



WAIN Circular connector



PRECISION PRODUCTS, ELABORATE PRODUCTION,
ACCURATE DELIVERY, SINCERE SERVICE.

Technical characteristics	Rated voltage	Rated current	Number of contacts	Terminal	Page
M8	30V,60V	4A	3,4,5	screw clamp connection, solder, dip solder, moulded	P10~P41
M12-A	60V,125V,250V	2A,4A,8A	3,4,5,8,12	screw clamp connection, solder, dip solder, moulded,single wires	P42~P88
M12-B	125V,250V	4A,8A	2,3,4,5	screw clamp connection, solder, dip solder, moulded,single wires	P89~P120
M12-D	250V	4A	4	screw clamp connection, solder, dip solder, moulded,single wires	P121~P146
M12-X	250V	4A	8	crimp terminal,single wires	P147~P157
M12 Distributor Sensor junction box	60/250V 10~30V DC	4A 2A,9A	4,5 4,5	- pluggable M23	P158~P179
7/8	300V	8A,9A,10A,12A	3(2+PE),4(3+PE), 5(4+PE)	screw clamp connection,	P180~P193
M17	32V~/63V-/630V-	3.6A,7A,14A	7,12,17	crimp terminal	P194~P204
HR23(M23)	25V~/60V-	7A,15A	6,9,12,17,19	crimp terminal, (PCB)solder terminal screw clamp connection	P205~P225
MR23	25V~/60V-	7A	12,17	crimp terminal	P226~P255
M23	250V~/630V-	9A,30A	6,8	crimp terminal	P256~P269
M40	250V	20A,60A	4/4	crimp terminal	P270~P279
Power electrical connector	220V,250V	1A,13A,20A,25A,40A	4,5,6,10,26,RJ45&3	crimp terminal, solder terminal	P280~P289
HW	1000V	800A	1	crimp terminal	P290~P293
MI	400V/30V	6A/1A	6+6(5+PE)	crimp terminal	P294~P296

• Technical data

- Binding for the applications of connectors are the requirements of the equipment specifications of the users.
- We reserve the right to change the design due to improvements in quality, further development or production requirements.
- All technical data mentioned in this catalog are related to connectors, meaning connecting devices which in normal use (when under load) shall not be inserted or withdrawn.
- Regarding the CE marking it has to be noted that electronic components such as connectors are not subject to a marking, and therefore must not be marked with a CE mark. This is confirmed by the rules of the European commission for low voltage and EMC guidelines.
- The listed technical data are intended to help selecting the appropriate product and to secure a proper application.
- The connectors are developed and designed for the use in the field of equipment, control and electrical appliances. Whether they also can be used in other applications has to be checked by the user.
- When mounting electrical conductive socket housings, they have to be integrated into the protection measures.
- The wires to be connected shall be stripped only so far that distances to conductive parts are not shortened. When wires are soldered, it has to be beared in mind that no single strands stick out and no short circuit can occur.
- All dimensions in this catalog are in mm.
- For connectors with strain relief the following minimum parameters are valid:

		Recommended tightening torque of the pressing screw
2-3	Cable Φ : min.20N	30-40 Ncm
3-4	Cable Φ : min.30N	30-40 Ncm
4-5	Cable Φ : min.40N	80-100 Ncm
5-6	Cable Φ : min.50N	80-100 Ncm
6-7	Cable Φ : min.60N	80-100 Ncm
7-8	Cable Φ : min.70N	80-100 Ncm
8-12	Cable Φ : min.80N	100-140 Ncm

• Connectors

Connectors are components which are not to be engaged or disengaged in normal use (under live).

• Plug and socket devices

Plug and socket devices are components which in normal use (under live or load) may be engaged or disengaged when live or under load.

• Termination methods

• Screw termination

A Screw termination is a detachable electrical connection between a conductor and a screw clamp. Screw clamps are designed acc. to DIN/EN 60999/VDE 0609. The chart below shows the screw size and the required clamping and testing torque.

Screw size	M2.5	M3	M3.5
Torque(Ncm) Cap screw	40	50	60
Headless screw	20	25	40

• Solder connection

Besides the soldering of single wires with solder irons or soldering machines, the method of wave soldering or infra-red vapor phase soldering has gained great importance for connectors for printed boards or flexible wiring.

We recommend the following soldering parameters

- hand-soldering: soldering bold temperature max. 370° C/max. 4s
- dip soldering: soldering bath temperature max. 270° C/max. 4s
- alternativ dip soldering: soldering bath temperature max. 260° C/max. 10s

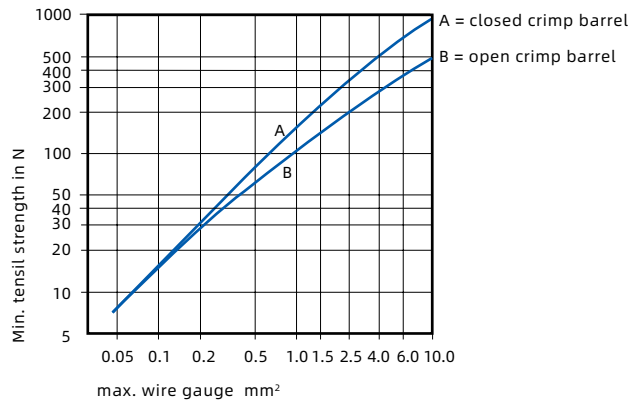
When wires are soldered, it has to be watched that no single strands stick out which could lead to a short circuit and that no large solder joints occur which would reduce the clearance and creepage distances unfavourably. Testing and valuation of solder joints and the relevant components is regulated in DIN EN 60068

• Technical data

• Crimp connection

A crimp connection is a non-detachable electrical connection between a conductor and a crimp contact produced with the crimp technology. The requirements for crimp connections are defined in DIN IEC 60352 part 2.

An important point for the quality of a crimp connection is the achieved tensile strength of the termination. Since easy to measure, the tensile strength is a practicable means for quality control purposes. The diagram below shows the required minimum tensile strength depending on the wire size.



• American Wire Gauges

Since various areas of industry are also using wires according to the American Wire Gauge (AWG), the following comparison chart is included to allow a cross reference between AWG and metric wire sizes

AWG	Wire composition (mm)	Wire-Ø(mm)	Wire gauge(mm²)
30	1 x 0.25 7 x 0.10	2-3	2-3
28	1 x 0.32 7 x 0.13	3-4	3-4
26	1 x 0.40 7 x 0.16 19 x 0.10	0.40 0.48 0.51	0.13 0.14 0.15
24	1 x 0.51 7 x 0.20 19 x 0.13	0.51 0.61 0.64	0.21 0.22 0.25
22	1 x 0.64 7 x 0.25 19 x 0.16	0.64 0.76 0.81	0.33 0.34 0.38
20	1 x 0.81 7 x 0.32 19 x 0.20	0.81 0.97 1.02	0.52 0.56 0.60
18	1 x 1.02 19 x 0.25	1.02 0.27	0.82 0.93
16	19 x 0.29	1.44	1.25
14	19 x 0.36	1.80	1.93
12	19 x 0.46	2.29	3.16
10	19 x 0.56	3.10	4.65

- Composition and dimensions of commonly used copper wires based on VDE 0295

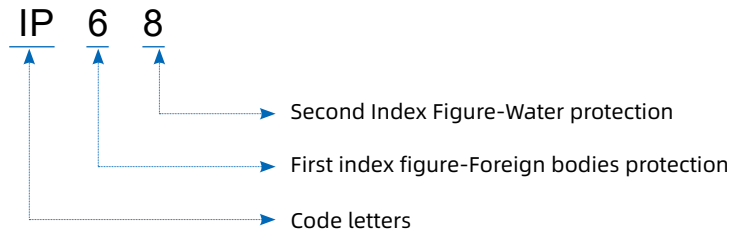
Wire gauge(mm²)	Wire composition (mm)	Wire-Ø(mm)
0.09	12 x 0.10	0.5
0.14	18 x 0.10	0.5
0.25	14 x 0.16 32 x 0.10	0.7 0.7
0.34	19 x 0.16 42 x 0.10	0.8 0.9
0.5	7 x 0.30 16 x 0.21 28 x 0.16	1.0 1.1 1.1
0.75	7 x 0.37 24 x 0.21 42 x 0.16	1.2 1.2 1.3
1.0	7 x 0.43 32 x 0.21 56 x 0.16	1.4 1.4 1.5
1.5	7 x 0.52 30 x 0.26 84 x 0.16	1.6 1.7 1.8
2.5	7 x 0.67 50 x 0.26 140 x 0.16	2.2 2.3 2.3
4.0	7 x 0.85 56 x 0.31 224 x 0.16	2.7 2.8 2.9

It has to be noted that wires of the same AWG number but with different composition have slightly different mm²!

• Hoods/housings connector insert protection

For safety reasons, connectors have to be protected from outside influences like dust, foreign objects, direct contact, moisture and water. This protection is provided on industrial connectors by their housings with their latching devices and sealed cable entries. The degree of protection can be selected depending on the type of intended use. The standard IEC 60529 and/or DIN EN 60529 has specified and divided the degree of protection into several classes.

The degree of protection is indicated in the following way:



Index figure	Degree of protection	Index figure	Degree of protection
0	No protection: No protection against accidental contact, no protection against solid foreign bodies	0	No protection against water
1	Protection against large foreign bodies: Protection against contact with any large area by hand and against large solid foreign bodies with $\varnothing > 50$ mm	1	Drip-proof: Protection against vertical water drips
2	Protection against medium sized foreign bodies: Protection against contact with the fingers, protection against solid foreign bodies with $\varnothing > 12$ mm	2	Drip-proof: Protection against water drips (up to a 15° angle)
3	Protection against small solid foreign bodies: Protection against tools, wires or similar objects with $\varnothing > 2.5$ mm, protection against small foreign solid bodies with $\varnothing > 2.5$ mm	3	Spray-proof: Protection against diagonal water drips (up to a 60° angle)
4	Protection against grain-shaped foreign bodies: As 3 however $\varnothing > 1$ mm	4	Spray-proof: Protection against splashed water from all directions
5	Protection against injurious deposits of dust: Full protection against contact. Protection against interior injurious dust deposits	5	Hose-proof: Protection against water (out of a nozzle) from all directions
6	Protection against ingress of dust: Total protection against contact. Protection against penetration of dust	6	Strong hose-proof: Protection against strong water (out of a nozzle) from all directions
		7	Protected against immersion: Protected against temporary immersion
		8	Water-tight: Protected against water pressure

• Voltage grading of connectors (insulation coordination)

Clearances and creepage distances are the base of voltage grading of connectors. Valuation and dimensioning of clearances and creepage distances have changed since the introduction of insulation coordination. The following standards apply for this:

- IEC 60664-1/11.92 Insulation coordination for equipment within low-voltage systems
- DIN VDE 0110/4.97 Insulation coordination for equipment within low-voltage systems

Insulation coordination comprises the selection of the electrical insulation performances of an equipment (e.g. connector), taking into account the expected use and its environment.

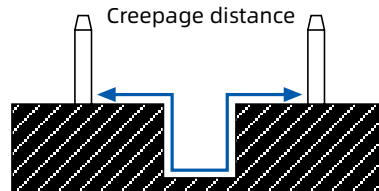
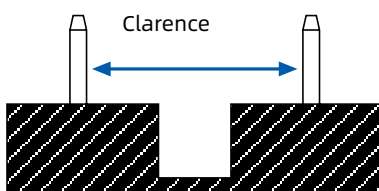
• In this respect some definitions are explained in short:

Rated voltage: The value of voltage assigned by the manufacturer to the connector and to which operation and performance characteristics are referred.

Rated impulse voltage: The value of an impulse withstand voltage assigned by the manufacturer to the connector characterising the specified withstand capability of its insulation against transient overvoltages.

Clearance: The shortest distance in air between two conductive parts.

Creepage distance: The shortest distance along the surface of the insulating material between two conductive parts.



• Voltage grading of connectors (insulation coordination)

Overvoltage categories: The standard has divided the possible overvoltages into four categories. The three categories which relate to connectors are shortly described below:

Overvoltage category I

Equipment (e.g. connectors) intended for the use in applications or parts of installations in which no overvoltage can occur. Examples are low voltage equipments.

Overvoltage category II

Equipment (e.g. connectors) intended for the use in installations or parts of it, in which lightning overvoltages do not need to be considered, however switching overvoltages generated by the equipment. Examples are household appliances.

Overvoltage category III

Equipment (e.g. connectors) intended for the use in installations or parts of it in which lightning overvoltages do not need to be considered, however switching overvoltages generated by the equipment, and for cases where the reliability and the availability of the equipment (e.g. connectors) or its dependent circuits are subject to special requirements. Examples are protecting means, switches and sockets.

Material groups

For the dimensioning of the creepage distance, the tracking formation of the insulating material used by the manufacturer has to be considered. The materials are separated into three groups according to their CTI values (Comparative Tracking Index):

Material group I $600 \leq \text{CTI}$

Material group II $400 \leq \text{CTI} < 600$

Material group III $175 \leq \text{CTI} < 400$

• Pollution degree of connectors

Pollution degree: The expected pollution around the equipment (e.g. connector) was established in the standard in four degrees:

Pollution degree 1: No pollution or only dry, non-conductive pollution occurs. The pollution has no influence. Examples: The inside of electrical measuring instruments, electronic measuring devices.

Pollution degree 2: Only non-conductive pollution occurs. Except that occasionally a temporary conductivity caused by condensation is to be expected.

Examples: Household appliances, installation material, lamps, power supplies of office equipment.

Pollution degree 3: Conductive pollution occurs or dry non-conductive pollution occurs which becomes conductive due to condensation which is to be expected.

Examples: Electrical equipment of machine tools and processing machines, low voltage switches at machine tools.

Pollution degree 4: The pollution generates persistent conductivity caused by conductive dust or by rain or snow.

Examples: Equipment on wagon roofs and beneath wagons at electrical locomotives, rail cars, trolley busses. Equipment at electrical locomotives underground.

Additional remarks: If connectors being defined for pollution degree 1 and overvoltage categorie 1 are applied for other conditions (higher pollution degree and higher overvoltage category), voltage levels reduce correspondingly. But the connectors can be used without any problems at reduced maximum voltages.

It has to be noted that for a connector with a degree of protection of at least IP 54 the parts inside the enclosure may be dimensioned for a lower pollution degree. This also applies to mated connectors whose enclosure is ensured through the connector housing and which may only be disengaged for test and maintenance purposes.

• Current carrying capacity

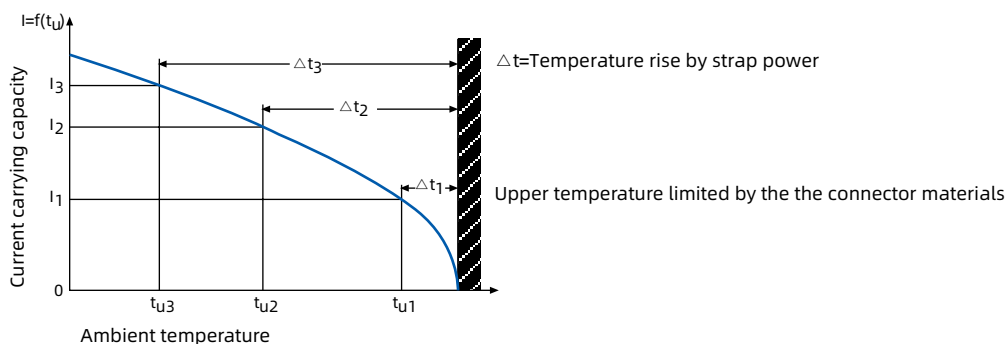
The current carrying capacity of a connector denotes the current that can be carried continuously and simultaneously through all its contacts. It is determined by testing following the standard DIN IEC 60512.

The upper limit temperature results from the thermal properties of the contact and insulating materials. The sum of the ambient temperature and the temperature created by the current flow may not exceed the upper limit temperature of the connector.

This means, that the current carrying capacity is no fixed value but decreases with increasing ambient temperatures. This relation between current, the caused temperature rise and ambient temperature of the connector is depicted in a curve, the so-called derating curve. As one can see, the current carrying capacity decreases with increasing ambient temperature.

On the other hand, very often not all contacts are loaded simultaneously with the whole rated current, so that some single contacts can carry a higher current than that according to the derating curve. These currents have to be determined by testing.

Derating curve:



• Shielding, Electromagnetic compatibility (EMC)

Since the issue of the German law about electromagnetic compatibility of equipment, more attention is paid to EMC within the concerned equipment.

The equipment has to be designed in such a way that:

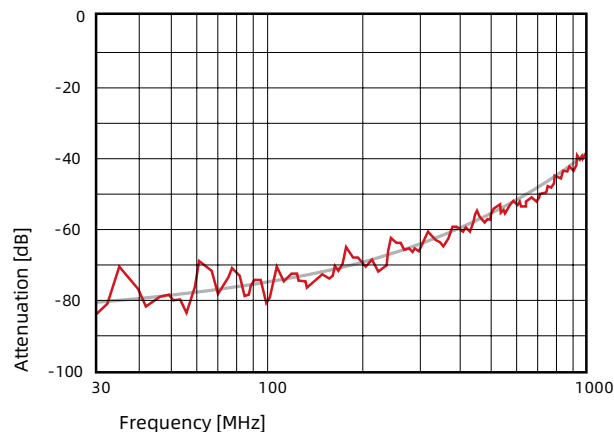
1. the generation of electromagnetic interference is limited to such extend that the determined operation of this equipment is not hampered,
2. the equipment has a reasonable resistance against electromagnetic interference so that the determined operation is not hampered.

To satisfy the requirements of the equipment manufacturers, more and more connectors with shielding properties are applied where shielded cables can be connected. In use are conductive housings to which the cable shield can be terminated. In case of circular connectors, it should be watched that the cable shield is carefully connected to the connector shield. A circumferentially (360°) contact is optimal in this case. Good shielding values (and very often sufficient for practical use) are also achieved when the shielding braid is firmly connected to the conductive housing. Not sufficient are fully plastic connectors without metal sleeves with no possibility to terminate the cable shield.

Furthermore, it is important that during mating a secure electrical connection between plug and socket housing is achieved and that the panel mounted connector part has a good metallic connection with the chassis wall.

The shielding attenuation is stated in decibel (dB) and depends on the frequency. Good shieldings have a high attenuation, which over a large frequency band (MHz) does not decrease too heavily.

Attenuation curve acc. to DIN 47250-6
Example 360° shielding: M12-A series



Two material groups are used to manufacture the connectors described in this catalog:

- 1: Metals for contacts and housings
- 2: Plastic material for inserts and housings

Materials for contacts

The properties of contacts are defined to a large extent by the used materials. Decisive features are:

- strength and spring properties
- electrical conductivity
- max. operating temperature

Considering these points, Wain is using proven copper-alloys for the manufacture of contacts;

Materials for metal housings

Depending on the application, the metal housings are produced from either brass, zinc die-cast or an aluminium alloy. For circular housing parts, mainly brass is used due to its good machine ability and strength. For angled housings and parts with minor finishing work, zinc diecast or an aluminium alloy is used.

Plastic material for inserts

The inserts of Wain-connectors are manufactured primarily from PBT (Polybutylen-terephthalate), a plastic material with a temperature stability of up to 130 °C and special properties for high grade moulded parts. The material has very good chemical and electrical properties and very good dimensional stability.

Surface finishes

In order to protect contacts and housings from aggressive environments and to improve the conductivity, the surfaces are treated accordingly. At wain, contacts are gold or silver plated. These platings improve the conductivity and are very corrosion-proof. For applications in the mA-range at very low voltages, gold plated contacts are recommended to improve the electrical properties and in addition, it increases the corrosion-proofness. Housings are anodised or covered with a plating of either nickel or chromium for anti-corrosion and decorative reasons.

Material for sealing gaskets

To achieve the required protection class, all Wain circular connectors are equipped with sealing rings of an elastomeric material. Depending on the final use, wain has selected Chloroprene Rubber (Trademark Neoprene), Nitrid Rubber (Trademark Perbunan) or Fluorsilicon Rubber (Trademark Viton). The chemical resistance of these elastomeric materials can be depicted from table on page 16-09.

Plastic material for housings

Plastic housings are primarily manufactured from PA (Polyamide). This wellproven material (internationally known under the name Nylon) is very tough, non-abrasive, resistant against solvents, oils and greases and can be used at temperatures up to 120 °C .

• Important data of used metals

Material	Letter symbol	Conductivity ($\frac{m}{\Omega \times mm^2}$)	Tensile strength (N/mm ²)	Limit temperature (°C)	Corrosion resistance ¹⁾
Coatings					
Gold	Au	44	-	-	Very good
Silver	Ag	62	-	-	Good
Nickel	Ni	10	-	-	Very good
Optaloy	CuSnZn	15	-	-	Good
Basic material					
Copper	Cu	55	ca.400	90	Partially resistant. Surface coating recommended.
Brass	CuZn	15	ca.500	90	Partially resistant. Surface coating recommended.
Phos. bronze	CuSn	9	ca.700	120	Good
Zinc die-cast	GD-Zn	16	ca.300	-	Non-resistant. Surface coating required.
Aluminium die-cast	GD-Al	20	ca.250	-	Partially resistant. Surface coating recommended.

1) Depends on environmental influences.

- Chemical resistance of used plastic material and elastomeres

	PA	PBT	CR	NBR	FPM	PUR(Ester) ¹⁾	PUR(Ether) ¹⁾
Hydrocarbons							
Gasolin	+	+	0	+	+	+	+
Fuel oil	+	+	+	+	+	+	+
Benzole	+	0	-	-	+	0	0
Naphthalene	+	0	-	+	+	0	0
Alcohols							
Ethyl alcohol	0	+	+	+	+	+	+
Isopropanol	0	0	+	+	+	+	+
Glycol	-	0	+	+	+	+	+
Glycerine	+	+	+	+	0	+	+
Ketons							
Acetone	+	+	0	-	-	-	-
Acids							
Hydrochloric acid(20%)	-	0	0	0	+	-	+
Nitric acid(10%)	-	0	0	0	+	-	-
Phosphoric acid(30%)	-	0	+	+	+	-	+
Sulphuric(30%)	-	0	+	+	+	-	+
Citric acid(10%)	+	+	+	+	+	0/-w	+
Lactic acid(10%)	+	+	0	0	+	0/-	+
Acetic acid(10%)	0	0	+	+	+	0/-	+
Bases (solutions)							
Caustic soda(10%)	+	-	0	0	0	0	+
Ammonia, diluted	+	+	+	+	+	-	+
Oils, greases							
Soybean oil	+	+	+	+	0	0/-	0
Olive oil	+	+	+	+	+	0/-	0
Butter	+	+	+	+	+	0/-	0/-
Salt water	+	+	+	+	+	0	+
Cleaning agents							
Detergents	+	0	+	+	+	+/-	+/-
Detergents	+	+	+	+	+	+/-	+/-

- The standards used in this catalog for definition and testing of the connectors are described below in more detail. These are:

IEC 60664-1; (2007-4), Insulation coordination

This international standard, which is identical to the German standard DIN VDE 0110-1 issued April 1997, is a basic safety standard to achieve insulation coordination. It provides the information necessary to specify clearances, creepage distances and solid insulation for electrical equipment (e.g. connectors), taking into account the expected micro-environment and other influencing stresses to which it is likely to be subjected during its anticipated lifetime. Included are methods for voltage testing in regards to the insulation coordination.

IEC 60512; (2001-1), Testing procedures and measuring methods

This international standard, which is identical with the European standard DIN EN 60512, has replaced the earlier German standard DIN 41640. It is the basic standard for testing procedures and measuring methods for electromechanical components (e.g. connectors). The standard is very comprehensive and consists of nine parts in total in which all electrical, mechanical and climatic tests are described. Furthermore, it contains tests about solderability, sealing, shielding and cable strain relieve.

IEC 60529; (2001-2), Degrees of protection provided by enclosures (IP-Code)

This international standard, which is identical with the European standard DIN EN 60529 and the German standard DIN VDE 0470-1 of Nov. 1992, defines the designation, requirements and testing for the classification of degrees of protection by enclosures for electrical equipment (e.g. connectors). It classifies the protection against access to hazardous parts, protection against foreign objects and protection against ingress of water. The degree of protection is indicated by an IP-Code.

IEC 60068-1; March 1995, Environmental testing

This international standard, which is identical with the European standard DIN EN 60068, contains basic procedures for environmental tests and test severities. The test procedures are intended to prove the resistance of components against expected environmental influences under working conditions. Typical tests are: cold, dry and damp heat, shock, vibration, temperature change and more.

DIN EN 61984 (VDE 0627); 2009-11, Connectors and Connection devices

This international standard is applicable for plug connectors with rated voltages ranging from 50 V to 1000 V AC and DC and rated currents up to 500 A per contact for which there is either no detail specification (DS), or if the detail specification with reference to the safety requirements is based on this standard. This standard may be used as a guide for plug connector with rated voltages up to 50 V. In this case the design for clearances and leakage paths must be based on IEC 60664-1.

This standard may also be used as a guide for plug connectors with rated voltages greater than 125 V per pole.

This standard is not applicable for plug connectors in or on equipment for which there are application-specific safety requirements for plug connectors.





Standards: IEC-61076-2-104

Cable Connector

- Versions with assembly
- Thread locking M8x1
- Screw-, solder termination
- Connector moulded on cable
- Degree of protection IP67/IP65
- Cable length 2m and 5m (PVC and PUR)
- Further cable length upon request, minimum order quantity 200 pieces.

• Cable Connector shielded

- Assembly possible, moulded on cable
- Thread locking M8x1
- Solder-, screw termination

M8 S - M 04 - T - 1.5 - PVC / BU - SH

► **Special feature:**

Blank= without shielding
SH= shielding
LED=with LED
Cat.5e= Cable Type
.....

► **Cable color:**

Blank=black
BU=blue

► **cable connection:**

PVC=moulded
PUR=moulded
DPUR=moulded (Low Smoke and Halogen-Free)
C=solder cup
D=dip solder
W0.25=UL1007 24AWG
.....

► **Cable specification:**

Cable length: 1.5=1.5m
5=5m
Cable range: D5 (3.5~5)
D5.5(3.5-5.5)
.....
Mounting thread: M8

► **Installation interface:**

Plug;T=top
S=side
BK=panel mount(socket)
BKR=front fastend(socket)
BKP=positioning(socket)

► **Pin:**

03
04
.....

► **Type:**

M=male screw
F=female screw
MST=male solder
FST=female solder
MCV=male cover
FCV=female cover

► **Locking type:**

Blank=Standard lock
P=plastic lock
S=steel lock

► **M8**

• Electrical properties

Number of contacts	3-pole	4-pole
Rated current	4A	4A
Rated voltage	60V	30V
Pulse voltage	800V	800V
Pollution degree	3	3
Insulation resistance	$\geq 10^{12}\Omega$	$\geq 10^{12}\Omega$
Overvoltage categorie	II	II
Contact resistance	$\leq 10m\Omega$	$\leq 10m\Omega$

• Mechanical properties

Number of contacts	3-pole	4-pole
Connector locking system	screw M8X1	screw M8X1
Termination	screw, solder, crimp, moulded	screw, solder, crimp, moulded
Wire gauge	screw 0.14-0.5mm ² (AWG26-20)	screw 0.14-0.5mm ² (AWG26-20)
	solder 0.25mm ² (AWG24)	solder 0.25mm ² (AWG24)
	crimp 0.25mm ² (AWG24)	crimp 0.25mm ² (AWG24)
Cable outlet	3.5~5mm,3.5~5.5mm	3.5~5mm,3.5~5.5mm
Mechanical operation	> 100	> 100

• Environmental performance

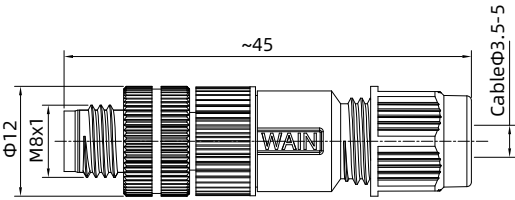
Number of contacts	3-pole	4-pole
Limiting temperature	-40°C ~85°C	-40°C ~85°C
Limit humidity	5%~95%	5%~95%
Degree of protection	IP67	IP67

• Materials and surface treatment

Number of contacts	3-pole	4-pole
Material group	II	II
Material of contact	copper alloy	copper alloy
Contact plating	Au	Au
Insulating material	PA	PA
Material of housing	PA/zinc alloy/TPU	PA/zinc alloy/TPU
Sealing element	FPM/NBR	FPM/NBR



- Male
- Solder



□ **Straight cable connectors**
30/60V 4A

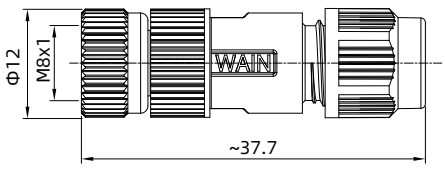
Contact arrangements



Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-MST03-T-D5	162 003 413 3001
4	3.5-5 mm	M8-MST04-T-D5	162 004 413 3001



- Female
- Solder



□ **Straight cable connectors**
30/60V 4A

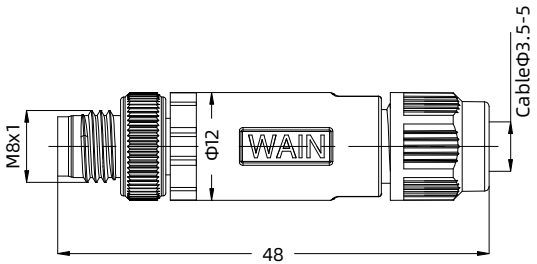
Contact arrangements



Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-FST03-T-D5	162 003 423 3001
4	3.5-5 mm	M8-FST04-T-D5	162 004 423 3001



- Male
- Screw
- Recommend to use



□ **Straight cable connectors**
30/60V 4A

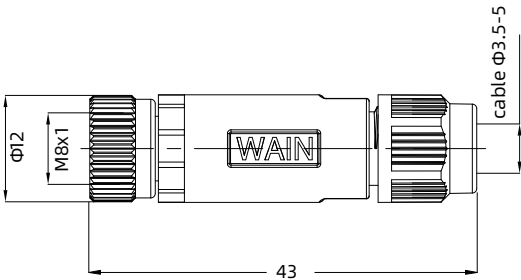
Contact arrangements



Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-M03-T-D5	162 003 411 3001
4	3.5-5 mm	M8-M04-T-D5	162 004 411 3001



- Female
- Screw
- Recommend to use



□ **Straight cable connectors**
30/60V 4A

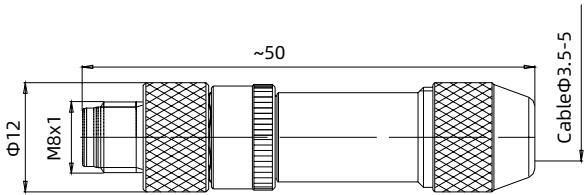
Contact arrangements



Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-F03-T-D5	162 003 421 3001
4	3.5-5 mm	M8-F04-T-D5	162 004 421 3001



- Male
- Solder
- Shielded
- Recommend to use



Straight cable connectors, shielded
30/60V 4A

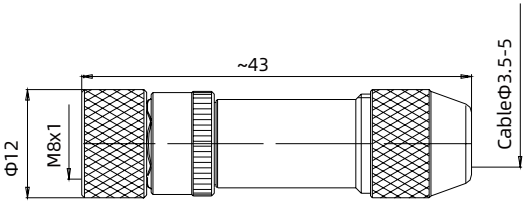
Contact arrangements



Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-MST03-T-D5-SH	162 003 413 2001
4	3.5-5 mm	M8-MST04-T-D5-SH	162 004 413 2001



- Female
- Solder
- Shielded
- Recommend to use



Straight cable connectors, shielded
30/60V 4A

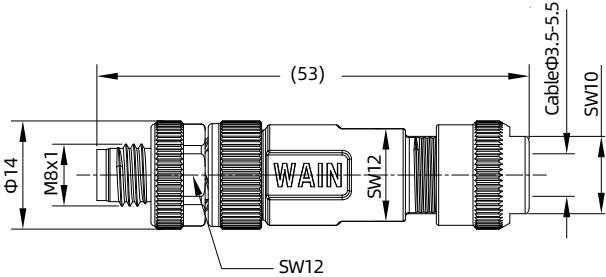
Contact arrangements



Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-FST03-T-D5-SH	162 003 423 2001
4	3.5-5 mm	M8-FST04-T-D5-SH	162 004 423 2001



- Male
- Screw
- Shielded



Straight cable connectors, shielded
30/60V 4A

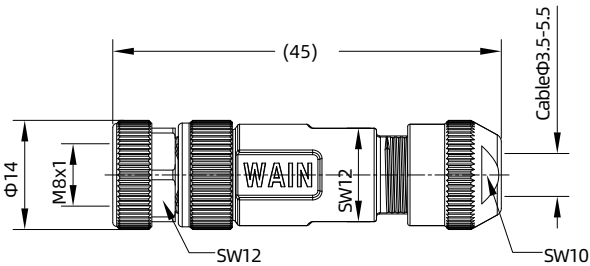
Contact arrangements



Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-M03-T-D5.5-SH	162 003 411 2001
4	3.5-5 mm	M8-M04-T-D5.5-SH	162 004 411 2001



- Female
- Screw
- Shielded



Straight cable connectors, shielded
30/60V 4A

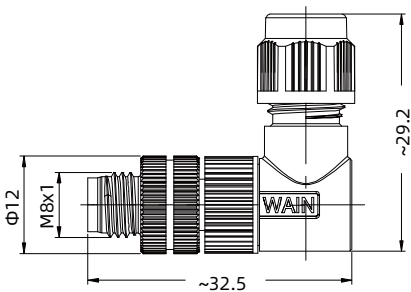
Contact arrangements



Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-F03-T-D5.5-SH	162 003 421 2001
4	3.5-5 mm	M8-F04-T-D5.5-SH	162 004 421 2001



- Male
- Solder



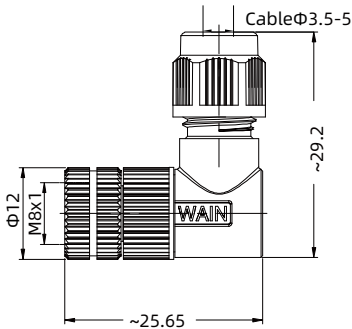
Angled cable connectors
30/60V 4A

Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-MST03-S-D5	162 003 513 3001
4	3.5-5 mm	M8-MST04-S-D5	162 004 513 3001

Contact arrangements



- Female
- Solder



Angled cable connectors
30/60V 4A

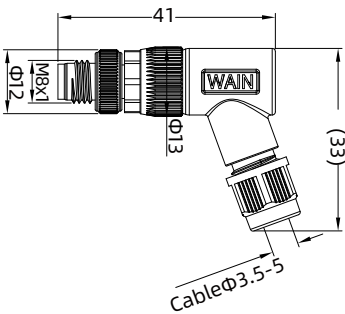
Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-FST03-S-D5	162 003 523 3001
4	3.5-5 mm	M8-FST04-S-D5	162 004 523 3001

Contact arrangements





- Male
- Screw



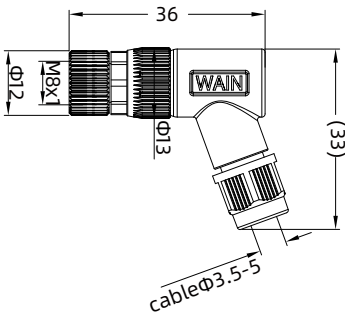
Angled cable connectors
30/60V 4A

Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-M03-S-D5	162 003 511 3001
4	3.5-5 mm	M8-M04-S-D5	162 004 511 3001

Contact arrangements



- Female
- screw



Angled cable connectors
30/60V 4A

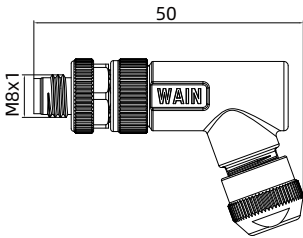
Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-F03-S-D5	162 003 521 3001
4	3.5-5 mm	M8-F04-S-D5	162 004 521 3001

Contact arrangements





- Male
- Screw
- Shielded
- Recommend to use



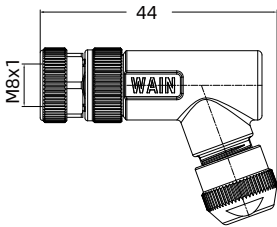
Angled cable connectors
30/60V 4A

Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-M03-S-D5.5-SH	162 003 501 2003
4	3.5-5 mm	M8-M04-S-D5.5-SH	162 004 501 2003

Contact arrangements



- Female
- Screw
- Shielded
- Recommend to use



Angled cable connectors
30/60V 4A

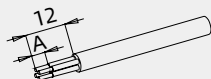
Contacts	Cable outlet	Designation	Order No.
3	3.5-5 mm	M8-F03-S-D5.5-SH	162 003 502 2007
4	3.5-5 mm	M8-F04-S-D5.5-SH	162 004 502 2003

Contact arrangements



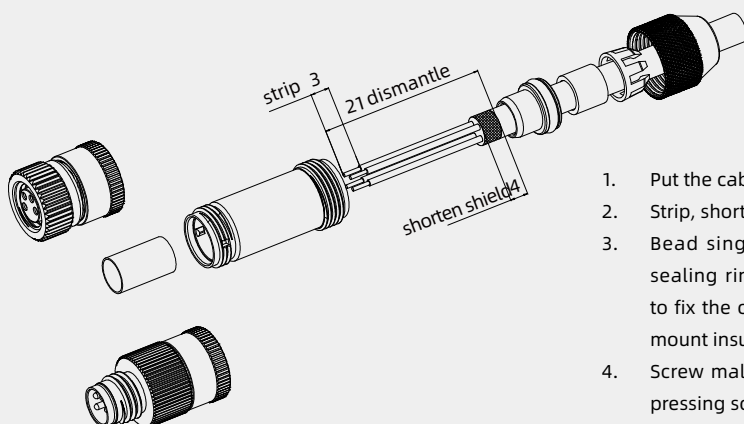
• Assembly instruction

- Strip length cable connectors



	Screw termination	solder version
Strip length A/mm	4mm	3mm

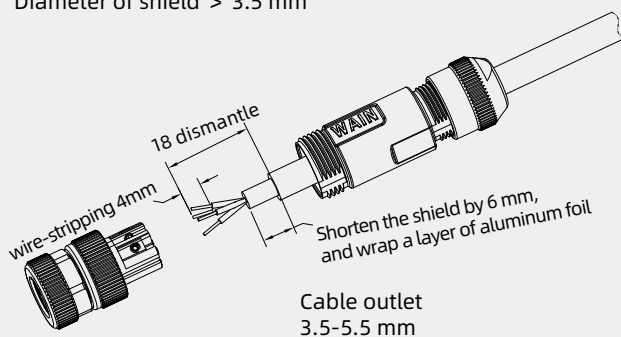
- Straight cable connectors, **shielded, solder**



1. Put the cable through all the parts of the connector.
2. Strip, shorten, widen shield and lay around shielding ring.
3. Bead single wires through housing, mount shielding ring, sealing ring and pinch ring. Slightly tighten pressing screw to fix the cable. Bead insulating tube, solder single wires and mount insulating tube.
4. Screw male or female contact carrier to housing and tighten pressing screw.
5. Angled version: tighten locking screw.

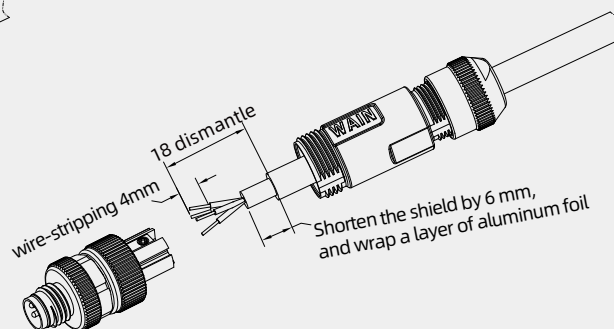
Straight cable connectors, **shielded, screw clamp connection**

- Diameter of shield > 3.5 mm



1. Put the cable through the housing.
2. Strip cable, shorten shielding braid.
3. Connect single wires.
4. Screw housing to either male or female contact carrier and tighten pressing screw.

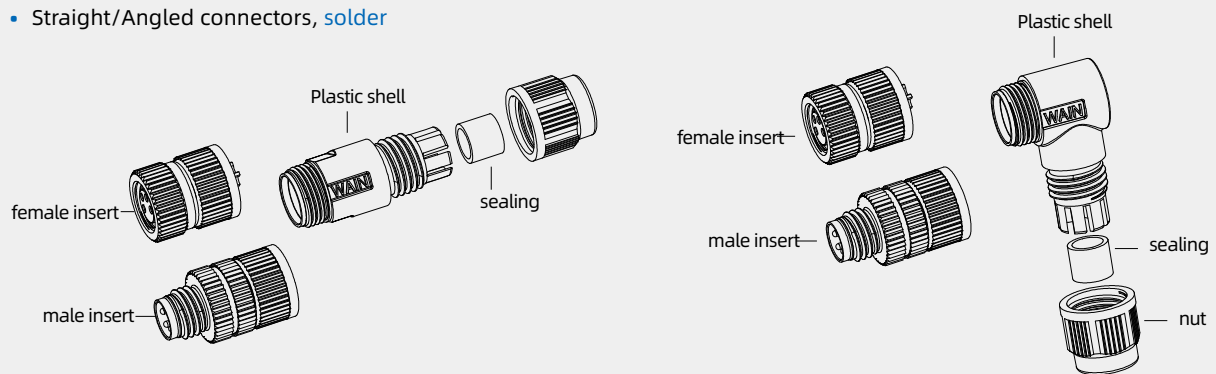
- Diameter of shield ≤ 3.5 mm



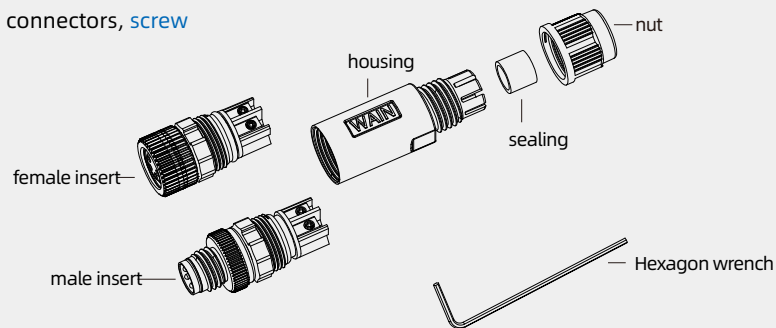
1. Put the cable through the housing.
2. Strip cable, shorten shielding braid, place it over cable coating and wrap it with copper tape.
3. Connect single wires.
4. Screw housing to either male or female contact carrier and tighten pressing screw.

• Component part drawing

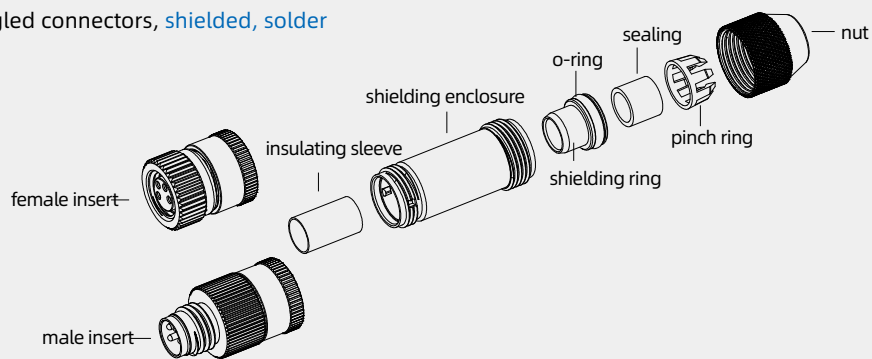
• Straight/Angled connectors, **solder**



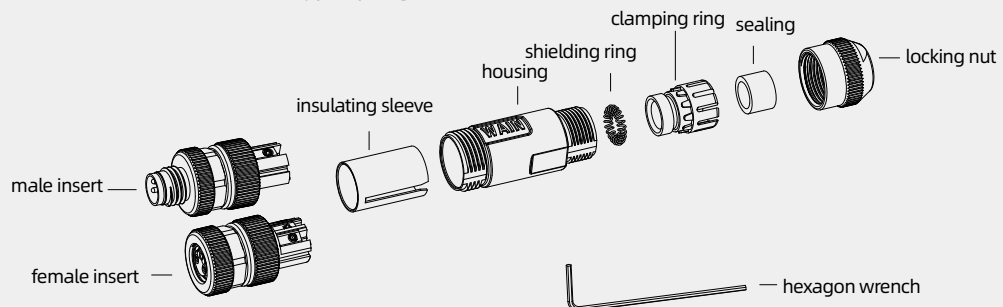
• Straight/Angled connectors, **screw**



• Straight/Angled connectors, **shielded, solder**



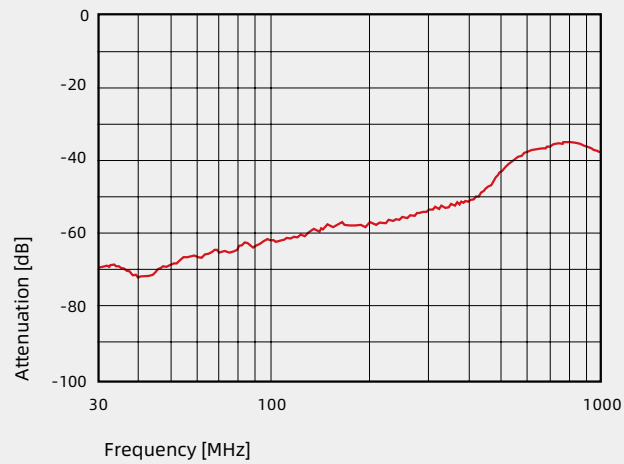
• Straight connectors **shielded, screw, iris type spring**



- Rating

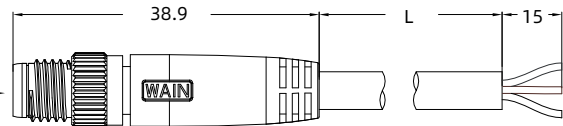
- Attenuation curve

- Attenuation curve according to DIN 47250-6
- For straight cable connectors (cable version IEEE 802.3) shielded





- Male
- Moulded
- Screw
- Recommended use



Straight cable connectors, cable
30/60V 4A

Contact arrangements

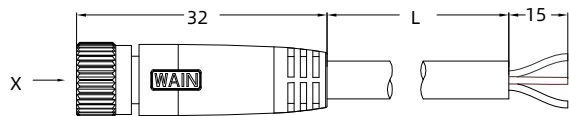


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-M03-T-1.5-PVC	162 003 401 4001
		3x0.25PUR	M8-M03-T-1.5-PUR	162 003 401 4041
	5.0m	3x0.25PVC	M8-M03-T-5.0-PVC	162 003 401 4002
		3x0.25PUR	M8-M03-T-5.0-PUR	162 003 401 4042
4	1.5m	4x0.25PVC	M8-M04-T-1.5-PVC	162 004 401 4001
		4x0.25PUR	M8-M04-T-1.5-PUR	162 004 401 4041
	5.0m	4x0.25PVC	M8-M04-T-5.0-PVC	162 004 401 4002
		4x0.25PUR	M8-M04-T-5.0-PUR	162 004 401 4042



- Female
- Moulded
- Screw
- Recommended use



Straight cable connectors, cable
30/60V 4A

Contact arrangements

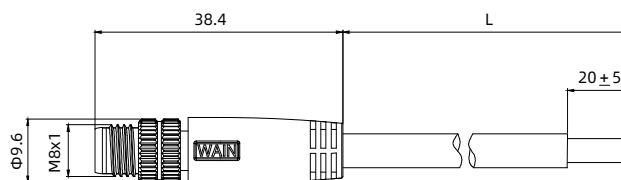


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-F03-T-1.5-PVC	162 003 402 4001
		3x0.25PUR	M8-F03-T-1.5-PUR	162 003 402 4041
	5.0m	3x0.25PVC	M8-F03-T-5.0-PVC	162 003 402 4002
		3x0.25PUR	M8-F03-T-5.0-PUR	162 003 402 4042
4	1.5m	4x0.25PVC	M8-F04-T-1.5-PVC	162 004 402 4001
		4x0.25PUR	M8-F04-T-1.5-PUR	162 004 402 4041
	5.0m	4x0.25PVC	M8-F04-T-5.0-PVC	162 004 402 4002
		4x0.25PUR	M8-F04-T-5.0-PUR	162 004 402 4042



- Male
- Moulded
- Screw
- Shielded



Straight cable connectors, cable

60V 4A

Contact arrangements

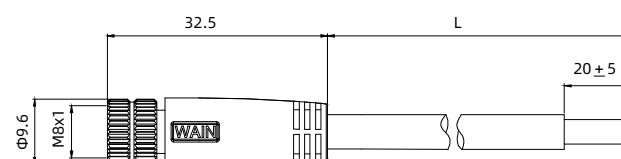


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-M03-T-1.5-PVC-SH	162 003 401 2001
		3x0.25PUR	M8-M03-T-1.5-PUR-SH	162 003 401 2041
	5.0m	3x0.25PVC	M8-M03-T-5.0-PVC-SH	162 003 401 2002
		3x0.25PUR	M8-M03-T-5.0-PUR-SH	162 003 401 2042
4	1.5m	4x0.25PVC	M8-M04-T-1.5-PVC-SH	162 004 401 2001
		4x0.25PUR	M8-M04-T-1.5-PUR-SH	162 004 401 2041
	5.0m	4x0.25PVC	M8-M04-T-5.0-PVC-SH	162 004 401 2002
		4x0.25PUR	M8-M04-T-5.0-PUR-SH	162 004 401 2043



- Female
- Moulded
- Screw
- Shielded



Straight cable connectors, cable

60V 4A

Contact arrangements

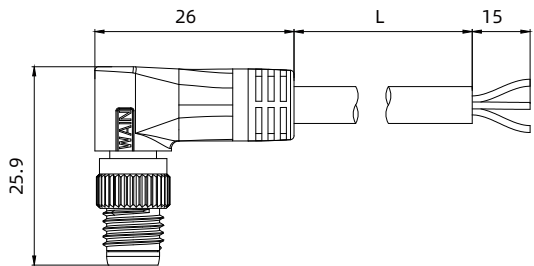


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-F03-T-1.5-PVC-SH	162 003 402 2001
		3x0.25PUR	M8-F03-T-1.5-PUR-SH	162 003 402 4061
	5.0m	3x0.25PVC	M8-F03-T-5.0-PVC-SH	162 003 402 4022
		3x0.25PUR	M8-F03-T-5.0-PUR-SH	162 003 402 4062
4	1.5m	4x0.25PVC	M8-F04-T-1.5-PVC-SH	162 004 402 2001
		4x0.25PUR	M8-F04-T-1.5-PUR-SH	162 004 402 2041
	5.0m	4x0.25PVC	M8-F04-T-5.0-PVC-SH	162 004 402 2002
		4x0.25PUR	M8-F04-T-5.0-PUR-SH	162 004 402 2042



- Male
- Moulded
- Screw
- Recommended use



Angled cable connectors, cable
30/60V 4A

Contact arrangements

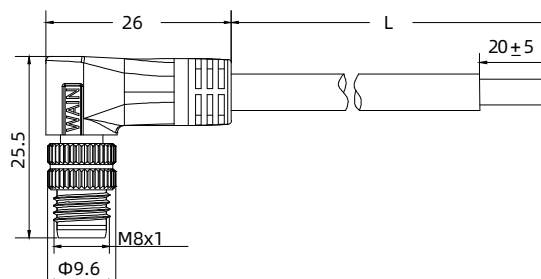


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-M03-S-1.5-PVC	162 003 501 4001
		3x0.25PUR	M8-M03-S-1.5-PUR	162 003 501 4041
	5.0m	3x0.25PVC	M8-M03-S-5.0-PVC	162 003 501 4002
		3x0.25PUR	M8-M03-S-5.0-PUR	162 003 501 4042
4	1.5m	4x0.25PVC	M8-M04-S-1.5-PVC	162 004 501 4001
		4x0.25PUR	M8-M04-S-1.5-PUR	162 004 501 4041
	5.0m	4x0.25PVC	M8-M04-S-5.0-PVC	162 004 501 4002
		4x0.25PUR	M8-M04-S-5.0-PUR	162 004 501 4042



- Male
- Moulded
- Screw
- Shielded



Angled cable connectors, cable

60V 4A

Contact arrangements

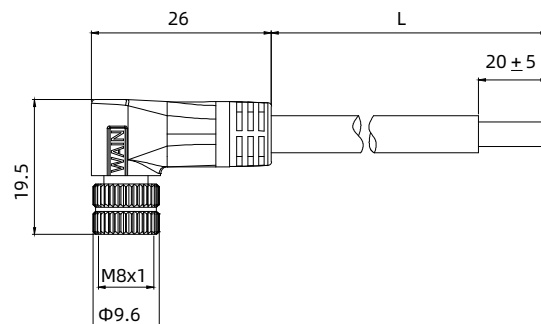


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-M03-S-1.5-PVC-SH	162 003 501 2001
		3x0.25PUR	M8-M03-S-1.5-PUR-SH	162 003 501 2041
	5.0m	3x0.25PVC	M8-M03-S-5.0-PVC-SH	162 003 501 2002
		3x0.25PUR	M8-M03-S-5.0-PUR-SH	162 003 501 2042
4	1.5m	4x0.25PVC	M8-M04-S-1.5-PVC-SH	162 004 501 2001
		4x0.25PUR	M8-M04-S-1.5-PUR-SH	162 004 501 2041
	5.0m	4x0.25PVC	M8-M04-S-5.0-PVC-SH	162 004 501 2002
		4x0.25PUR	M8-M04-S-5.0-PUR-SH	162 004 501 2042



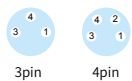
- Female
- Moulded
- Screw
- Shielded



Angled cable connectors, cable

60V 4A

Contact arrangements

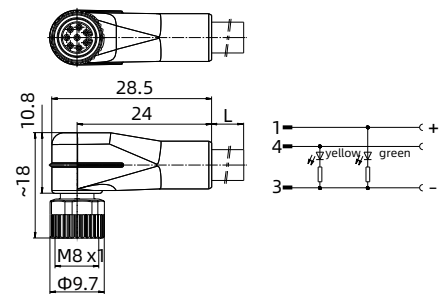


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-F03-S-1.5-PVC-SH	162 003 502 2001
		3x0.25PUR	M8-F03-S-1.5-PUR-SH	162 003 502 4061
	5.0m	3x0.25PVC	M8-F03-S-5.0-PVC-SH	162 003 502 2002
		3x0.25PUR	M8-F03-S-5.0-PUR-SH	162 003 502 4062
4	1.5m	4x0.25PVC	M8-F04-S-1.5-PVC-SH	162 004 502 2001
		4x0.25PUR	M8-F04-S-1.5-PUR-SH	162 004 502 2041
	5.0m	4x0.25PVC	M8-F04-S-5.0-PVC-SH	162 004 502 2002
		4x0.25PUR	M8-F04-S-5.0-PUR-SH	162 004 502 2042



- Female
- Moulded
- Screw
- LED



Angled cable connectors, cable

60V 4A

Contact arrangements

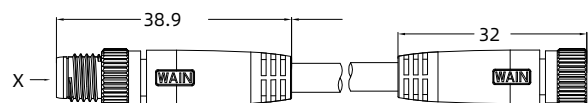


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-F03-S-1.5-PVC-LED	162 003 502 4003
		3x0.25PUR	M8-F03-S-1.5-PUR-LED	162 003 502 4043
	5.0m	3x0.25PVC	M8-F03-S-5.0-PVC-LED	162 003 502 4004
		3x0.25PUR	M8-F03-S-5.0-PUR-LED	162 003 502 4044



- Male/female
- Cable connectors
- -wire jumper



Straight cable connectors, cable

30/60V 4A

Contact arrangements

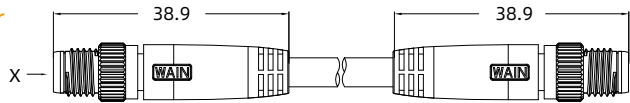


Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-M03-T/F03-T-1.5-PVC	162 003 401 4010
		3x0.25PUR	M8-M03-T/F03-T-1.5-PUR	162 003 401 4011
	5.0m	3x0.25PVC	M8-M03-T/F03-T-5.0-PVC	162 003 401 4506
		3x0.25PUR	M8-M03-T/F03-T-5.0-PUR	162 003 401 4004
4	1.5m	4x0.25PVC	M8-M04-T/F04-T-1.5-PVC	162 004 401 4010
		4x0.25PUR	M8-M04-T/F04-T-1.5-PUR	162 004 401 4011
	5.0m	4x0.25PVC	M8-M04-T/F04-T-5.0-PVC	162 004 401 4007
		4x0.25PUR	M8-M04-T/F04-T-5.0-PUR	162 004 401 4008

- Other cable lengths can be customized, PVC/PUR double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.

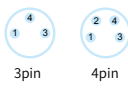


- Male
- Cable connectors
- wire jumper



Straight cable connectors, cable
30/60V 4A

Contact arrangements

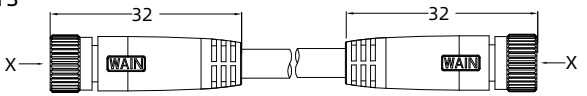


Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-M03-T/M03-T-1.5-PVC	162 003 401 4012
	5.0m	3x0.25PVC	M8-M03-T/M03-T-5.0-PVC	162 003 401 4013
4	1.5m	4x0.25PVC	M8-M04-T/M04-T-1.5-PVC	162 004 401 4012
	5.0m	4x0.25PVC	M8-M04-T/M04-T-5.0-PVC	162 004 401 4009

- Other cable lengths can be customized, PVC/PUR double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.



- Female
- Cable connectors
- wire jumper



Straight cable connectors, cable
30/60V 4A

Contact arrangements

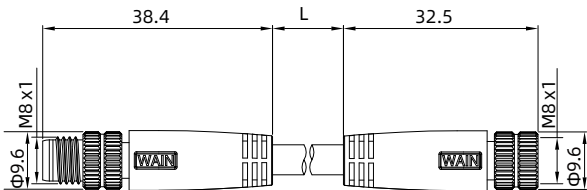


Contacts	Cable length	Cable	Designation	Order No.
3	1.5m	3x0.25PVC	M8-F03-T/F03-T-1.5-PVC	162 003 402 4006
	5.0m	3x0.25PVC	M8-F03-T/F03-T-5.0-PVC	162 003 402 4005
4	1.5m	4x0.25PVC	M8-F04-T/F04-T-1.5-PVC	162 004 402 4014
	5.0m	4x0.25PVC	M8-F04-T/F04-T-5.0-PVC	162 004 402 4013

- Other cable lengths can be customized, PVC/PUR double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.

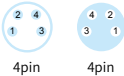


- Male/Female
- Cable connectors
- wire jumper



Straight cable connectors, cable
30/60V 4A

Contact arrangements

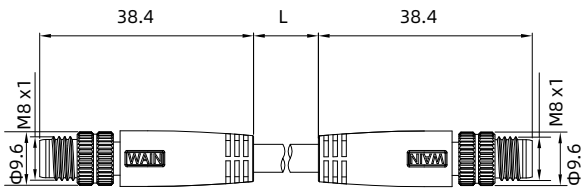


Contacts	Cable length	Cable	Designation	Order No.
4	1.5m	4x0.25PUR	M8-M04-T/F04-T-1.5-PUR-EtherCat	162 004 401 4077
	5.0m	4x0.25PUR	M8-M04-T/F04-T-5.0-PUR-EtherCat	162 004 401 4045

- Other cable lengths can be customized, PVC/PUR double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.



- Male
- Cable connectors
- wire jumper



Straight cable connectors, cable
30/60V 4A

Contact arrangements

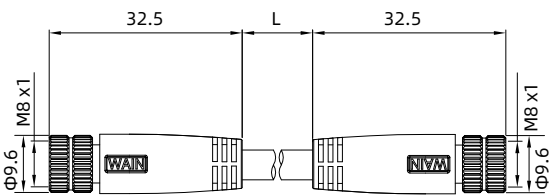


Contacts	Cable length	Cable	Designation	Order No.
4	1.5m	4x0.25PUR	M8-M04-T/M04-T-1.5-PUR-EtherCat	162 004 401 4080
	5.0m	4x0.25PUR	M8-M04-T/M04-T-5.0-PUR-EtherCat	162 004 401 4014

- Other cable lengths can be customized, PVC/PUR double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.



- Female
- Cable connectors -wire jumper



Straight cable connectors, cable
30/60V 4A

Contact arrangements

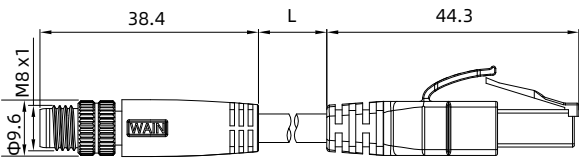


Contacts	Cable length	Cable	Designation	Order No.
4	1.5m	4x0.25PUR	M8-F04-T/F04-T-1.5-PUR-EtherCat	162 004 402 4021
	5.0m	4x0.25PUR	M8-F04-T/F04-T-5.0-PUR-EtherCat	162 004 402 4022

- Other cable lengths can be customized, PVC/PUR double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.



- Male
- Cable connectors -wire jumper



Straight cable connectors, cable
30/60V 4A

Contact arrangements



Contacts	Cable length	Cable	Designation	Order No.
4	1.5m	4x0.25PUR	M8-M04-T/RJ45-1.5-PUR-EtherCat	162 004 401 4054
	5.0m	4x0.25PUR	M8-M04-T/RJ45-5.0-PUR-EtherCat	162 004 401 4039

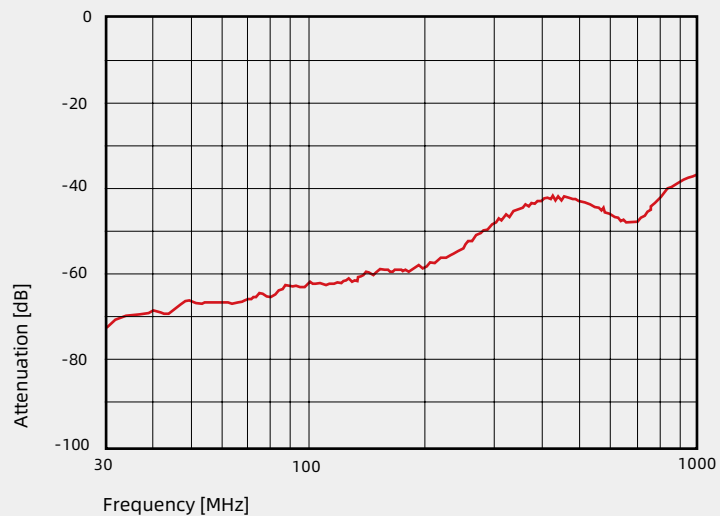
- Other cable lengths can be customized, PVC/PUR double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.

- Specifications of standard cable

Contacts	3-pole	4-pole
Wire gauge mm ²	3x0.14mm ² / 3x0.25mm ²	4x0.25mm ²
Material jacket	PVC/PUR / PVC/PUR	PUR / PVC
Insulation wire	PVC	PVC
Design of wire (mm)	18x0.1 / 32x0.1	32x0.1
Cable jacket (mm)	3 / 4.5	4.5
Resistance of wire	148Ω/Km / 79.5Ω/Km / 72Ω/Km	79.9Ω/Km
Temperature range (cable in move)	-5°C ...+70°C	-5°C ...+70°C
Temperature range (cable not in move)	-15°C ...+70°C	-15°C ...+70°C
Bending radius (cable in move)	min. 10xD	min. 10xD
Bending radius (cable not in move)	min. 5xD	min. 5xD
Approval	-	-

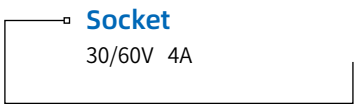
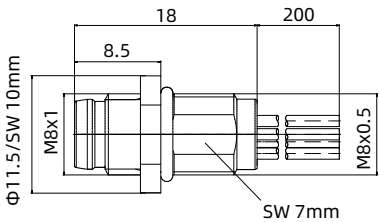
- Attenuation curve

- Attenuation curve according to DIN 47250-6
- For straight cable connectors





- Male
- Panel mount connector
- with single wires 0.25mm² length 0.2m
- Recommended use



Contact arrangements

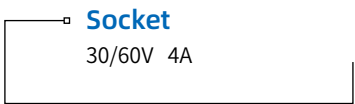
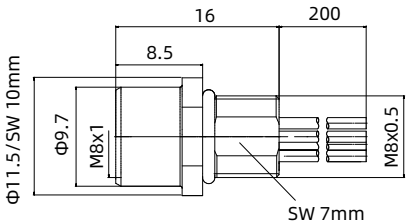


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
3	M8	M8-M03-BK-M8-W0.25	162 003 301 4001
4	M8	M8-M04-BK-M8-W0.25	162 004 301 4001



- Female
- Panel mount connector
- with single wires 0.25mm² length 0.2m
- Recommended use



Contact arrangements

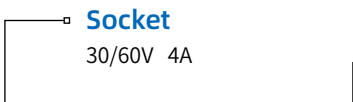
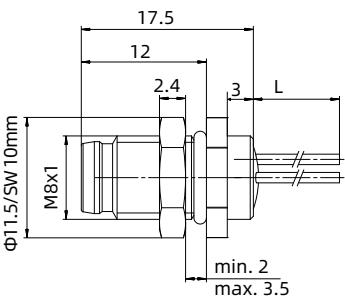


- Customized cable length upon request.

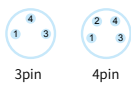
Contacts	Thread	Designation	Order No.
3	M8	M8-F03-BK-M8-W0.25	162 003 302 4001
4	M8	M8-F04-BK-M8-W0.25	162 004 302 4001



- Male
- Panel mount connector
- with single wires 0.25mm² length 0.2m
- Front fastened



Contact arrangements

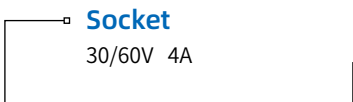
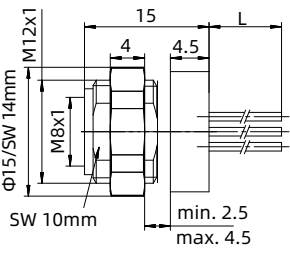


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
3	M8	M8-M03-BKR-M8-W0.25	162 003 301 4011
4	M8	M8-M04-BKR-M8-W0.25	162 004 301 4011



- Female
- Panel mount connector
- with single wires 0.25mm² length 0.2m
- Front fastened



Contact arrangements

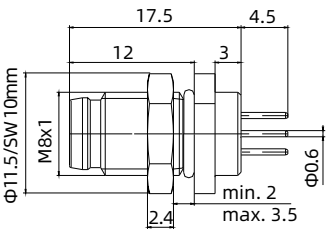


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
3	M8	M8-F03-BKR-M8-W0.25	162 003 302 4011
4	M8	M8-F04-BKR-M8-W0.25	162 004 302 4011



- Male
- Panel mount connector
- Front fastened
- Dip solder



Socket

30/60V 4A

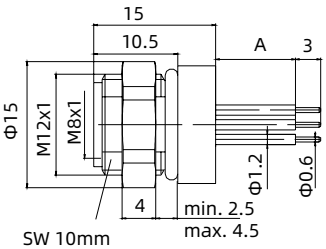
Contact arrangements



Contacts	Thread	Designation	Order No.
3	M8	M8-M03-BKR-M8-D	162 003 314 1011
4	M8	M8-M04-BKR-M8-D	162 004 314 1011



- Female
- Panel mount connector
- Front fastened
- Dip solder



Socket

30/60V 4A

Contact arrangements

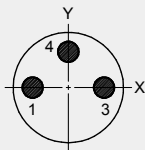


Contacts	Contact length A	Thread	Designation	Order No.
3	9.5 mm	M8	M8-F03-BKR-M8-D9.5	162 003 324 1013
	4.7 mm	M8	M8-F03-BKR-M8-D4.7	162 003 324 1012
	0.5 mm	M8	M8-F03-BKR-M8-D0.5	162 003 324 1011
4	9.5 mm	M8	M8-F04-BKR-M8-D9.5	162 004 324 1013
	4.7 mm	M8	M8-F04-BKR-M8-D4.7	162 004 324 1012
	0.5 mm	M8	M8-F04-BKR-M8-D0.5	162 004 324 1011

• Contact arrangements

• Male insert (mating side)

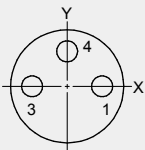
3 contacts



	X	Y	
1	-1.75	0.00	1. brown
2	-	-	2. -
3	1.75	0.00	3. blue
4	0.00	1.75	4. black

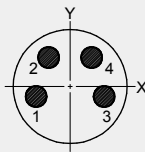
• Female insert (mating side)

3 contacts



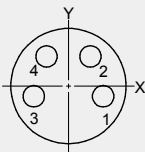
	X	Y	
1	1.75	0.00	1. brown
2	-	-	2. -
3	-1.75	0.00	3. blue
4	0.00	-1.75	4. black

4 contacts



	X	Y	
1	-1.70	-0.50	1. brown
2	-1.08	1.45	2. white
3	1.70	-0.50	3. blue
4	1.08	1.45	4. black

4 contacts

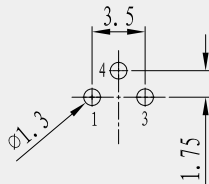


	X	Y	
1	1.70	-0.50	1. brown
2	1.08	1.45	2. white
3	-1.70	-0.50	3. blue
4	-1.08	1.45	4. black

- Panel cut out

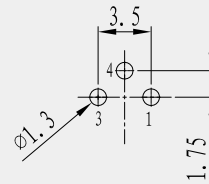
- Drilling schemes male insert (PCB), shielding sheet

3 contacts

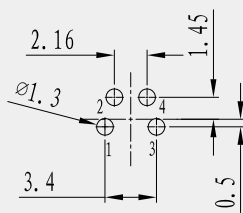


- Drilling schemes male insert (PCB), shielding sheet

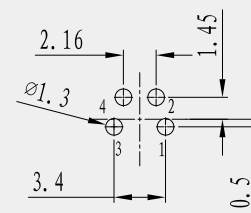
3 contacts



4 contacts

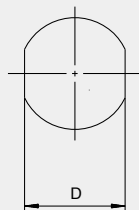


4 contacts

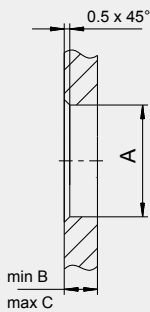


• Panel cut out

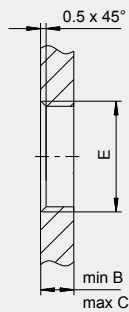
- With flats as anti-rotation device



- With bore hole



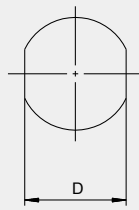
- With thread to screw in



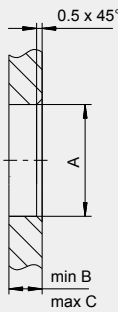
Thread E	A	B	C	D
M8x0.5	8.1	2.5	4.5	7.1

Tightening moment 1Nm

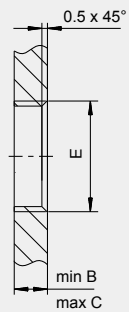
- With flats as anti-rotation device



- With bore hole



- With thread to screw in



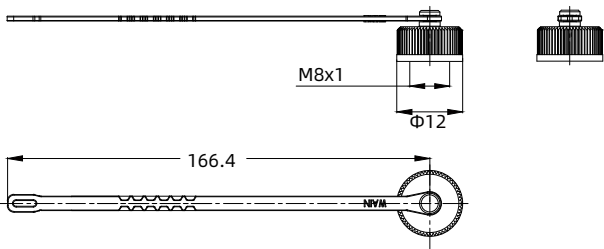
Thread E	A	B	C	D
M8x1	8.1	2.5	4.5	7.1

Tightening moment 1Nm

• Accessories



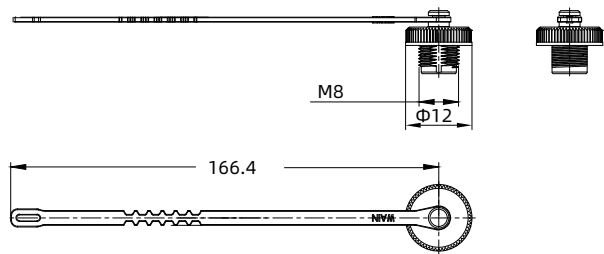
Protection cover
for male cable connector



Description	Designation	Order No.
Without cord	M8-MCV	162 000 001 9003
With cord	M8-MCV/1	162 000 001 9001



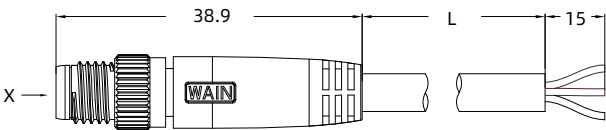
Protection cover
for female cable connector



Description	Designation	Order No.
Without cord	M8-FCV	162 000 002 9003
With cord	M8-FCV/1	162 000 002 9001



- Male
- Moulded
- Screw



Straight cable connectors, cable
30V 4A

Contact arrangements

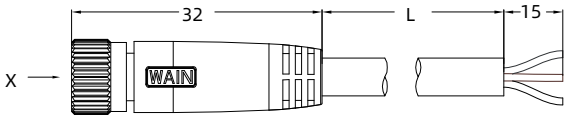


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
5	1.5m	5x0.25PVC	M8-M05B-T-1.5-PVC	162 005 401 4001
		5x0.25PUR	M8-M05B-T-1.5-PUR	162 005 401 4002
	5.0m	5x0.25PVC	M8-M05B-T-5.0-PVC	162 005 401 4003
		5x0.25PUR	M8-M05B-T-5.0-PUR	162 005 401 4004



- Female
- Moulded
- Screw



Straight cable connectors, cable
30V 4A

Contact arrangements

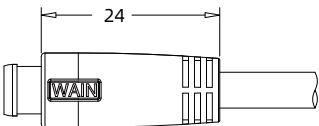


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
5	1.5m	5x0.25PVC	M8-F05B-T-1.5-PVC	162 005 402 4001
		5x0.25PUR	M8-F05B-T-1.5-PUR	162 005 402 4002
	5.0m	5x0.25PVC	M8-F05B-T-5.0-PVC	162 005 402 4003
		5x0.25PUR	M8-F05B-T-5.0-PUR	162 005 402 4004



- Male
- Moulded
- connect straight



Straight cable connectors, cable
30V 4A

Contact arrangements

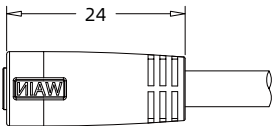


- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
5	1.5m	5x0.25PVC	M8Q-M05B-T-1.5-PVC	162 005 401 4005
		5x0.25PUR	M8Q-M05B-T-1.5-PUR	162 005 401 4006
	5.0m	5x0.25PVC	M8Q-M05B-T-5.0-PVC	162 005 401 4007
		5x0.25PUR	M8Q-M05B-T-5.0-PUR	162 005 401 4008



- Female
- Moulded
- connect straight



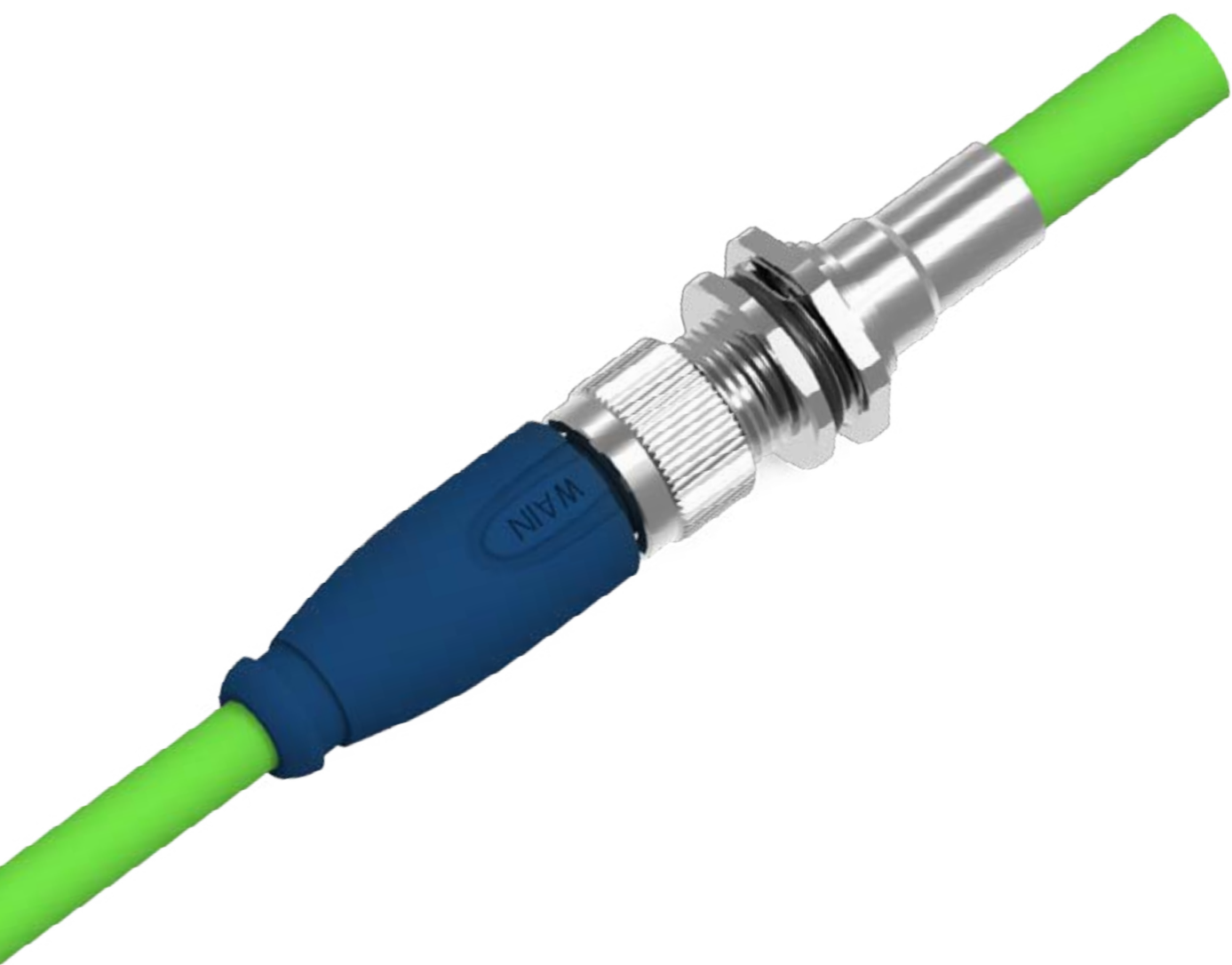
Straight cable connectors, cable
30V 4A

Contact arrangements



- Further cable length upon request, minimum order quantity 200 pieces.

Contacts	Cable length	Cable	Designation	Order No.
5	1.5m	5x0.25PVC	M8Q-F05B-T-1.5-PVC	162 005 402 4005
		5x0.25PUR	M8Q-F05B-T-1.5-PUR	162 005 402 4006
	5.0m	5x0.25PVC	M8Q-F05B-T-5.0-PVC	162 005 402 4007
		5x0.25PUR	M8Q-F05B-T-5.0-PUR	162 005 402 4008



M12 S - M 04 A - T - 1.5 - PVC /BU - SH

➤ **Special feature:**

Blank= without shielding
SH= shielding
LED=with LED
Cable Type=Cat.5e/ Cat.6a
PFN=PROFINET

➤ **Cable color:**

Blank=black
BU=blue
.....

➤ **cable connection:**

PVC=moulded PUR=moulded
DPUR=moulded (Low Smoke and Halogen-Free)
C=solder cup D=dip solder W0.25=UL1007 24AWG
.....

➤ **Cable specification:**

Cable length: 1.5=1.5m
5=5m
Cable range: D6 (4-6)
D8 (6-8)
D10 (8-10)
.....

➤ **Mounting thread:**

PG9
M16
.....

➤ **Installation interface:**

Plug:T=top / TH=Lengthened straight plug /
S=side BK=panel mount(Socket)
BKR=front fastend(Socket)
BKP=positioning(Socket)
Code: A / B / D / X

➤ **Pin:**

03
04
05
.....

➤ **Type:**

M=male screw F=female screw
MCV=male cover FCV=female cover

➤ **Locking type:**

Blank=Standard lock
P=plastic lock
S=steel lock

➤ **M12**

• Electrical properties

Number of contacts	3-pole	4-pole	5-pole	8-pole	12-pole
Rated current	4A	4A	4A	2A	1.5A
Rated voltage	250V	250V	125V	60V	60V
Pulse voltage	2500V	2500V	2500V	800V	800V
Pollution degree	3	3	3	3	3
Insulation resistance	$\geq 10^{12}\Omega$	$\geq 10^{12}\Omega$	$\geq 10^{12}\Omega$	$\geq 10^{12}\Omega$	$\geq 10^{12}\Omega$
Overvoltage categorie	II	II	II	II	II
Contact resistance	$\leq 10\text{m}\Omega$	$\leq 10\text{m}\Omega$	$\leq 10\text{m}\Omega$	$\leq 10\text{m}\Omega$	$\leq 10\text{m}\Omega$

• Mechanical properties

Number of contacts	3-pole	4-pole	5-pole	8-pole	12-pole
Connector locking system	screw M12X1	screw M12X1	screw M12X1	screw M12X1	screw M12X1
Termination	screw	screw	screw	screw	screw
Wire gauge	MAX.0.75mm ² (Max.AWG18)	MAX.0.75mm ² (Max.AWG18)	MAX.0.75mm ² (Max.AWG18)	MAX.0.34mm ² (Max.AWG22)	MAX.0.14mm ² (Max.AWG26)
Cable outlet	4-10mm	4-10mm	4-10mm	4-10mm	4-10mm
Mechanical operation	> 100	> 100	> 100	> 100	> 100

• Environmental performance

Number of contacts	3-pole	4-pole	5-pole	8-pole	12-pole
Limiting temperature	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C	-40°C ~85°C
Limit humidity	5%~95%	5%~95%	5%~95%	5%~95%	5%~95%
Degree of protection	IP67	IP67	IP67	IP67	IP67

• Materials and surface treatment

Number of contacts	3-pole	4-pole	5-pole	8-pole	12-pole
Material group	II	II	II	II	II
Material of contact	copper alloy	copper alloy	copper alloy	copper alloy	copper alloy
Contact plating	Au	Au	Au	Au	Au
Insulating material	PA	PA	PA	PA	PA
Material of housing	PA/PBT/zinc alloy/ copper alloy	PA/PBT/zinc alloy/ copper alloy	PA/PBT/zinc alloy/ copper alloy	PA/PBT/zinc alloy/ copper alloy	PA/PBT/zinc alloy/ copper alloy
Sealing element	FPM/NBR	FPM/NBR	FPM/NBR	FPM/NBR	FPM/NBR



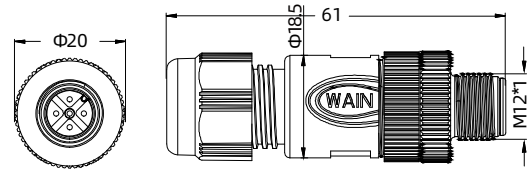
Standards: IEC-61076-2-101

Cable Connector

- Shielded / unshielded series
- Installable series and moulded cable series
- Thread locking M12X1
- Screw terminal and welding terminal
- Shielding ring and ring spring shielding connection
- Cable length 1.5m and 5m
- Other cable length upon request, minimum order quantity 200 pieces
- Cable material can be customized according to requirements
- Degree of protection IP67/ IP68
- Transparent case for PCB with LED



- Male
- Plastic locking system
- Screw clamp connection



Straight cable connectors

60/125/250V 2/4A

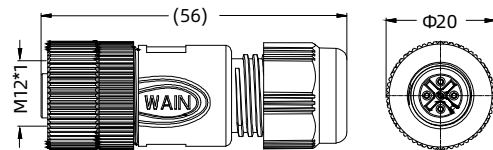
A-Code



Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12P-M03A-T-D6	163 003 411 3101
	6-8 mm	M12P-M03A-T-D8	163 003 411 3102
4	4-6 mm	M12P-M04A-T-D6	163 004 411 3101
	6-8 mm	M12P-M04A-T-D8	163 004 411 3102
5	4-6 mm	M12P-M05A-T-D6	163 005 411 3101
	6-8 mm	M12P-M05A-T-D8	163 005 411 3102
8	6-8 mm	M12P-M08A-T-D8	163 008 401 3003
12	6-8 mm	M12P-MST12A-T-D8	163 012 413 3003



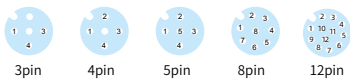
- Female
- Plastic locking system
- Screw clamp connection



Straight cable connectors

60/125/250V 2/4A

A-Code



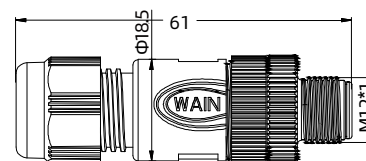
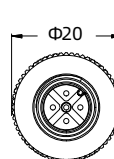
Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12P-F03A-T-D6	163 003 421 3101
	6-8 mm	M12P-F03A-T-D8	163 003 421 3102
4	4-6 mm	M12P-F04A-T-D6	163 004 421 3101
	6-8 mm	M12P-F04A-T-D8	163 004 421 3102
5	4-6 mm	M12P-F05A-T-D6	163 005 421 3101
	6-8 mm	M12P-F05A-T-D8	163 005 421 3102
8	6-8 mm	M12P-F08A-T-D8	163 008 424 3002
12	6-8 mm	M12P-FST12A-T-D8	163 012 423 3003

- Hexagonal driver

Description	Designation	Order No.
for 8 pin screw clamp connection	SW-1.27*47	198 001 003 0016



- Male
- Metal locking system
- Screw clamp connection
- Recommended use



Straight cable connectors

60/125/250V 2/4A

A-Code



3pin

4pin

5pin

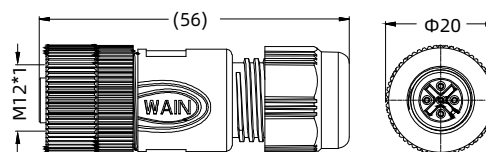
8pin

12pin

Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12-M03A-T-D6	163 003 411 3001
	6-8 mm	M12-M03A-T-D8	163 003 411 3002
4	4-6 mm	M12-M04A-T-D6	163 004 411 3001
	6-8 mm	M12-M04A-T-D8	163 004 411 3002
5	4-6 mm	M12-M05A-T-D6	163 005 411 3001
	6-8 mm	M12-M05A-T-D8	163 005 411 3002
8	6-8 mm	M12-M08A-T-D8	163 008 411 3002
12	6-8 mm	M12-MST12A-T-D8	163 012 413 3002



- Female
- Metal locking system
- Screw clamp connection
- Recommended use



Straight cable connectors

60/125/250V 2/4A

A-Code



3pin

4pin

5pin

8pin

12pin

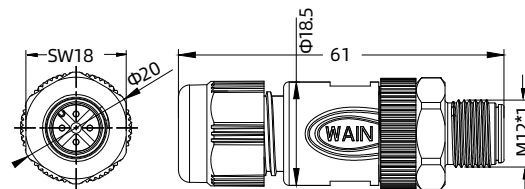
Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12-F03A-T-D6	163 003 421 3001
	6-8 mm	M12-F03A-T-D8	163 003 421 3002
4	4-6 mm	M12-F04A-T-D6	163 004 421 3001
	6-8 mm	M12-F04A-T-D8	163 004 421 3002
5	4-6 mm	M12-F05A-T-D6	163 005 421 3001
	6-8 mm	M12-F05A-T-D8	163 005 421 3002
8	6-8 mm	M12-F08A-T-D8	163 008 421 3002
12	6-8 mm	M12-FST12A-T-D8	163 012 423 3002

- Hexagonal driver

Description	Designation	Order No.
for 8 pin screw clamp connection	SW-1.27*47	198 001 003 0016



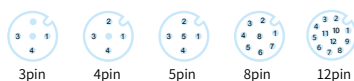
- Male
- Stainless steel
- Locking system
- Screw clamp connection



Straight cable connectors

60/125/250V 2/4A

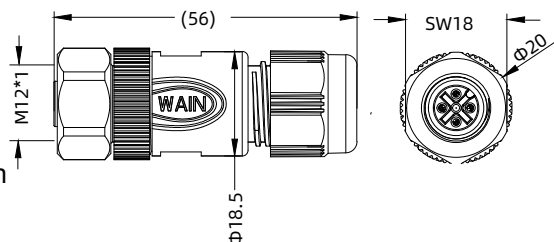
A-Code



Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12S-M03A-T-D6	163 003 401 3001
	6-8 mm	M12S-M03A-T-D8	163 003 401 3002
4	4-6 mm	M12S-M04A-T-D6	163 004 411 3201
	6-8 mm	M12S-M04A-T-D8	163 004 411 3202
5	4-6 mm	M12S-M05A-T-D6	163 005 411 3201
	6-8 mm	M12S-M05A-T-D8	163 005 411 3202
8	6-8 mm	M12S-M08A-T-D8	163 008 411 3202
12	6-8 mm	M12S-MST12A-T-D8	163 012 413 3004



- Female
- Stainless steel
- Locking system
- Screw clamp connection



Straight cable connectors

60/125/250V 2/4A

A-Code



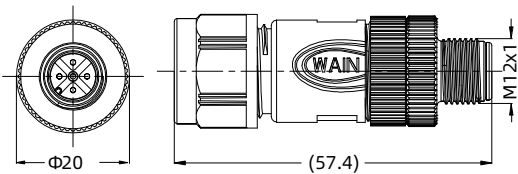
Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12S-F03A-T-D6	163 003 424 1001
	6-8 mm	M12S-F03A-T-D8	163 003 424 1002
4	4-6 mm	M12S-F04A-T-D6	163 004 421 3201
	6-8 mm	M12S-F04A-T-D8	163 004 421 3202
5	4-6 mm	M12S-F05A-T-D6	163 005 421 3201
	6-8 mm	M12S-F05A-T-D8	163 005 421 3202
8	6-8 mm	M12S-F08A-T-D8	163 008 421 3202
12	6-8 mm	M12S-MST12A-T-D8	163 012 423 3004

- Hexagonal driver

Description	Designation	Order No.
for 8 pin screw clamp connection	SW-1.27*47	198 001 003 0016



- Male
- Power
- Screw clamp connection



Straight cable connectors
125/250V 2/8A

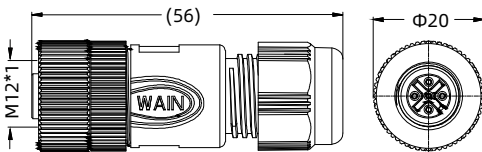
A-Code



Contacts	Cable outlet	Designation	Order No.
4	8-10 mm	M12-M04A-T-D10	163 004 411 3003
5	8-10 mm	M12-M05A-T-D10	163 005 411 3003
8	8-10 mm	M12-M08A-T-D10	163 008 401 3001
12	8-10 mm	M12-MST12A-T-D10	163 012 413 3001



- Female
- Power
- Screw clamp connection



Straight cable connectors
125/250V 2/8A

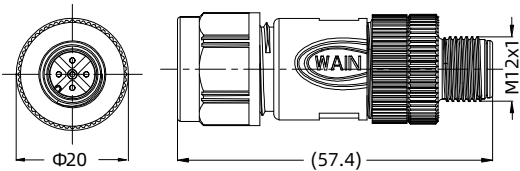
A-Code



Contacts	Cable outlet	Designation	Order No.
4	8-10 mm	M12-F04A-T-D10	163 004 421 3003
5	8-10 mm	M12-F05A-T-D10	163 005 421 3003
8	8-10 mm	M12-F08A-T-D10	163 008 424 1002
12	8-10 mm	M12-FST12A-T-D10	163 012 423 3001



- Male
- Plastic locking system
- Screw clamp connection



Straight cable duo connectors

60/125/250V 2/4A

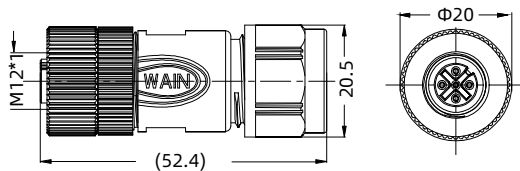
A-Code



Contacts	Cable outlet	Designation	Order No.
4	2(2.1-3 mm or 4-5 mm)	M12P-M04A-T-2D5	163 004 411 3104
5	2(2.1-3 mm or 4-5 mm)	M12P-M05A-T-2D5	163 005 411 3104
8	2(2.1-3 mm or 4-5 mm)	M12P-M08A-T-2D5	163 008 401 3002



- Female
- Plastic locking system
- Screw clamp connection



Straight cable duo connectors

60/125/250V 2/4A

A-Code



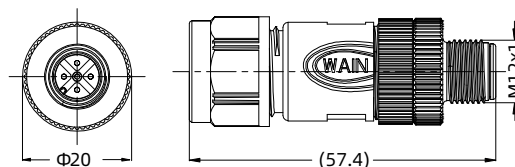
Contacts	Cable outlet	Designation	Order No.
4	2(2.1-3 mm or 4-5 mm)	M12P-F04A-T-2D5	163 004 421 3104
5	2(2.1-3 mm or 4-5 mm)	M12P-F05A-T-2D5	163 005 421 3104
8	2(2.1-3 mm or 4-5 mm)	M12P-F08A-T-2D5	163 008 424 3001

- Hexagonal driver

Description	Designation	Order No.
for 8 pin screw clamp connection	SW-1.27*47	198 001 003 0016



- Male
- Metal locking system
- Screw clamp connection



Straight cable duo connectors

60/125/250V 2/4A

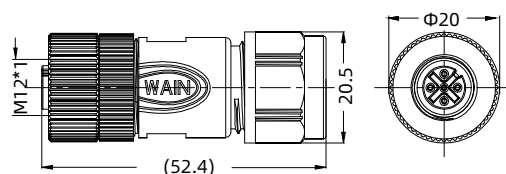
A-Code



Contacts	Cable outlet	Designation	Order No.
4	2(2.1-3 mm or 4-5 mm)	M12-M04A-T-2D5	163 004 411 3004
5	2(2.1-3 mm or 4-5 mm)	M12-M05A-T-2D5	163 005 411 3004
8	2(2.1-3 mm or 4-5 mm)	M12-M08A-T-2D5	163 008 411 3004



- Female
- Metal locking system
- Screw clamp connection



Straight cable duo connectors

60/125/250V 2/4A

A-Code



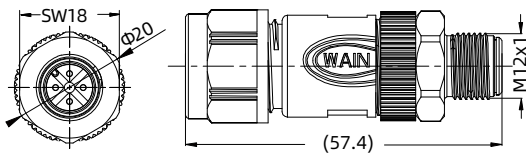
Contacts	Cable outlet	Designation	Order No.
4	2(2.1-3 mm or 4-5 mm)	M12-F04A-T-2D5	163 004 421 3105
5	2(2.1-3 mm or 4-5 mm)	M12-F05A-T-2D5	163 005 421 3105
8	2(2.1-3 mm or 4-5 mm)	M12-F08A-T-2D5	163 008 424 1001

- Hexagonal driver

Description	Designation	Order No.
for 8 pin screw clamp connection	SW-1.27*47	198 001 003 0016



- Male
- Stainless steel
- Locking system
- Screw clamp connection



Straight cable duo connectors

60/125/250V 2/4A

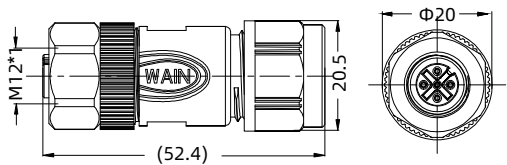
A-Code



Contacts	Cable outlet	Designation	Order No.
4	2(2.1-3 mm or 4-5 mm)	M12S-M04A-T-2D5	163 004 411 3204
5	2(2.1-3 mm or 4-5 mm)	M12S-M05A-T-2D5	163 005 411 3204
8	2(2.1-3 mm or 4-5 mm)	M12S-M08A-T-2D5	163 008 411 3204



- Female
- Stainless steel
- Locking system
- Screw clamp connection



Straight cable duo connectors

60/125/250V 2/4A

A-Code



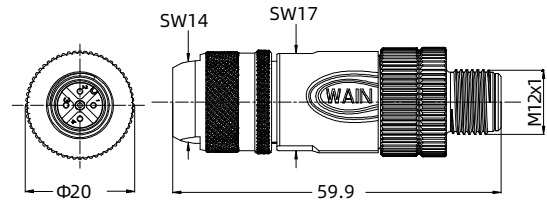
Contacts	Cable outlet	Designation	Order No.
4	2(2.1-3 mm or 4-5 mm)	M12S-F04A-T-2D5	163 004 421 3204
5	2(2.1-3 mm or 4-5 mm)	M12S-F05A-T-2D5	163 005 421 3204
8	2(2.1-3 mm or 4-5 mm)	M12S-F08A-T-2D5	163 008 421 3204

• Hexagonal driver

Description	Designation	Order No.
for 8 pin screw clamp connection	SW-1.27*47	198 001 003 0016



- Male
- Shielded
- Screw clamp connection
- Recommended use



Straight cable connectors, shielded

60/125/250V 2/4A

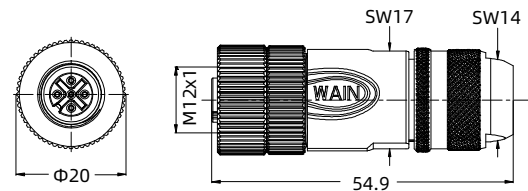
A-Code



Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12-M03A-T-D6-SH	163 003 414 2002
	6-8 mm	M12-M03A-T-D8-SH	163 003 414 2003
4	4-6 mm	M12-M04A-T-D6-SH	163 004 411 2001
	6-8 mm	M12-M04A-T-D8-SH	163 004 411 2002
5	4-6 mm	M12-M05A-T-D6-SH	163 005 411 2001
	6-8 mm	M12-M05A-T-D8-SH	163 005 411 2002
8	6-8 mm	M12-M08A-T-D8-SH	163 008 411 2002
12	6-8 mm	M12-MST12A-T-D8-SH	163 012 413 2003



- Female
- Shielded
- Screw clamp connection
- Recommended use



Straight cable connectors, shielded

60/125/250V 2/4A

A-Code



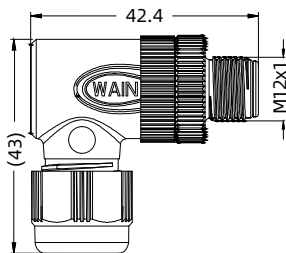
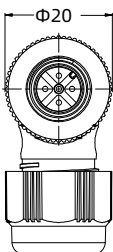
Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12-F03A-T-D6-SH	163 003 421 2001
	6-8 mm	M12-F03A-T-D8-SH	163 003 421 2002
4	4-6 mm	M12-F04A-T-D6-SH	163 004 421 2001
	6-8 mm	M12-F04A-T-D8-SH	163 004 421 2002
5	4-6 mm	M12-F05A-T-D6-SH	163 005 421 2001
	6-8 mm	M12-F05A-T-D8-SH	163 005 421 2002
8	6-8 mm	M12-F08A-T-D8-SH	163 008 421 2002
12	6-8 mm	M12-FST12A-T-D8-SH	163 012 423 2003

- Hexagonal driver

Description	Designation	Order No.
for 8 pin screw clamp connection	SW-1.27*47	198 001 003 0016



- Male
- Plastic locking system
- Screw clamp connection



Angled
cable connectors
125/250V 4A

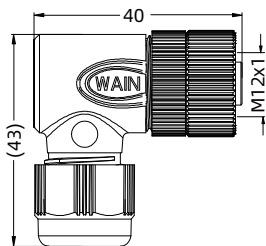
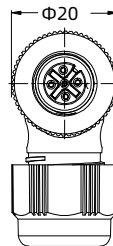
A-Code



Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12P-M03A-S-D6	163 003 511 3101
	6-8 mm	M12P-M03A-S-D8	163 003 511 3102
4	4-6 mm	M12P-M04A-S-D6	163 004 511 3101
	6-8 mm	M12P-M04A-S-D8	163 004 511 3102
5	4-6 mm	M12P-M05A-S-D6	163 005 511 3101
	6-8 mm	M12P-M05A-S-D8	163 005 511 3102



- Female
- Plastic locking system
- Screw clamp connection



Angled
cable connectors
125/250V 4A

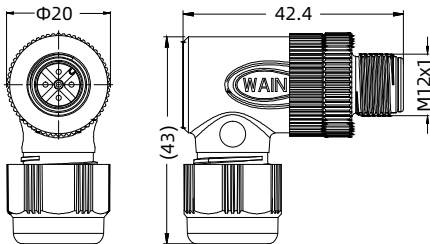
A-Code



Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12P-F03A-S-D6	163 003 521 3101
	6-8 mm	M12P-F03A-S-D8	163 003 521 3102
4	4-6 mm	M12P-F04A-S-D6	163 004 521 3101
	6-8 mm	M12P-F04A-S-D8	163 004 521 3102
5	4-6 mm	M12P-F05A-S-D6	163 005 521 3101
	6-8 mm	M12P-F05A-S-D8	163 005 521 3102



- Male
- Metal locking system
- Screw clamp connection



Angled cable connectors
125/250V 4A

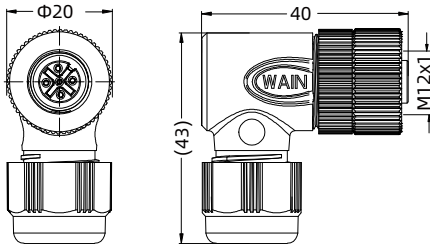
A-Code



Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12-M03A-S-D6	163 003 511 3001
	6-8 mm	M12-M03A-S-D8	163 003 511 3002
4	4-6 mm	M12-M04A-S-D6	163 004 511 3001
	6-8 mm	M12-M04A-S-D8	163 004 511 3002
5	4-6 mm	M12-M05A-S-D6	163 005 511 3001
	6-8 mm	M12-M05A-S-D8	163 005 511 3002



- Female
- Metal locking system
- Screw clamp connection



Angled cable connectors
125/250V 4A

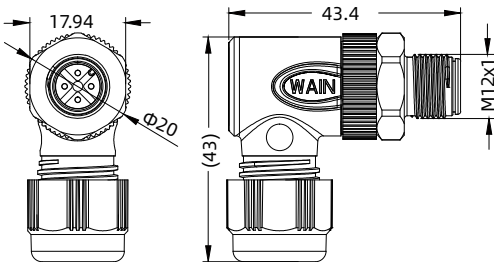
A-Code



Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12-F03A-S-D6	163 003 521 3001
	6-8 mm	M12-F03A-S-D8	163 003 521 3002
4	4-6 mm	M12-F04A-S-D6	163 004 521 3001
	6-8 mm	M12-F04A-S-D8	163 004 521 3002
5	4-6 mm	M12-F05A-S-D6	163 005 521 3001
	6-8 mm	M12-F05A-S-D8	163 005 521 3002



- Male
- Stainless steel locking system
- Screw clamp connection



Angled cable connectors
125/250V 4A

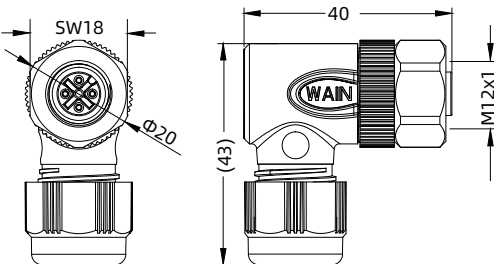
A-Code



Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12S-M03A-S-D6	163 003 414 1001
	6-8 mm	M12S-M03A-S-D8	163 003 514 1001
4	4-6 mm	M12S-M04A-S-D6	163 004 511 3201
	6-8 mm	M12S-M04A-S-D8	163 004 511 3202
5	4-6 mm	M12S-M05A-S-D6	163 005 511 3201
	6-8 mm	M12S-M05A-S-D8	163 005 511 3202



- Female
- Stainless steel locking system
- Screw clamp connection



Angled cable connectors
125/250V 4A

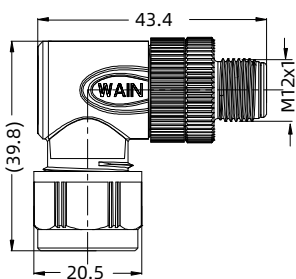
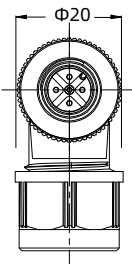
A-Code



Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12S-F03A-S-D6	163 003 524 1001
	6-8 mm	M12S-F03A-S-D8	163 003 524 1002
4	4-6 mm	M12S-F04A-S-D6	163 004 521 3201
	6-8 mm	M12S-F04A-S-D8	163 004 521 3202
5	4-6 mm	M12S-F05A-S-D6	163 005 521 3201
	6-8 mm	M12S-F05A-S-D8	163 005 521 3202



- Male
- Plastic locking system
- Screw clamp connection



Angled cable duo
connectors

125/250V 4A

A-Code



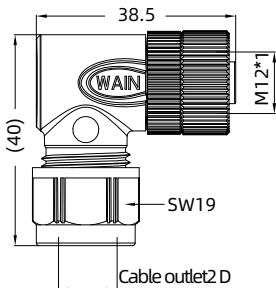
4pin

5pin

Contacts	Cable outlet	Designation	Order No.
4	2(2.1-3 mm or 4-5 mm)	M12P-M04A-S-2D5	163 004 511 3104
5	2(2.1-3 mm or 4-5 mm)	M12P-M05A-S-2D5	163 005 511 3104



- Female
- Plastic locking system
- Screw clamp connection



Angled cable duo
connectors

125/250V 4A

A-Code



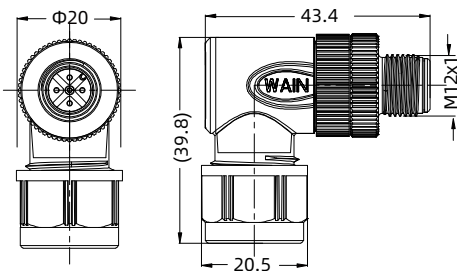
4pin

5pin

Contacts	Cable outlet	Designation	Order No.
4	2(2.1-3 mm or 4-5 mm)	M12P-F04A-S-2D5	163 004 502 3001
5	2(2.1-3 mm or 4-5 mm)	M12P-F05A-S-2D5	163 005 502 3001



- Male
- Metal locking system
- Screw clamp connection



Angled cable duo connectors
125/250V 4A

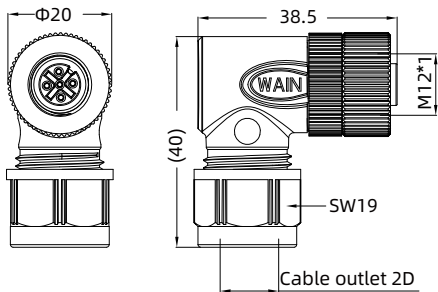
A-Code



Contacts	Cable outlet	Designation	Order No.
4	2(2.1-3 mm or 4-5 mm)	M12-M04A-S-2D5	163 004 511 3004
5	2(2.1-3 mm or 4-5 mm)	M12-M05A-S-2D5	163 005 511 3004



- Female
- Metal locking system
- Screw clamp connection



Angled cable duo connectors
125/250V 4A

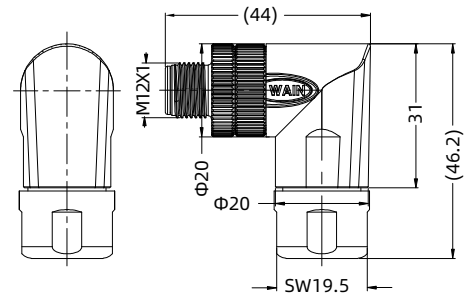
A-Code



Contacts	Cable outlet	Designation	Order No.
4	2(2.1-3 mm or 4-5 mm)	M12-F04A-S-2D5	163 004 502 1001
5	2(2.1-3 mm or 4-5 mm)	M12-F05A-S-2D5	163 005 502 1001



- Male
- Shielded
- Screw clamp connection



**Angled
cable connectors
shielded**
125/250V 4A

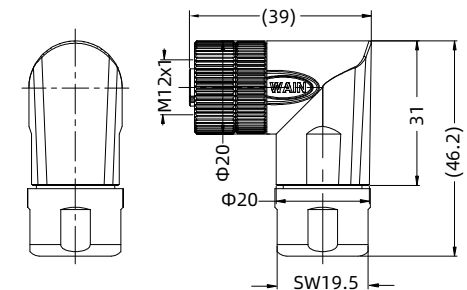
A-Code



Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12-M03A-S-D6-SH	163 003 414 2001
	6-8 mm	M12-M03A-S-D8-SH	163 003 514 2001
4	4-6 mm	M12-M04A-S-D6-SH	163 004 511 2001
	6-8 mm	M12-M04A-S-D8-SH	163 004 511 2002
5	4-6 mm	M12-M05A-S-D6-SH	163 005 511 2001
	6-8 mm	M12-M05A-S-D8-SH	163 005 511 2002



- Female
- Shielded,
- Screw clamp connection



**Angled
cable connectors
shielded**
125/250V 4A

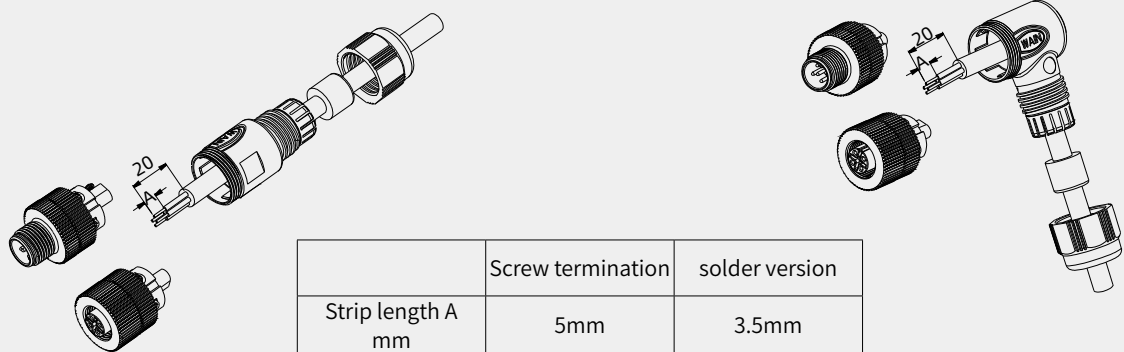
A-Code



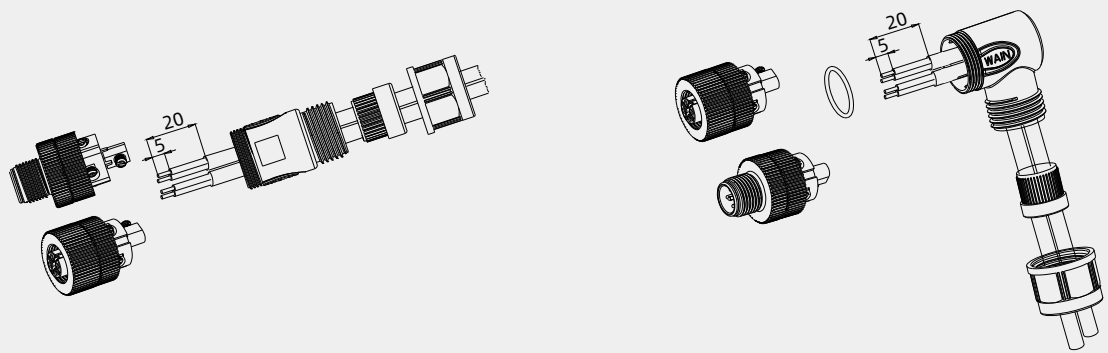
Contacts	Cable outlet	Designation	Order No.
3	4-6 mm	M12-F03A-S-D6-SH	163 003 521 2001
	6-8 mm	M12-F03A-S-D8-SH	163 003 521 2002
4	4-6 mm	M12-F04A-S-D6-SH	163 004 521 2001
	6-8 mm	M12-F04A-S-D8-SH	163 004 521 2002
5	4-6 mm	M12-F05A-S-D6-SH	163 005 521 2001
	6-8 mm	M12-F05A-S-D8-SH	163 005 521 2002

• Assembly instruction

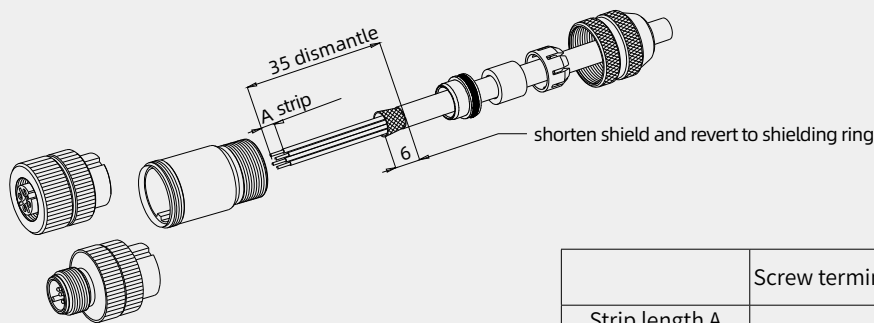
- Strip length male/female cable connector, male/female angled connector, **not shielded**



- Strip length male/female cable duo connector, male/female angled duo connector, **not shielded**



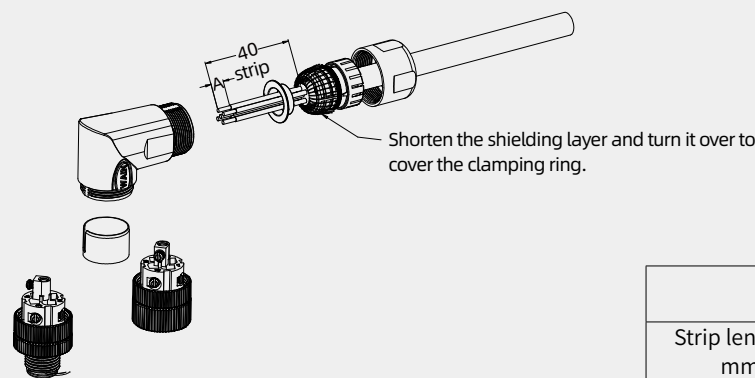
- Strip length male/female cable connector, **with shielding ring**



	Screw termination	solder version
Strip length A mm	5mm	3.5mm

• Assembly instruction

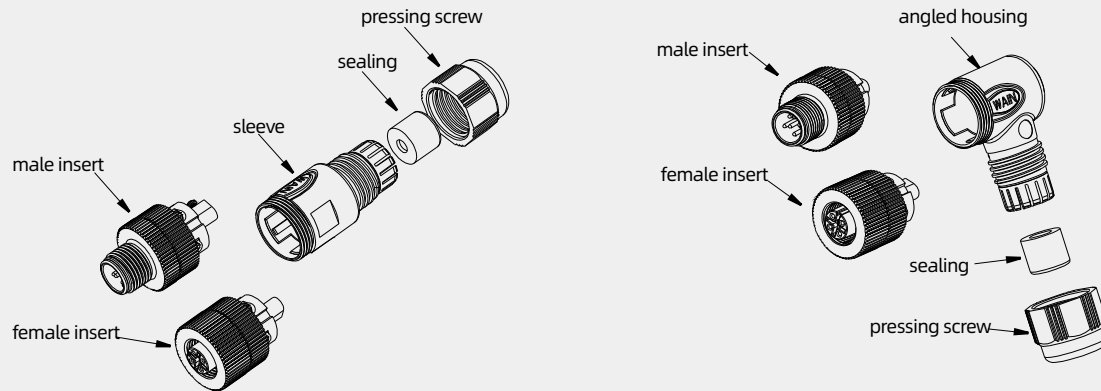
- Stripping length of male/female angled cable connector , with shielded ring.



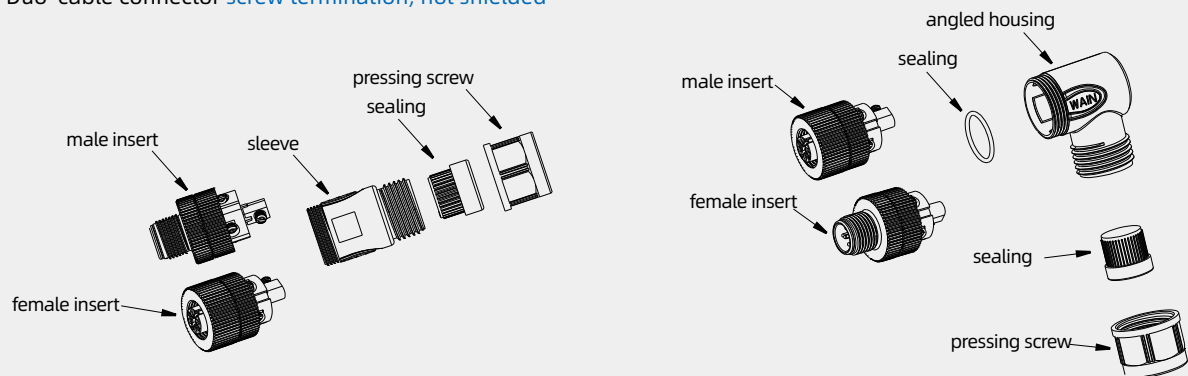
	Screw termination	solder version
Strip length A mm	5mm	3.5mm

• Component part drawing

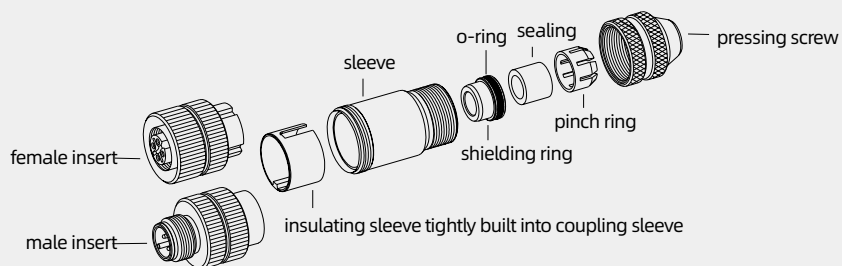
• Cable connector **not shielded**



• Duo-cable connector **screw termination, not shielded**

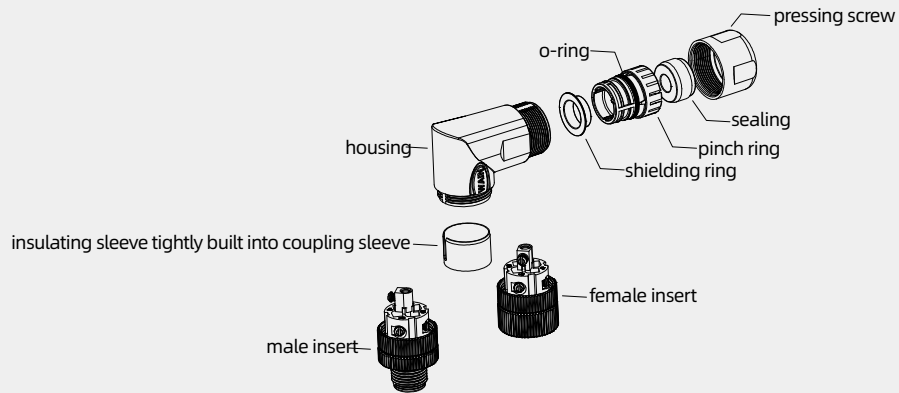


• Cable connector **with shielding ring**



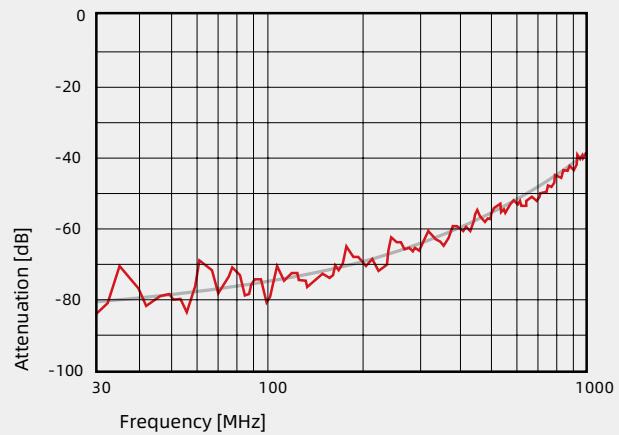
- Component part drawing

- Angled connector [Screw termination, shielded](#)

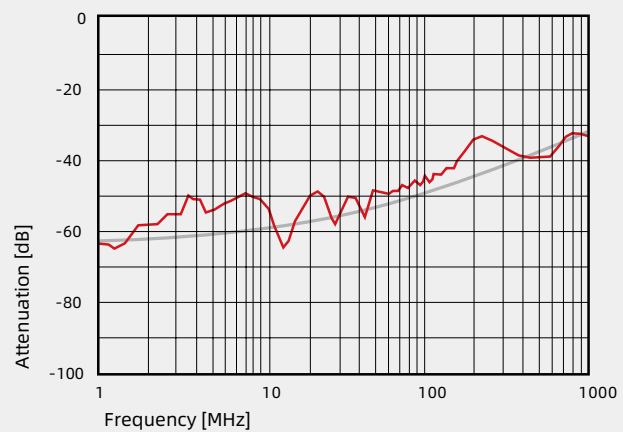


• Rating

- Attenuation curve according to DIN 47250-6
- For straight cable connectors, with shielding ring

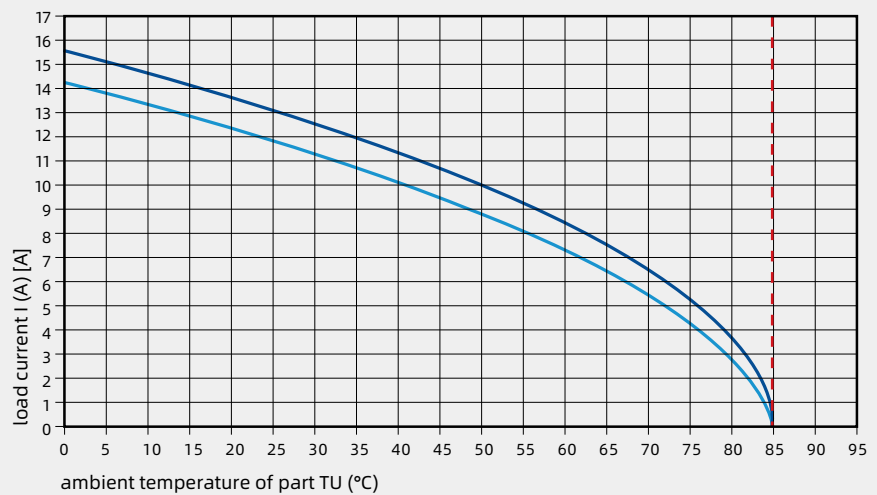


- Attenuation curve according to DIN 47250-6
- For straight cable connectors, with iris type spring



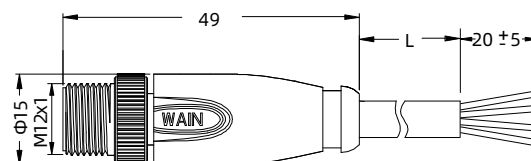
- Derating curve according to DIN EN 60512 for POWER cable connectors

- A-coding 4 pole version
- A-coding 5 pole version





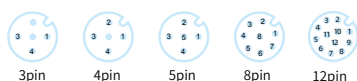
- Male
- Moulded
- Screw
- Recommended use



Straight cable connectors, cable

60/125/250V 2/4A

A-Code

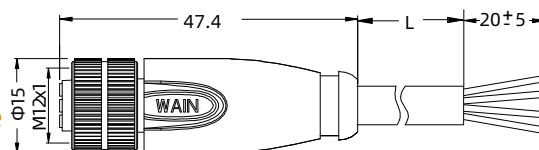


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-M03A-T-1.5-PVC	163 003 401 4001
		5.0 m	M12-M03A-T-1.5-PVC	163 003 401 4002
	3x0.34PUR	1.5 m	M12-M03A-T-1.5-PUR	163 003 401 4041
		5.0 m	M12-M03A-T-1.5-PVC	163 003 401 4042
4	4x0.34PVC	1.5 m	M12-M04A-T-1.5-PVC	163 004 401 4001
		5.0 m	M12-M03A-T-1.5-PVC	163 004 401 4002
	4x0.34PUR	1.5 m	M12-M04A-T-1.5-PUR	163 004 401 4041
		5.0 m	M12-M03A-T-1.5-PVC	163 004 401 4042
5	5x0.25PVC	1.5 m	M12-M05A-T-1.5-PVC	163 005 401 4001
		5.0 m	M12-M03A-T-1.5-PVC	163 005 401 4002
	5x0.25PUR	1.5 m	M12-M05A-T-1.5-PUR	163 005 401 4041
		5.0 m	M12-M03A-T-1.5-PVC	163 005 401 4042
8	8x0.25PUR	1.5 m	M12-M08A-T-1.5-PUR	163 008 401 4041
		5.0 m	M12-M03A-T-1.5-PVC	163 008 401 4042
12	12x0.25PVC	1.5 m	M12-M12A-T-1.5-PVC	163 012 401 4001
		5.0 m	M12-M12A-T-5.0-PVC	163 012 401 4003
	12x0.25PUR	1.5 m	M12-M12A-T-1.5-PUR	163 012 401 4004
		5.0 m	M12-M12A-T-5.0-PUR	163 012 401 4005



- Female
- Moulded
- Screw
- Recommended use



Straight cable connectors, cable

60/125/250V 2/4A

A-Code

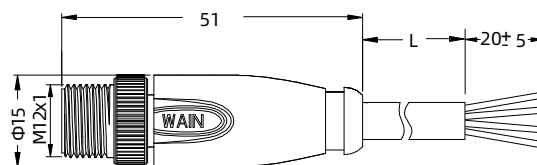


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-F03A-T-1.5-PVC	163 003 402 4001
		5.0 m	M12-F03A-T-5.0-PVC	163 003 402 4002
	3x0.34PUR	1.5 m	M12-F03A-T-1.5-PUR	163 003 402 4041
		5.0 m	M12-F03A-T-5.0-PUR	163 003 402 4042
4	4x0.34PVC	1.5 m	M12-F04A-T-1.5-PVC	163 004 402 4001
		5.0 m	M12-F04A-T-5.0-PVC	163 004 402 4002
	4x0.34PUR	1.5 m	M12-F04A-T-1.5-PUR	163 004 402 4041
		5.0 m	M12-F04A-T-5.0-PUR	163 004 402 4042
5	5x0.25PVC	1.5 m	M12-F05A-T-1.5-PVC	163 005 402 4001
		5.0 m	M12-F05A-T-5.0-PVC	163 005 402 4002
	5x0.25PUR	1.5 m	M12-F05A-T-1.5-PUR	163 005 402 4041
		5.0 m	M12-F05A-T-5.0-PUR	163 005 402 4042
8	8x0.25PUR	1.5 m	M12-F08A-T-1.5-PUR	163 008 402 4041
		5.0 m	M12-F08A-T-5.0-PUR	163 008 402 4042
12	12x0.25PVC	1.5 m	M12-F12A-T-1.5-PVC	163 012 402 4001
		5.0 m	M12-F12A-T-5.0-PVC	163 012 402 4003
	12x0.25PUR	1.5 m	M12-F12A-T-1.5-PUR	163 012 402 4004
		5.0 m	M12-F12A-T-5.0-PUR	163 012 402 4005



- Male
- Moulded
- Screw
- Shielded
- Recommended use



Straight cable connectors, cable

60/125/250V 2/4A

A-Code

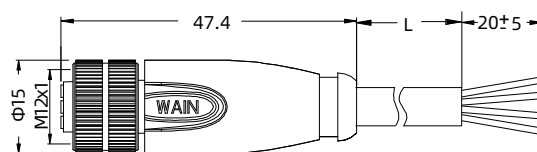


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-M03A-T-1.5-PVC-SH	163 003 401 4021
		5.0 m	M12-M03A-T-5.0-PVC-SH	163 003 401 4022
	3x0.34PUR	1.5 m	M12-M03A-T-1.5-PUR-SH	163 003 401 4061
		5.0 m	M12-M03A-T-5.0-PUR-SH	163 003 401 4062
4	4x0.34PVC	1.5 m	M12-M04A-T-1.5-PVC-SH	163 004 401 4021
		5.0 m	M12-M04A-T-5.0-PVC-SH	163 004 401 4022
	4x0.34PUR	1.5 m	M12-M04A-T-1.5-PUR-SH	163 004 401 4061
		5.0 m	M12-M04A-T-5.0-PUR-SH	163 004 401 4062
5	5x0.25PVC	1.5 m	M12-M05A-T-1.5-PVC-SH	163 005 401 4021
		5.0 m	M12-M05A-T-5.0-PVC-SH	163 005 401 4022
	5x0.25PUR	1.5 m	M12-M05A-T-1.5-PUR-SH	163 005 401 4061
		5.0 m	M12-M05A-T-5.0-PUR-SH	163 005 401 4062
8	8x0.25PUR	1.5 m	M12-M08A-T-1.5-PUR-SH	163 008 401 4061
		5.0 m	M12-M08A-T-5.0-PUR-SH	163 008 401 4062
12	12x0.25PVC	1.5 m	M12-M12A-T-1.5-PVC-SH	163 012 401 2001
		5.0 m	M12-M12A-T-5.0-PVC-SH	163 012 401 2002
	12x0.25PUR	1.5 m	M12-M12A-T-1.5-PUR-SH	163 012 401 2003
		5.0 m	M12-M12A-T-5.0-PUR-SH	163 012 401 2004



- Female
- Moulded
- Screw
- Shielded
- Recommended use



Straight cable connectors, cable

60/125/250V 2/4A

A-Code

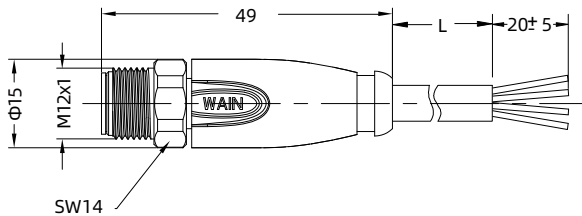


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-F03A-T-1.5-PVC-SH	163 003 402 4021
		5.0 m	M12-F03A-T-5.0-PVC-SH	163 003 402 4022
	3x0.34PUR	1.5 m	M12-F03A-T-1.5-PUR-SH	163 003 402 4061
		5.0 m	M12-F03A-T-5.0-PUR-SH	163 003 402 4062
4	4x0.34PVC	1.5 m	M12-F04A-T-1.5-PVC-SH	163 004 402 4021
		5.0 m	M12-F04A-T-5.0-PVC-SH	163 004 402 4022
	4x0.34PUR	1.5 m	M12-F04A-T-1.5-PUR-SH	163 004 402 4061
		5.0 m	M12-F04A-T-5.0-PUR-SH	163 004 402 4062
5	5x0.25PVC	1.5 m	M12-F05A-T-1.5-PVC-SH	163 005 402 4021
		5.0 m	M12-F05A-T-5.0-PVC-SH	163 005 402 4022
	5x0.25PUR	1.5 m	M12-F05A-T-1.5-PUR-SH	163 005 402 4061
		5.0 m	M12-F05A-T-5.0-PUR-SH	163 005 402 4062
8	8x0.25PUR	1.5 m	M12-F08A-T-1.5-PUR-SH	163 008 402 4061
		5.0 m	M12-F08A-T-5.0-PUR-SH	163 008 402 4062
12	12x0.25PVC	1.5 m	M12-F12A-T-1.5-PVC-SH	163 012 402 2001
		5.0 m	M12-F12A-T-5.0-PVC-SH	163 012 402 2002
	12x0.25PUR	1.5 m	M12-F12A-T-1.5-PUR-SH	163 012 402 2003
		5.0 m	M12-F12A-T-5.0-PUR-SH	163 012 402 2004



- Male
- Moulded
- Screw
- Stainless steel ring nut



Straight
cable connectors,
cable
125/250V 4A

A-Code

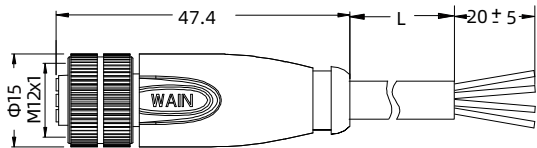


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PUR	1.5 m	M12S-M03A-T-1.5-PUR	163 003 401 4241
		5.0 m	M12S-M03A-T-5.0-PUR	163 003 401 4242
4	4x0.34PUR	1.5 m	M12S-M04A-T-1.5-PUR	163 004 401 4241
		5.0 m	M12S-M04A-T-5.0-PUR	163 004 401 4242
5	5x0.25PUR	1.5 m	M12S-M05A-T-1.5-PUR	163 005 401 4241
		5.0 m	M12S-M05A-T-5.0-PUR	163 005 401 4242



- Female
- Moulded
- Screw
- Stainless steel ring nut



Straight
cable connectors,
cable
125/250V 4A

A-Code

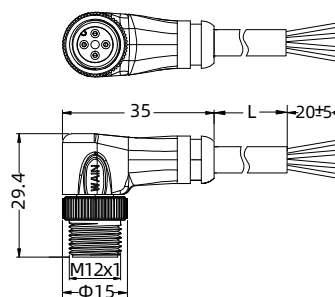


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PUR	1.5 m	M12S-F03A-T-1.5-PUR	163 003 402 4241
		5.0 m	M12S-F03A-T-5.0-PUR	163 003 402 4242
4	4x0.34PUR	1.5 m	M12S-F04A-T-1.5-PUR	163 004 402 4241
		5.0 m	M12S-F04A-T-5.0-PUR	163 004 402 4242
5	5x0.25PUR	1.5 m	M12S-F05A-T-1.5-PUR	163 005 402 4241
		5.0 m	M12S-F05A-T-5.0-PUR	163 005 402 4242



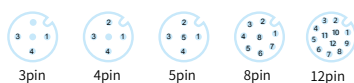
- Male
- Moulded
- Screw
- Recommended use



Angled
cable connectors,
cable

60/125/250V 2/4A

A-Code

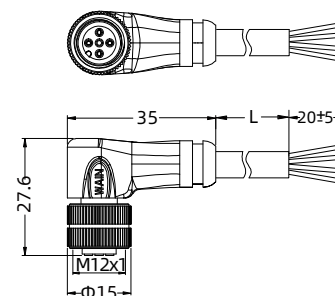


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-M03A-S-1.5-PVC	163 003 501 4001
		5.0 m	M12-M03A-S-5.0-PVC	163 003 501 4002
	3x0.34PUR	1.5 m	M12-M03A-S-1.5-PUR	163 003 501 4041
		5.0 m	M12-M03A-S-5.0-PUR	163 003 501 4042
4	4x0.34PVC	1.5 m	M12-M04A-S-1.5-PVC	163 004 501 4001
		5.0 m	M12-M04A-S-5.0-PVC	163 004 501 4015
	4x0.34PUR	1.5 m	M12-M04A-S-1.5-PUR	163 004 501 4041
		5.0 m	M12-M04A-S-5.0-PUR	163 004 501 4042
5	5x0.25PVC	1.5 m	M12-M05A-S-1.5-PVC	163 005 501 4001
		5.0 m	M12-M05A-S-5.0-PVC	163 005 501 4002
	5x0.25PUR	1.5 m	M12-M05A-S-1.5-PUR	163 005 501 4041
		5.0 m	M12-M05A-S-5.0-PUR	163 005 501 4042
8	8x0.25PUR	1.5 m	M12-M08A-S-1.5-PUR	163 008 501 4041
		5.0 m	M12-M08A-S-5.0-PUR	163 008 501 4042
12	12x0.25PVC	1.5 m	M12-M12A-S-1.5-PVC	163 012 501 4001
		5.0 m	M12-M12A-S-5.0-PVC	163 012 501 4002
	12x0.25PUR	1.5 m	M12-M12A-S-1.5-PUR	163 012 501 4003
		5.0 m	M12-M12A-S-5.0-PUR	163 012 501 4004



- Female
- Moulded
- Screw
- Recommended use



Angled
cable connectors,
cable

60/125/250V 2/4A

A-Code

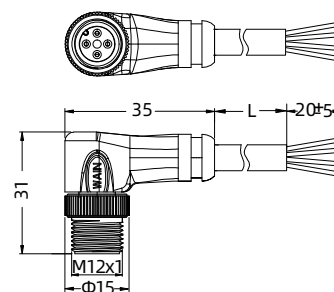


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-F03A-S-1.5-PVC	163 003 502 4001
		5.0 m	M12-F03A-S-5.0-PVC	163 003 502 4002
	3x0.34PUR	1.5 m	M12-F03A-S-1.5-PUR	163 003 502 4041
		5.0 m	M12-F03A-S-5.0-PUR	163 003 502 4042
4	4x0.34PVC	1.5 m	M12-F04A-S-1.5-PVC	163 004 502 4001
		5.0 m	M12-F04A-S-5.0-PVC	163 004 502 4002
	4x0.34PUR	1.5 m	M12-F04A-S-1.5-PUR	163 004 502 4041
		5.0 m	M12-F04A-S-5.0-PUR	163 004 502 4042
5	5x0.25PVC	1.5 m	M12-F05A-S-1.5-PVC	163 005 502 4001
		5.0 m	M12-F05A-S-5.0-PVC	163 005 502 4002
	5x0.25PUR	1.5 m	M12-F05A-S-1.5-PUR	163 005 502 4041
		5.0 m	M12-F05A-S-5.0-PUR	163 005 502 4042
8	8x0.25PUR	1.5 m	M12-F08A-S-1.5-PUR	163 008 502 4041
		5.0 m	M12-F08A-S-5.0-PUR	163 008 502 4042
12	12x0.25PVC	1.5 m	M12-F12A-S-1.5-PVC	163 012 502 4001
		5.0 m	M12-F12A-S-5.0-PVC	163 012 502 4002
	12x0.25PUR	1.5 m	M12-F12A-S-1.5-PUR	163 012 502 4003
		5.0 m	M12-F12A-S-5.0-PUR	163 012 502 4004



- Male
- Moulded
- Screw
- Shielded
- Recommended use



Angled
cable connectors,
cable

60/125/250V 2/4A

A-Code

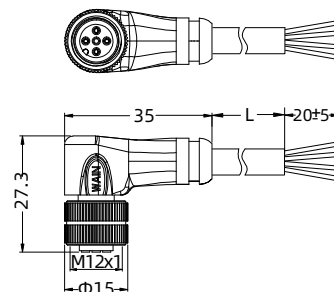


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-M03A-S-1.5-PVC-SH	163 003 501 4021
		5.0 m	M12-M03A-S-5.0-PVC-SH	163 003 501 4022
	3x0.34PUR	1.5 m	M12-M03A-S-1.5-PUR-SH	163 003 501 4061
		5.0 m	M12-M03A-S-5.0-PUR-SH	163 003 501 4062
4	4x0.34PVC	1.5 m	M12-M04A-S-1.5-PVC-SH	163 004 501 4021
		5.0 m	M12-M04A-S-5.0-PVC-SH	163 004 501 4022
	4x0.34PUR	1.5 m	M12-M04A-S-1.5-PUR-SH	163 004 501 4061
		5.0 m	M12-M04A-S-5.0-PUR-SH	163 004 501 4062
5	5x0.34PVC	1.5 m	M12-M05A-S-1.5-PVC-SH	163 005 501 4021
		5.0 m	M12-M05A-S-5.0-PVC-SH	163 005 501 4022
	5x0.34PUR	1.5 m	M12-M05A-S-1.5-PUR-SH	163 005 501 4061
		5.0 m	M12-M05A-S-5.0-PUR-SH	163 005 501 4062
8	8x0.34PUR	1.5 m	M12-M08A-S-1.5-PUR-SH	163 008 514 2001
		5.0 m	M12-M08A-S-5.0-PUR-SH	163 008 514 2002
12	12x0.25PVC	1.5 m	M12-M12A-S-1.5-PVC-SH	163 012 501 2001
		5.0 m	M12-M12A-S-5.0-PVC-SH	163 012 501 2002
	12x0.25PUR	1.5 m	M12-M12A-S-1.5-PUR-SH	163 012 501 2003
		5.0 m	M12-M12A-S-5.0-PUR-SH	163 012 501 2004



- Female
- Moulded
- Screw
- Shielded
- Recommended use



Angled
cable connectors,
cable

60/125/250V 2/4A

A-Code

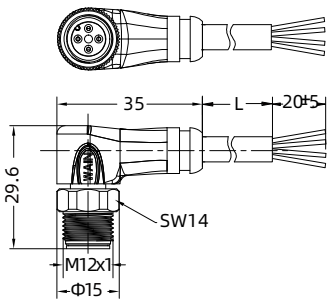


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-F03A-S-1.5-PVC-SH	163 003 502 4021
		5.0 m	M12-F03A-S-5.0-PVC-SH	163 003 502 4022
	3x0.34PUR	1.5 m	M12-F03A-S-1.5-PUR-SH	163 003 502 4061
		5.0 m	M12-F03A-S-5.0-PUR-SH	163 003 502 4062
4	4x0.34PVC	1.5 m	M12-F04A-S-1.5-PVC-SH	163 004 502 4021
		5.0 m	M12-F04A-S-5.0-PVC-SH	163 004 502 4022
	4x0.34PUR	1.5 m	M12-F04A-S-1.5-PUR-SH	163 004 502 4061
		5.0 m	M12-F04A-S-5.0-PUR-SH	163 004 502 4062
5	5x0.25PVC	1.5 m	M12-F05A-S-1.5-PVC-SH	163 005 502 4021
		5.0 m	M12-F05A-S-5.0-PVC-SH	163 005 502 4022
	5x0.25PUR	1.5 m	M12-F05A-S-1.5-PUR-SH	163 005 502 4061
		5.0 m	M12-F05A-S-5.0-PUR-SH	163 005 502 4062
8	8x0.25PUR	1.5 m	M12-F08A-S-1.5-PUR-SH	163 008 524 2001
		5.0 m	M12-F08A-S-5.0-PUR-SH	163 008 524 2002
12	12x0.25PVC	1.5 m	M12-F12A-S-1.5-PVC-SH	163 012 502 2001
		5.0 m	M12-F12A-S-5.0-PVC-SH	163 012 502 2002
	12x0.25PUR	1.5 m	M12-F12A-S-1.5-PUR-SH	163 012 502 2003
		5.0 m	M12-F12A-S-5.0-PUR-SH	163 012 502 2004



- Male
- Moulded
- Screw
- Stainless steel ring nut



Angled
cable connectors,
cable
125/250V 4A

A-Code

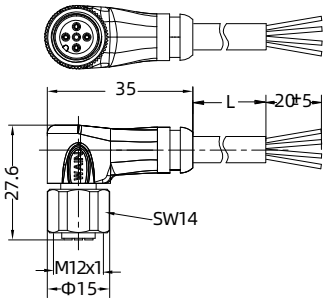


Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PUR	1.5 m	M12S-M03A-S-1.5-PUR	163 003 501 4241
		5.0 m	M12S-M03A-S-5.0-PUR	163 003 501 4242
4	4x0.34PUR	1.5 m	M12S-M04A-S-1.5-PUR	163 004 501 4241
		5.0 m	M12S-M04A-S-5.0-PUR	163 004 501 4242
5	5x0.25PUR	1.5 m	M12S-M05A-S-1.5-PUR	163 005 501 4241
		5.0 m	M12S-M05A-S-5.0-PUR	163 005 501 4242

- Further cable length upon request



- Female
- Moulded
- Screw
- Stainless steel ring nut



Angled
cable connectors,
cable
125/250V 4A

A-Code

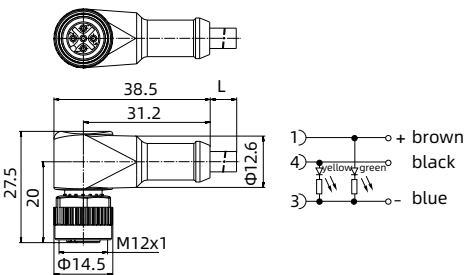


Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PUR	1.5 m	M12S-F03A-S-1.5-PUR	163 003 502 4241
		5.0 m	M12S-F03A-S-5.0-PUR	163 003 502 4242
4	4x0.34PUR	1.5 m	M12S-F04A-S-1.5-PUR	163 004 502 4241
		5.0 m	M12S-F04A-S-5.0-PUR	163 004 502 4242
5	5x0.25PUR	1.5 m	M12S-F05A-S-1.5-PUR	163 005 502 4241
		5.0 m	M12S-F05A-S-5.0-PUR	163 005 502 4242

- Further cable length upon request



- Female
- Moulded
- Screw
- With LED PNP normally open



Angled cable connectors, cable
36V 4A

A-Code

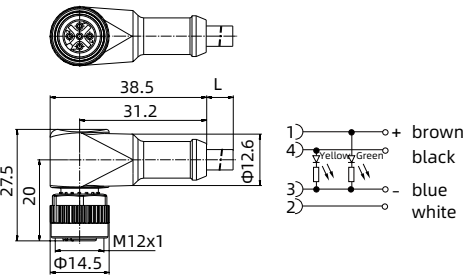


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-F03A-S-1.5-PVC-LED	163 003 502 4003
		5.0 m	M12-F03A-S-5.0-PVC-LED	163 003 502 4004
3	3x0.34PUR	1.5 m	M12-F03A-S-1.5-PUR-LED	163 003 502 4043
		5.0 m	M12-F03A-S-5.0-PUR-LED	163 003 502 4044



- Female
- Moulded
- Screw
- With LED PNP normally closed/open
- Antivalent



Angled cable connectors, cable
36V 4A

A-Code

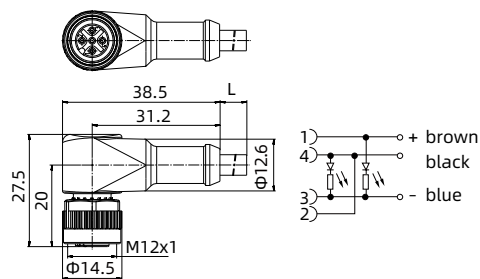


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
4	4x0.34PVC	1.5 m	M12-F04A-S-1.5-PVC-LED1	163 004 502 4005
		5.0 m	M12-F04A-S-5.0-PVC-LED1	163 004 502 4006
4	4x0.34PUR	1.5 m	M12-F04A-S-1.5-PUR-LED1	163 004 502 4045
		5.0 m	M12-F04A-S-5.0-PUR-LED1	163 004 502 4046



- Female
- Moulded
- Screw
- With LED PNP normally closed/open



Angled
cable connectors,
cable
36V 4A

A-Code

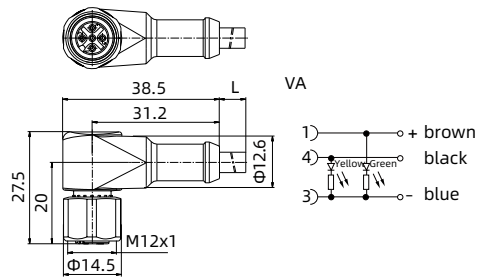


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PUR	1.5 m	M12-F03A-S-1.5-PUR-LED2	163 003 502 4047
		5.0 m	M12-F03A-S-5.0-PUR-LED2	163 003 502 4048



- Female
- Moulded
- Screw
- With LED PNP normally open,
- Stainless steel ring nut



Angled
cable connectors,
cable
36V 4A

A-Code

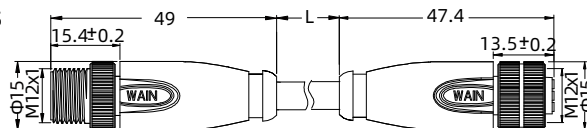


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PUR	1.5 m	M12S-F03A-S-1.5-PUR-LED	163 003 502 4243
		5.0 m	M12S-F03A-S-5.0-PUR-LED	163 003 502 4244



- Male/female
- Cable connectors
- -wire jumper
- Recommended use



Straight cable connectors, cable

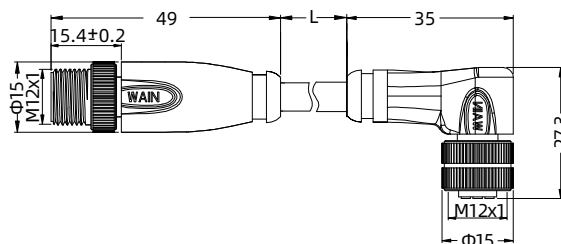
60/125/250V 4A

- Other cable lengths can be customized, double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PUR	1.5 m	M12-M03A-T/F03A-T-1.5-PUR	163 003 400 4041
		5.0 m	M12-M03A-T/F03A-T-5.0-PUR	163 003 400 4042
4	4x0.34PUR	1.5 m	M12-M04A-T/F04A-T-1.5-PUR	163 004 400 4041
		5.0 m	M12-M04A-T/F04A-T-5.0-PUR	163 004 400 4042
5	5x0.25PUR	1.5 m	M12-M05A-T/F05A-T-1.5-PUR	163 005 400 4041
		5.0 m	M12-M05A-T/F05A-T-5.0-PUR	163 005 400 4042
8	8x0.25PUR	1.5 m	M12-M08A-T/F08A-T-1.5-PUR	163 008 400 4007
		5.0 m	M12-M08A-T/F08A-T-5.0-PUR	163 008 400 4011
12	12x0.25PUR	1.5 m	M12-M12A-T/F12A-T-1.5-PUR	163 012 400 4001
		5.0 m	M12-M12A-T/F12A-T-5.0-PUR	163 012 400 4002



- Male (straight)
- Female (angled)
- Cable connectors
- -wire jumper
- Recommended use



Straight and angled Straight cable connectors, cable

60/125/250V 4A

- Other cable lengths can be customized, double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PUR	1.5 m	M12-M03A-T/F03A-S-1.5-PUR	163 003 500 4041
		5.0 m	M12-M03A-T/F03A-S-5.0-PUR	163 003 500 4042
4	4x0.34PUR	1.5 m	M12-M04A-T/F04A-S-1.5-PUR	163 004 500 4041
		5.0 m	M12-M04A-T/F04A-S-5.0-PUR	163 004 500 4042
5	5x0.25PUR	1.5 m	M12-M05A-T/F05A-S-1.5-PUR	163 005 500 4041
		5.0 m	M12-M05A-T/F05A-S-5.0-PUR	163 005 500 4042
8	8x0.25PUR	1.5 m	M12-M08A-T/F08A-S-1.5-PUR	163 008 500 4041
		5.0 m	M12-M08A-T/F08A-S-5.0-PUR	163 008 400 4008
12	12x0.25PUR	1.5 m	M12-M12A-T/F12A-S-1.5-PUR	163 012 400 4003
		5.0 m	M12-M12A-T/F12A-S-5.0-PUR	163 012 500 4001



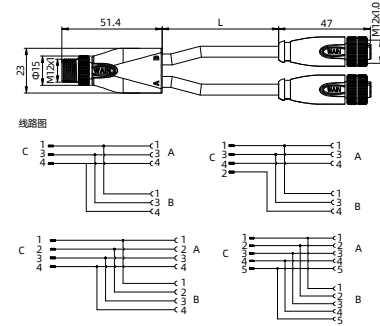
- Male/female
- Cable connectors
- wire jumper
- Recommended use

Straight cable connectors, cable

60/125/250V 4A

- Other cable lengths can be customized, double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12Y-M03A/2M12-F03A-T-1.5-PVC	171 302 003 0308
		5.0 m	M12Y-M03A/2M12-F03A-T-5.0-PVC	171 302 003 0309
	3x0.34PUR	1.5 m	M12Y-M03A/2M12-F03A-T-1.5-PUR	171 302003 0306
		5.0 m	M12Y-M03A/2M12-F03A-T-5.0-PUR	171 302 003 0307
	3x0.34PVC	1.5 m	M12Y-M04A/2M12-F03A-T-1.5-PVC	171 302 003 0302
		5.0 m	M12Y-M04A/2M12-F03A-T-5.0-PVC	171 302 003 0303
	3x0.34PUR	1.5 m	M12Y-M04A/2M12-F03A-T-1.5-PUR	171 302 003 0304
		5.0 m	M12Y-M04A/2M12-F03A-T-5.0-PUR	171 302 003 0305
4	4x0.34PVC	1.5 m	M12Y-M04A/2M12-F04A-T-1.5-PVC	171 302 004 0307
		5.0 m	M12Y-M04A/2M12-F04A-T-5.0-PVC	171 302 004 0308
	4x0.34PUR	1.5 m	M12Y-M04A/2M12-F04A-T-1.5-PUR	171 302 004 0305
		5.0 m	M12Y-M04A/2M12-F04A-T-5.0-PUR	171 302 004 0306
5	5x0.25PVC	1.5 m	M12Y-M05A/2M12-F05A-T-1.5-PVC	171 302 005 0302
		5.0 m	M12Y-M05A/2M12-F05A-T-5.0-PVC	171 302 005 0303
	5x0.25PUR	1.5 m	M12Y-M05A/2M12-F05A-T-1.5-PUR	171 302 005 0304
		5.0 m	M12Y-M05A/2M12-F05A-T-5.0-PUR	171 302 005 0305



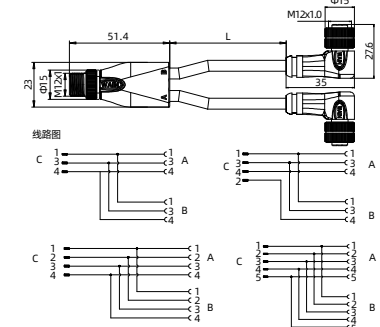
- Male (straight)
- Female (angled)
- Cable connectors
- wire jumper
- Recommended use

Straight and angled cable connectors, cable

60/125/250V 4A

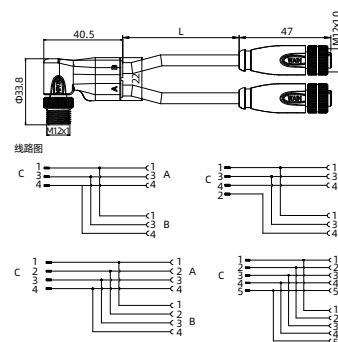
- Other cable lengths can be customized, double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12Y-M03A/2M12-F03A-S-1.5-PVC	171 302 003 0318
		5.0 m	M12Y-M03A/2M12-F03A-S-5.0-PVC	171 302 003 0319
	3x0.34PUR	1.5 m	M12Y-M03A/2M12-F03A-S-1.5-PUR	171 302 003 0321
		5.0 m	M12Y-M03A/2M12-F03A-S-5.0-PUR	171 302 003 0322
	3x0.34PVC	1.5 m	M12Y-M04A/2M12-F03A-S-1.5-PVC	171 302 003 0323
		5.0 m	M12Y-M04A/2M12-F03A-S-5.0-PVC	171 302 003 0320
	3x0.34PUR	1.5 m	M12Y-M04A/2M12-F03A-S-1.5-PUR	171 302 003 0324
		5.0 m	M12Y-M04A/2M12-F03A-S-5.0-PUR	171 302 003 0325
4	4x0.34PVC	1.5 m	M12Y-M04A/2M12-F04A-S-1.5-PVC	171 302 004 0327
		5.0 m	M12Y-M04A/2M12-F04A-S-5.0-PVC	171 302 004 0326
	4x0.34PUR	1.5 m	M12Y-M04A/2M12-F04A-S-1.5-PUR	171 302 004 0328
		5.0 m	M12Y-M04A/2M12-F04A-S-5.0-PUR	171 302 004 0329
5	5x0.25PVC	1.5 m	M12Y-M05A/2M12-F05A-S-1.5-PVC	171 302 005 0315
		5.0 m	M12Y-M05A/2M12-F05A-S-5.0-PVC	171 302 005 0314
	5x0.25PUR	1.5 m	M12Y-M05A/2M12-F05A-S-1.5-PUR	171 302 005 0316
		5.0 m	M12Y-M05A/2M12-F05A-S-5.0-PUR	171 302 005 0317





- Male (angled)
Female (straight)
- Cable connectors
-wire jumper
- Recommended use



Angled and straight cable connectors, cable

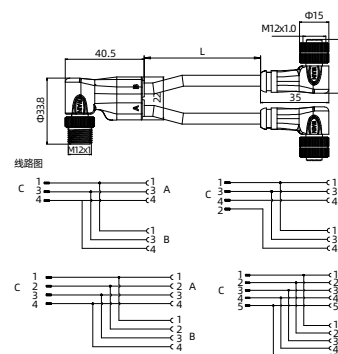
60/125/250V 4A

- Other cable lengths can be customized, double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12Y-M03A-S/2M12-F03A-T-1.5-PVC	171 302 003 0310
		5.0 m	M12Y-M03A-S/2M12-F03A-T-5.0-PVC	171 302 003 0312
	3x0.34PUR	1.5 m	M12Y-M03A-S/2M12-F03A-T-1.5-PUR	171 302 003 0311
		5.0 m	M12Y-M03A-S/2M12-F03A-T-5.0-PUR	171 302 003 0313
	3x0.34PVC	1.5 m	M12Y-M04A-S/2M12-F03A-T-1.5-PVC	171 302 004 0309
		5.0 m	M12Y-M04A-S/2M12-F03A-T-5.0-PVC	171 302 004 0311
	3x0.34PUR	1.5 m	M12Y-M04A-S/2M12-F03A-T-1.5-PUR	171 302 004 0310
		5.0 m	M12Y-M04A-S/2M12-F03A-T-5.0-PUR	171 302 004 0312
4	4x0.34PVC	1.5 m	M12Y-M04A-S/2M12-F04A-T-1.5-PVC	171 302 004 0313
		5.0 m	M12Y-M04A-S/2M12-F04A-T-5.0-PVC	171 302 004 0315
	4x0.34PUR	1.5 m	M12Y-M04A-S/2M12-F04A-T-1.5-PUR	171 302 004 0314
		5.0 m	M12Y-M04A-S/2M12-F04A-T-5.0-PUR	171 302 004 0316
	5	5x0.25PVC	1.5 m	M12Y-M05A-S/2M12-F05A-T-1.5-PVC
5.0 m			M12Y-M05A-S/2M12-F05A-T-5.0-PVC	171 302 005 0308
5x0.25PUR		1.5 m	M12Y-M05A-S/2M12-F05A-T-1.5-PUR	171 302 005 0307
	5.0 m	M12Y-M05A-S/2M12-F05A-T-5.0-PUR	171 302 005 0309	



- Male (angled)
Female (angled)
- Cable connectors
-wire jumper
- Recommended use



Angled and angled Straight cable connectors, cable

60/125/250V 4A

- Other cable lengths can be customized, double-ended connectors, male/female, straight/angled, shielded/unshielded, freely combinable.

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12Y-M03A-S/2M12-F03A-S-1.5-PVC	171 302 003 0314
		5.0 m	M12Y-M03A-S/2M12-F03A-S-5.0-PVC	171 302 003 0316
	3x0.34PUR	1.5 m	M12Y-M03A-S/2M12-F03A-S-1.5-PUR	171 302 003 0315
		5.0 m	M12Y-M03A-S/2M12-F03A-S-5.0-PUR	171 302 003 0317
	3x0.34PVC	1.5 m	M12Y-M04A-S/2M12-F03A-S-1.5-PVC	171 302 004 0318
		5.0 m	M12Y-M04A-S/2M12-F03A-S-5.0-PVC	171 302 004 0320
	3x0.34PUR	1.5 m	M12Y-M04A-S/2M12-F03A-S-1.5-PUR	171 302 004 0319
		5.0 m	M12Y-M04A-S/2M12-F03A-S-5.0-PUR	171 302 004 0321
4	4x0.34PVC	1.5 m	M12Y-M04A-S/2M12-F04A-S-1.5-PVC	171 302 004 0322
		5.0 m	M12Y-M04A-S/2M12-F04A-S-5.0-PVC	171 302 004 0324
	4x0.34PUR	1.5 m	M12Y-M04A-S/2M12-F04A-S-1.5-PUR	171 302 004 0323
		5.0 m	M12Y-M04A-S/2M12-F04A-S-5.0-PUR	171 302 004 0325
	5	5x0.25PVC	1.5 m	M12Y-M05A-S/2M12-F05A-S-1.5-PVC
5.0 m			M12Y-M05A-S/2M12-F05A-S-5.0-PVC	171 302 005 0312
5x0.25PUR		1.5 m	M12Y-M05A-S/2M12-F05A-S-1.5-PUR	171 302 005 0311
	5.0 m	M12Y-M05A-S/2M12-F05A-S-5.0-PUR	171 302 005 0313	

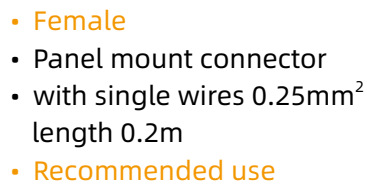
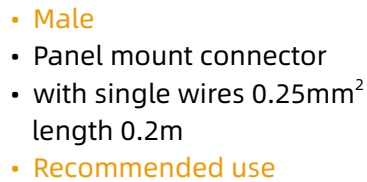
- Standard cable

Contacts	3-pole	4-pole	5-pole	12-pole
Wire gauge mm ²	3x0.34mm ²	4x0.34mm ²	5x0.25mm ²	12x0.25mm ²
Material jacket	PVC / TPU	PVC / TPU	PVC / TPU	TPU
Insulation wire	PVC	PVC	PVC	PVC
Design of wire (mm)	42x0.1	7x0.25 / 42x0.1	14x0.16 / 32x0.1	14x0.25
Cable jacket (mm)	5.2	5.6	5.6	7
Resistance of wire	58Ω/Km / 55Ω/Km	79.9Ω/Km / 55Ω/Km	79.9Ω/Km / 55Ω/Km	73Ω/Km
Temperature range (cable in move)	-5°C ...+70°C	-5°C ...+70°C	-5°C ...+70°C	-5°C ...+70°C
Temperature range (cable not in move)	-25°C ...+70°C	-25°C ...+70°C	-25°C ...+70°C	-25°C ...+70°C
Bending radius (cable in move)	- / 10xD	- / 10xD	- / 10xD	15xD
Bending radius (cable not in move)	- / 5xD	- / 5xD	- / 5xD	8xD
Approval	-	-	-	-

- Shielded cable

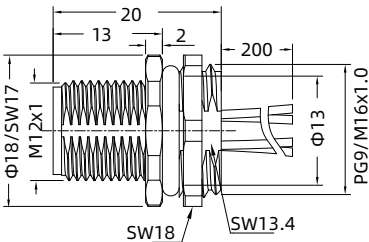
Contacts	3-pole	4-pole	5-pole	8-pole
Wire gauge mm ²	3x0.34mm ²	4x0.34mm ²	5x0.25mm ²	8x0.25mm ²
Material jacket	PVC / TPU	PVC / TPU	PVC	TPU
Insulation wire	PVC	PVC	PVC	PVC
Design of wire (mm)	7x0.25	7x0.25	14x0.16	19x0.127
Cable jacket (mm)	5	5	5.3	6
Resistance of wire	53Ω/Km	53Ω/Km	75.5Ω/Km	73Ω/Km
Temperature range (cable in move)	-5°C ...+70°C	-5°C ...+70°C	-5°C ...+70°C	-5°C ...+70°C
Temperature range (cable not in move)	-25°C ...+70°C	-25°C ...+70°C	-25°C ...+70°C	-25°C ...+70°C
Bending radius (cable in move)	10xD	10xD	20xD	20xD
Bending radius (cable not in move)	5xD	5xD	10xD	10xD
Approval	-	-	-	-
Cover screen grid	80% / 90%	80% / 90%	90	85%

WAIN®





- Male
- Panel mount connector
- with single wires 0.25mm² length 0.2m
- Recommended use



Socket

60/125/250V 2A/4A

A-Code

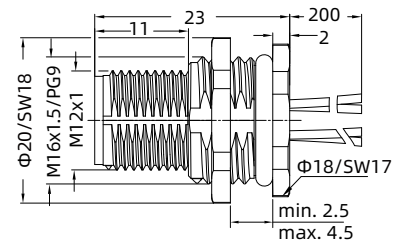


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
4	M16x1.0	M12-M04A-BK-M16*1.0-W0.25	163 004 301 4505
5	M16x1.0	M12-M05A-BK-M16*1.0-W0.25	163 005 301 4506
8	M16x1.0	M12-M08A-BK-M16*1.0-W0.25	163 008 301 4507



- Male
- Panel mount connector
- with single wires 0.25mm² length 0.2m
- Front fastened



Socket

60/125/250V 2A/4A

A-Code

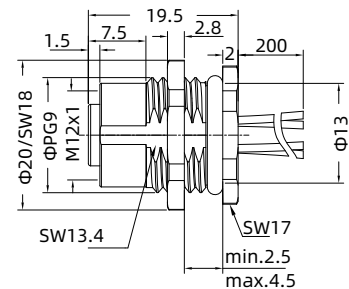


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
4	PG9	M12-M04A-BKR-PG9-W0.25	163 004 301 4011
	M16x1.5	M12-M04A-BKR-M16-W0.25	163 004 301 4031
5	PG9	M12-M05A-BKR-PG9-W0.25	163 005 301 4011
	M16x1.5	M12-M05A-BKR-M16-W0.25	163 005 301 4031
8	PG9	M12-M08A-BKR-PG9-W0.25	163 008 301 4011
	M16x1.5	M12-M08A-BKR-M16-W0.25	163 008 301 4031
12	PG9	M12-M12A-BKR-PG9-W0.14	163 012 301 4011
	M16x1.5	M12-M12A-BKR-M16-W0.14	163 012 301 4012



- Female
- Panel mount connector
- with single wires 0.25mm² length 0.2m
- Front fastened



Socket

60/125/250V 2A/4A

A-Code

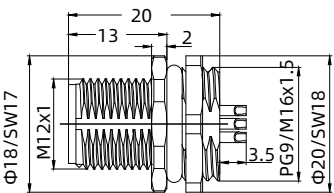


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
4	PG9	M12-F04A-BKR-PG9-W0.25	163 004 302 4011
	M16x1.5	M12-F04A-BKR-M16-W0.25	163 004 302 4031
5	PG9	M12-F05A-BKR-PG9-W0.25	163 005 302 4011
	M16x1.5	M12-F05A-BKR-M16-W0.25	163 005 302 4031
8	PG9	M12-F08A-BKR-PG9-W0.25	163 008 302 4011
	M16x1.5	M12-F08A-BKR-M16-W0.25	163 008 624 1002
12	PG9	M12-F12A-BKR-PG9-W0.14	163 012 302 4003
	M16x1.5	M12-F12A-BKR-M16-W0.14	163 012 302 4004



- Male
- Panel mount connector
- solder
- Recommended use



Socket

60/125/250V 2A/4A

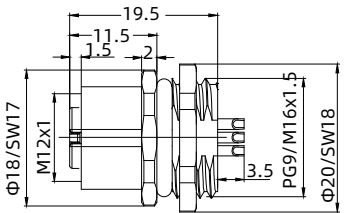
A-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04A-BK-PG9-C	163 004 313 1001
	M16x1.5	M12-M04A-BK-M16-C	163 004 313 1021
5	PG9	M12-M05A-BK-PG9-C	163 005 313 1001
	M16x1.5	M12-M05A-BK-M16-C	163 005 313 1021
8	PG9	M12-M08A-BK-PG9-C	163 008 313 1001
	M16x1.5	M12-M08A-BK-M16-C	163 008 313 1021



- Female
- Panel mount connector
- solder
- PG9/M16x1.5
- Recommended use



Socket

60/125/250V 2A/4A

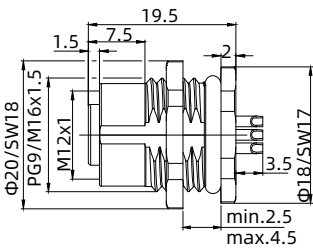
A-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-F04A-BK-PG9-C	163 004 323 1001
	M16x1.5	M12-F04A-BK-M16-C	163 004 323 1021
5	PG9	M12-F05A-BK-PG9-C	163 005 323 1001
	M16x1.5	M12-F05A-BK-M16-C	163 005 323 1021
8	PG9	M12-F08A-BK-PG9-C	163 008 324 1002
	M16x1.5	M12-F08A-BK-M16-C	163 008 302 1011



- Female
- Panel mount connector
- Solder
- Front fastened



Socket

60/125/250V 2A/4A

A-Code

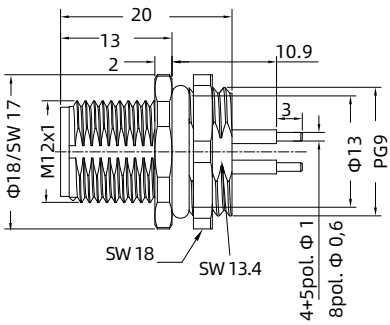


Contacts	Thread	Designation	Order No.
4	PG9	M12-F04A-BKR-PG9-C	163 004 323 1011
	M16x1.5	M12-F04A-BKR-M16-C	163 004 624 1003
5	PG9	M12-F05A-BKR-PG9-C	163 005 323 1011
	M16x1.5	M12-F05A-BKR-M16-C	163 005 624 1001
8	PG9	M12-F08A-BKR-PG9-C	163 008 323 1011
	M16x1.5	M12-F08A-BKR-M16-C	163 008 323 1012

M12 Circular Connector,A-coded



- Male
- Panel mount connector
- Dip solder



Socket

60/125/250V 2A/4A

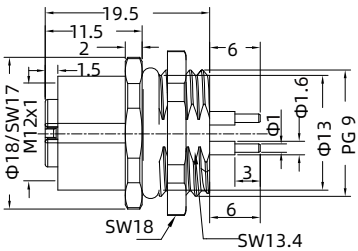
A-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04A-BK-PG9-D	163 004 314 1001
	M16x1.5	M12-M04A-BK-M16-D	163 004 314 1002
5	PG9	M12-M05A-BK-PG9-D	163 005 314 1001
	M16x1.5	M12-M05A-BK-M16-D	163 005 314 1002
8	PG9	M12-M08A-BK-PG9-D	163 008 314 1001
	M16x1.5	M12-M08A-BK-M16-D	163 008 314 1002



- Female
- Panel mount connector
- Dip solder



Socket

60/125/250V 2A/4A

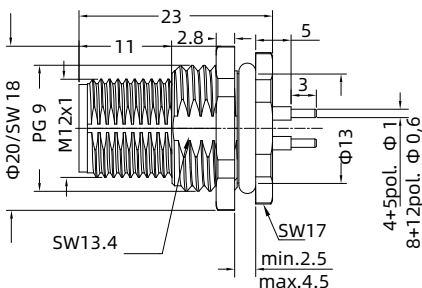
A-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-F04A-BK-PG9-D	163 004 324 1001
	M16x1.5	M12-F04A-BK-M16-D	163 004 324 1002
5	PG9	M12-F05A-BK-PG9-D	163 005 324 1001
	M16x1.5	M12-F05A-BK-M16-D	163 005 324 1002
8	PG9	M12-F08A-BK-PG9-D	163 008 324 1003
	M16x1.5	M12-F08A-BK-M16-D	163 008 324 1001



- Male
- Panel mount connector
- Dip solder
- Front fastened



Socket

60/125/250V 2A/4A

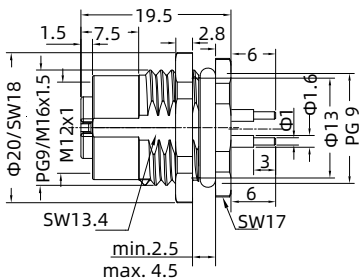
A-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04A-BKR-PG9-D	163 004 314 1011
	M16x1.5	M12-M04A-BKR-M16-D	163 004 614 1001
5	PG9	M12-M05A-BKR-PG9-D	163 005 314 1011
	M16x1.5	M12-M05A-BKR-M16-D	163 005 614 1001
8	PG9	M12-M08A-BKR-PG9-D	163 008 314 1011
	M16x1.5	M12-M08A-BKR-M16-D	163 008 614 1001



- Female
- Panel mount connector
- Dip solder
- Front fastened



Socket

60/125/250V 2A/4A

A-Code

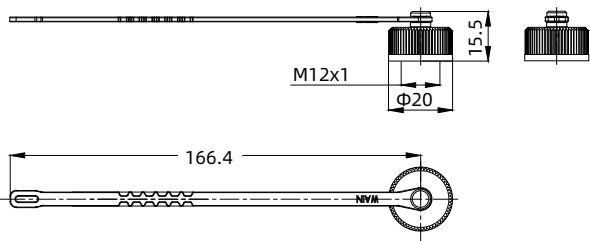


Contacts	Thread	Designation	Order No.
4	PG9	M12-F04A-BKR-PG9-D	163 004 324 1011
	M16x1.5	M12-F04A-BKR-M16-D	163 004 624 1004
5	PG9	M12-F05A-BKR-PG9-D	163 005 324 1011
	M16x1.5	M12-F05A-BKR-M16-D	163 005 624 1002
8	PG9	M12-F08A-BKR-PG9-D	163 008 324 1011
	M16x1.5	M12-F08A-BKR-M16-D	163 008 624 1001

• Protection covers (IP67)



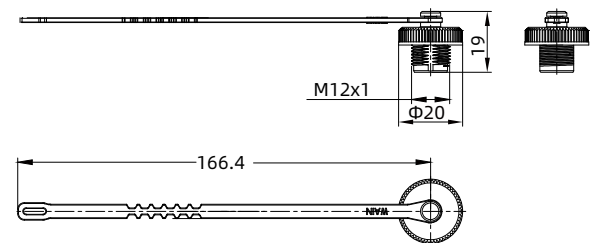
Protection cover
for male cable connector



Description	Designation	Order No.
Without cord	M12-MCV	163 000 001 9003
With cord	M12-MCV/1	163 000 001 9001



Protection cover
for female cable connector

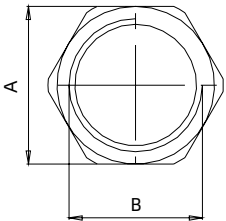


Description	Designation	Order No.
Without cord	M12-FCV	163 000 002 9003
With cord	M12-FCV/1	163 000 002 9001

- Protection covers (IP67)



Hexagonal nut for
fixing thread

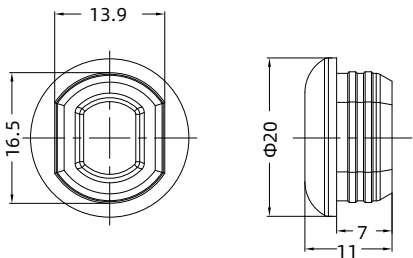


A	B
SW18	PG9
SW19	M16x1.5

Thread	Designation	Order No.
PG9	WNA-PG9/S	102 105 002 1101
M16X1.5	WNA-M16/S	102 105 013 1101



Protection covers
for flange mount panel

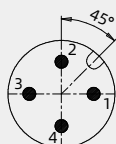


Description	Designation	Order No.
Dust-proof	M12-WNPP-M16/BK	163 000 000 9001

- Contact arrangements

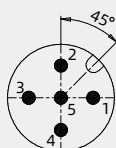
- Male insert (mating side)

4 contacts



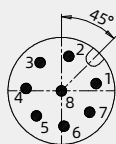
	X	Y	
1	2.50	0.00	1. brown
2	0.00	2.50	2. white
3	-2.50	0.00	3. blue
4	0.00	-2.50	4. black

5 contacts



	X	Y	
1	2.50	0.00	1. brown
2	0.00	2.50	2. white
3	-2.50	0.00	3. blue
4	0.00	-2.50	4. black
5	0.00	0.00	5. grey

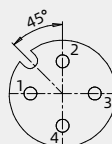
8 contacts



	X	Y	
1	2.69	0.57	1. white
2	0.57	2.69	2. brown
3	-1.66	2.20	3. green
4	-2.75	0.19	4. yellow
5	-1.94	-1.94	5. grey
6	0.19	-2.74	6. pink
7	2.20	-1.65	7. blue
8	0.00	0.00	8. red

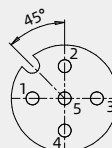
- Female insert (mating side)

4 contacts



	X	Y	
1	-2.50	0.00	1. brown
2	0.00	2.50	2. white
3	2.50	0.00	3. blue
4	0.00	-2.50	4. black

5 contacts



	X	Y	
1	-2.50	0.00	1. brown
2	0.00	2.50	2. white
3	2.50	0.00	3. blue
4	0.00	-2.50	4. black
5	0.00	0.00	5. grey

8 contacts

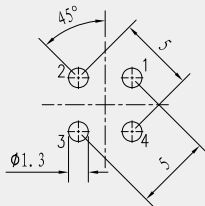


	X	Y	
1	-2.69	0.57	1. white
2	0.57	2.69	2. brown
3	1.66	2.20	3. green
4	2.75	0.19	4. yellow
5	1.94	-1.94	5. grey
6	-0.19	-2.74	6. pink
7	-2.20	-1.66	7. blue
8	0.00	0.00	8. red

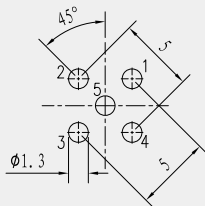
- Panel cut out

- Opening hole drawing male insert(PCB),
Panel mount connectors

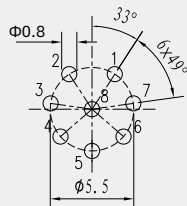
4 contacts



5 contacts

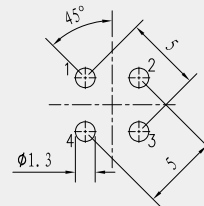


8 contacts

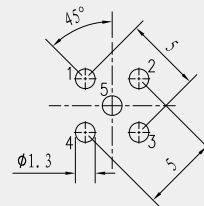


- Opening hole drawing female insert(PCB),
Panel mount connectors

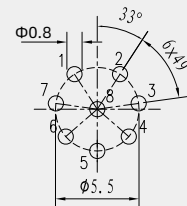
4 contacts



5 contacts



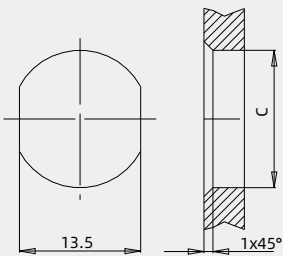
8 contacts



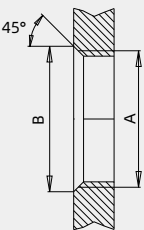
• Panel cut out

• Panel mount connectors

• Through-hole mounting



• Screw mounting



	A	B	C
PG9	PG9	16.2	15.3
PG13.5	PG13.5	21.5	20.5
M16x1.5	M16x1.5	17.0	16.1
M20x1.5	M20x1.5	21.0	20.1

Tightening torque according to
DIN VDE 0619

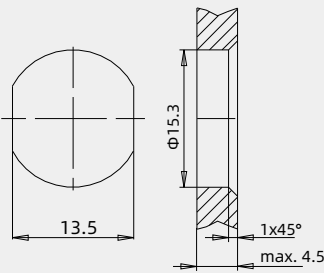
Metal housing 6,25 Nm
Plastic housing 3,75 Nm

• Panel mount connectors

• Rear panel mounting

• Front tighten

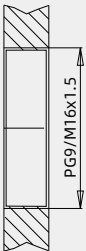
• Through-hole mounting



• Panel mount connectors

• Front tighten

• Through-hole mounting



Tightening torque 6,25 Nm

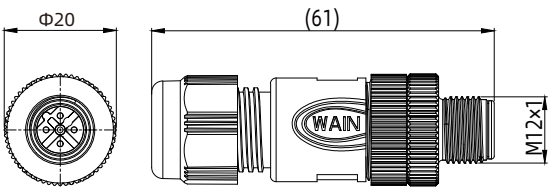


Cable Connector

- Shielded / unshielded series
- Installable series and moulded cable series
- Thread locking M12X1
- Screw terminal
- Shielding ring and ring spring shielding connection
- Cable length 1.5m and 5m
- Other cable length upon request, minimum order quantity 200 pieces
- Cable material can be customized according to requirements
- Degree of protection IP67
- Anti-loose spring with nut



- Male
- Plastic locking system
- Screw clamp connection



□ **Straight cable connectors**
125/250V 4A

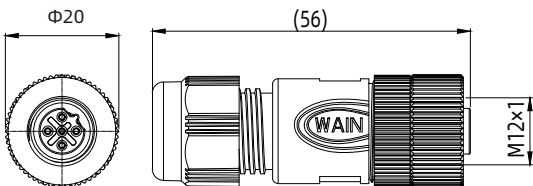
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12P-M04B-T-D6	163 004 411 3105
	6-8 mm	M12P-M04B-T-D8	163 004 411 3106
5	4-6 mm	M12P-M05B-T-D6	163 005 411 3105
	6-8 mm	M12P-M05B-T-D8	163 005 411 3106



- Female
- Plastic locking system
- Screw clamp connection



□ **Straight cable connectors**
125/250V 4A

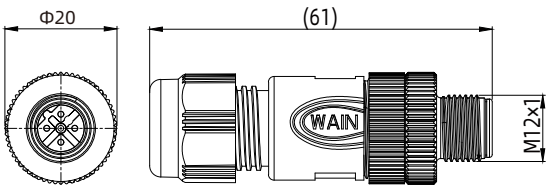
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12P-F04B-T-D6	163 004 421 3106
	6-8 mm	M12P-F04B-T-D8	163 004 421 3107
5	4-6 mm	M12P-F05B-T-D6	163 005 421 3106
	6-8 mm	M12P-F05B-T-D8	163 005 421 3107



- Male
- Metal locking system
- Screw clamp connection
- Recommended use



□ **Straight cable connectors**
125/250V 4A

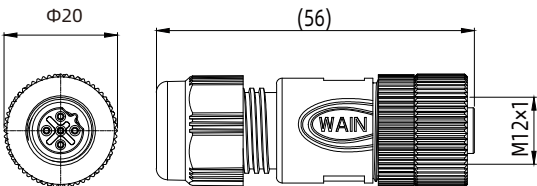
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-M04B-T-D6	163 004 411 1001
	6-8 mm	M12-M04B-T-D8	163 004 411 1002
5	4-6 mm	M12-M05B-T-D6	163 005 411 1001
	6-8 mm	M12-M05B-T-D8	163 105 411 3002



- Female
- Metal locking system
- Screw clamp connection
- Recommended use



□ **Straight cable connectors**
125/250V 4A

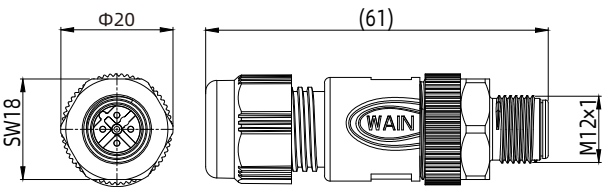
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-F04B-T-D6	163 004 421 1001
	6-8 mm	M12-F04B-T-D8	163 004 421 1002
5	4-6 mm	M12-F05B-T-D6	163 005 421 1001
	6-8 mm	M12-F05B-T-D8	163 105 421 3002



- Male
- Stainless steel locking system
- Screw clamp connection



□ **Straight cable connectors**
125/250V 4A

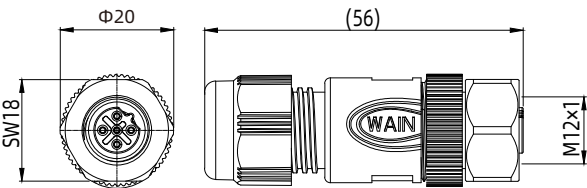
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12S-M04B-T-D6	163 004 411 1003
	6-8 mm	M12S-M04B-T-D8	163 004 411 1004
5	4-6 mm	M12S-M05B-T-D6	163 005 411 1003
	6-8 mm	M12S-M05B-T-D8	163 005 411 1004



- Female
- Stainless steel locking system
- Screw clamp connection



□ **Straight cable connectors**
125/250V 4A

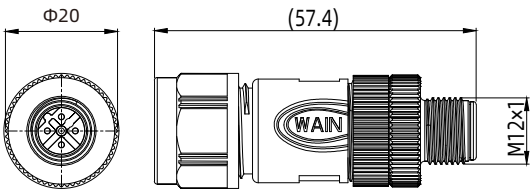
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12S-F04B-T-D6	163 004 421 1003
	6-8 mm	M12S-F04B-T-D8	163 004 421 1004
5	4-6 mm	M12S-F05B-T-D6	163 005 421 1003
	6-8 mm	M12S-F05B-T-D8	163 005 421 1004



- Male
- Power
- Plastic locking system
- Screw clamp connection



□ Straight cable connectors
125V 2/8A

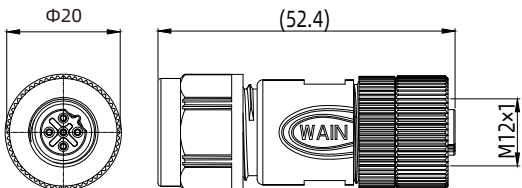
B-Code



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12P-M05B-T-D10	163 005 411 3107



- Female
- Power
- Plastic locking system
- Screw clamp connection



□ Straight cable connectors
125V 2/8A

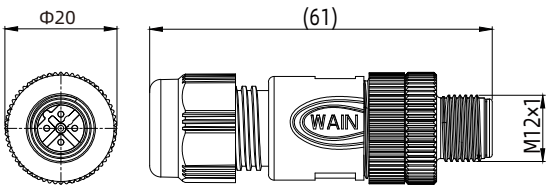
B-Code



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12P-F05B-T-D10	163 005 421 3108



- Male
- Power
- Metal locking system
- Screw clamp connection
- Recommended use



□ **Straight cable connectors**
125V 2/8A

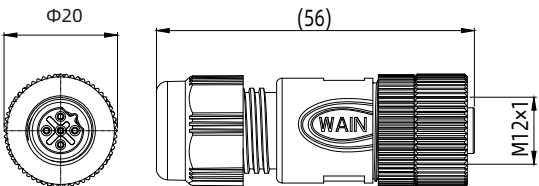
B-Code



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12-M05B-T-D10	163 005 411 1002



- Female
- Power
- Metal locking system
- Screw clamp connection
- Recommended use



□ **Straight cable connectors**
125V 2/8A

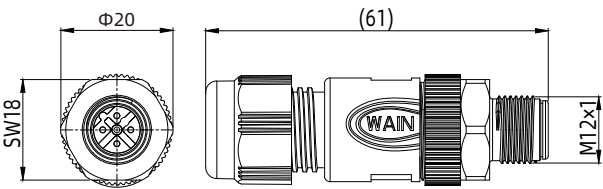
B-Code



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12-F05B-T-D10	163 005 421 1002



- Male
- Power
- Stainless steel locking system
- Screw clamp connection



Straight cable connectors

125V 2/8A

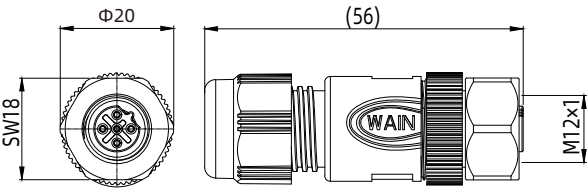
B-Code



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12S-M05B-T-D10	163 005 411 1005



- Female
- Power
- Stainless steel locking system
- Screw clamp connection



Straight cable connectors

125V 2/8A

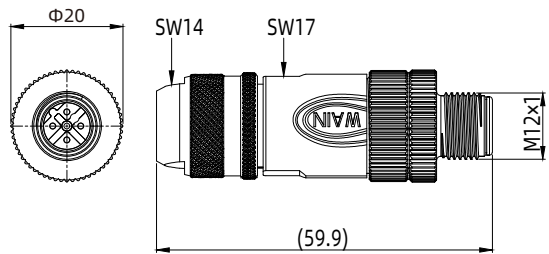
B-Code



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12S-F05B-T-D10	163 005 421 1005



- Male
- Shielded
- Screw clamp connection
- Recommended use



□ Straight cable connectors, shielded
125/250V 4A

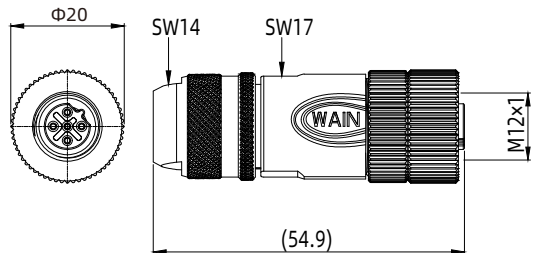
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-M04B-T-D6-SH	163 004 411 2006
	6-8 mm	M12-M04B-T-D8-SH	163 004 411 2007
5	4-6 mm	M12-M05B-T-D6-SH	163 005 411 2007
	6-8 mm	M12-M05B-T-D8-SH	163 005 411 2008



- Female
- Shielded
- Screw clamp connection
- Recommended use



□ Straight cable connectors, shielded
125/250V 4A

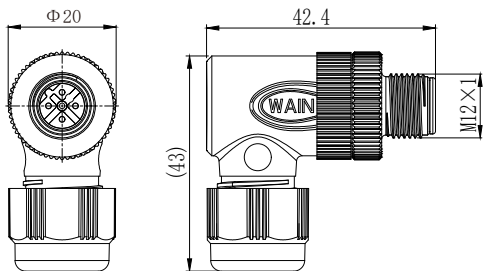
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-F04B-T-D6-SH	163 104 421 2001
	6-8 mm	M12-F04B-T-D8-SH	163 004 421 2005
5	4-6 mm	M12-F05B-T-D6-SH	163 005 421 2006
	6-8 mm	M12-F05B-T-D8-SH	163 105 421 3003



- Male
- Plastic locking system
- Screw clamp connection



Angled cable connectors
125/250V 4A

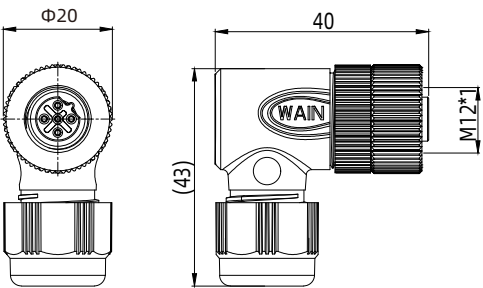
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12P-M04B-S-D6	163 004 511 3105
	6-8 mm	M12P-M04B-S-D8	163 004 511 3106
5	4-6 mm	M12P-M05B-S-D6	163 005 511 3105
	6-8 mm	M12P-M05B-S-D8	163 005 511 3106



- Female
- Plastic locking system
- Screw clamp connection



Angled cable connectors
125/250V 4A

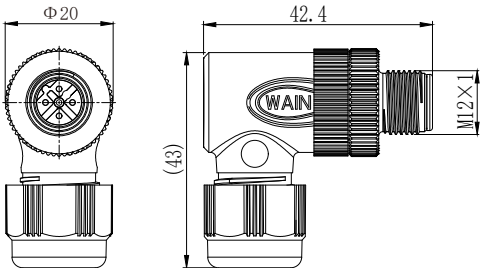
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12P-F04B-S-D6	163 004 521 3105
	6-8 mm	M12P-F04B-S-D8	163 004 521 3106
5	4-6 mm	M12P-F05B-S-D6	163 005 521 3103
	6-8 mm	M12P-F05B-S-D8	163 005 521 3104



- Male
- Metal locking system
- Screw clamp connection
- Recommended use



Angled cable connectors
125/250V 4A

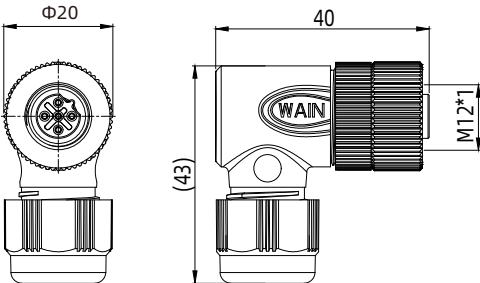
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-M04B-S-D6	163 004 511 1001
	6-8 mm	M12-M04B-S-D8	163 004 511 1002
5	4-6 mm	M12-M05B-S-D6	163 005 511 1001
	6-8 mm	M12-M05B-S-D8	163 005 511 1002



- Female
- Metal locking system
- Screw clamp connection
- Recommended use



Angled cable connectors
125/250V 4A

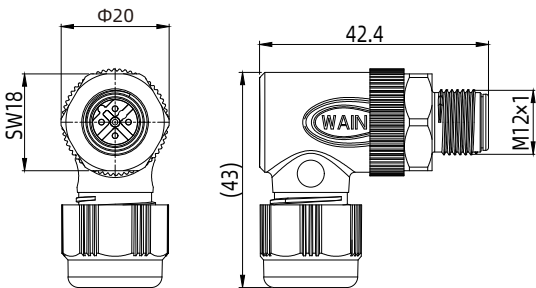
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-F04B-S-D6	163 004 521 1001
	6-8 mm	M12-F04B-S-D8	163 004 521 1002
5	4-6 mm	M12-F05B-S-D6	163 005 521 1001
	6-8 mm	M12-F05B-S-D8	163 005 521 1002



- Male
- Stainless steel locking system
- Screw clamp connection



Angled cable connectors
125/250V 4A

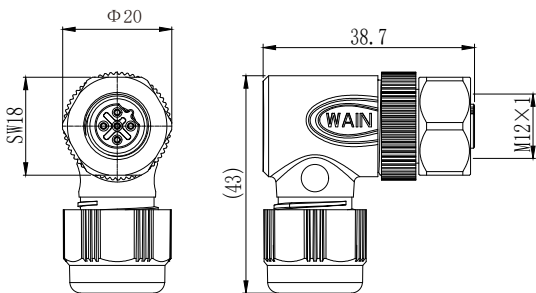
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12S-M04B-S-D6	163 004 511 1003
	6-8 mm	M12S-M04B-S-D8	163 004 511 1004
5	4-6 mm	M12S-M05B-S-D6	163 005 511 1004
	6-8 mm	M12S-M05B-S-D8	163 005 511 1005



- Female
- Stainless steel locking system
- Screw clamp connection



Angled cable connectors
125/250V 4A

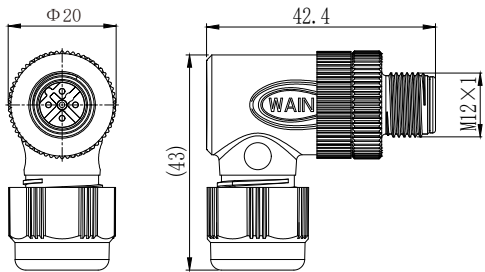
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12S-F04B-S-D6	163 004 521 1003
	6-8 mm	M12S-F04B-S-D8	163 004 521 1004
5	4-6 mm	M12S-F05B-S-D6	163 005 521 1004
	6-8 mm	M12S-F05B-S-D8	163 005 521 1005



- Male
- Power
- Plastic locking system
- Screw clamp connection



Angled cable connectors
125V 2/8A

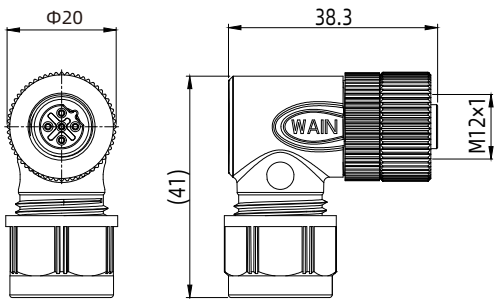
B-Code



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12P-M05B-S-D10	163 005 511 3107



- Female
- Power
- Plastic locking system
- Screw clamp connection



Angled cable connectors
125V 2/8A

B-Code



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12P-F05B-S-D10	163 005 521 3105

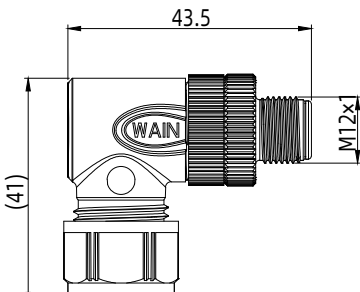
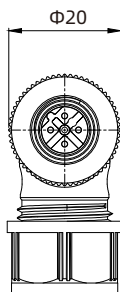


Angled cable connectors
125V 2/8A

B-Code



- Male
- Power
- Metal locking system
- Screw clamp connection
- Recommended use



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12-M05B-S-D10	163 005 511 1003

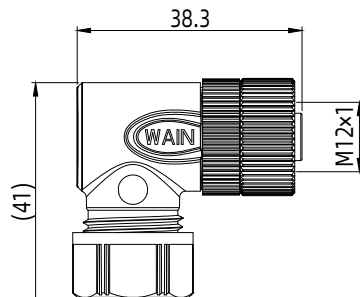
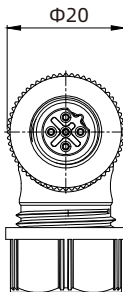


Angled cable connectors
125V 2/8A

B-Code



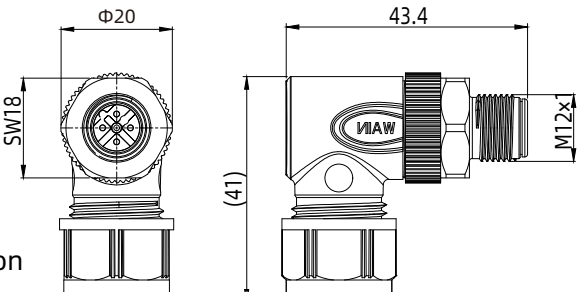
- Female
- Power
- Metal locking system
- Screw clamp connection
- Recommended use



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12-F05B-S-D10	163 005 521 1003



- Male
- Power
- Stainless steel locking system
- Screw clamp connection



Angled cable connectors
125V 2/8A

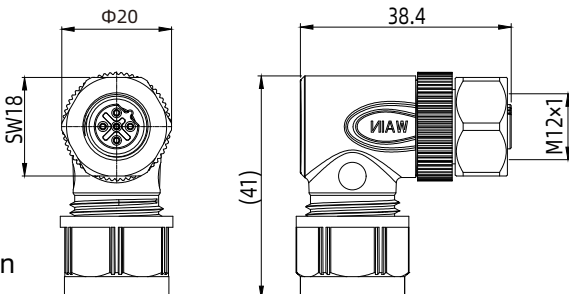
B-Code



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12S-M05B-S-D10	163 005 511 1006



- Female
- Power
- Stainless steel locking system
- Screw clamp connection



Angled cable connectors
125V 2/8A

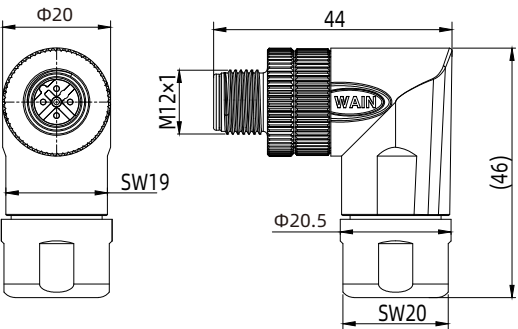
B-Code



Contacts	Cable outlet	Designation	Order No.
5	8-10mm	M12S-F05B-S-D10	163 005 521 1006



- Male
- Shielded
- With shielding ring
- Screw clamp connection



Angled
cable connectors,
shielded
125/250V 4A

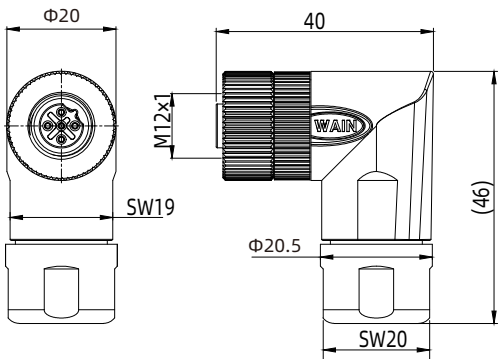
B-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-M04B-S-D6-SH	163 004 511 2003
	6-8 mm	M12-M04B-S-D8-SH	163 004 511 2004
5	4-6 mm	M12-M05B-S-D6-SH	163 005 511 2003
	6-8 mm	M12-M05B-S-D8-SH	163 005 511 2004



- Female
- Shielded
- With shielding ring
- Screw clamp connection



Angled
cable connectors,
shielded
125/250V 4A

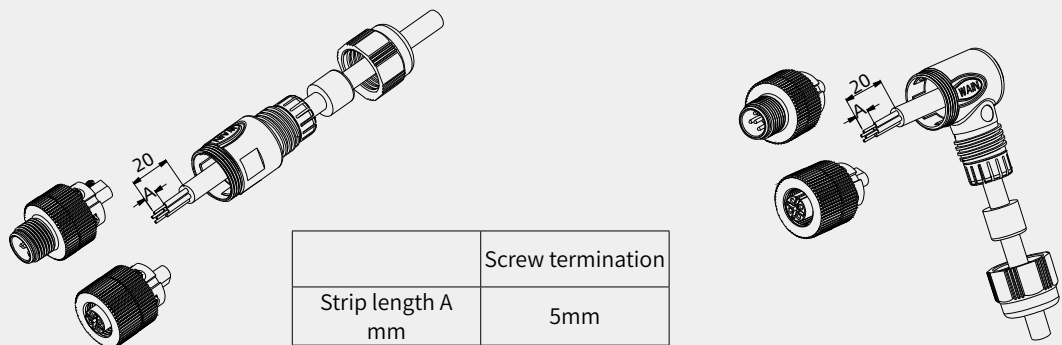
B-Code



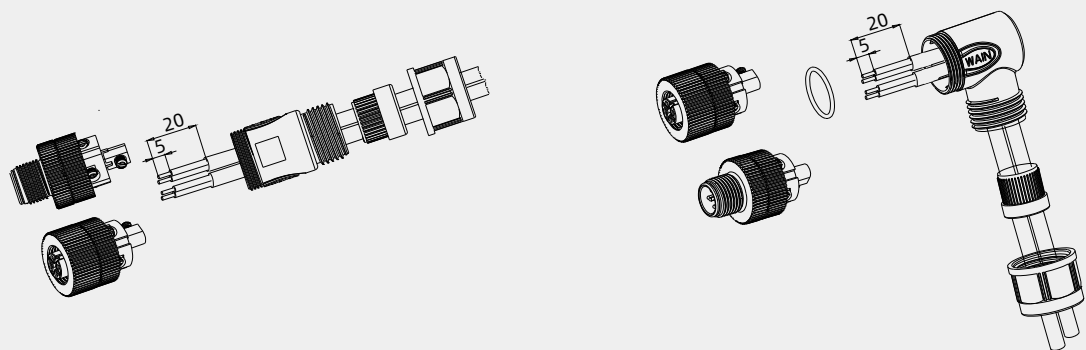
Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-F04B-S-D6-SH	163 004 521 2003
	6-8 mm	M12-F04B-S-D8-SH	163 004 521 2004
5	4-6 mm	M12-F05B-S-D6-SH	163 005 521 2003
	6-8 mm	M12-F05B-S-D8-SH	163 005 521 2004

• Assembly instruction

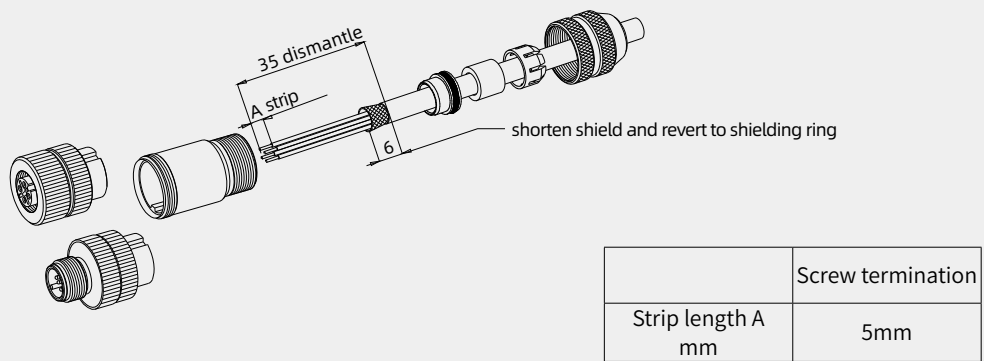
- Strip length male/female cable connector, male/female angled connector, **not shielded**



- Strip length male/female cable duo connector, male/female angled duo connector, **not shielded**

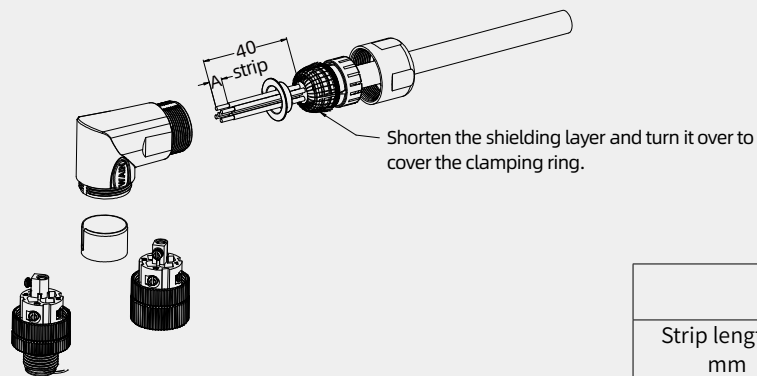


- Strip length male/female cable connector, **with shielding ring**



• Assembly instruction

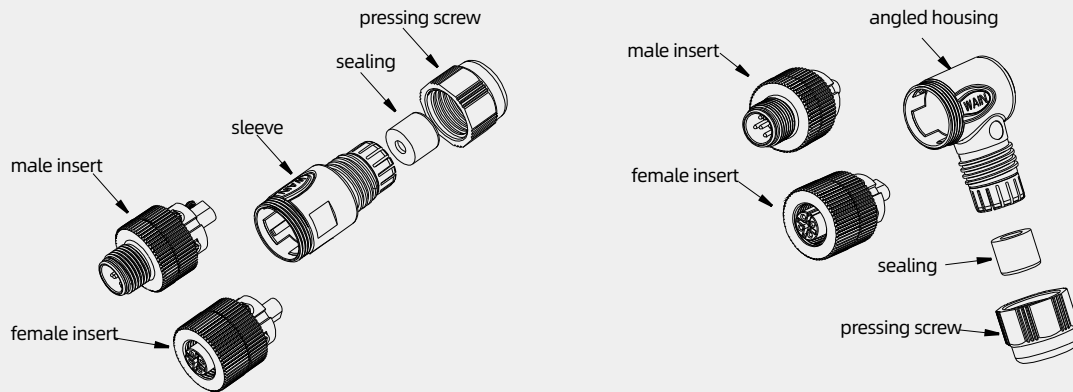
- Stripping length of male/female angled cable connector , with shielded ring.



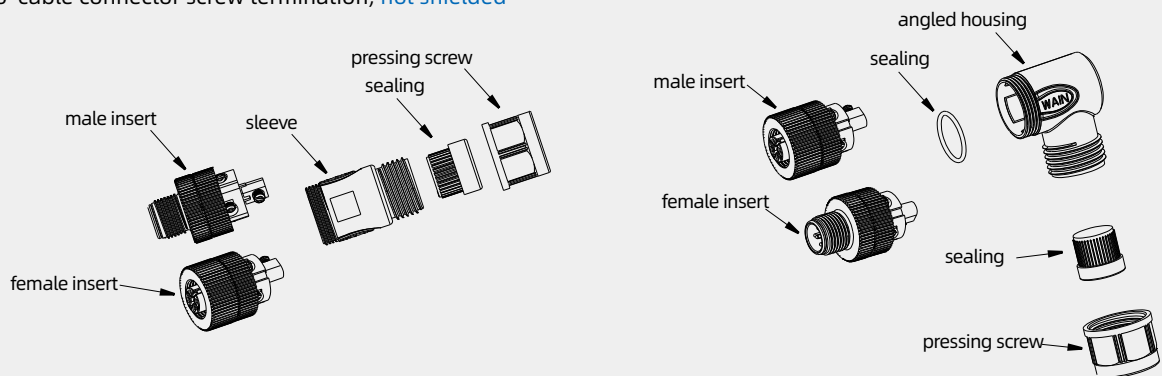
	Screw termination
Strip length A mm	5mm

• Component part drawing

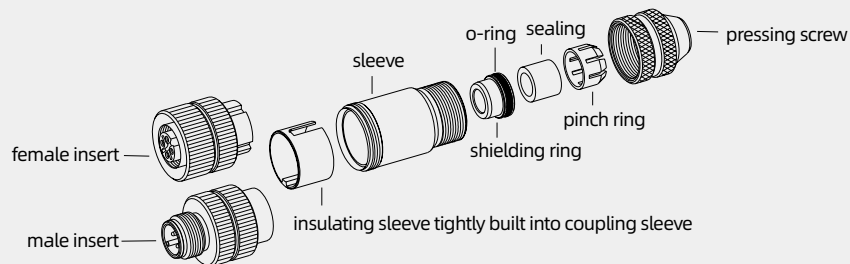
• Cable connector **not shielded**



• Duo-cable connector screw termination, **not shielded**

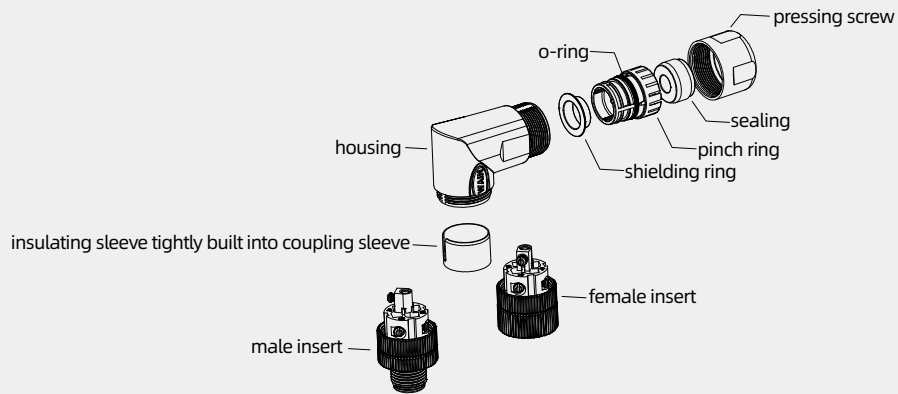


• Cable connector **with shielding ring**



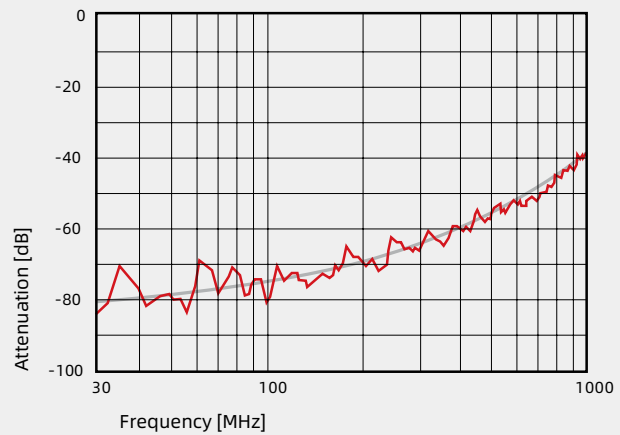
- Component part drawing

- Angled connector Screw termination, [shielded](#)

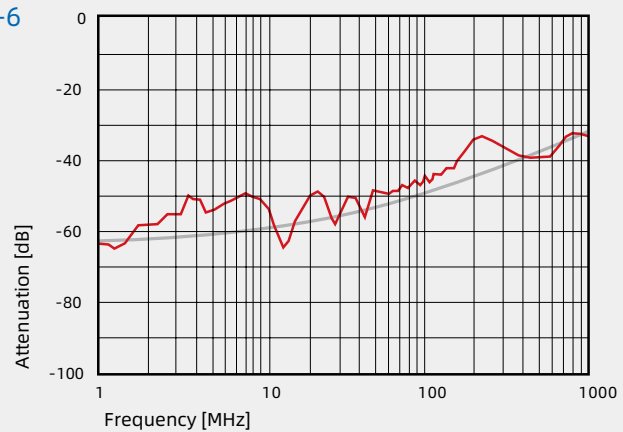


• Rating

- Attenuation curve according to DIN 47250-6
- For straight cable connectors, with shielding ring

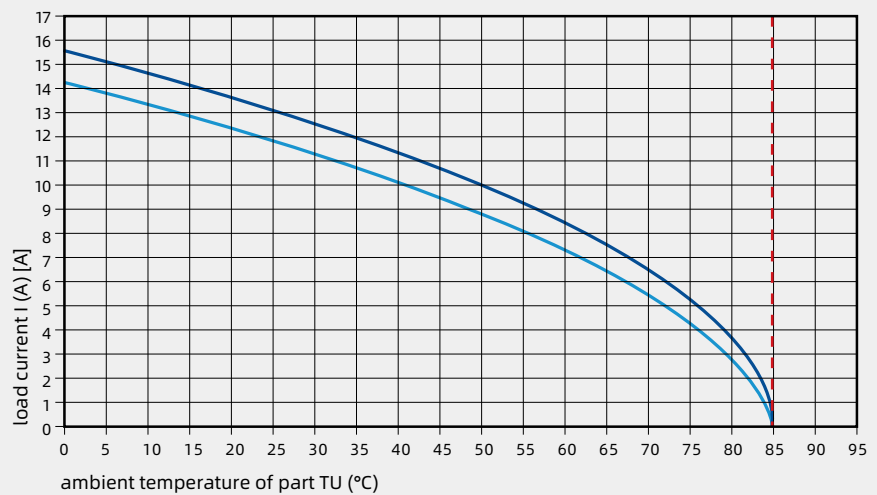


- Attenuation curve according to DIN 47250-6
- For straight cable connectors, with iris type spring



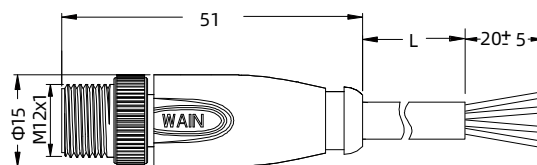
- Derating curve according to DIN EN 60512 for POWER cable connectors

- 4 pole version
- 5 pole version





- Male
- Moulded
- Screw
- Shielded
- Recommended use



Straight cable connectors, cable

125/250V 4A

B-Code

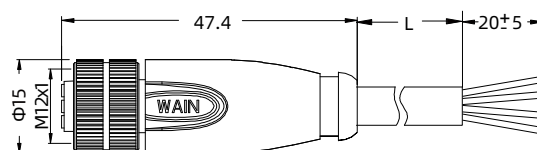


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-M03B-T-1.5-PVC-SH	163 003 401 4045
		5.0 m	M12-M03B-T-5.0-PVC-SH	163 003 401 4046
	3x0.34PUR	1.5 m	M12-M03B-T-1.5-PUR-SH	163 003 401 4043
		5.0 m	M12-M03B-T-5.0-PUR-SH	163 003 401 4044
4	4x0.34PVC	1.5 m	M12-M04B-T-1.5-PVC-SH	163 004 401 4047
		5.0 m	M12-M04B-T-5.0-PVC-SH	163 004 401 4048
	4x0.34PUR	1.5 m	M12-M04B-T-1.5-PUR-SH	163 004 401 4045
		5.0 m	M12-M04B-T-5.0-PUR-SH	163 004 401 4046
5	5x0.25PVC	1.5 m	M12-M05B-T-1.5-PVC-SH	163 005 401 4043
		5.0 m	M12-M05B-T-5.0-PVC-SH	163 005 401 4044
	5x0.25PUR	1.5 m	M12-M05B-T-1.5-PUR-SH	163 005 401 4063
		5.0 m	M12-M05B-T-5.0-PUR-SH	163 005 401 4064



- Female
- Moulded
- Screw
- Shielded
- Recommended use



Straight cable connectors, cable

125/250V 4A

B-Code

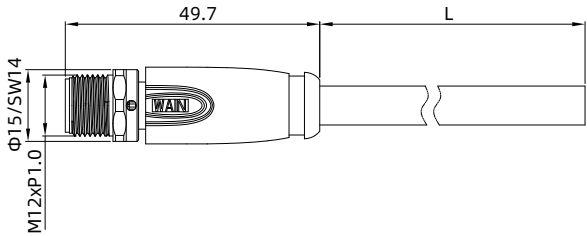


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	3x0.34PVC	1.5 m	M12-F03B-T-1.5-PVC-SH	163 003 402 4046
		5.0 m	M12-F03B-T-5.0-PVC-SH	163 003 402 4047
	3x0.34PUR	1.5 m	M12-F03B-T-1.5-PUR-SH	163 003 402 4043
		5.0 m	M12-F03B-T-5.0-PUR-SH	163 003 402 4044
4	4x0.34PVC	1.5 m	M12-F04B-T-1.5-PVC-SH	163 004 402 4046
		5.0 m	M12-F04B-T-5.0-PVC-SH	163 004 402 4047
	4x0.34PUR	1.5 m	M12-F04B-T-1.5-PUR-SH	163 004 402 4045
		5.0 m	M12-F04B-T-5.0-PUR-SH	163 004 402 4044
5	5x0.25PVC	1.5 m	M12-F05B-T-1.5-PVC-SH	163 005 402 4046
		5.0 m	M12-F05B-T-5.0-PVC-SH	163 005 402 4044
	5x0.25PUR	1.5 m	M12-F05B-T-1.5-PUR-SH	163 005 402 4064
		5.0 m	M12-F05B-T-5.0-PUR-SH	163 005 402 4065



- Male
- Moulded
- Screw



Straight
cable connectors,
cable
125/250V 4A

B-Code



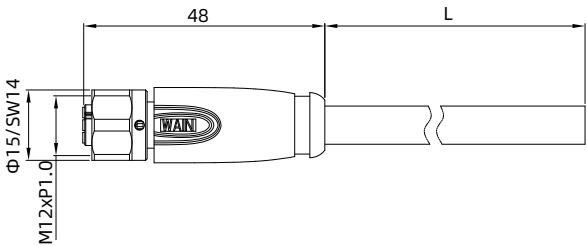
2pin

- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
2	2x0.25PVC	1.5 m	M12-M02B-T-1.5-PVC-DP	163 002 401 4005
		5.0 m	M12-M02B-T-5.0-PVC-DP	163 002 401 4007
	2x0.25PUR	1.5 m	M12-M02B-T-1.5-PUR-DP	163 002 401 4006
		5.0 m	M12-M02B-T-5.0-PUR-DP	163 002 401 4008



- Female
- Moulded
- Screw



Straight
cable connectors,
cable
125/250V 4A

B-Code



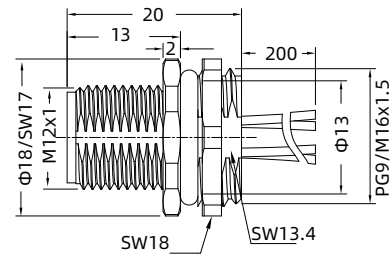
2pin

- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
2	2x0.25PVC	1.5 m	M12-F02B-T-1.5-PVC-DP	163 002 402 4001
		5.0 m	M12-F02B-T-5.0-PVC-DP	163 002 402 4003
	2x0.25PUR	1.5 m	M12-F02B-T-1.5-PUR-DP	163 002 402 4002
		5.0 m	M12-F02B-T-5.0-PUR-DP	163 002 402 4004



- Male
- Panel mount connector
- with single wires 0.25mm² length 0.2m
- Recommended use



Socket

125/250V 4A

B-Code

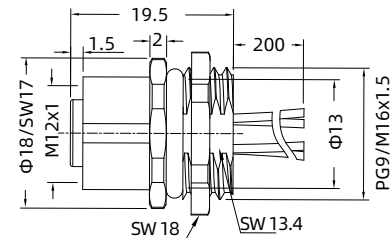


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
4	PG9	M12-M04B-BK-PG9-W0.25	163 004 301 4004
	M16x1.5	M12-M04B-BK-M16-W0.25	163 004 301 4005
5	PG9	M12-M05B-BK-PG9-W0.25	163 005 301 4002
	M16x1.5	M12-M05B-BK-M16-W0.25	163 005 301 4003



- Female
- Panel mount connector
- with single wires 0.25mm² length 0.2m
- Recommended use



Socket

125/250V 4A

B-Code

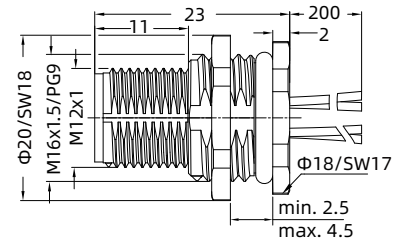


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
4	PG9	M12-F04B-BK-PG9-W0.25	163 004 302 4003
	M16x1.5	M12-F04B-BK-M16-W0.25	163 004 302 4004
5	PG9	M12-F05B-BK-PG9-W0.25	163 005 302 4007
	M16x1.5	M12-F05B-BK-M16-W0.25	163 005 302 4008



- Male
- Panel mount connector
- with single wires 0.25mm^2 length 0.2m
- Front fastened



Socket

125/250V 4A

B-Code

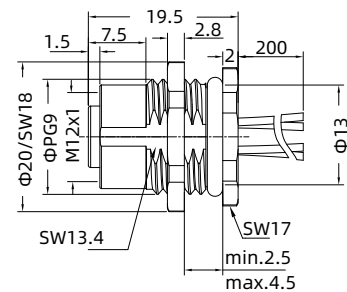


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
4	PG9	M12-M04B-BKR-PG9-W0.25	163 004 301 4012
	M16x1.5	M12-M04B-BKR-M16-W0.25	163 004 301 4015
5	PG9	M12-M05B-BKR-PG9-W0.25	163 005 301 4012
	M16x1.5	M12-M05B-BKR-M16-W0.25	163 005 301 4013



- Female
- Panel mount connector
- with single wires 0.25mm² length 0.2m
- Front fastened



Socket

125/250V 4A

B-Code

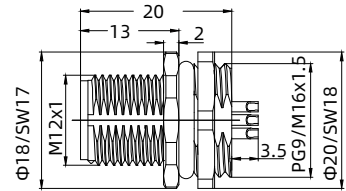


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
4	PG9	M12-F04B-BKR-PG9-W0.25	163 004 302 4517
	M16x1.5	M12-F04B-BKR-M16-W0.25	163 004 302 4518
5	PG9	M12-F05B-BKR-PG9-W0.25	163 005 302 4512
	M16x1.5	M12-F05B-BKR-M16-W0.25	163 005 302 4513



- Male
- panel mount connector
- Solder
- Recommended use



Socket

125/250V 4A

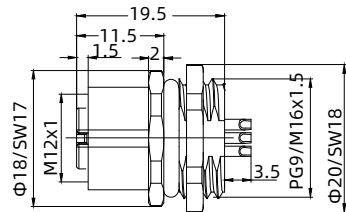
B-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04B-BK-PG9-C	163 004 313 1002
	M16x1.5	M12-M04B-BK-M16-C	163 004 313 1003
5	PG9	M12-M05B-BK-PG9-C	163 005 313 1002
	M16x1.5	M12-M05B-BK-M16-C	163 005 313 1003



- Female
- panel mount connector
- Solder
- Recommended use



Socket

125/250V 4A

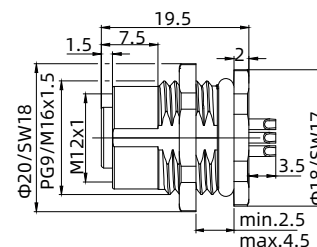
B-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-F04B-BK-PG9-C	163 004 323 1002
	M16x1.5	M12-F04B-BK-M16-C	163 004 323 1003
5	PG9	M12-F05B-BK-PG9-C	163 005 323 1002
	M16x1.5	M12-F05B-BK-M16-C	163 005 323 1003



- Male
- panel mount connector
- Solder
- Front fastened



Socket

125/250V 4A

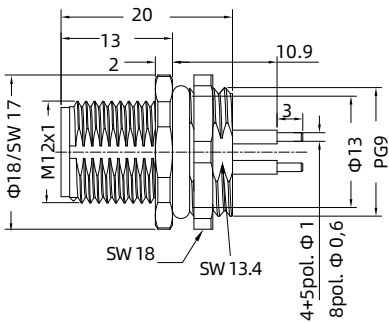
B-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-F04B-BKR-PG9-C	163 004 323 1012
	M16x1.5	M12-F04B-BKR-M16-C	163 004 323 1013
5	PG9	M12-F05B-BKR-PG9-C	163 005 323 1012
	M16x1.5	M12-F05B-BKR-M16-C	163 005 323 1013



- Male
- panel mount connector
- Dip solder



Socket

125/250V 4A

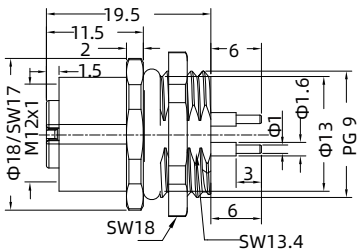
B-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04B-BK-PG9-D	163 004 314 1003
	M16x1.5	M12-M04B-BK-M16-D	163 004 314 1004
5	PG9	M12-M05B-BK-PG9-D	163 005 314 1003
	M16x1.5	M12-M05B-BK-M16-D	163 005 314 1004



- Female
- panel mount connector
- Dip solder



Socket

125/250V 4A

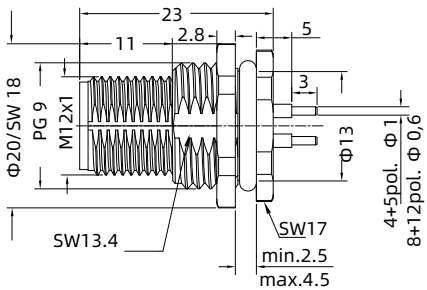
B-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-F04B-BK-PG9-D	163 004 324 1003
	M16x1.5	M12-F04B-BK-M16-D	163 004 324 1004
5	PG9	M12-F05B-BK-PG9-D	163 005 324 1003
	M16x1.5	M12-F05B-BK-M16-D	163 005 324 1004



- Male
- panel mount connector
- Dip solder
- Front fastened



Socket

125/250V 4A

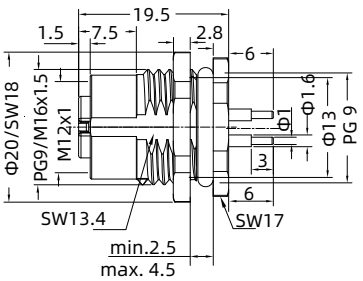
B-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04B-BKR-PG9-D	163 004 314 1012
	M16x1.5	M12-M04B-BKR-M16-D	163 004 314 1013
5	PG9	M12-M05B-BKR-PG9-D	163 005 314 1012
	M16x1.5	M12-M05B-BKR-M16-D	163 005 314 1013



- Female
- panel mount connector
- Dip solder
- Front fastened



Socket

125/250V 4A

B-Code

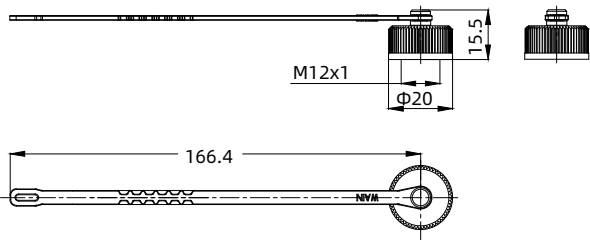


Contacts	Thread	Designation	Order No.
4	PG9	M12-F04B-BKR-PG9-D	163 004 324 1012
	M16x1.5	M12-F04B-BKR-M16-D	163 004 324 1013
5	PG9	M12-F05B-BKR-PG9-D	163 005 324 1012
	M16x1.5	M12-F05B-BKR-M16-D	163 005 324 1013

• Protection covers (IP67)



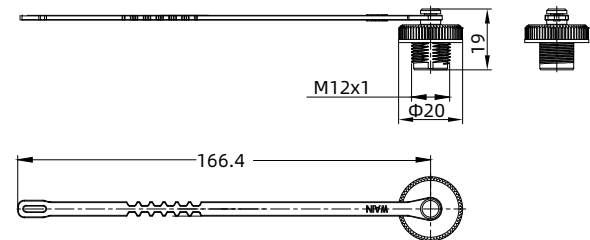
Protection cover
for male cable connector



Description	Designation	Order No.
Without cord	M12-MCV	163 000 001 9003
With cord	M12-MCV/1	163 000 001 9001



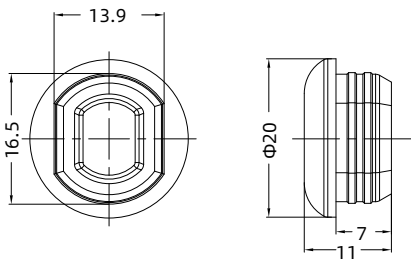
Protection cover
for female cable connector



Description	Designation	Order No.
Without cord	M12-FCV	163 000 002 9003
With cord	M12-FCV/1	163 000 002 9001



Protection covers
for flange mount panel

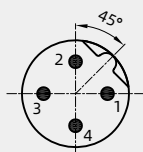


Description	Designation	Order No.
Dust-proof	M12-WNPP-M16/BK	163 000 000 9001

- Contact arrangements

- Male insert (mating side)

2 contacts



	X	Y	
1			1. n.C
2	0.00	2.50	2. green
3			3. n.C
4	0.00	-2.50	4. red

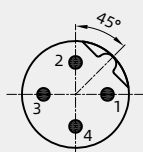
- Female insert (mating side)

2 contacts



	X	Y	
1			1. n.C
2	0.00	2.50	2. green
3			3. n.C
4	0.00	-2.50	4. red

3 contacts



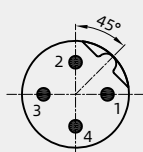
	X	Y	
1	2.50	0.00	1. brown
2			2. n.C
3	-2.50	0.00	3. blue
4	0.00	-2.50	4. black

3 contacts



	X	Y	
1	-2.50	0.00	1. brown
2			2. n.C
3	2.50	0.00	3. blue
4	0.00	-2.50	4. black

4 contacts



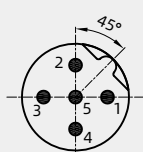
	X	Y	
1	2.50	0.00	1. brown
2	0.00	2.50	2. white
3	-2.50	0.00	3. blue
4	0.00	-2.50	4. black

4 contacts



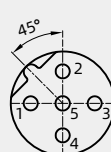
	X	Y	
1	-2.50	0.00	1. brown
2	0.00	2.50	2. white
3	2.50	0.00	3. blue
4	0.00	-2.50	4. black

5 contacts



	X	Y	
1	2.50	0.00	1. brown
2	0.00	2.50	2. white
3	-2.50	0.00	3. blue
4	0.00	-2.50	4. black
5	0.00	0.00	5. grey

5 contacts

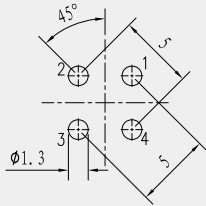


	X	Y	
1	-2.50	0.00	1. brown
2	0.00	2.50	2. white
3	2.50	0.00	3. blue
4	0.00	-2.50	4. black
5	0.00	0.00	5. grey

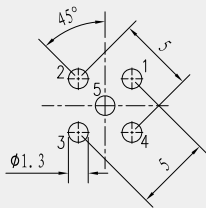
- Panel cut out

- Opening hole drawing male insert(PCB),
Panel mount connectors

4 contacts

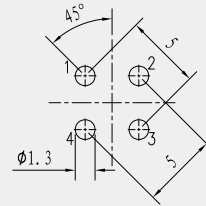


5 contacts

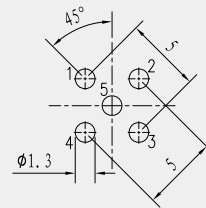


- Opening hole drawing female insert(PCB),
Panel mount connectors

4 contacts



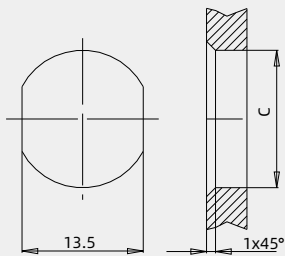
5 contacts



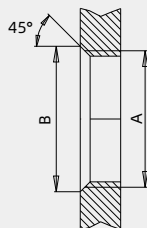
• Panel cut out

• Panel mount connectors

• Through-hole mounting



• Screw mounting



	A	B	C
PG9	PG9	16.2	15.3
PG13.5	PG13.5	21.5	20.5
M16x1.5	M16x1.5	17.0	16.1
M20x1.5	M20x1.5	21.0	20.1

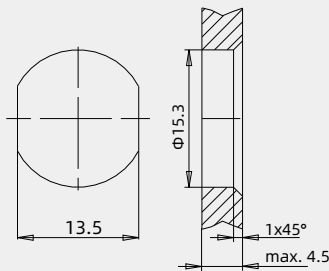
Tightening torque according to
DIN VDE 0619

Metal housing 6,25 Nm
Plastic housing 3,75 Nm

• Panel mount connectors

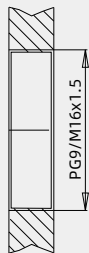
• Rear panel mounting,
front tighten

• Through-hole mounting



• Panel mount connectors
front tighten

• Through-hole mounting



Tightening torque 6,25 Nm

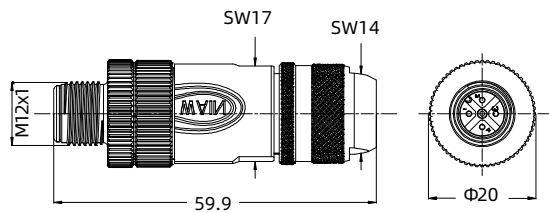


Cable Connector

- Shielded / unshielded series
- Installable series and cast cable series
- Thread locking M12X1
- Screw terminal
- Shielding ring and ring spring shielding connection
- Cable length 1.5m and 5m
- Other cable length upon request, minimum order quantity 200 pieces
- Cable material can be customized according to requirements
- Protection grade IP67
- Anti-loose spring with nut



- Male
- Shielded
- Cat.5e Screw terminal, with shielding ring



Straight cable connectors, shielded
250V 4A

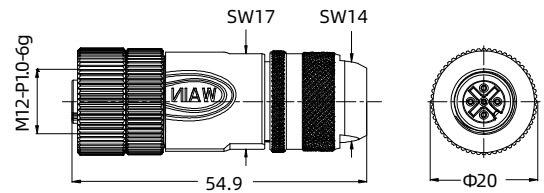
D-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-M04D-T-D6-SH	163 204 411 2001
	6-8 mm	M12-M04D-T-D8-SH	163 204 411 2002



- Female
- Shielded
- Cat.5e Screw terminal, with shielding ring



Straight cable connectors, shielded
250V 4A

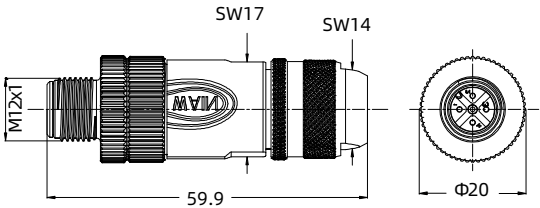
D-Code



Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-F04D-T-D6-SH	163 204 421 2001
	6-8 mm	M12-F04D-T-D8-SH	163 204 421 2002



- Male
- Shielded
- Cat.5e Crimp terminal , with shielding ring



□ Straight cable connectors, shielded
250V 4A

D-Code

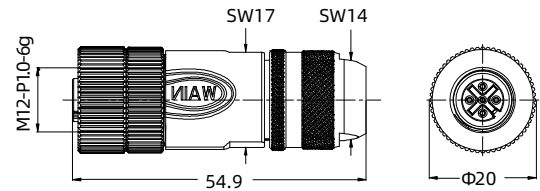


- Order crimp contacts separately

Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-MC04D-T-D6-SH	163 004 010 2001
	6-8 mm	M12-MC04D-T-D8-SH	163 004 010 2002



- Female
- Shielded
- Cat.5e Crimp terminal , with shielding ring



□ Straight cable connectors, shielded
250V 4A

D-Code

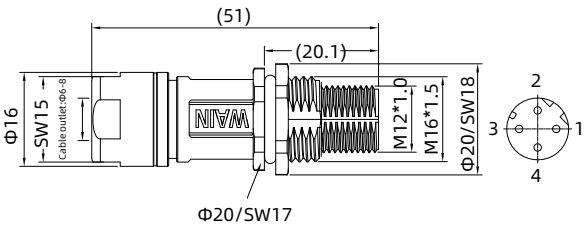


- Order crimp contacts separately

Contacts	Cable outlet	Designation	Order No.
4	4-6 mm	M12-FC04D-T-D6-SH	163 004 020 2001
	6-8 mm	M12-FC04D-T-D8-SH	163 004 020 2002



- Male
- Shielded
- Cat.5e Crimp terminal , with shielding ring



Flange base
cable connector
shielded
250V 4A

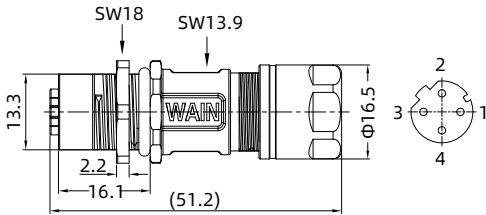
D-Code



Contacts	Cable outlet	Designation	Order No.
4	6-8 mm	M12-MC04D-CCT/R-M16-D8-SH	163 004 510 2001



- Female
- Shielded
- Cat.5e Crimp terminal , with shielding ring



Flange base
cable connector
shielded
250V 4A

D-Code



Contacts	Cable outlet	Designation	Order No.
4	6-8 mm	M12-FC04D-CCT/R-M16-D8-SH	163 004 520 2003

• Accessories

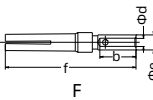
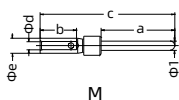
▣ Crimp contacts 5A

Contact resistance
≤ 3mΩ

Gold plated



Wire gauge(mm ²)	Male	Order No.	Female	Order No.
0.09-0.25	CSGM-0.25	101 014 210 0101	CSGF-0.25	101 014 220 0101
0.13-0.33	CSGM-0.33	101 014 210 0201	CSGF-0.33	101 014 220 0201
0.33-0.52	CSGM-0.52	101 014 210 0501	CSGF-0.52	101 014 220 0501
0.52-0.82	CSGM-0.82	101 014 210 0701	CSGF-0.82	101 014 220 0701



a	b	c	d	e	f
8.10	4.0	14.8	0.64	1.66	14.4
8.10	4.0	14.8	0.90	1.66	14.4
8.10	4.0	14.8	1.12	1.66	14.4
8.23	4.2	14.0	1.35	1.75	13.6

Wire gauge		Stripping length
0.09-0.25 mm ²	AWG 28-24	5 mm
0.13-0.33 mm ²	AWG 26-22	5 mm
0.33-0.52 mm ²	AWG 22-20	5 mm
0.52-0.82 mm ²	AWG 22-18	5 mm

▣ Crimping tool

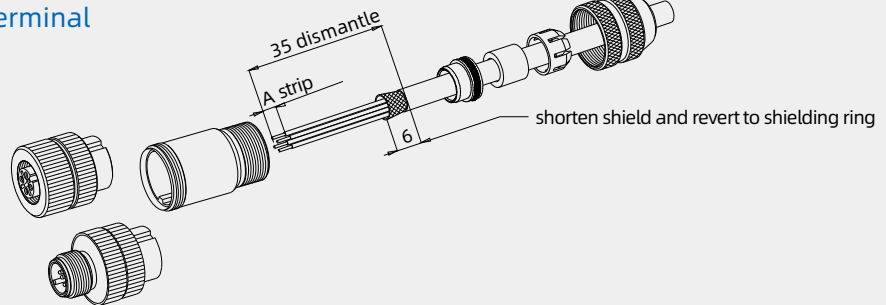


Wire gauge	Designation	Order No.
0.09-0.82mm ²	TL03	198 001 001 0002

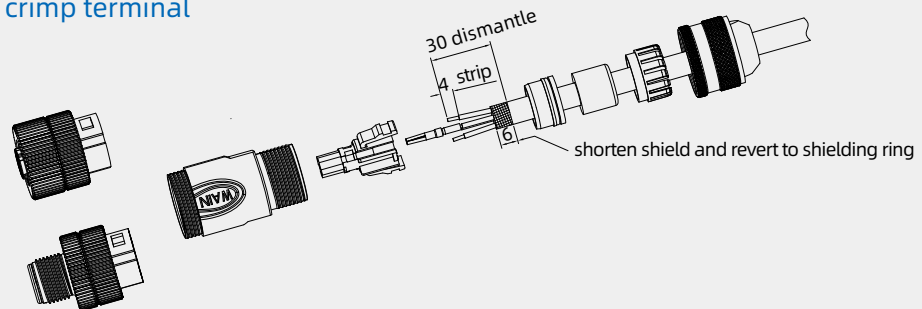
- Notes: The tools for crimp terminal may influence the product quality and stability.
Please select the tools recognized by our company.

- Assembly instruction/Component part drawing

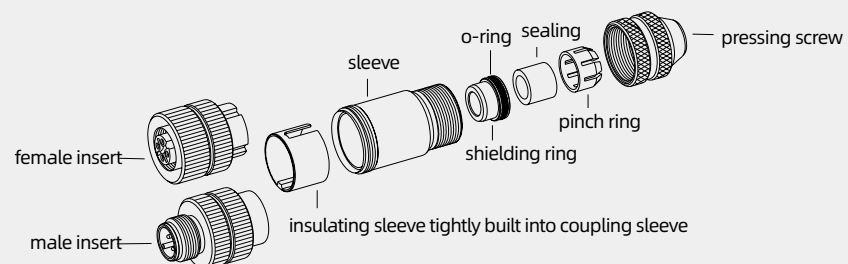
- Assembly instruction
- Strip length male/female cable connector,
with shielding ring, screw terminal



- Assembly instruction
- Strip length male/female cable connector,
with shielding ring, crimp terminal

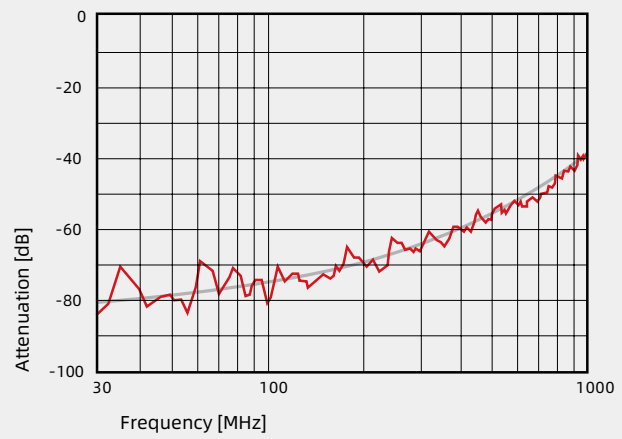


- Component part drawing
- Cable connector with shielding ring



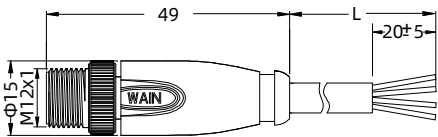
- Rating

- Attenuation curve according to DIN 47250-6 for straight cable connectors screw termination (cable version IEEE 802.3)





- Male
- Moulded
- Screw
- PROFINET



**Straight
cable connectors,
cable**
250V 4A

D-Code

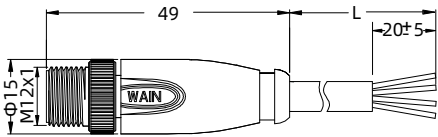


- Further cable length upon request,
minimum order quantity is 200 pcs.

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-M04D-T-1.5-PUR-PFN	163 204 401 4081
	5.0m	M12-M04D-T-5.0-PUR-PFN	163 204 401 4082



- Male
- Moulded
- Screw
- Cat.5e
- Ethernet



**Straight
cable connectors,
cable**
250V 4A

D-Code

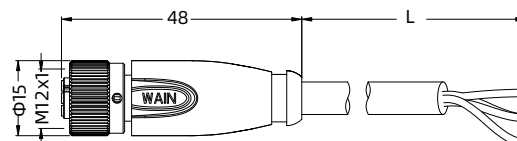


- Further cable length upon request,
minimum order quantity is 200 pcs.

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-M04D-T-1.5-PUR-Cat.5e	163 204 401 4091
	5.0m	M12-M04D-T-5.0-PUR-Cat.5e	163 204 401 4092



- Female
- Moulded
- Screw
- PROFINET



**Straight
cable connectors,
cable**
250V 4A

D-Code



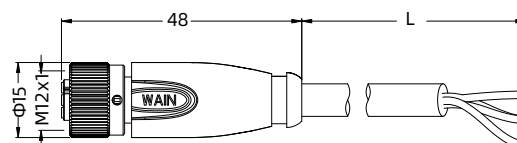
4pin

- Further cable length upon request, minimum order quantity is 200 pcs.

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-F04D-T-1.5-PUR-PFN	163 204 402 4081
	5.0m	M12-F04D-T-5.0-PUR-PFN	163 204 402 4082



- Female
- Moulded
- Screw
- Cat.5e
- Ethernet



**Straight
cable connectors,
cable**
250V 4A

D-Code



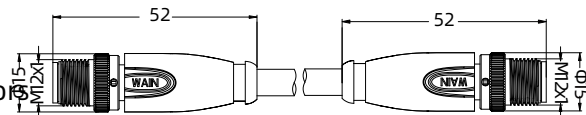
4pin

- Further cable length upon request, minimum order quantity is 200 pcs.

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-F04D-T-1.5-PUR-Cat.5e	163 204 402 4091
	5.0m	M12-F04D-T-5.0-PUR-Cat.5e	163 204 402 4092



- Male
- Moulded
- Screw
- PROFINET
- Cable connectors
- wire jumper



□ **Straight cable connectors, cable**
250V 4A

D-Code

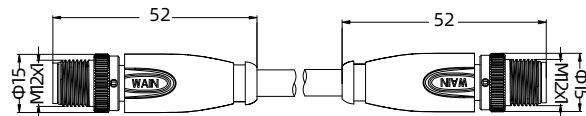


- Further cable length upon request, minimum order quantity is 200 pcs.

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-M04D-T/M04D-T-1.5-PUR-PFN	163 004 401 4508
	5.0m	M12-M04D-T/M04D-T-5.0-PUR-PFN	163 004 401 4507



- Male
- Moulded
- Screw
- Cat.5e
- Ethernet
- Cable connectors
- wire jumper



□ **Straight cable connectors, cable**
250V 4A

D-Code

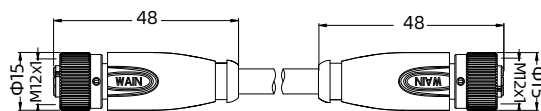


- Further cable length upon request, minimum order quantity is 200 pcs.

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-M04D-T/M04D-T-1.5-PUR-Cat.5e	163 004 401 4510
	5.0m	M12-M04D-T/M04D-T-5.0-PUR-Cat.5e	163 004 401 4509



- Female
- Moulded
- Screw
- PROFINET
- Cable connectors -wire jumper



Straight cable connectors, cable

250V 4A

D-Code



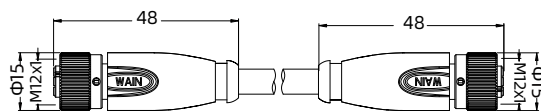
4pin

- Further cable length upon request, minimum order quantity is 200 pcs.

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-F04D-T/F04D-T-1.5-PUR-PFN	163 004 402 4510
	5.0m	M12-F04D-T/F04D-T-5.0-PUR-PFN	163 004 402 4509



- Female
- Moulded
- Screw
- Cat.5e
- Ethernet
- Cable connectors -wire jumper



Straight cable connectors, cable

250V 4A

D-Code



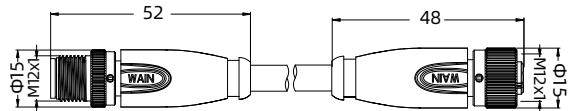
4pin

- Further cable length upon request, minimum order quantity is 200 pcs.

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-F04D-T/F04D-T-1.5-PUR-Cat.5e	163 004 402 4512
	5.0m	M12-F04D-T/F04D-T-5.0-PUR-Cat.5e	163 004 402 4511



- Male, female
- Moulded
- Screw
- PROFINET
- Cable connectors -wire jumper



Straight cable connectors, cable
250V 4A

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-M04D-T/F04D-T-1.5-PUR-PFN	163 004 400 4016
	5.0m	M12-M04D-T/F04D-T-5.0-PUR-PFN	163 004 401 4502

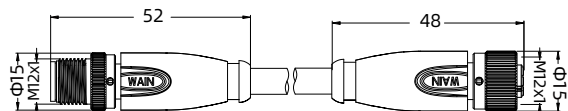
D-Code



- Further cable length upon request, minimum order quantity is 200 pcs.



- Male, female
- Moulded
- Screw
- Cat.5e
- Ethernet
- Cable connectors -wire jumper



Straight cable connectors, cable
250V 4A

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-M04D-T/F04D-T-1.5-PUR-Cat.5e	163 004 400 4017
	5.0m	M12-M04D-T/F04D-T-5.0-PUR-Cat.5e	163 004 001 4013

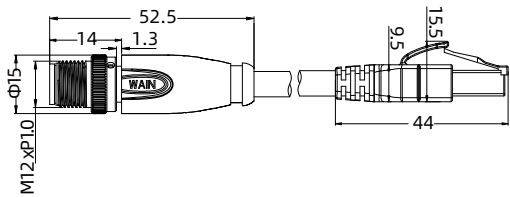
D-Code



- Further cable length upon request, minimum order quantity is 200 pcs.



- Male
- Moulded
- Screw
- Cat.5e
- Ethernet
- Cable connectors -wire jumper



Straight
cable connectors,
cable
250V 4A

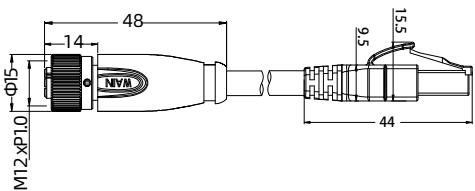
D-Code



Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-M04D-T/RJ45-1.5-PUR-Cat.5e	163 004 001 4021
	5.0 m	M12-M04D-T/RJ45-5.0-PUR-Cat.5e	163 004 001 4004



- Female
- Moulded
- Screw
- Cat.5e
- Ethernet
- Cable connectors
- wire jumper



Straight
cable connectors,
cable
250V 4A

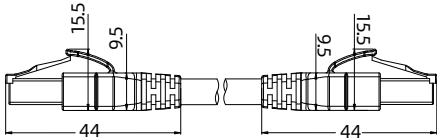
D-Code



Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-F04D-T/RJ45-1.5-PUR-Cat.5e	163 004 402 4506
	5.0m	M12-F04D-T/RJ45-5.0-PUR-Cat.5e	163 004 402 4507



- Cat.5e
- Ethernet
- Cable connectors
- wire jumper

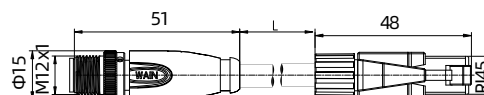


Straight
cable connectors,
cable
250V 4A

Contacts	Cable length	Designation	Order No.
4	1.5 m	2RJ45-M04-T-1.5-PUR-Cat.5e	172 004 000 4002
	5.0m	2RJ45-M04-T-5.0-PUR-Cat.5e	172 004 000 4001



- Male
- Moulded
- Screw
- PROFINET
- Cable connectors
- wire jumper



Straight cable connectors, cable

250V 4A

D-Code

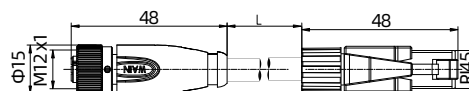


4pin

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-M04D-T/RJ45P-T-1.5-PUR-PFN	163 004 001 4056
	5.0m	M12-M04D-T/RJ45P-T-5.0-PUR-PFN	163 004 001 4057



- Female
- Moulded
- Screw
- Cat.5e
- PROFINET
- Cable connectors
- wire jumper



Straight cable connectors, cable

250V 4A

D-Code



4pin

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-F04D-T/RJ45P-T-1.5-PUR-PFN	163 004 002 4004
	5.0m	M12-F04D-T/RJ45P-T-5.0-PUR-PFN	163 004 002 4005

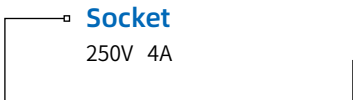
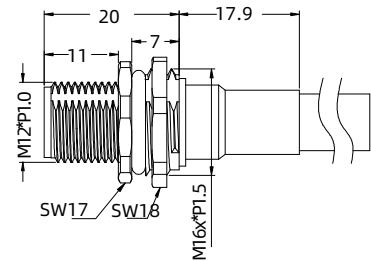
- PROFINET cable

Number of contacts	4-pole
Wire gauge mm ²	2 x 2 x AWG 22
Material jacket	PUR
Insulation wire	Polyolefin
Design of wire (mm)	7 x 0,25 (AWG 22)
Cable jacket (mm)	6.7
Resistance of wire	55 Ω/Km
Temperature range (cable in move)	- 5 ° C / + 60 ° C
Temperature range (cable not in move)	- 20 ° C / + 60 ° C
Bending radius (cable in move)	min. 100 mm
Bending radius (cable not in move)	min. 35 mm
Approval	Profinet, UL 20236

M12 Circular Connector,D-coded



- Male
- Panel mount connector , with PROFINET-cable
- Shielded



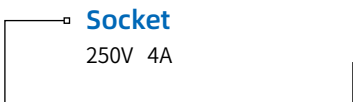
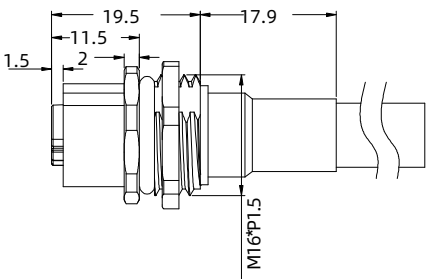
D-Code



Contacts	Cable length	Thread	Designation	Order No.
4	0.5m	PG9	M12-M04D-BK-PG9-PFN	163 004 301 4017
	0.5m	M16x1.5	M12-M04D-BK-M16-PFN	163 204 301 4022



- Female
- Panel mount connector , with PROFINET-cable
- Shielded



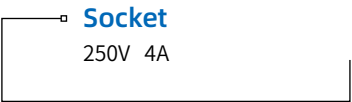
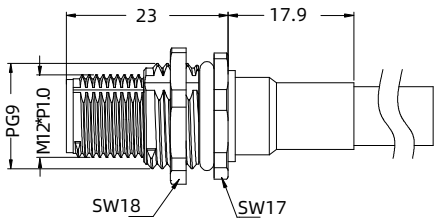
D-Code



Contacts	Cable length	Thread	Designation	Order No.
4	0.5m	PG9	M12-F04D-BK-PG9-PFN	163 004 302 4022
	0.5m	M16x1.5	M12-F04D-BK-M16-PFN	163 204 302 4022



- Male
- Panel mount connector , with PROFINET-cable
- Shielded



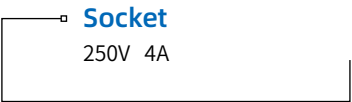
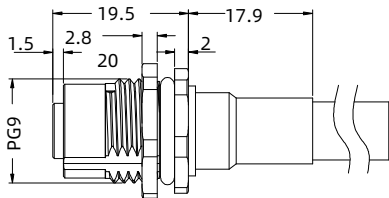
D-Code



Contacts	Cable length	Thread	Designation	Order No.
4	0.5m	PG9	M12-M04D-BKR-PG9-PFN	163 204 301 4012
	0.5m	M16x1.5	M12-M04D-BKR-M16-PFN	163 004 301 4018



- Female
- Panel mount connector , with PROFINET-cable
- Shielded



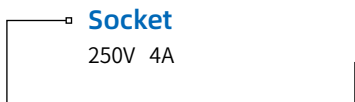
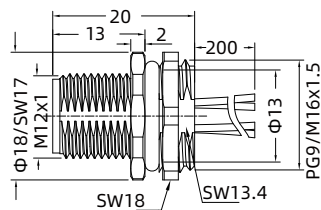
D-Code



Contacts	Cable length	Thread	Designation	Order No.
4	0.5m	PG9	M12-F04D-BKR-PG9-PFN	163 204 302 4012
	0.5m	M16x1.5	M12-F04D-BKR-M16-PFN	163 004 302 4023



- Male
- Panel mount connector
- with single wires 0.25mm²



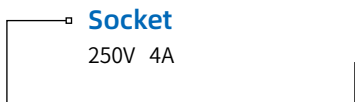
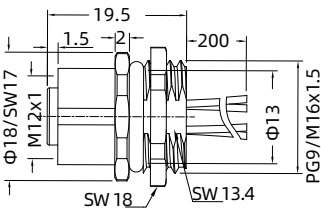
D-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04D-BK-PG9-W0.25	163 004 301 4003
	M16x1.5	M12-M04D-BK-M16-W0.25	163 204 301 4021



- Female
- Panel mount connector
- with single wires 0.25mm²



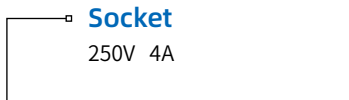
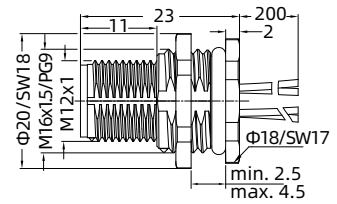
D-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-F04D-BK-PG9-W0.25	163 204 302 4001
	M16x1.5	M12-F04D-BK-M16-W0.25	163 204 302 4021



- Male
- Panel mount connector
- with single wires 0.25mm²



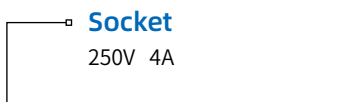
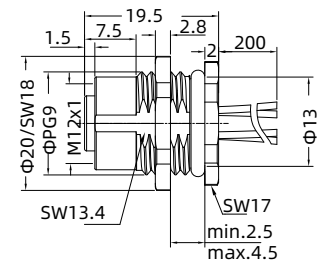
D-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04D-BKR-PG9-W0.25	163 004 301 4014
	M16x1.5	M12-M04D-BKR-M16-W0.25	163 004 301 4016



- Female
- Panel mount connector
- with single wires 0.25mm²



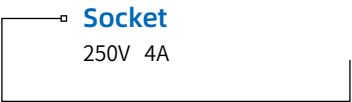
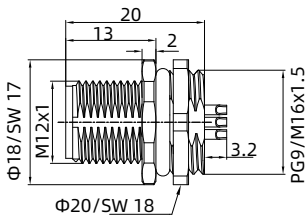
D-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-F04D-BKR-PG9-W0.25	163 204 302 4011
	M16x1.5	M12-F04D-BKR-M16-W0.25	163 204 302 4031



- Male
- Panel mount connector
- Solder



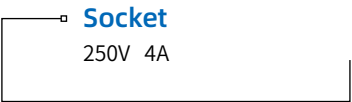
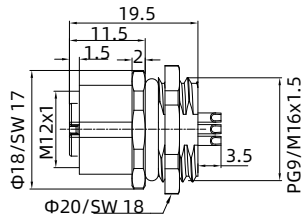
D-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04D-BK-PG9-C	163 004 301 1006
	M16x1.5	M12-M04D-BK-M16-C	163 004 301 1007



- Female
- Panel mount connector
- Solder



D-Code

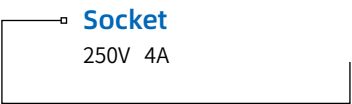
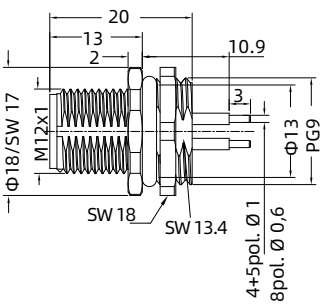


Contacts	Thread	Designation	Order No.
4	PG9	M12-F04D-BK-PG9-C	163 204 324 1002
	M16x1.5	M12-F04D-BK-M16-C	163 004 302 1006

M12 Circular Connector,D-coded



- Male
- Panel mount connector
- Dip solder



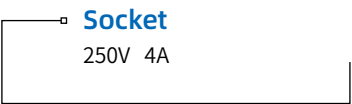
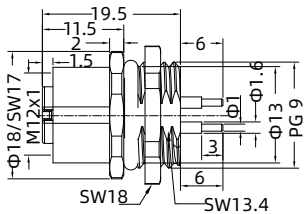
D-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04D-BK-PG9-D	163 004 314 1005
	M16x1.5	M12-M04D-BK-M16-D	163 004 314 1006



- Female
- Panel mount connector
- Dip solder



D-Code

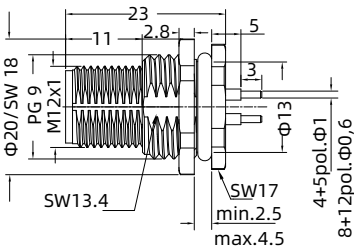


Contacts	Thread	Designation	Order No.
4	PG9	M12-F04D-BK-PG9-D	163 204 324 1001

M12 Circular Connector,D-coded



- Male
- Panel mount connector
- Dip solder



Socket

250V 4A

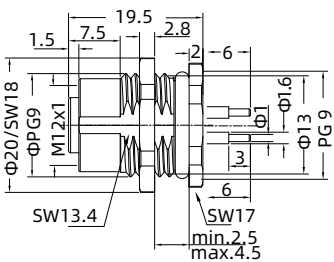
D-Code



Contacts	Thread	Designation	Order No.
4	PG9	M12-M04D-BKR-PG9-D	163 004 314 1007
	M16x1.5	M12-M04D-BKR-M16-D	163 004 314 1008



- Female
- Panel mount connector
- Dip solder



Socket

250V 4A

D-Code

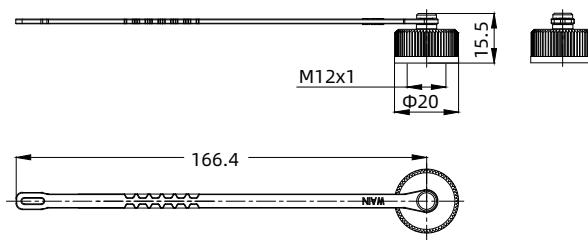


Contacts	Thread	Designation	Order No.
4	PG9	M12-F04D-BKR-PG9-D	163 204 324 1011

- Protection covers (IP67)



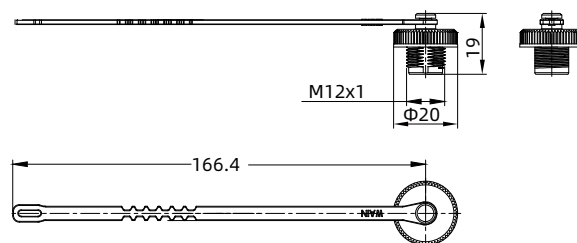
Protection cover
for male cable connector



Description	Designation	Order No.
Without cord	M12-MCV	163 000 001 9003
With cord	M12-MCV/1	163 000 001 9001



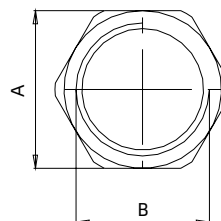
Protection cover
for female cable connector



Description	Designation	Order No.
Without cord	M12-FCV	163 000 002 9003
With cord	M12-FCV/1	163 000 002 9001



Hexagonal nut for
fixing thread



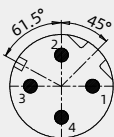
A	B
SW18	PG9
SW19	M16x1.5

Thread	Designation	Order No.
PG9	WNA-PG9/S	102 105 002 1101
M16X1.5	WNA-M16/S	102 105 013 1101

• Contact arrangements

• Male insert (mating side)

4 contacts



	X	Y
1	2.50	0.00
2	0.00	2.50
3	-2.50	0.00
4	0.00	-2.50

PROFINET cat.5e
1. yellow
2. white
3. orange
4. blue
1. Orange white
2. Green and white
3. Orange
4. green

• Female insert (mating side)

4 contacts



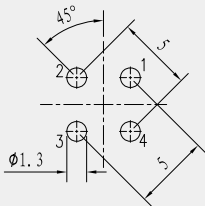
	X	Y
1	-2.50	0.00
2	0.00	2.50
3	2.50	0.00
4	0.00	-2.50

PROFINET cat.5e
1. yellow
2. white
3. orange
4. blue
1. Orange white
2. Green and white
3. Orange
4. green

• Panel cut out

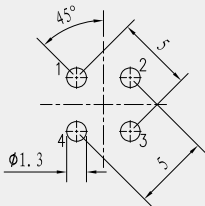
• Drilling schemes male insert (PCB), receptacles

4 contacts



• Drilling schemes female insert (PCB), receptacles

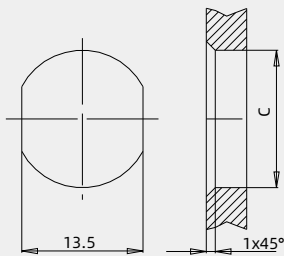
4 contacts



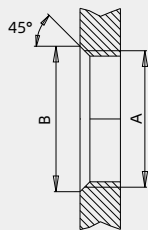
• Panel cut out

• Panel mount connectors

• Through-hole mounting



• Screw mounting



	A	B	C
PG9	PG9	16.2	15.3
PG13.5	PG13.5	21.5	20.5
M16x1.5	M16x1.5	17.0	16.1
M20x1.5	M20x1.5	21.0	20.1

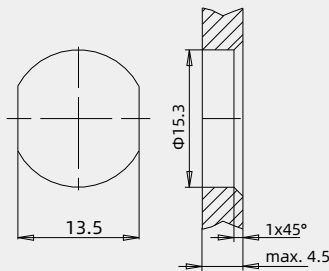
Tightening torque according to
DIN VDE 0619

Metal housing 6.25 Nm
Plastic housing 3.75 Nm

• Panel mount connectors

Rear panel mounting,
front tighten

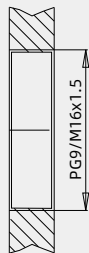
• Through-hole mounting



• Panel mount connectors

front tighten

• Through-hole mounting



Tightening torque 6.25 Nm



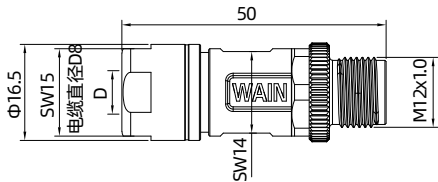
Cable Connector

- Degree of protection IP67
- Gigabit transmission
- Shielded/360° shield connection
- Anti-loose spring with nut

M12 Circular Connector,X-coded



- Male
- Cable connector
- Crimp terminal



□

Straight cable connectors
50V/60V 0.5A

X-Code

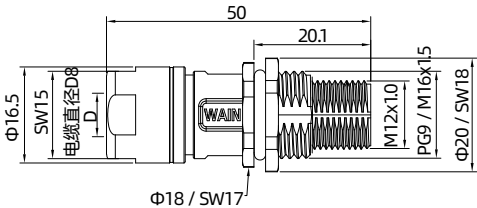


- Order crimp contacts separately

Contacts	Cable outlet	Designation	Order No.
4	6-8mm	M12-MC08X-T-D8-SH	163 008 010 2001



- Male
- Cable connector
- Crimp terminal



□

Straight cable connectors
50V/60V 0.5A

X-Code

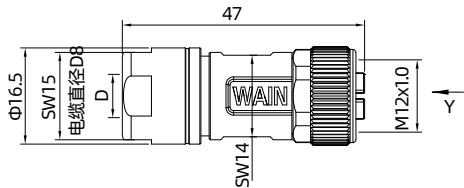


- Order crimp contacts separately

Contacts	Cable outlet	Designation	Order No.
4	6-8mm	M12-MC08X-CCT/R-M16-D8-SH	163 008 710 2001



- Female
- Cable connector
- Crimp terminal



**Straight
cable connectors**
50V/60V 0.5A

X-Code

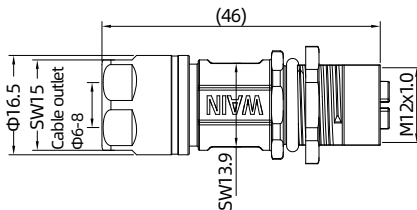


- Order crimp contacts separately

Contacts	Cable outlet	Designation	Order No.
4	6-8mm	M12-FC08X-T-D8-SH	163 008 020 0001



- Female
- Cable connector
- Crimp terminal
- Cat.6a



**Straight
cable connectors**
50V/60V 0.5A

X-Code



- Order crimp contacts separately

Contacts	Cable outlet	Designation	Order No.
4	6-8mm	M12-FC08X-CCT/R-M16-D8-SH	163 008 720 2001

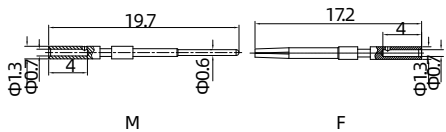
• Accessories

▣ Crimp contacts 5A

Contact resistance
≤ 3mΩ
Gold plated



Wire gauge(mm ²)	Male	Order No.	Female	Order No.
0.09-0.25	M12-MC0.5G-0.25	101 038 210 0101	M12-FC0.5G-0.25	101 038 220 0101



▣ Crimping tool

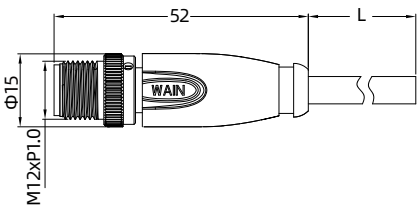


Wire gauge	Designation	Order No.
0.09-0.25mm ²	TL27	198 001 001 0037

- Notes: The tools for crimp terminal may influence the product quality and stability.
Please select the tools recognized by our company.



- Male
- Moulded
- Male cable connector



Straight
cable connectors,
cable

50V/60V 0.5A

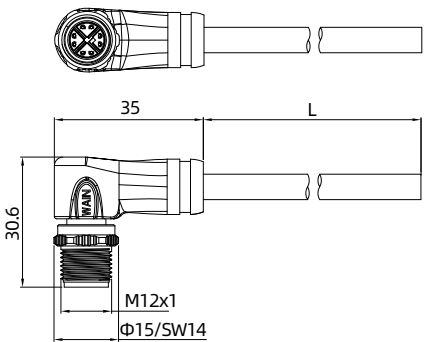
X-Code



Contacts	Cable length	Designation	Order No.
8	1.5 m	M12-M08X-T-1.5-PUR-Cat.6a	163 008 401 4001
	5.0 m	M12-M08X-T-5.0-PUR-Cat.6a	163 008 401 4002



- Male
- Moulded
- Male cable connector



Angled
cable connectors,
cable

50V/60V 0.5A

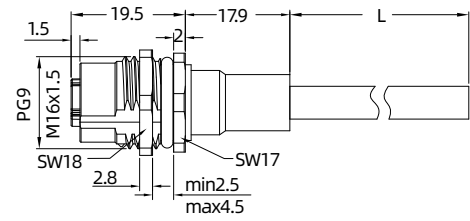
X-Code



Contacts	Cable length	Designation	Order No.
8	1.5 m	M12-M08X-S-1.5-PUR-Cat.6a	163 008 501 4001
	5.0 m	M12-M08X-S-5.0-PUR-Cat.6a	163 008 501 4002



- Female
- Panel mount connector
- Shielded



Socket

50V/60V 0.5A

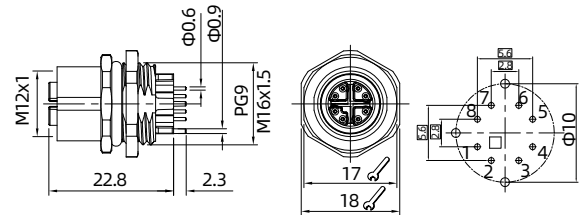
X-Code



Contacts	Cable length	Thread	Designation	Order No.
8	0.5m	PG9	M12-F08X-BKR-PG9-Cat.6a	163 008 302 4003
	0.5m	M16x1.5	M12-F08X-BKR-M16-0.5-PUR-Cat.6a	163 008 302 4005



- Female
- Panel mount connector
- Shielded



Socket

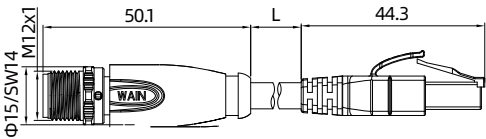
50V/60V 0.5A

X-Code

[illegible]



- Male
- Moulded
- Male cable connector



**Straight
cable connectors,
cable**

50V/60V 0.5A

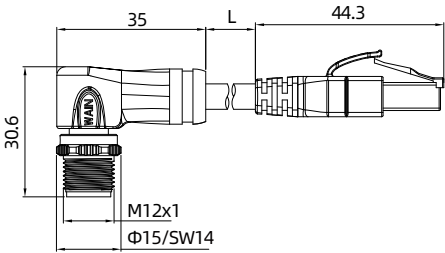
X-Code



Contacts	Cable length	Designation	Order No.
8	1.5 m	M12-M08X-T/RJ45-T-1.5-PUR-Cat.6a	163 008 402 4040
	5.0 m	M12-M08X-T/RJ45-T-5.0-PUR-Cat.6a	163 008 401 4015



- Male
- Moulded
- Male cable connector



**Angled
cable connectors,
cable**

50V/60V 0.5A

X-Code

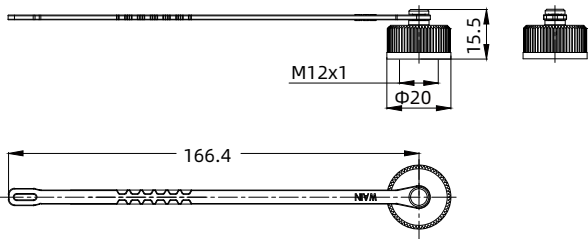


Contacts	Cable length	Designation	Order No.
8	1.5 m	M12-M08X-S/RJ45-T-1.5-PUR-Cat.6a	163 008 001 4002
	5.0 m	M12-M08X-S/RJ45-T-5.0-PUR-Cat.6a	163 008 001 4003

• Protection covers (IP67)



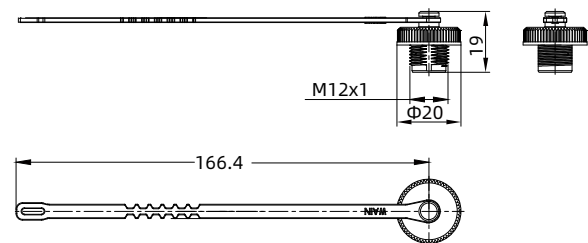
Protection cover
for male cable connector



Description	Designation	Order No.
Without cord	M12-MCV	163 000 001 9003
With cord	M12-MCV/1	163 000 001 9001



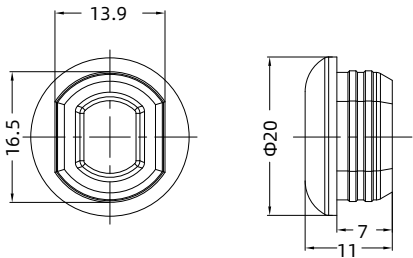
Protection cover
for female cable connector



Description	Designation	Order No.
Without cord	M12-FCV	163 000 002 9003
With cord	M12-FCV/1	163 000 002 9001



Protection covers
for flange mount panel



Description	Designation	Order No.
Dust-proof	M12-WNPP-M16/BK	163 000 000 9001

• Contact arrangements

• Male insert (mating side)

8 contacts

		X	Y	568A	568B
	1	1.40	-2.80	1. white/green	1. white/Orange
	2	0.00	-1.40	2. green	2. Orange
	3	2.80	1.40	3. white/Orange	3. white/green
	4	1.40	2.80	4. Orange	4. green
	5	-1.40	2.80	5. white/brown	5. white/brown
	6	2.80	1.40	6. brown	6. brown
	7	-2.80	-1.40	7. white/blue	7. white/blue
	8	-1.40	-2.80	8. blue	8. blue

• Female insert (mating side)

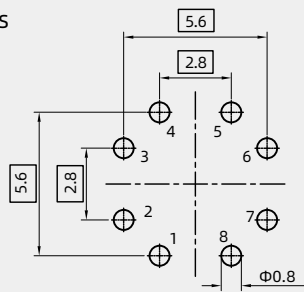
8 contacts

		X	Y	568A	568B
	1	-1.40	-2.80	1. white/green	1. white/Orange
	2	-2.80	-1.40	2. green	2. Orange
	3	-2.80	1.40	3. white/Orange	3. white/green
	4	-1.40	2.80	4. Orange	4. green
	5	1.40	2.80	5. white/brown	5. white/brown
	6	2.80	1.40	6. brown	6. brown
	7	2.80	-1.40	7. white/blue	7. white/blue
	8	1.40	-2.80	8. blue	8. blue

• PCB cut out

• Opening hole drawing female insert(PCB), Panel mount connectors

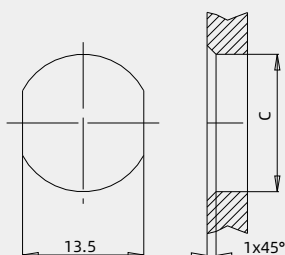
8 contacts



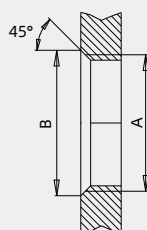
• Panel cut out

• Panel mount connectors

• Through-hole mounting



• Screw mounting



	A	B	C
PG9	PG9	16.2	15.3
PG13.5	PG13.5	21.5	20.5
M16x1.5	M16x1.5	17.0	16.1
M20x1.5	M20x1.5	21.0	20.1

Tightening torque according to
DIN VDE 0619

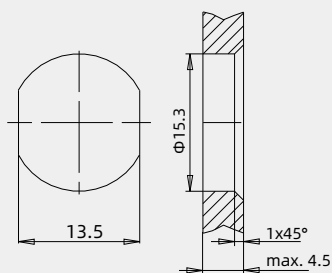
Metal housing 6,25 Nm

Plastic housing 3,75 Nm

• Panel mount connectors

• Rear panel mounting, front tighten

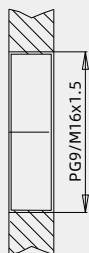
• Through-hole mounting



• Panel mount connectors

front tighten

• Through-hole mounting



Tightening torque 6,25 Nm

- Operating Instruction

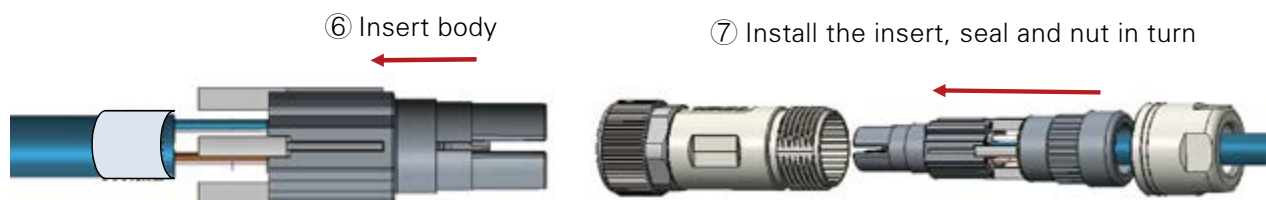
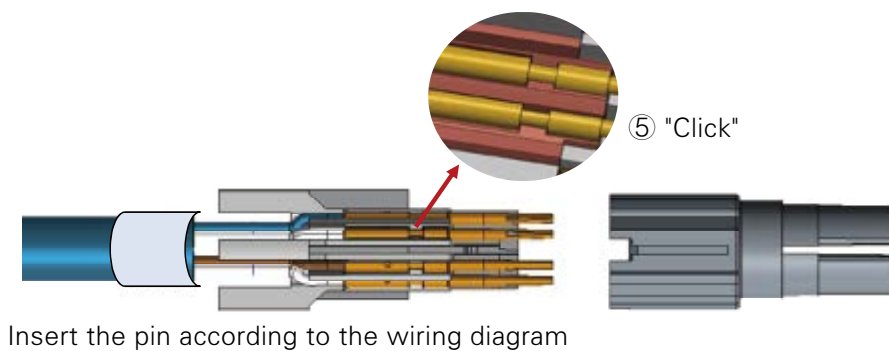
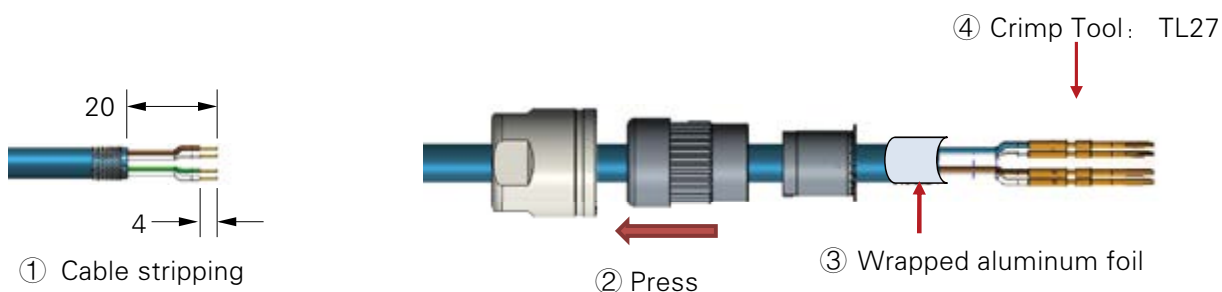
M12-MC08X-T-D8-SH

M12-FC08X-T-D8-SH

M12-MC08X-CCT/R-M16-D8-SH

M12-FC08X-CCT/R-M16-D8-SH)

- Installation Step



⑧ Installation complete





Y distributor - Technical characteristics

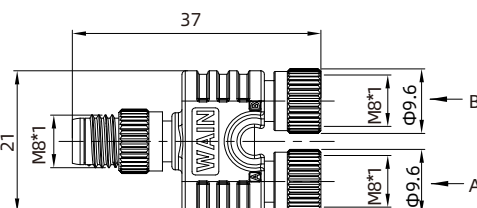
Number of contacts	4/3	4/4
Rated current (40°C)	4A	4A
Rated voltage	30V	30V
Rated impulse voltage	800V	800V
Pollution degree	3	3
Overvoltage categorie	II	II
Contact resistance	≤ 10 mΩ	≤ 10 mΩ
Connector locking system	screw	screw
Termination	-	-
Wire gauge	-	-
Cable outlet	-	-
Degree of protection	IP67	IP67
Mechanical operation	> 100	> 100
Limiting temperature	-25°C ...+85°C	-25°C ...+85°C
Material group	II	II
Material of contact	copper alloy	copper alloy
Contact plating	Au	Au
Insulating material	PA	PA
Material of housing	TPU	TPU



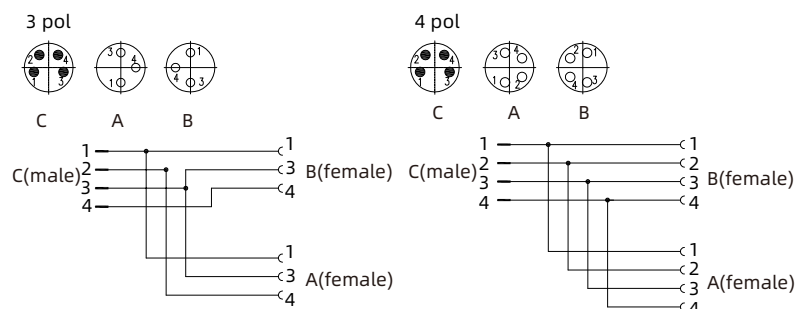
Y distributor

30V 4A

- Three-way,
male connector M12 x 1
- 2 female connectors M12 x 1



	Designation	Order No.
4-2*3pole	M8Y-M04/2M8-F03-NX	171 202 004 0317
4-2*4pole	M8Y-M04/2M8-F04-NX	171 202 004 0219

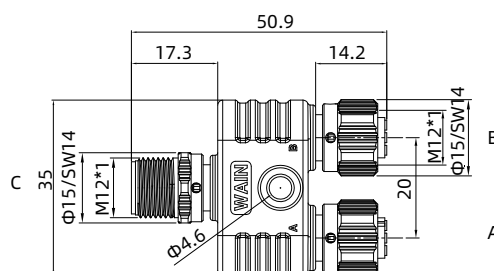


- Y distributor - Technical characteristics

Number of contacts	5/4	5/5
Rated current (40°C)	A	4A
Rated voltage	250V	60V
Rated impulse voltage	2500V	1500V
Pollution degree	3	3
Overvoltage categorie	II	II
Contact resistance	≤ 10 mΩ	≤ 10 mΩ
Connector locking system	screw	screw
Termination	-	-
Wire gauge	-	-
Cable outlet	-	-
Degree of protection	IP67	IP67
Mechanical operation	> 100	> 100
Limiting temperature	-25°C ...+85°C	-25°C ...+85°C
Material group	II	II
Material of contact	copper alloy	copper alloy
Contact plating	Au	Au
Insulating material	PA	PA
Material of housing	TPU	TPU

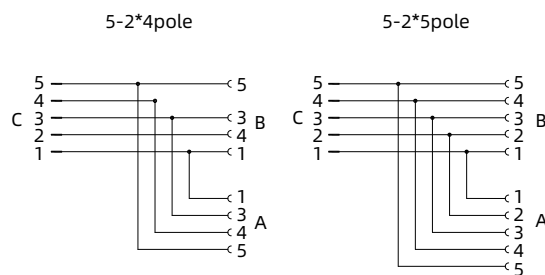


- Three-way,
male connector M12 x 1
- 2 female connectors M12 x 1



60V/250V 4A

	Designation	Order No.
5-2*4pole	M12Y-M05A/2M12-F04A-NX	171 302 005 0318
5-2*5pole	M12Y-M05A/2M12-F05A-NX	171 302 005 0320



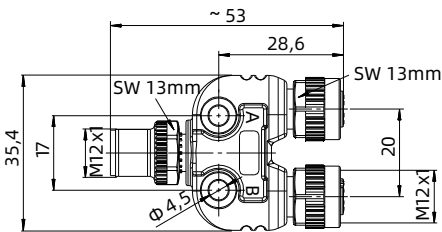
• Y distributor - Technical characteristics

Number of contacts	4/3	5/5
Rated current (40°C)	A	4A
Rated voltage	250V	60V
Rated impulse voltage	2500V	1500V
Pollution degree	3	3
Overvoltage categorie	II	II
Contact resistance	≤ 10 mΩ	≤ 10 mΩ
Connector locking system	screw	screw
Termination	-	-
Wire gauge	-	-
Cable outlet	-	-
Degree of protection	IP67	IP67
Mechanical operation	> 100	> 100
Limiting temperature	-25°C ...+85°C	-25°C ...+85°C
Material group	II	II
Material of contact	copper alloy	copper alloy
Contact plating	Au	Au
Insulating material	PA	PA
Material of housing	TPU	TPU



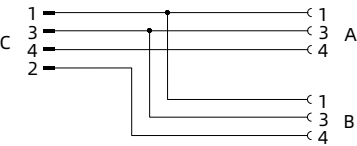
Y distributor
60V/250V 4A

- Three-way,
male connector M12 x 1
– 2 female connectors M12 x 1

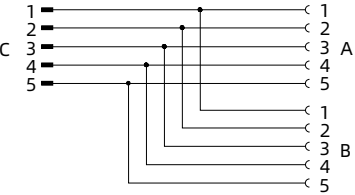


	Designation	Order No.
4-2*3pole	M12Y-M04A/2M12-F03A-CX	171 302 003 0301
5-2*5pole	M12Y-M05A/2M12-F05A-CX	171 302 005 0301

4/3 pol



5 pol

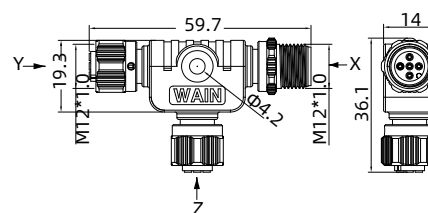


Y distributor - Technical characteristics

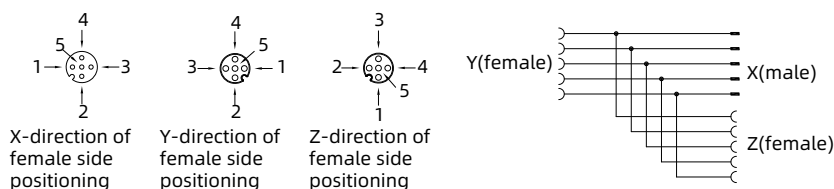
Number of contacts	5/5
Rated current (40°C)	4A
Rated voltage	60V
Rated impulse voltage	1500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	≤ 10 mΩ
Connector locking system	screw
Termination	-
Wire gauge	-
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-25°C ...+85°C
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	TPU



- Three-way, male connector M12 x 1
- 2 female connectors M12 x 1



	Designation	Order No.
5-2*5pole	M12T-M05A/2F05A-NX	163 005 000 1003

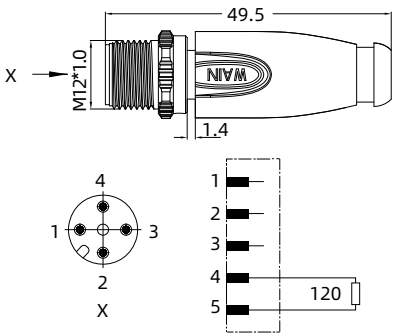


• Y distributor - Technical characteristics

Number of contacts	5
Rated current (40°C)	4A
Rated voltage	60V
Rated impulse voltage	-
Pollution degree	3
Overvoltage categorie	II
Contact resistance	≤ 10 mΩ
Connector locking system	screw
Termination	-
Wire gauge	-
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-25°C ...+85°C
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	TPU



- Three distributor,
male connector M12 x 1
– 2 female connectors M12 x 1



□ **M12 Terminal
resistance**
60V 4A

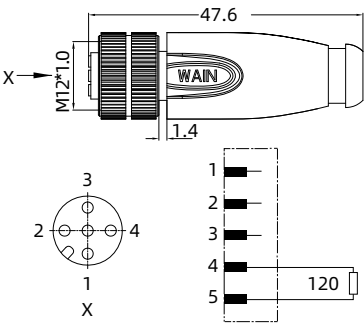
	Designation	Order No.
5pole	M12-M05A-T-R120	163 005 401 4518

• Y distributor - Technical characteristics

Number of contacts	5
Rated current (40°C)	4A
Rated voltage	60V
Rated impulse voltage	-
Pollution degree	3
Overvoltage categorie	II
Contact resistance	≤ 10 mΩ
Connector locking system	screw
Termination	-
Wire gauge	-
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-25°C ...+85°C
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	TPU



- Three distributor, male connector M12 x 1
- 2 female connectors M12 x 1



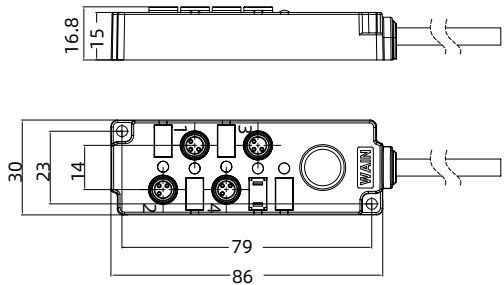
	Designation	Order No.
5pole	M12-F05A-T-R120	163 005 402 4512

• Sensor junction box-M8 - Technical characteristics

Number of contacts	3-pole
Rated current (40°C)	6A/2A
Rated voltage	24V~30V(max)
Rated impulse voltage	-
Pollution degree	3
Overvoltage categorie	II
Contact resistance	≤ 3 mΩ
Connector locking system	M8 x 1
Termination	electric cable
Cable outlet	Φ6-12mm
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-25°C ...+80°C
Material group	-
Material of contact	copper alloy
Contact plating	Au
Insulating material	PBT/PA
Material of housing	PA



• Pluggable 4-way interface box



▪ **Sensor junction
box-M8**
24~30V DC 2A/6A

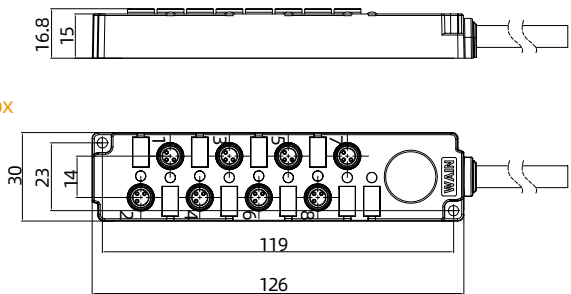
Cable length	Circuit	Designation	Order No.
3.0m	PNP single channel	SJB-M8-4F03-3.0-PUR	171 204 003 0003

• Sensor junction box-M8 - Technical characteristics

Number of contacts	3-pole
Rated current (40°C)	6A/2A
Rated voltage	24V~30V(max)
Rated impulse voltage	-
Pollution degree	3
Overvoltage categorie	II
Contact resistance	≤ 3 mΩ
Connector locking system	M8 x 1
Termination	electric cable
Cable outlet	Φ6-12mm
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-25°C ...+80°C
Material group	-
Material of contact	copper alloy
Contact plating	Au
Insulating material	PBT/PA
Material of housing	PA



• Pluggable 8-way interface box



▪ **Sensor junction
box-M8**

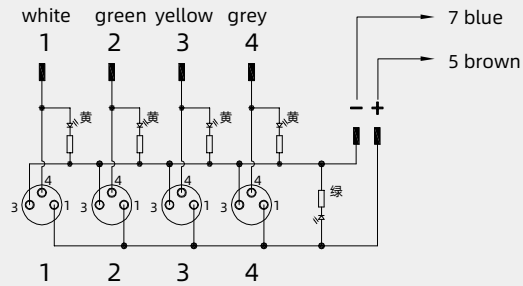
24~30V DC 2A/6A

Cable length	Circuit	Designation	Order No.
3.0m	PNP single channel	SJB-M8-8F03-3.0-PUR	171 208 003 0003

• Sensor junction box-M12

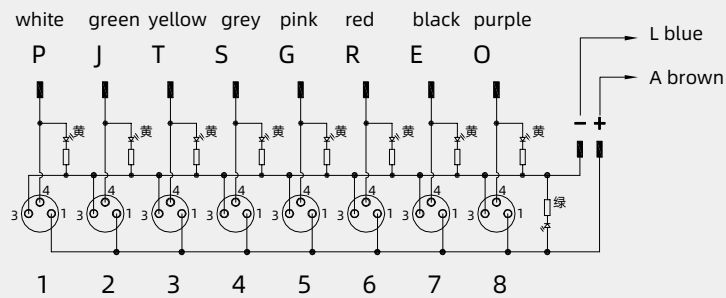
• M8 4-way interface box

3



• M8 8-way interface box

3

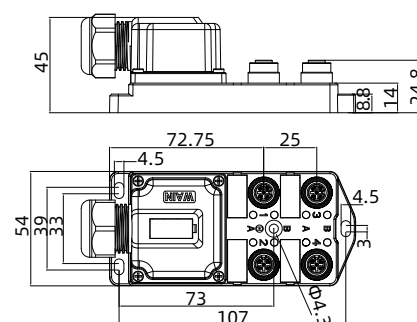


- **Sensor junction box-M12 - Technical characteristics**

Number of contacts	4-pole	5-pole
Rated current (40°C)	9A/2A	9A/2A
Rated voltage	10-30V	10-30V
Rated impulse voltage	-	-
Pollution degree	3	3
Overvoltage categorie	II	II
Contact resistance	≤ 10 mΩ	≤ 10 mΩ
Connector locking system	M12 x 1 Push-Pull	M12 x 1 Push-Pull
Termination	pluggable M23	pluggable M23
Wire gauge	0,34 mm ² (AWG 22),	3x0,75 mm ² (AWG 20)
Cable outlet	-	-
Degree of protection	IP67	IP67
Mechanical operation	> 100	> 100
Limiting temperature	-25°C ...+80°C	-25°C ...+80°C
Material group	-	-
Material of contact	copper alloy	copper alloy
Contact plating	Au	Au
Insulating material	PBT/PA	PBT/PA
Material of housing	PA	PA



- **Four-hole junction box without cable**



**Sensor junction
box-M12**

10~30V DC 2A/9A

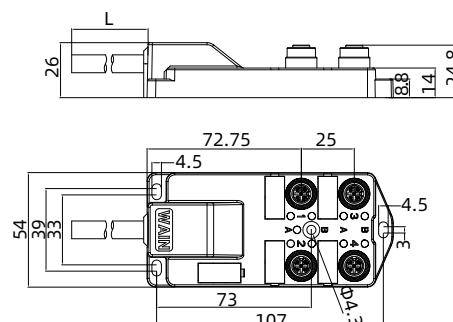
Cable outlet	Circuit	Designation	Order No.
6-8mm	PNP single channel	SJB-M12-4F04A-D8	171 304 004 0001
8-10mm	PNP single channel	SJB-M12-4F04A-D10.5	171 304 004 0002
10-12mm	PNP single channel	SJB-M12-4F04A-D12.5	171 304 004 0003
6-8mm	PNP double channel	SJB-M12-4F05A-D8	171 304 005 0001
8-10mm	PNP double channel	SJB-M12-4F05A-D10.5	171 304 005 0002
10-12mm	PNP double channel	SJB-M12-4F05A-D12.5	171 304 005 0003

- **Sensor junction box-M12 - Technical characteristics**

Number of contacts	4-pole	5-pole
Rated current (40°C)	9A/2A	9A/2A
Rated voltage	10-30V	10-30V
Rated impulse voltage	-	-
Pollution degree	3	3
Overvoltage categorie	II	II
Contact resistance	≤ 10 mΩ	≤ 10 mΩ
Connector locking system	M12 x 1 Push-Pull	M12 x 1 Push-Pull
Termination	pluggable M23	pluggable M23
Wire gauge	0,34 mm ² (AWG 22),	3x0,75 mm ² (AWG 20)
Cable outlet	-	-
Degree of protection	IP67	IP67
Mechanical operation	> 100	> 100
Limiting temperature	-25°C ...+80°C	-25°C ...+80°C
Material group	-	-
Material of contact	copper alloy	copper alloy
Contact plating	Au	Au
Insulating material	PBT/PA	PBT/PA
Material of housing	PA	PA



- **Four-hole junction box with cable**



Sensor junction box-M12

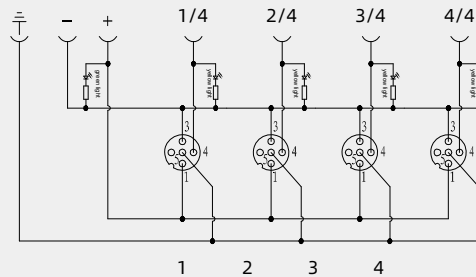
10~30V DC 2A/9A

Cable length	Circuit	Designation	Order No.
3m	PNP single channel	SJB-M12-4F04A-3.0-PUR	171 304 004 0004
3m	PNP single channel	SJB-M12-4F04A-3.0-PVC	171 304 004 0005
3m	PNP double channel	SJB-M12-4F05A-3.0-PUR	171 304 005 0004
3m	PNP double channel	SJB-M12-4F05A-3.0-PVC	171 304 005 0005

- Sensor junction box-M12

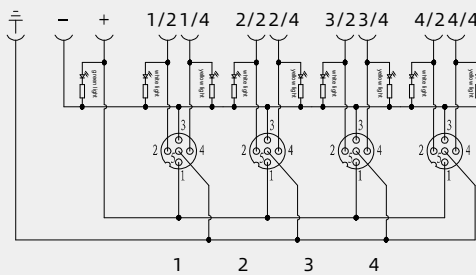
- M12 4-way interface box without wire

4



- M12 4-way interface box without wire

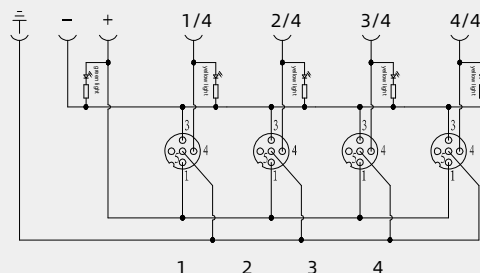
5



• Sensor junction box-M12

• M12 4-way interface box with wire

4



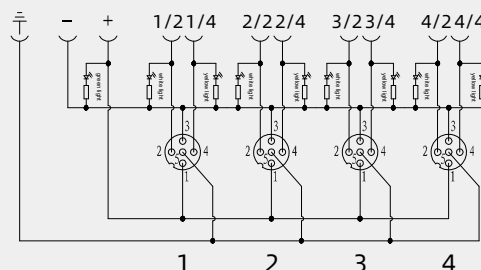
Colors of wires

1/4 - white
2/4 - green
3/4 - yellow
4/4 - grey

(+)-brown
(-)-blue
(PE)-yellow/green

• M12 4-way interface box with wire

5



Colors of wires

1/2 - grey/pink
1/4 - white
2/2 - red/blue
2/4 - green
3/2 - white/green
3/4 - yellow
4/2 - brown/green
4/4 - grey

(+)-brown
(-)-blue
(PE)-yellow/green

- **Sensor junction box-M12 - Technical characteristics**

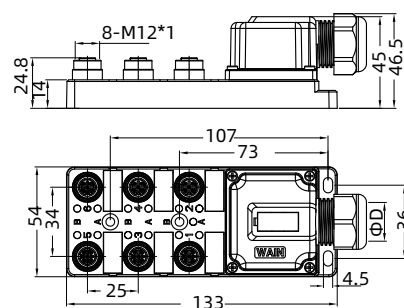
Number of contacts	4-pole	5-pole
Rated current (40°C)	10A/2A	10A/2A
Rated voltage	24-30V	24-30V
Rated impulse voltage	-	-
Pollution degree	3	3
Overvoltage categorie	II	II
Contact resistance	≤ 10 mΩ	≤ 10 mΩ
Connector locking system	M12 x 1 Push-Pull	M12 x 1 Push-Pull
Wire gauge	0,34 mm ² (AWG 22),	3x0,75 mm ² (AWG 20)
Cable outlet	-	-
Degree of protection	IP67	IP67
Mechanical operation	> 100	> 100
Limiting temperature	-25°C ...+80°C	-25°C ...+80°C
Material group	-	-
Material of contact	copper alloy	copper alloy
Contact plating	Au	Au
Insulating material	PBT/PA	PBT/PA
Material of housing	PA	PA



Sensor junction box-M12

24~30V DC 2A/10A

• **Six-hole double channel junction box without cable**



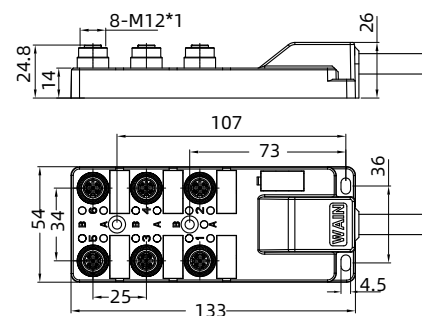
Cable outlet	Circuit	Designation	Order No.
6-8mm	PNP single channel	SJB-M12-6F04A-D8	171 306 004 0001
8-10mm	PNP single channel	SJB-M12-6F04A-D10.5	171 306 004 0002
8-10mm	PNP double channel	SJB-M12-6F05A-D10.5	171 306 005 0001
10-12mm	PNP double channel	SJB-M12-6F05A-D12.5	171 306 005 0002

- Sensor junction box-M12 - Technical characteristics

Number of contacts	4-pole	5-pole
Rated current (40°C)	10A/2A	10A/2A
Rated voltage	24-30V	24-30V
Rated impulse voltage	-	-
Pollution degree	3	3
Overvoltage categorie	II	II
Contact resistance	≤ 10 mΩ	≤ 10 mΩ
Connector locking system	M12 x 1 Push-Pull	M12 x 1 Push-Pull
Wire gauge	0,34 mm ² (AWG 22),	3x0,75 mm ² (AWG 20)
Cable outlet	-	-
Degree of protection	IP67	IP67
Mechanical operation	> 100	> 100
Limiting temperature	-25°C ...+80°C	-25°C ...+80°C
Material group	-	-
Material of contact	copper alloy	copper alloy
Contact plating	Au	Au
Insulating material	PBT/PA	PBT/PA
Material of housing	PA	PA



• Six-hole double channel junction box with cable



□ **Sensor junction box-M12**

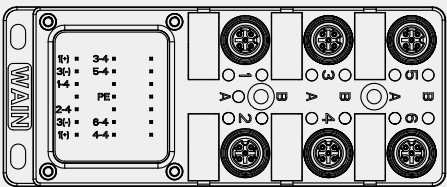
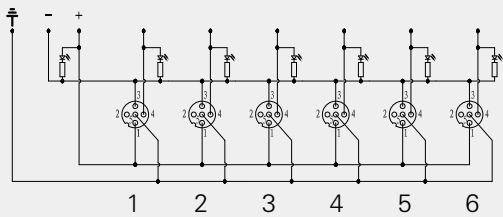
24~30V DC 2A/10A

Cable length	Circuit	Designation	Order No.
3.0m	PNP single channel	SJB-M12-6F04A-3.0-PUR	171 306 004 0003
3.0m	PNP single channel	SJB-M12-6F04A-3.0-PVC	171 306 004 0004
3.0m	PNP double channel	SJB-M12-6F05A-3.0-PUR	171 306 005 0003
3.0m	PNP double channel	SJB-M12-6F05A-3.0-PVC	171 306 005 0004

- Sensor junction box-M12

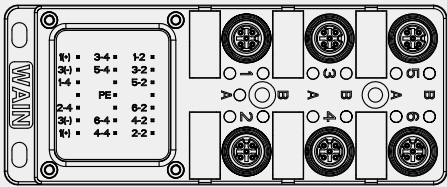
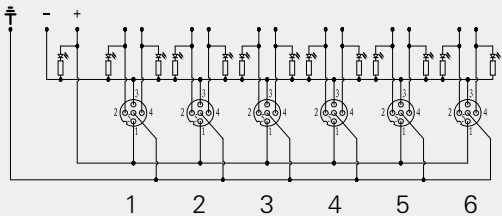
- M12 6-way interface box without wire

4



- M12 6-way interface box without wire

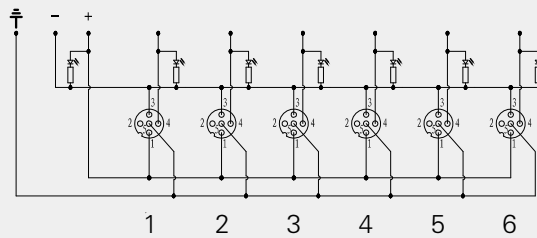
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• Sensor junction box-M12

• M12 6-way interface box with wire

4

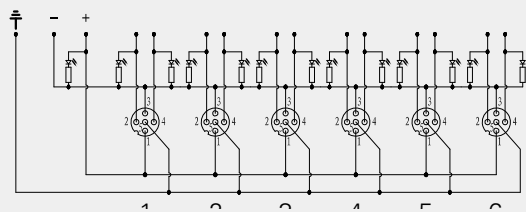


Colors of wires

1/4 – white	1(+)-brown
2/4 – green	1(-)-blue
3/4 – yellow	5(PE)-yellow/green
4/4 – grey	
5/4 – pink	
6/4 – red	

• M12 6-way interface box with wire

5



Colors of wires

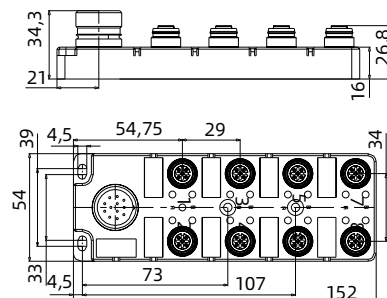
1/2 – grey/pink	5/2 – white/yellow
1/4 – white	5/4 – pink
2/2 – red/blue	6/2 – yellow/brown
2/4 – green	6/4 – red
3/2 – white/green	1(+)-brown
3/4 – yellow	1(-)-blue
4/2 – brown/green	5(PE)-yellow/green
4/4 – grey	

- **Sensor junction box-M12 - Technical characteristics**

Number of contacts	4-pole	5-pole
Rated current (40°C)	9A/2A	9A/2A
Rated voltage	10-30V	10-30V
Rated impulse voltage	-	-
Pollution degree	3	3
Overvoltage categorie	II	II
Contact resistance	≤ 10 mΩ	≤ 10 mΩ
Connector locking system	M12 x 1 Push-Pull	M12 x 1 Push-Pull
Termination	pluggable M23	pluggable M23
Wire gauge	0,34 mm ² (AWG 22),	3x0,75 mm ² (AWG 20)
Cable outlet	-	-
Degree of protection	IP67	IP67
Mechanical operation	> 100	> 100
Limiting temperature	-25°C ...+80°C	-25°C ...+80°C
Material group	-	-
Material of contact	copper alloy	copper alloy
Contact plating	Au	Au
Insulating material	PBT/PA	PBT/PA
Material of housing	PA	PA



- Pluggable 8-way interface box with M23 connector 12/19 pol.,equipment-on LED (green) and functional indicator (yellow) M12 Push-Pull-locking



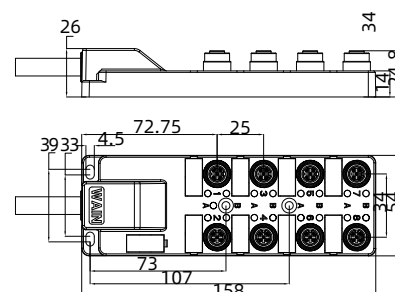
□ Sensor junction box-M12

10~30V DC 2A/9A

Cable outlet	Circuit	Designation	Order No.
M23-12pole	PNP single channel	SJB-M12-8F04-M23-12P	171 308 004 0601
M23-19pole	PNP double channel	SJB-M12-8F05A-M23-19P	171 308 005 0601



• Eight-hole junction box with cable

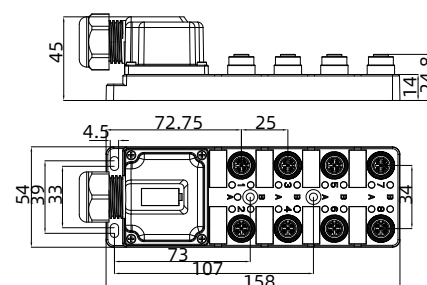


□ **Sensor junction
box-M12**
10~30V DC 2A/9A

Cable length	Circuit	Designation	Order No.
3.0m	PNP single channel	SJB-M12-8F04A-3.0-PUR	171 308 004 0001
3.0m	PNP double channel	SJB-M12-8F05A-3.0-PUR	171 308 005 0002



Eight-hole junction box without cable



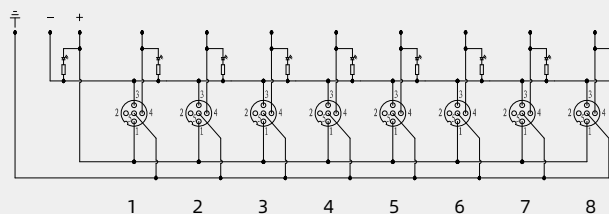
□ **Sensor junction
box-M12**
10~30V DC 2A/9A

Cable outlet	Circuit	Designation	Order No.
10-12mm	PNP single channel	SJB-M12-8F04A-D12.5	171 308 004 0002
10-12mm	PNP double channel	SJB-M12-8F05A-D12.5	171 308 005 0001

• Sensor junction box-M12

• M12 8-way interface box with wire

4

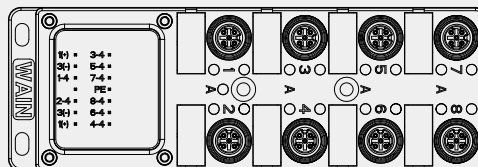
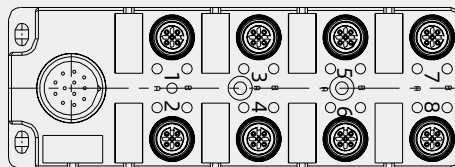
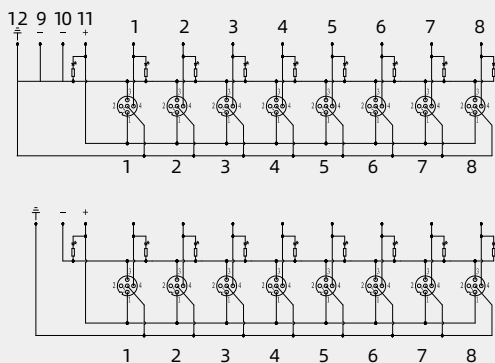


Colors of wires

- | | |
|--------------|--------------------|
| 1/4 - white | 1(+)-brown |
| 2/4 - green | 1(-)-blue |
| 3/4 - yellow | 5(PE)-yellow/green |
| 4/4 - grey | |
| 5/4 - pink | |
| 6/4 - red | |
| 7/4 - black | |
| 8/4 - purple | |

• M12 8-way interface box without wire

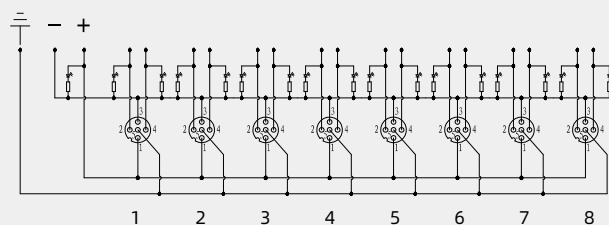
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• Sensor junction box-M12

• M12 8-way interface box with wire

5

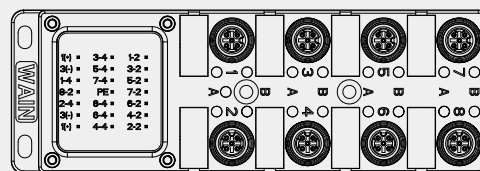
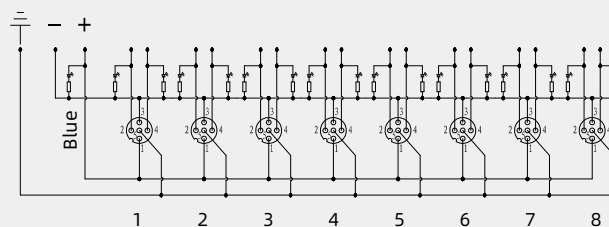


Colors of wires

1/2 - grey/pink	5/2 - white/yellow	1(+)-brown
1/4 - white	5/4 - pink	1(-)-brown
2/2 - red/blue	6/2 - yellow/brown	5(PE)-yellow/green
2/4 - green	6/4 - red	
3/2 - white/green	7/2 - white/grey	
3/4 - yellow	7/4 - black	
4/2 - blue/green	8/2 - grey/brown	
4/4 - grey	8/4 - purple	

• M12 8-way interface box without wire

5

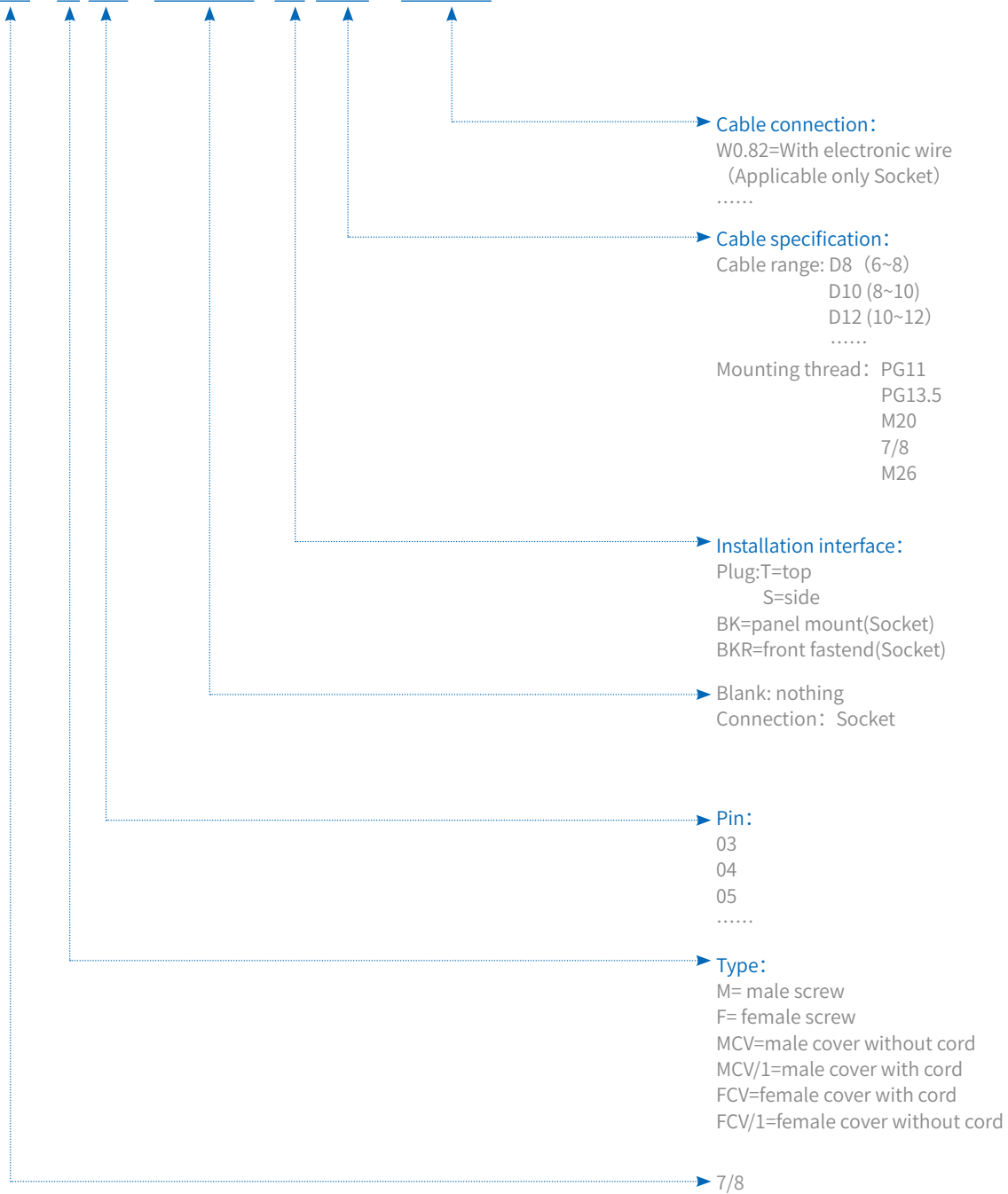






- Panel Mount, socket/receptacle series
- 7/8-16UN Locking
- Screw Terminal
- Blocking nut constructure
- Protection Degree IP67

7/8 - M 03 - CCT/R - T - D8 - W0.82



• Electrical properties

Number of contacts	3-pole	4-pole	5-pole
Rated current	12A	9A	9A
Rated voltage	300V	300V	300V
Pulse voltage	4000V	4000V	4000V
Pollution degree	3	3	3
Insulation resistance	$\geq 10^{12}\Omega$	$\geq 10^{12}\Omega$	$\geq 10^{12}\Omega$
Overvoltage categorie	III	III	III
Contact resistance	$\leq 3m\Omega$	$\leq 3m\Omega$	$\leq 3m\Omega$

• Mechanical properties

Number of contacts	3-pole	4-pole	5-pole
Connector locking system	screw 7/8-16UN	screw 7/8-16UN	screw 7/8-16UN
Termination	screw, single-strand wires	screw, single-strand wires	screw, single-strand wires
Wire gauge	Max 1.5mm ² (AWG16)	Max 1.5mm ² (AWG16)	Max 1.5mm ² (AWG16)
Cable outlet	6~8mm,8~10mm,10~12mm	6~8mm,8~10mm,10~12mm	6~8mm,8~10mm,10~12mm
Mechanical operation	> 100	> 100	> 100

• Environmental performance

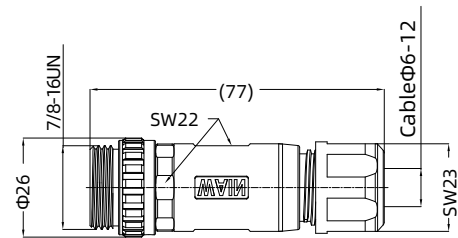
Number of contacts	3-pole	4-pole	5-pole
Limiting temperature	-25°C ~85°C	-25°C ~85°C	-25°C ~85°C
Limit humidity	5%~95%	5%~95%	5%~95%
Degree of protection	IP67	IP67	IP67

• Materials and surface treatment

Number of contacts	3-pole	4-pole	5-pole
Material group	III	III	III
Material of contact	copper alloy	copper alloy	copper alloy
Contact plating	Au	Au	Au
Insulating material	PA/TPU	PA/TPU	PA/TPU
Material of housing	PA/brass nickel plated/TPE	PA/brass nickel plated/TPE	PA/brass nickel plated/TPE
Sealing element	FPM/NBR	FPM/NBR	FPM/NBR



- Male
- metal locking system
- screw clamp connection
- Recommended use



Straight cable connectors

300V 12A/9A

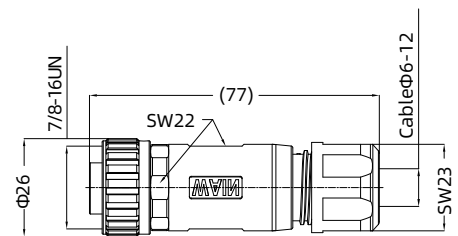
7/8



Contacts	Cable outlet	Designation	Order No.
3 (2+PE)	6-8 mm	7/8-M03-T-D8	168 003 411 3001
	8-10 mm	7/8-M03-T-D10	168 003 411 3002
	10-12mm	7/8-M03-T-D12	168 003 411 3003
4 (3+PE)	6-8 mm	7/8-M04-T-D8	168 004 411 3002
	8-10 mm	7/8-M04-T-D10	168 004 411 3001
	10-12mm	7/8-M04-T-D12	168 004 411 3003
5 (4+PE)	6-8 mm	7/8-M05-T-D8	168 005 411 3001
	8-10 mm	7/8-M05-T-D10	168 005 411 3003
	10-12mm	7/8-M05-T-D12	168 005 411 3002



- Female
- metal locking system
- screw clamp connection
- Recommended use



Straight cable connectors

300V 12A/9A

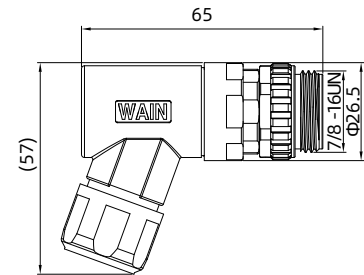
7/8



Contacts	Cable outlet	Designation	Order No.
3 (2+PE)	6-8 mm	7/8-F03-T-D8	168 003 421 3001
	8-10 mm	7/8-F03-T-D10	168 003 421 3002
	10-12mm	7/8-F03-T-D12	168 003 421 3003
4 (3+PE)	6-8 mm	7/8-F04-T-D8	168 004 421 3002
	8-10 mm	7/8-F04-T-D10	168 004 421 3001
	10-12mm	7/8-F04-T-D12	168 004 421 3003
5 (4+PE)	6-8 mm	7/8-F05-T-D8	168 005 421 3003
	8-10 mm	7/8-F05-T-D10	168 005 421 3001
	10-12mm	7/8-F05-T-D12	168 005 421 3002



- Male
- metal locking system
- screw clamp connection
- Recommended use



Angled cable connectors

300V 12A/9A

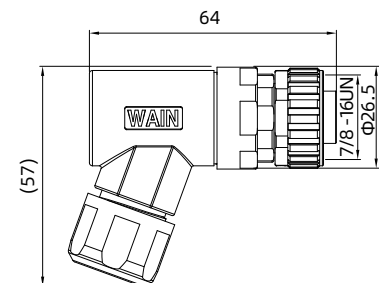
7/8



Contacts	Cable outlet	Designation	Order No.
3 (2+PE)	6-8 mm	7/8-M03-S-D8	168 003 511 3001
	8-10 mm	7/8-M03-S-D10	168 003 511 3002
	10-12mm	7/8-M03-S-D12	168 003 511 3003
4 (3+PE)	6-8 mm	7/8-M04-S-D8	168 004 511 3001
	8-10 mm	7/8-M04-S-D10	168 004 511 3002
	10-12mm	7/8-M04-S-D12	168 004 511 3003
5 (4+PE)	6-8 mm	7/8-M05-S-D8	168 005 511 3001
	8-10 mm	7/8-M05-S-D10	168 005 511 3002
	10-12mm	7/8-M05-S-D12	168 005 511 3003



- Female
- metal locking system
- screw clamp connection
- Recommended use



Angled cable connectors

300V 12A/9A

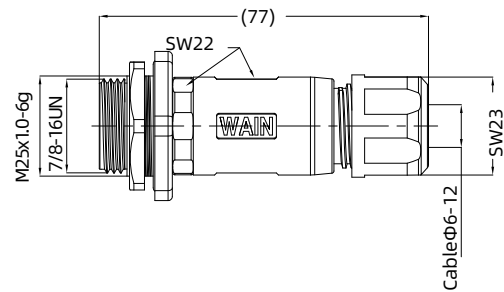
7/8



Contacts	Cable outlet	Designation	Order No.
3 (2+PE)	6-8 mm	7/8-F03-S-D8	168 003 521 3001
	8-10 mm	7/8-F03-S-D10	168 003 521 3002
	10-12mm	7/8-F03-S-D12	168 003 521 3003
4 (3+PE)	6-8 mm	7/8-F04-S-D8	168 004 521 3001
	8-10 mm	7/8-F04-S-D10	168 004 521 3002
	10-12mm	7/8-F04-S-D12	168 004 521 3003
5 (4+PE)	6-8 mm	7/8-F05-S-D8	168 005 521 3001
	8-10 mm	7/8-F05-S-D10	168 005 521 3002
	10-12mm	7/8-F05-S-D12	168 005 521 3003



- Male
- metal locking system
- screw clamp connection
- Recommended use



Flange base cable connector

300V 12A/9A

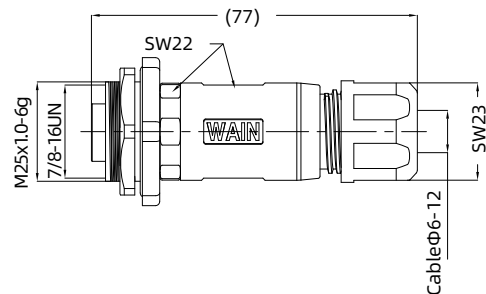
7/8



Contacts	Cable outlet	Designation	Order No.
3 (2+PE)	6-8 mm	7/8-M03-CCT/R-T-D8	168 003 711 3001
	8-10 mm	7/8-M03-CCT/R-T-D10	168 003 711 3002
	10-12mm	7/8-M03-CCT/R-T-D12	168 003 711 3003
4 (3+PE)	6-8 mm	7/8-M04-CCT/R-T-D8	168 004 711 3001
	8-10 mm	7/8-M04-CCT/R-T-D10	168 004 711 3002
	10-12mm	7/8-M04-CCT/R-T-D12	168 004 711 3003
5 (4+PE)	6-8 mm	7/8-M05-CCT/R-T-D8	168 005 711 3001
	8-10 mm	7/8-M05-CCT/R-T-D10	168 005 711 3002
	10-12mm	7/8-M05-CCT/R-T-D12	168 005 711 3003



- Female
- metal locking system
- screw clamp connection
- Recommended use



Flange base cable connector

300V 12A/9A

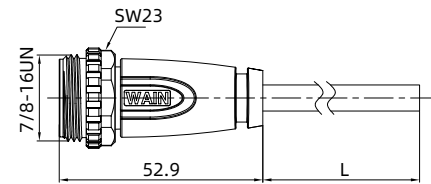
7/8



Contacts	Cable outlet	Designation	Order No.
3 (2+PE)	6-8 mm	7/8-F03-CCT/R-T-D8	168 003 721 3001
	8-10 mm	7/8-F03-CCT/R-T-D10	168 003 721 3002
	10-12mm	7/8-F03-CCT/R-T-D12	168 003 721 3003
4 (3+PE)	6-8 mm	7/8-F04-CCT/R-T-D8	168 004 721 3001
	8-10 mm	7/8-F04-CCT/R-T-D10	168 004 721 3002
	10-12mm	7/8-F04-CCT/R-T-D12	168 004 721 3003
5 (4+PE)	6-8 mm	7/8-F05-CCT/R-T-D8	168 005 721 3001
	8-10 mm	7/8-F05-CCT/R-T-D10	168 005 721 3002
	10-12mm	7/8-F05-CCT/R-T-D12	168 005 721 3003



- Male
- Moulded
- Screw



Straight cable connectors, cable

300V 12A/9A

7/8

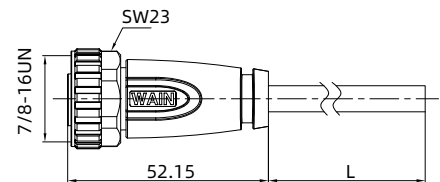


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	5x1.5PVC	1.5 m	7/8-M03-T-1.5-PVC	168 003 401 4001
		5.0 m	7/8-M03-T-5.0-PVC	168 003 401 4002
	5x1.5PUR	1.5 m	7/8-M03-T-1.5-PUR	168 003 401 4003
		5.0 m	7/8-M03-T-5.0-PUR	168 003 401 4004
4	5x1.5PVC	1.5 m	7/8-M04-T-1.5-PVC	168 004 401 4002
		5.0 m	7/8-M04-T-5.0-PVC	168 004 401 4003
	5x1.5PUR	1.5 m	7/8-M04-T-1.5-PUR	168 004 401 4004
		5.0 m	7/8-M04-T-5.0-PUR	168 004 401 4005
5	5x1.5PVC	1.5 m	7/8-M05-T-1.5-PVC	168 005 401 4002
		5.0 m	7/8-M05-T-5.0-PVC	168 005 401 4003
	5x1.5PUR	1.5 m	7/8-M05-T-1.5-PUR	168 005 401 4004
		5.0 m	7/8-M05-T-5.0-PUR	168 005 401 4005



- Female
- Moulded
- Screw



Straight cable connectors, cable

300V 12A/9A

7/8

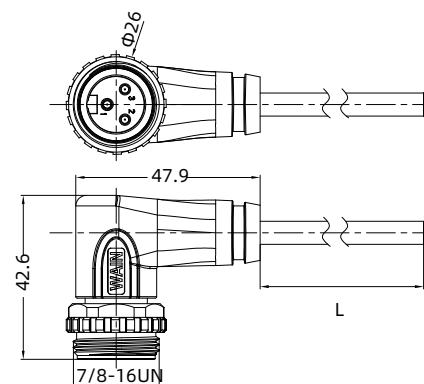


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	5x1.5PVC	1.5 m	7/8-F03-T-1.5-PVC	168 003 402 4001
		5.0 m	7/8-F03-T-5.0-PVC	168 003 402 4002
	5x1.5PUR	1.5 m	7/8-F03-T-1.5-PUR	168 003 402 4003
		5.0 m	7/8-F03-T-5.0-PUR	168 003 402 4004
4	5x1.5PVC	1.5 m	7/8-F04-T-1.5-PVC	168 004 402 4002
		5.0 m	7/8-F04-T-5.0-PVC	168 004 402 4003
	5x1.5PUR	1.5 m	7/8-F04-T-1.5-PUR	168 004 402 4004
		5.0 m	7/8-F04-T-5.0-PUR	168 004 402 4005
5	5x1.5PVC	1.5 m	7/8-F05-T-1.5-PVC	168 005 402 4002
		5.0 m	7/8-F05-T-5.0-PVC	168 005 402 4003
	5x1.5PUR	1.5 m	7/8-F05-T-1.5-PUR	168 005 402 4004
		5.0 m	7/8-F05-T-5.0-PUR	168 005 402 4005



- Male
- Moulded
- Screw



Angled cable connectors, cable

300V 12A/9A

7/8

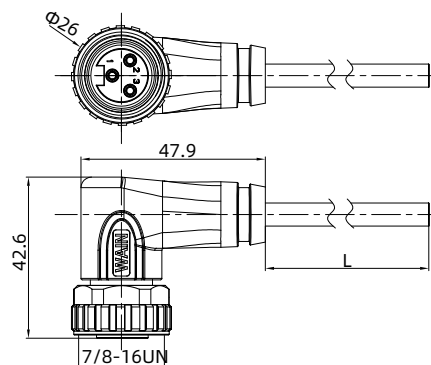


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	5x1.5PVC	1.5 m	7/8-M03-S-1.5-PVC	168 003 501 4001
		5.0 m	7/8-M03-S-5.0-PVC	168 003 501 4002
	5x1.5PUR	1.5 m	7/8-M03-S-1.5-PUR	168 003 501 4003
		5.0 m	7/8-M03-S-5.0-PUR	168 003 501 4004
4	5x1.5PVC	1.5 m	7/8-M04-S-1.5-PVC	168 004 501 4001
		5.0 m	7/8-M04-S-5.0-PVC	168 004 501 4002
	5x1.5PUR	1.5 m	7/8-M04-S-1.5-PUR	168 004 501 4003
		5.0 m	7/8-M04-S-5.0-PUR	168 004 501 4004
5	5x1.5PVC	1.5 m	7/8-M05-S-1.5-PVC	168 005 501 4001
		5.0 m	7/8-M05-S-5.0-PVC	168 005 501 4002
	5x1.5PUR	1.5 m	7/8-M05-S-1.5-PUR	168 005 501 4003
		5.0 m	7/8-M05-S-5.0-PUR	168 005 501 4004



- Female
- Moulded
- Screw



Angled cable connectors, cable

300V 12A/9A

7/8

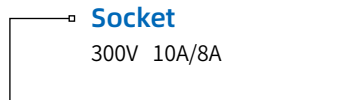
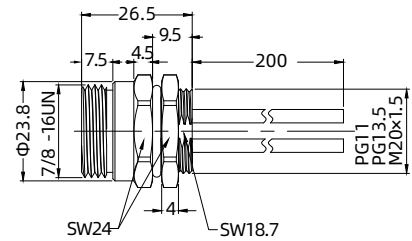


- Further cable length upon request

Contacts	Cable	Cable length	Designation	Order No.
3	5x1.5PVC	1.5 m	7/8-F03-S-1.5-PVC	168 003 502 4001
		5.0 m	7/8-F03-S-5.0-PVC	168 003 502 4002
	5x1.5PUR	1.5 m	7/8-F03-S-1.5-PUR	168 003 502 4003
		5.0 m	7/8-F03-S-5.0-PUR	168 003 502 4004
4	5x1.5PVC	1.5 m	7/8-F04-S-1.5-PVC	168 004 502 4001
		5.0 m	7/8-F04-S-5.0-PVC	168 004 502 4002
	5x1.5PUR	1.5 m	7/8-F04-S-1.5-PUR	168 004 502 4003
		5.0 m	7/8-F04-S-5.0-PUR	168 004 502 4004
5	5x1.5PVC	1.5 m	7/8-F05-S-1.5-PVC	168 005 502 4001
		5.0 m	7/8-F05-S-5.0-PVC	168 005 502 4002
	5x1.5PUR	1.5 m	7/8-F05-S-1.5-PUR	168 005 502 4003
		5.0 m	7/8-F05-S-5.0-PUR	168 005 502 4004



- **Male**
- With single wires 0.82mm²
- MAX.1.5mm²
- length 0.2m



7/8

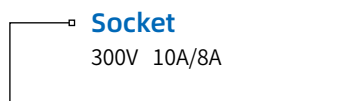
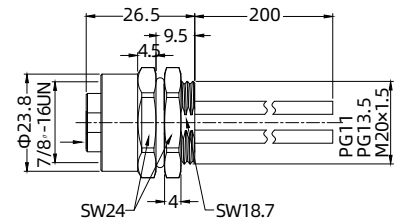


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
3 (2+PE)	PG11	7/8-M03-BK-PG11-W0.82	168 003 301 4001
	PG13.5	7/8-M03-BK-PG13.5-W0.82	168 003 301 4002
	M20×1.5	7/8-M03-BK-M20-W0.82	168 003 301 4003
4 (3+PE)	PG11	7/8-M04-BK-PG11-W0.82	168 004 301 4001
	PG13.5	7/8-M04-BK-PG13.5-W0.82	168 004 301 4002
	M20×1.5	7/8-M04-BK-M20-W0.82	168 004 301 4003
5 (4+PE)	PG11	7/8-M05-BK-PG11-W0.82	168 005 301 4001
	PG13.5	7/8-M05-BK-PG13.5-W0.82	168 005 301 4002
	M20×1.5	7/8-M05-BK-M20-W0.82	168 005 301 4003



- **Female**
- With single wires 0.82mm²
- MAX.1.5mm²
- length 0.2m



7/8

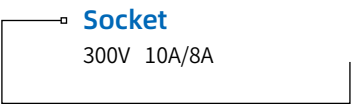
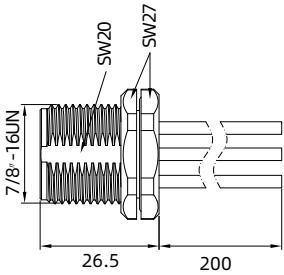


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
3 (2+PE)	7/8-16UN	7/8-F03-BK-7/8-W0.82	168 003 302 4004
	PG11	7/8-F03-BK-PG11-W0.82	168 003 302 4001
	PG13.5	7/8-F03-BK-PG13.5-W0.82	168 003 302 4002
4 (3+PE)	M20×1.5	7/8-F03-BK-M20-W0.82	168 003 302 4003
	7/8-16UN	7/8-F04-BK-7/8-W0.82	168 004 302 4005
	PG11	7/8-F04-BK-PG11-W0.82	168 004 302 4001
5 (4+PE)	PG13.5	7/8-F04-BK-PG13.5-W0.82	168 004 302 4002
	M20×1.5	7/8-F04-BK-M20-W0.82	168 004 302 4003
	7/8-16UN	7/8-F05-BK-7/8-W0.82	168 005 302 4005
	PG11	7/8-F05-BK-PG11-W0.82	168 005 302 4001
	PG13.5	7/8-F05-BK-PG13.5-W0.82	168 005 302 4002
	M20×1.5	7/8-F05-BK-M20-W0.82	168 005 302 4003



- Male
- With single wires 0.82mm²
- MAX.1.5mm²
- length 0.2m
- Front fastened



7/8

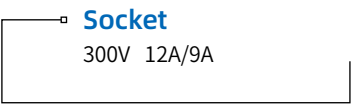
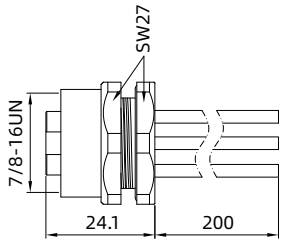


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
3 (2+PE)	7/8-16UN	7/8-M03-BKR-7/8-W0.82	168 003 301 4004
4 (3+PE)	7/8-16UN	7/8-M04-BKR-7/8-W0.82	168 004 301 4004
5 (4+PE)	7/8-16UN	7/8-M05-BKR-7/8-W0.82	168 005 301 4004



- Female
- With single wires 0.82mm²
- MAX.1.5mm²
- length 0.2m
- Front fastened



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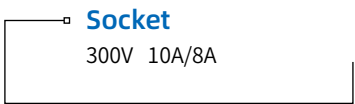
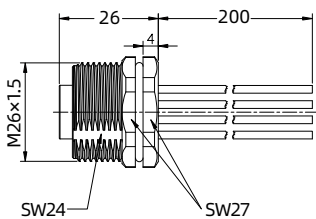


- Customized cable length upon request.

Contacts	Thread	Designation	Order No.
3 (2+PE)	7/8-16UN	7/8-F03-BKR-7/8-W0.82	168 003 302 4006
4 (3+PE)	7/8-16UN	7/8-F04-BKR-7/8-W0.82	168 003 302 4007
5 (4+PE)	7/8-16UN	7/8-F05-BKR-7/8-W0.82	168 003 302 4008



- Female
- With single wires 0.82mm²
- MAX.1.5mm²
- length 0.2m
- Front fastened



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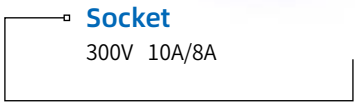
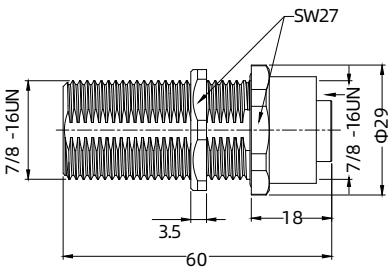


- Customized cable length upon request.

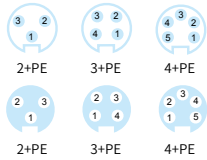
Contacts	Thread	Designation	Order No.
3 (2+PE)	M26	7/8-F03-BKR-M26-W0.82	168 003 302 4005
4 (3+PE)	M26	7/8-F04-BKR-M26-W0.82	168 004 302 4006
5 (4+PE)	M26	7/8-F05-BKR-M26-W0.82	168 005 302 4006



- Male integrate with female



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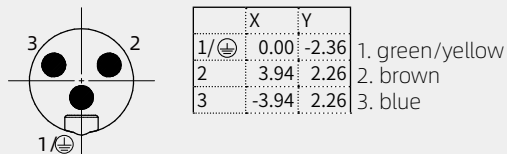


Contacts	Thread	Designation	Order No.
3 (2+PE)	7/8-16UN	7/8-M03-BK-F03-7/8	168 003 300 1001
4 (3+PE)	7/8-16UN	7/8-M04-BK-F04-7/8	168 003 300 1002
5 (4+PE)	7/8-16UN	7/8-M05-BK-F05-7/8	168 003 300 1003

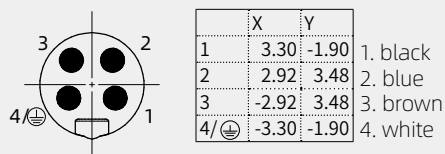
• Contact arrangements

• Male insert (mating side)

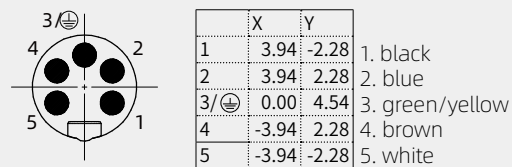
3 (2+PE)



4 (3+PE)

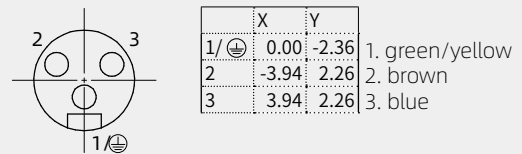


5 (4+PE)

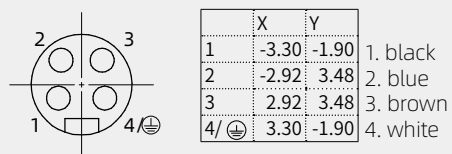


• Female insert (mating side)

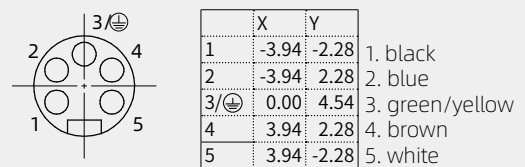
3 (2+PE)



4 (3+PE)

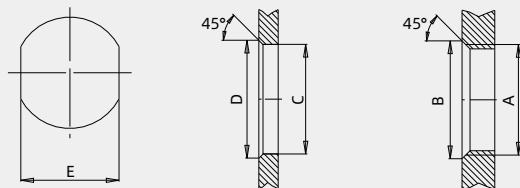


5 (4+PE)



• Panel cut out

- Front panel mounting,
- Back panel tighten
- Through-hole mounting
- Screw mounting

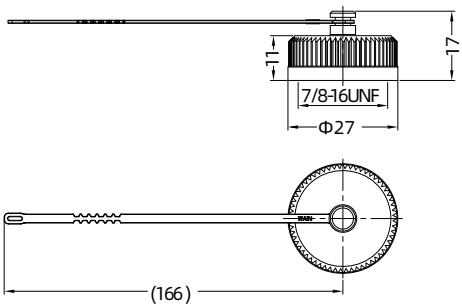


	A	B	C	D	E
PG11	PG11	20.2	18.7	20.2	17.0
PG13.5	PG13.5	22.2	20.5	22.2	18.8
M20×1.5	M20×1.5	21.6	20.1	21.6	17.8

• Protection covers (IP67)



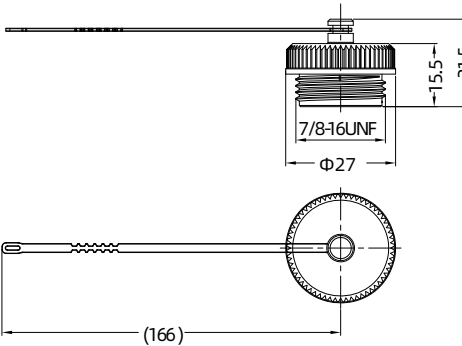
Protection cover
for male cable connector



Description	Designation	Order No.
Without cord	7/8-MCV	168 000 001 9003
With cord	7/8-MCV/1	168 000 001 9001



Protection cover
for female cable connector



Description	Designation	Order No.
Without cord	7/8-FCV	168 000 002 9003
With cord	7/8-FCV/1	168 000 002 9001

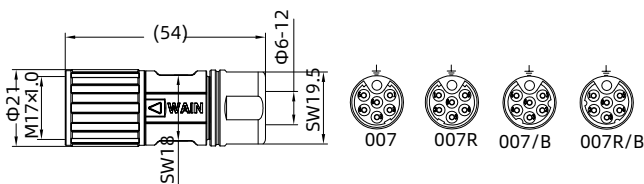


- MR17 - Technical characteristics

Specifications			
DIN EN 60 664	DIN EN 61 984		
Electrical data			
Number of contacts	7(6+PE)	12	17
Rated current	14A	7A	3.6A
mm ² / AWG	(0.03-1.5 mm ² / AWG 32-16)	(0.03-1.0 mm ² / AWG 32-18)	(0.14-0.5 mm ² / AWG 26-20)
Rated current	630 V	32 V	63 V
Test voltage Urms	6kV	1.5kV	1.5kV
Pollution degree	3	3	3
Flammability acc. to UL 94	V0 (UL94)	V0 (UL94)	V0 (UL94)
Surge voltage category	III	III	III
Mechanical date			
Housing material	Copper alloy, zinc alloy		
Housing surface	Nickel-plated		
Contact resistance	≤ 5 mΩ		
Insulating bodies	PBT		
Contact material	Copper alloy		
Contact surface	Hard-gold plated		
Mechanical working life	>500		
degree of protection	IP67		
Temperature range	-40°C ...+130°C		



- Order crimp contacts separately



Crimp terminal
630V- 14A

Contacts	Cable outlet	Designation	Order No.
7	6-9mm	M17-007-T-D9.5-SH	165 007 400 2007
	9-12mm	M17-007-T-D12-SH	165 007 400 2008
	6-9mm	M17-007R-T-D9.5-SH	165 007 400 2009
	9-12mm	M17-007R-T-D12-SH	165 007 400 2002
	6-9mm	M17-007/B-T-D9.5-SH	165 007 400 2005
	9-12mm	M17-007/B-T-D12-SH	165 007 400 2006
	6-9mm	M17-007R/B-T-D9.5-SH	165 007 400 2001
	9-12mm	M17-007R/B-T-D12-SH	165 007 400 2004

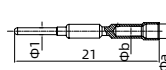
Accessories

Crimp contacts 9A

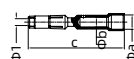
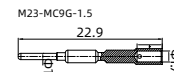
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.5-1.5	M23-MC9G-1.5	101 031 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.5-1.5	M23-FC9G-1.5	101 031 220 0901



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm



NO.	Φa	Φb	c	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	1.75	-	16.7	4.9mm

Crimping tool

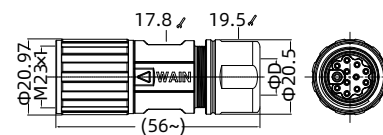


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately



Crimp terminal
32V- 7A

Contacts	Cable outlet	Designation	Order No.
12	6-9mm	M17-012R-T-D9.5-SH	165 012 400 2003
	9-12mm	M17-012R-T-D12-SH	165 012 400 2001

Accessories

Crimp contacts 9A

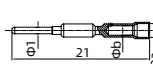
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801

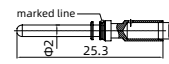
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool



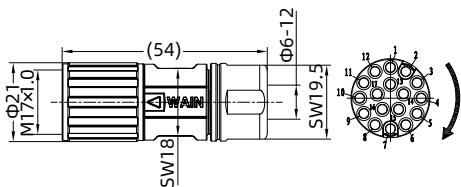
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Male
Crimp terminal
63V- 3.6A

• Order crimp contacts separately

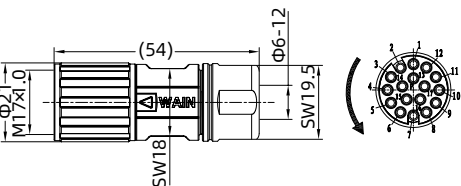


Contacts	Cable outlet	Designation	Order No.
17	6-9mm	M17-MC017-T-D9.5-SH	165 017 410 2001
	9-12mm	M17-MC017-T-D12-SH	165 017 410 2002



Female
Crimp terminal
63V- 3.6A

• Order crimp contacts separately



Contacts	Cable outlet	Designation	Order No.
17	6-9mm	M17-FC017-T-D9.5-SH	165 017 420 2002
	9-12mm	M17-FC017-T-D12-SH	165 017 420 2001

• Accessories

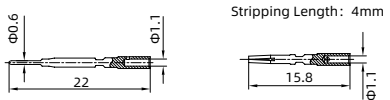
Crimp contacts 3.6A
3.6A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.14-0.5	M17-MC3.6G-0.5	101 039 210 0401

NO.	Wire gauge(mm ²)	Female	Order No.
①	0.14-0.5	M17-FC3.6G-0.5	101 039 220 0401

Crimping tool

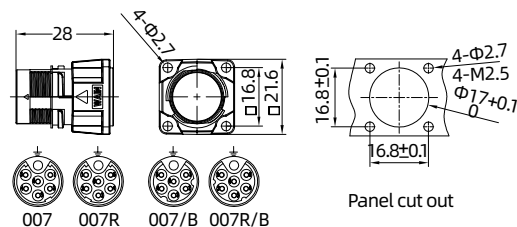


Wire gauge	Designation	Order No.
0.09-0.82 mm ²	TL03	198 001 001 0002

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately



Crimp terminal

630V- 14A

Contacts	Designation	Order No.
7	M17-007-BK21.6-OD2.7	165 007 300 4003
	M17-007R-BK21.6-OD2.7	165 007 300 4015
	M17-007/B-BK21.6-OD2.7	165 007 300 4016
	M17-007R/B-BK21.6-OD2.7	165 007 300 4017

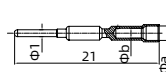
Accessories

Crimp contacts 9A

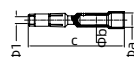
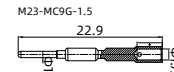
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.5-1.5	M23-MC9G-1.5	101 031 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.5-1.5	M23-FC9G-1.5	101 031 220 0901



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm



NO.	Φa	Φb	c	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	1.75	-	16.7	4.9mm

Crimping tool

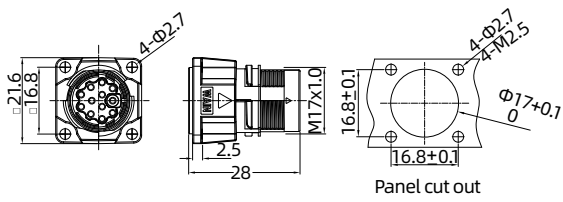


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



• Order crimp contacts separately



□ Crimp terminal
32V- 7A

Contacts	Designation	Order No.
12	M17-012-BK21.6-OD2.7	165 012 300 4002

• Accessories

□ Crimp contacts 9A
9A

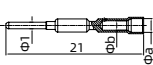
NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801

NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

□ Crimping tool

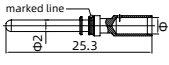


9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



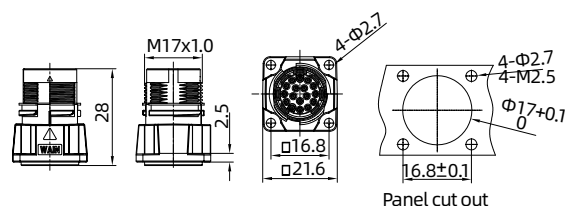
NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	marked line	2.25	6mm
⑤	-	2.85	6mm

Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately

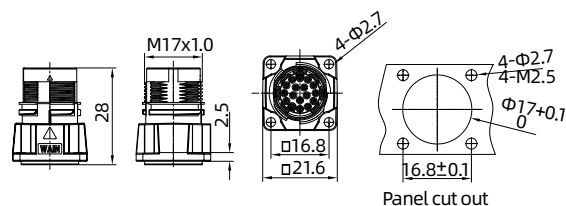


Male Crimp terminal
63V- 3.6A

Contacts	Designation	Order No.
17	M17-MC017-BK21.6-OD2.7	165 017 310 4002



- Order crimp contacts separately



Female Crimp terminal
63V- 3.6A

Contacts	Designation	Order No.
17	M17-FC017-BK21.6-OD2.7	165 017 320 1001

Accessories

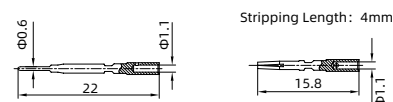
Crimp contacts 3.6A
3.6A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.14-0.5	M17-MC3.6G-0.5	101 039 210 0401

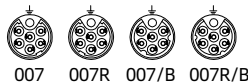
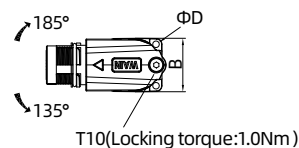
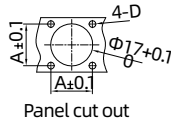
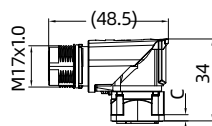
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.14-0.5	M17-FC3.6G-0.5	101 039 220 0401

Crimping tool



Wire gauge	Designation	Order No.
0.09-0.82 mm ²	TL03	198 001 001 0002

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Designation	A	B	C	D
BKP21.6	16.8	21.6	2.5	Φ2.7/M2.5
BKP26	19.8	26.0	2.5	Φ2.7/M2.5
BKP28	22.6	28.0	4.5	Φ3.2/M3

Crimp terminal

630V- 14A

- Order crimp contacts separately

Contacts	Designation	Order No.
7	M17-007-BKP21.6-SE-OD2.7	165 007 300 4001
	M17-007-BKP26-SE-OD2.7	165 007 300 4007
	M17-007-BKP28-SE-OD3.2	165 007 300 4011
7	M17-007R-BKP21.6-SE-OD2.7	165 007 300 4006
	M17-007R-BKP26-SE-OD2.7	165 007 300 4008
	M17-007R-BKP28-SE-OD3.2	165 007 300 4012
7	M17-007/B-BKP21.6-SE-OD2.7	165 007 300 4004
	M17-007/B-BKP26-SE-OD2.7	165 007 300 4009
	M17-007/B-BKP28-SE-OD3.2	165 007 300 4013
7	M17-007R/B-BKP21.6-SE-OD2.7	165 007 300 4005
	M17-007R/B-BKP26-SE-OD2.7	165 007 300 4010
	M17-007R/B-BKP28-SE-OD3.2	165 007 300 4014

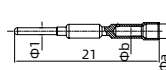
Accessories

Crimp contacts 9A

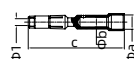
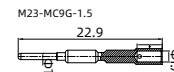
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.5-1.5	M23-MC9G-1.5	101 031 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.5-1.5	M23-FC9G-1.5	101 031 220 0901



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm



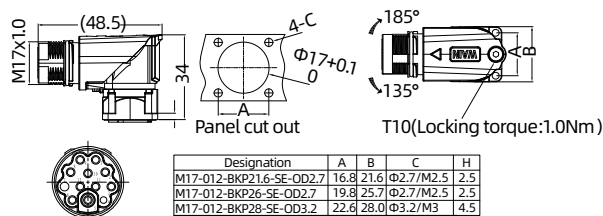
NO.	Φa	Φb	c	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	1.75	-	16.7	4.9mm

Crimping tool



Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Crimp terminal

32V- 7A

- Order crimp contacts separately

Contacts	Designation	Order No.
12	M17-012-BKP21.6-SE-OD2.7	165 012 300 4001
	M17-012-BKP26-SE-OD2.7	165 012 300 2001
	M17-012-BKP28-SE-OD3.2	165 012 300 2002

Accessories

Crimp contacts 9A

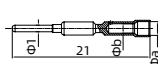
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801

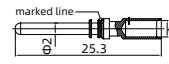
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool



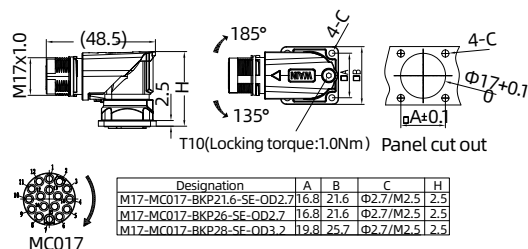
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



**Male
Crimp terminal**
63V- 3.6A

• Order crimp contacts
separately

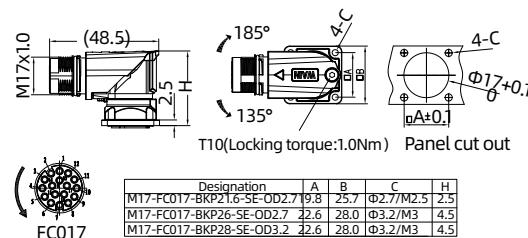


Contacts	Designation	Order No.
17	M17-MC017-BKP21.6-SE-OD2.7	165 017 310 4001
	M17-MC017-BKP26-SE-OD2.7	165 017 310 1001
	M17-MC017-BKP28-SE-OD3.2	165 017 310 1002



**Female
Crimp terminal**
63V- 3.6A

• Order crimp contacts
separately



Contacts	Designation	Order No.
17	M17-FC017-BKP21.6-SE-OD2.7	165 017 320 1002
	M17-FC017-BKP26-SE-OD2.7	165 017 320 1003
	M17-FC017-BKP28-SE-OD3.2	165 017 320 1004

• Accessories

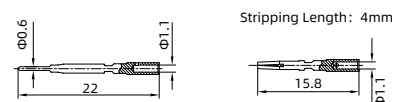
Crimp contacts 3.6A
3.6A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.14-0.5	M17-MC3.6G-0.5	101 039 210 0401

NO.	Wire gauge(mm ²)	Female	Order No.
①	0.14-0.5	M17-FC3.6G-0.5	101 039 220 0401

Crimping tool



Wire gauge	Designation	Order No.
0.09-0.82 mm ²	TL03	198 001 001 0002

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- M23 Circular connector-Signal Connection

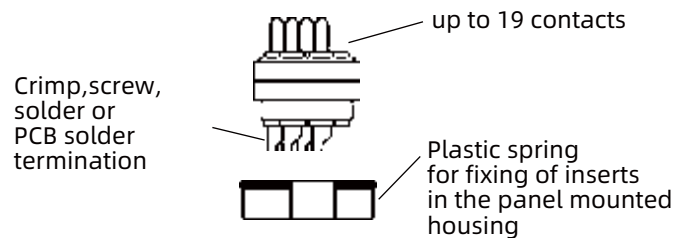
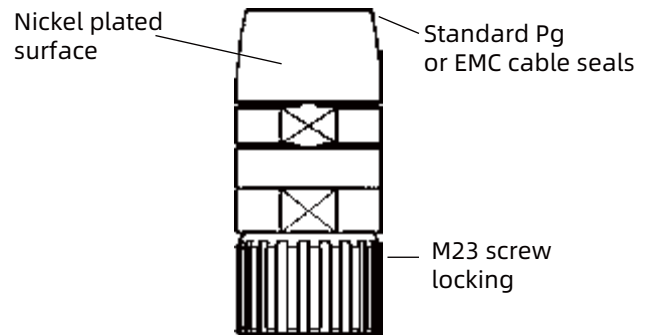


• Features



• Size R 23

- Outer diameter 26 mm
- High contact density
- Very robust hoods and housings
- Corrosion resistant
- Excellent EMC properties (with continuous shielding)
- Quick and easy assembly
- Vibration resistant screw locking system
- Up to 19 contacts, 25 V~ / 60 V-
- Ideal for applications such as measurement and automatic control



- HR23 - Technical characteristics

Specifications		
DIN EN 60 664	DIN EN 61 984	
Inserts		
Number of contacts	6	
Electrical data acc. to EN 61 984		
Rated current		
- power contact	15A	
Rated voltage	25 V~/60 V-	
of pollution	3	
Test voltage Urms	1.5 kV	
Insulation resistance	≥ 1012 Ω	
Material	PBT	
Temperature range	-40°C ...+130°C	
Flammability acc. to UL 94	V0	
Contacts		
Material	Copper alloy	
Surface	Gold plated	
Contact resistance	≤ 5 mΩ	
Screw termination		
- power contact	0.14-1.0 mm² / AWG 26-16	
Solder termination		
- power contact	0.14-2.5 mm² / AWG 26-14	
PCB solder termination		
- power contact	Φ1.5 mm	
- reference to bulkhead mounted housing	3.5 mm	
Inserts		
Number of contacts	7	
Electrical data acc. to EN 61 984		
Rated current		
- power contact	15A	
Rated voltage	25 V~/60 V-	
of pollution	3	
Test voltage Urms	1.5 kV	
Insulation resistance	≥ 1012 Ω	
Material	PBT	
Temperature range	-40°C ...+130°C	
Flammability acc. to UL 94	V0	
Contacts		
Material	Copper alloy	
Surface	Gold plated	
Contact resistance	≤ 5 mΩ	
Screw termination		
- power contact	0.14-1.0 mm² / AWG 26-16	
Solder termination		
- power contact	0.14-2.5 mm² / AWG 26-14	

- HR23 - Technical characteristics

Specifications	
DIN EN 60 664	DIN EN 61 984

Inserts	
Number of contacts	12
Electrical data acc. to EN 61 984	
Rated current	
- signal contact	7A
Rated voltage	25 V~/60 V-
of pollution	3
Test voltage Urms	1.5 kV
Insulation resistance	$\geq 10^{12} \Omega$
Material	PBT
Temperature range	-40°C ...+130°C
Flammability acc. to UL 94	V0

Contacts	
Material	Copper alloy
Surface	Gold plated
Contact resistance	$\leq 5 \text{ m}\Omega$
Crimp termination	
- D-Sub contact	0.09-0.82 mm ² / AWG 28-18
Solder termination	
- signal contact	0.14-1.0 mm ² / AWG 26-16
PCB solder termination	
- signal contact	$\Phi 0.6 \text{ mm}$
- reference to bulkhead mounted housing	3.5 mm 

Inserts	
Number of contacts	17
Electrical data acc. to EN 61 984	
Rated current	
- signal contact	7A
Rated voltage	25 V~/60 V-
of pollution	3
Test voltage Urms	1.5 kV
Insulation resistance	$\geq 10^{12} \Omega$
Material	PBT
Temperature range	-40°C ...+130°C
Flammability acc. to UL 94	V0

Contacts	
Material	Copper alloy
Surface	Gold plated
Contact resistance	$\leq 5 \text{ m}\Omega$
Crimp termination	
- D-Sub contact	0.09-0.82 mm ² / AWG 28-18
Solder termination	
- signal contact	0.14-1.0 mm ² / AWG 26-16
PCB solder termination	
- signal contact	$\Phi 0.6 \text{ mm}$
- reference to bulkhead mounted housing	3.5 mm 

Inserts	
Number of contacts	19
Electrical data acc. to EN 61 984	
Rated current	
- power contact	3x10A
- signal contact	16x7A
Rated voltage	25 V~/60 V-
of pollution	3
Test voltage Urms	1.5 kV
Insulation resistance	$\geq 10^{12} \Omega$
Material	PBT
Temperature range	-40°C ...+130°C
Flammability acc. to UL 94	V0

Contacts	
Material	Copper alloy
Surface	Gold plated
Contact resistance	$\leq 5 \text{ m}\Omega$
Solder termination	
- power contact	0.14-2.5 mm ² / AWG 26-14
- signal contact	0.14-1.0 mm ² / AWG 26-16

• HR23-006 Circular inserts

Screw terminal



Inserts	Designation	Order No.
Male	HR23-006-M	181 006 011 0001
Female	HR23-006-F	181 006 021 0001
Reverse coding		
Male	HR23-006R-M	181 006 011 0101
Female	HR23-006R-F	181 006 021 0101

Solder terminal



Inserts	Designation	Order No.
Male	HR23-006-MST	181 006 013 0001
Female	HR23-006-FST	181 006 023 0001
Reverse coding		
Male	HR23-006R-MST	181 006 013 0101
Female	HR23-006R-FST	181 006 023 0101

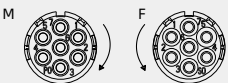
PCB solder termination



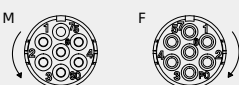
Inserts	Designation	Order No.
Male	HR23-006-MTHT ²⁾	181 006 014 0001
Female	HR23-006-FTHT ²⁾	181 006 024 0001
Reverse coding		
Male	HR23-006R-MTHT ²⁾	181 006 014 0101
Female	HR23-006R-FTHT ²⁾	181 006 024 0101

Hoods/Housings: size HR23

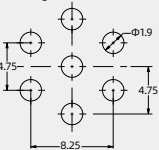
Contact arrangement: mating side



Reverse coding



Reverse coding



²⁾ Suitable only for bulkhead mounted housings: HR23-BK-D2.7, HR23-BK/R-OD2.7 and HR23-BK/R-OM2.5

• HR23-007 Circular inserts

Screw terminal



Inserts	Designation	Order No.
Male	HR23-007-M	181 007 011 0001
Female	HR23-007-F	181 007 021 0001
Reverse coding		
Male	HR23-007R-M	181 007 011 0101
Female	HR23-007R-F	181 007 021 0101

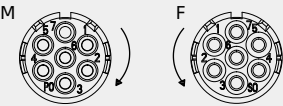
Solder terminal



Inserts	Designation	Order No.
Male	HR23-007-MST	181 007 013 0001
Female	HR23-007-FST	181 007 023 0001
Reverse coding		
Male	HR23-007R-MST	181 007 013 0101
Female	HR23-007R-FST	181 007 023 0101

Hoods/Housings: size HR23

Contact arrangement: mating side



Reverse coding



• HR23-009 Circular inserts

Screw terminal



Inserts	Designation	Order No.
Male	HR23-009-M	181 009 011 0001
Female	HR23-009-F	181 009 021 0001
Reverse coding		

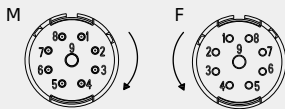
Solder terminal



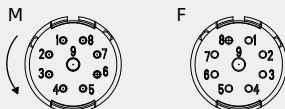
Inserts	Designation	Order No.
Male	HR23-009-MST	181 009 013 0001
Female	HR23-009-FST	181 009 023 0001
Reverse coding		
Male	HR23-009R-MST	181 009 013 0101
Female	HR23-009R-FST	181 009 023 0101

Hoods/Housings: size HR23

Contact arrangement: mating side



Reverse coding



• HR23-012 Circular inserts

□ Crimp terminal for D-Sub contacts



Inserts	Designation	Order No.
Male	HR23-012-MC	181 012 010 0001
Female	HR23-012-FC	181 012 020 0001

• Order crimp contacts separately

□ Solder terminal



Inserts	Designation	Order No.
Male	HR23-012-MST	181 012 013 0001
Female	HR23-012-FST	181 012 023 0001
Reverse coding		
Male	HR23-012R-MST	181 012 013 0101
Female	HR23-012R-FST	181 012 023 0101

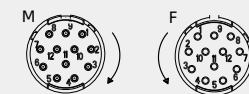
□ PCB solder termination ²⁾



Inserts	Designation	Order No.
Male	HR23-012-MTHT ²⁾	181 012 014 0001
Female	HR23-012-FTHT ²⁾	181 012 024 0001
Reverse coding		
Male	HR23-012R-MTHT ²⁾	181 012 014 0101
Female	HR23-012R-FTHT ²⁾	181 012 024 0101

Hoods/Housings: size HR23

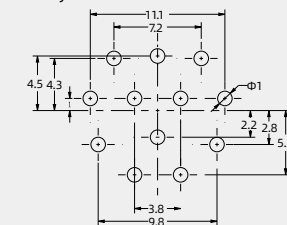
Contact arrangement: mating side



Reverse coding



PCB layout



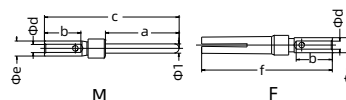
2) Suitable only for bulkhead mounted housings: HR23-BK-D2.7, HR23-BK/R-OD2.7 and HR23-BK/R-OM2.5

• Accessories

□ Crimp contacts 5A Contact resistance ≤ 3mΩ Gold plated



Wire gauge(mm ²)	Male	Order No.	Female	Order No.
0.09-0.25	CSGM-0.25	101 014 210 0101	CSGF-0.25	101 014 220 0101
0.13-0.33	CSGM-0.33	101 014 210 0201	CSGF-0.33	101 014 220 0201
0.33-0.52	CSGM-0.52	101 014 210 0501	CSGF-0.52	101 014 220 0501
0.52-0.82	CSGM-0.82	101 014 210 0701	CSGF-0.82	101 014 220 0701



a	b	c	d	e	f
8.10	4.0	14.8	0.64	1.66	14.4
8.10	4.0	14.8	0.90	1.66	14.4
8.10	4.0	14.8	1.12	1.66	14.4
8.23	4.2	14.0	1.35	1.75	13.6

Wire gauge	Stripping length
0.09-0.25 mm ² AWG 28-24	5 mm
0.13-0.33 mm ² AWG 26-22	5 mm
0.33-0.52 mm ² AWG 22-20	5 mm
0.52-0.82 mm ² AWG 22-18	5 mm

□ Crimping tool



Wire gauge	Designation	Order No.
0.09-0.82mm ²	TL03	198 001 001 0002

• Notes: The tools for crimp terminal may influence the product quality and stability.
Please select the tools recognized by our company.

• HR23-017 Circular inserts

□ Crimp terminal for D-Sub contacts

• 冷压针需另外订购



Inserts	Designation	Order No.
Male	HR23-017-MC	181 017 010 0001
Female	HR23-017-FC	181 017 020 0001

• Order crimp contacts separately

□ Solder terminal



Inserts	Designation	Order No.
Male	HR23-017-MST	181 017 013 0001
Female	HR23-017-FST	181 017 023 0001
Reverse coding		
Male	HR23-017R-MST	181 017 013 0101
Female	HR23-017R-FST	181 017 023 0101

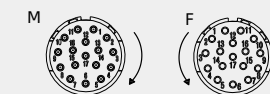
□ PCB solder termination ²⁾



Inserts	Designation	Order No.
Male	HR23-017-MTHT ²⁾	181 012 014 0001
Female	HR23-017-FTHT ²⁾	181 012 024 0001
Reverse coding		
Male	HR23-017R-MTHT ²⁾	181 012 014 0101
Female	HR23-017R-FTHT ²⁾	181 012 024 0101

Hoods/Housings: size HR23

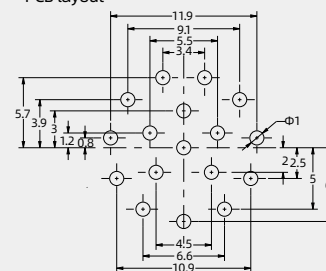
Contact arrangement: mating side



Reverse coding



PCB layout



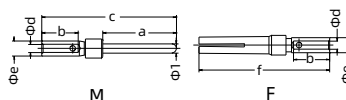
2) Suitable only for bulkhead mounted housings: HR23-BK-D2.7, HR23-BK/R-OD2.7 and HR23-BK/R-OM2.5

• Accessories

□ Crimp contacts 5A
Contact resistance
≤ 3mΩ
Gold plated



Wire gauge(mm ²)	Male	Order No.	Female	Order No.
0.09-0.25	CSGM-0.25	101 014 210 0101	CSGF-0.25	101 014 220 0101
0.13-0.33	CSGM-0.33	101 014 210 0201	CSGF-0.33	101 014 220 0201
0.33-0.52	CSGM-0.52	101 014 210 0501	CSGF-0.52	101 014 220 0501
0.52-0.82	CSGM-0.82	101 014 210 0701	CSGF-0.82	101 014 220 0701



a	b	c	d	e	f
8.10	4.0	14.8	0.64	1.66	14.4
8.10	4.0	14.8	0.90	1.66	14.4
8.10	4.0	14.8	1.12	1.66	14.4
8.23	4.2	14.0	1.35	1.75	13.6

Wire gauge	Stripping length
0.09-0.25 mm ²	AWG 28-24 5 mm
0.13-0.33 mm ²	AWG 26-22 5 mm
0.33-0.52 mm ²	AWG 22-20 5 mm
0.52-0.82 mm ²	AWG 22-18 5 mm

□ Crimping tool



Wire gauge	Designation	Order No.
0.09-0.82mm ²	TL03	198 001 001 0002

• Notes: The tools for crimp terminal may influence the product quality and stability.
Please select the tools recognized by our company.

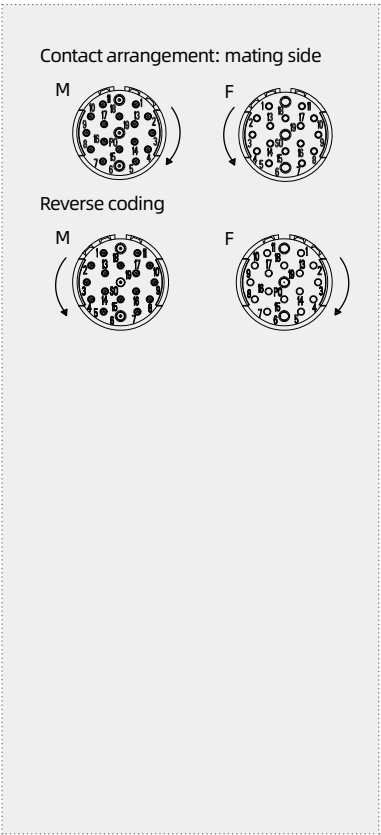
• HR23-019 Circular inserts

Solder terminal



Inserts	Designation	Order No.
Male	HR23-019-MST	181 019 013 0001
Female	HR23-019-FST	181 019 023 0001
Reverse coding		
Male	HR23-019R-MST	181 019 013 0101
Female	HR23-019R-FST	181 019 023 0101

Hoods/Housings: size HR23

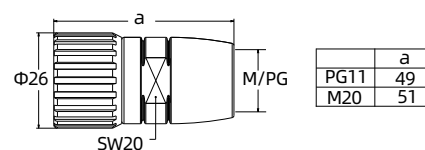


• HR23 Hoods/Housings- Technical characteristics

Hoods/Housings	
Material	Copper zinc alloy
Surface	Nickel plated
sealing	FPM
Temperature range	-40°C ...+130°C
Protection degree in locked position	IP 67

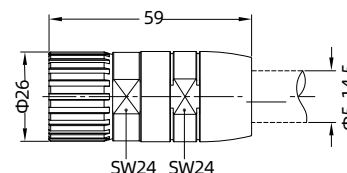


- Mounted with cable gland to achieve EMC function.
- Flnstall or remove this kind of produt need to use the HR23-TL02/N tools.



Hoods, top-entry

Thread	Designation	Order No.
PG11	HR23-TE-PG11	181 000 410 1002
M20	HR23-TE-M20	181 000 410 1001

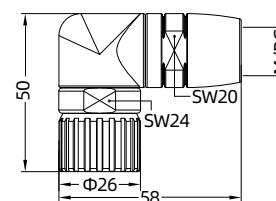


Hoods, top-entry, EMC version

Thread	Designation	Order No.
	HR23-TE-EMC	181 000 410 2003



- Mounted with cable gland to achieve EMC function.

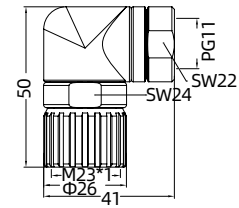


Hood, entry 90°

Thread	Designation	Order No.
PG11	HR23-SE-PG11	181 000 510 1002
M20	HR23-SE-M20	181 000 510 1001



Hood, entry 90°

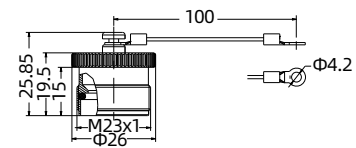


Thread	Designation	Order No.
PG11	HR23-SES-PG11	181 000 510 1102



Screw cover

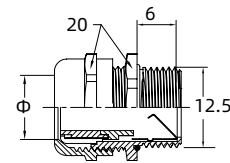
for hoods with rope



Thread	Designation	Order No.
	HR23-MCV-M2	181 000 010 9001



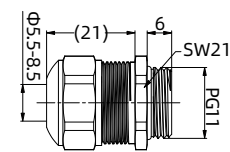
Cable gland



Thread	Designation	Order No.
PG11	WNAC-PG11(D5-10)	102 117 003 1001
M20	WNAC-M20(D6-12)	102 117 015 1001



Cable gland

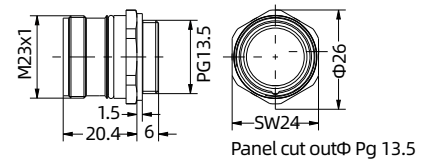


Thread	Designation	Order No.
PG11	WNACP-PG11(D5.5-8.5)	102 117 018 1503
M20	WNACP-M20(D5.5-8.5)	102 117 018 1505



Housings,
bulkhead mounting

- front wall assembly
with central locking PG13.5

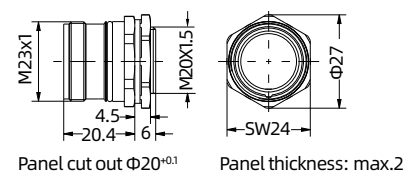


Thread	Designation	Order No.
PG13.5	HR23-BK-PG13.5	181 000 310 1004



Housings,
bulkhead mounting

- Front wall assembly, with central
locking M20

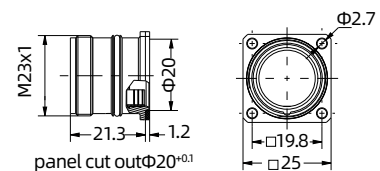


Thread	Designation	Order No.
M20	HR23-BK-M20	181 000 310 1003



Housings,
bulkhead mounting

- Front wall assembly, with flat
sealing and 4 $\Phi 2.7$ holes

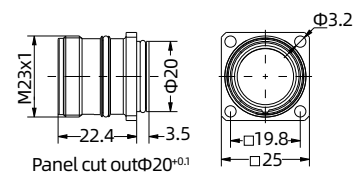


Thread	Designation	Order No.
---	HR23-BK-D2.7	181 000 310 1001



Housings,
bulkhead mounting

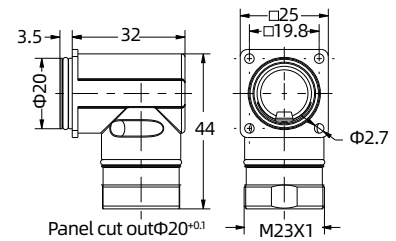
- front wall assembly, with O-ring
sealing and 4 $\Phi 3.2$ holes



Thread	Designation	Order No.
---	HR23-BK-OD3.2	181 000 310 1002



- front wall assembly, with O-ring sealing and 4 $\Phi 2.7$ holes
- HR23-TL03 tools are needed for installation and removal

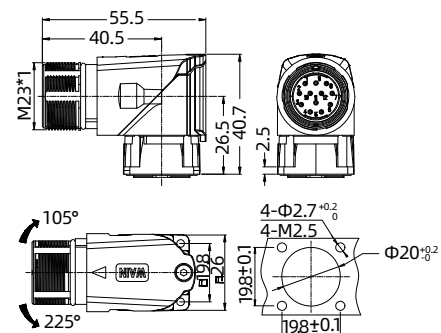


Housings,
bulkhead mounting

Thread	Designation	Order No.
---	HR23-BK-SE-OD2.7	181 000 610 1001



- front wall assembly, with O-ring sealing and 4 $\Phi 2.7$ holes. suitable for positioning rotation, can match HR23 series inserts, (except PCB Solder series)

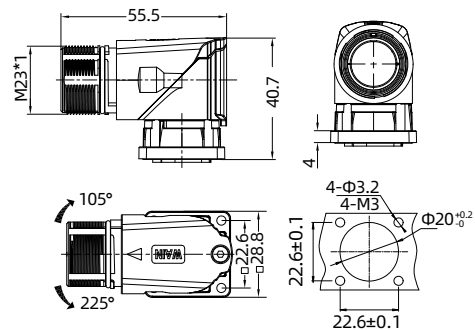


Housings,
bulkhead mounting

Thread	Designation	Order No.
---	HR23-BKP-SE-OD2.7	181 000 610 1101



- front wall assembly, with O-ring sealing and 4 $\Phi 3.2$ holes. suitable for positioning rotation, can match HR23 series inserts, (except PCB Solder series)

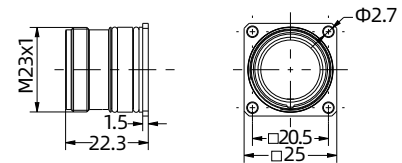


Housings,
bulkhead mounting

Thread	Designation	Order No.
---	HR23-BKP28.8-SE-OD3.2	181 000 610 1102



- Back wall assembly, with O-ring sealing and 4 $\Phi 2.7$ holes



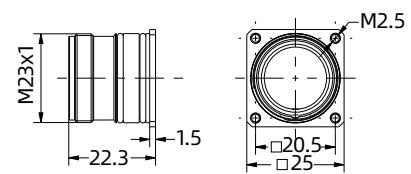
When using counter sunk screw

Housings,
bulkhead mounting

Thread	Designation	Order No.
---	HR23-BK/R-OD2.7	181 000 310 1101



- Back wall assembly, with O-ring sealing and 4 M2.5 holes

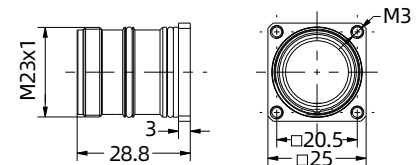


Housings,
bulkhead mounting

Thread	Designation	Order No.
---	HR23-BK/R-OM2.5	181 000 310 1102



- Back wall assembly, with O-ring sealing and 4 M3.0 holes

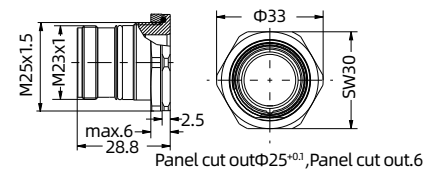


Housings,
bulkhead mounting

Thread	Designation	Order No.
---	HR23-BK/R-OM3.0	181 000 310 1103



- back wall assembly, with central locking M25

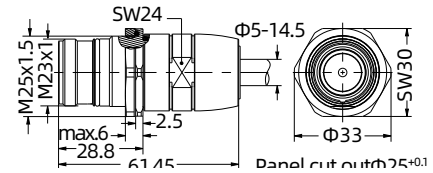


Housings,
bulkhead mounting

Thread	Designation	Order No.
M25	HR23-BK/R-OM25	181 000 310 1104



- Back wall assembly, with central locking M25

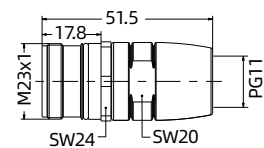


EMC Housings,
cable to cable

Thread	Designation	Order No.
M25	HR23-CCT/R-OM25	181 000 710 1004



- It should be used with cable gland , up to EMC function.

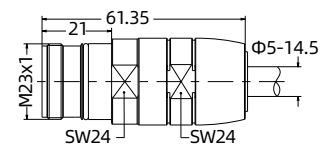


Housings,
cable to cable,
top entry

Thread	Designation	Order No.
M20	HR23-CCT-M20	181 000 710 1001
PG11	HR23-CCT-PG11	181 000 710 1002



- Install or remove this kind of product need to use the HR23-TL01 tools.



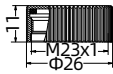
Housings,
cable to cable,
top entry

Thread	Designation	Order No.
---	HR23-CCT-EMC	181 000 710 2003



Screw cover

- For bulkhead mounted and cable to cable housings

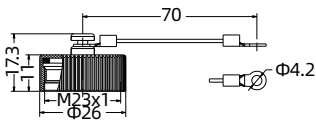


Thread	Designation	Order No.
---	HR23-MCV-F	181 000 010 9003



Screw cover

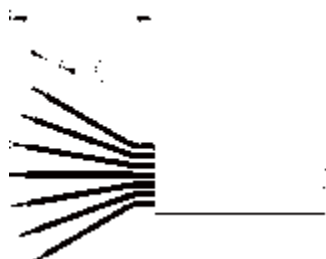
- For bulkhead mounted and cable to cable housings, with rope



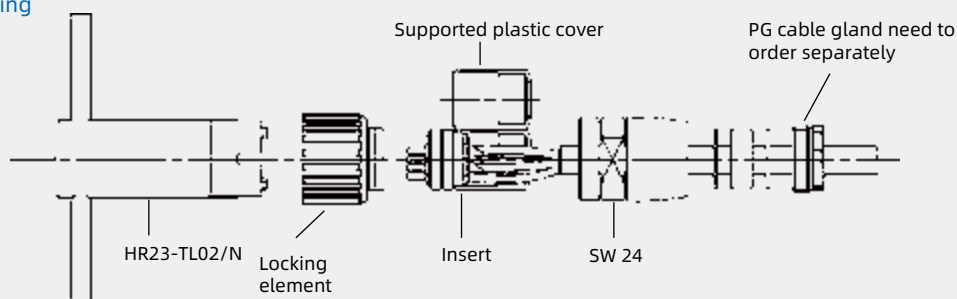
Thread	Designation	Order No.
---	HR23-MCV-F2	181 000 010 9002

• HR23 Assembly manuals

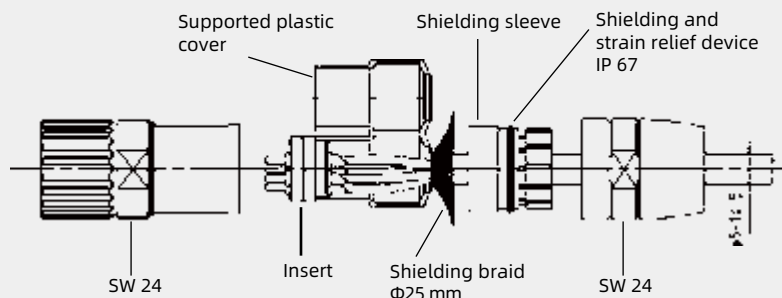
Hood and Housing	Cable stripping length x
HR23-CCT/R-OM25	26 mm
HR23-TE-PG11	20 mm
HR23-TE-EMC	26 mm
HR23-SE-PG11	30 mm
HR23-CCT-PG11	20 mm
HR23-CCT-EMC	26 mm
HR23-BK-SE-OD2.7	30 mm



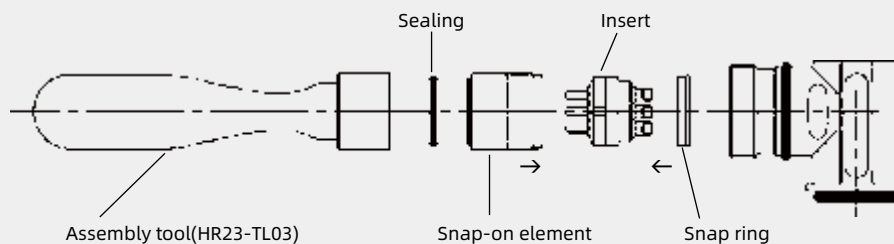
• Standard hood and housing



• EMC hoods



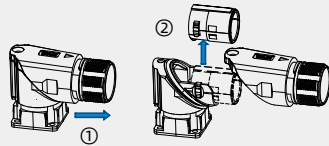
• Right angled bulkhead mounted housing



- Right angled bulkhead mounted housing:HR23-BKP-SE-OD2.7

- Right angled bulkhead mounted housing:HR23-BKP-SE-OD2.7

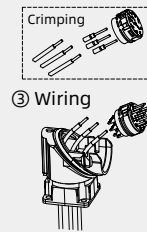
1: Pull out the upper cover horizontally, and then take out the inner insert fixed part.



2: insert wiring

a、The cable passes through the fixed base.

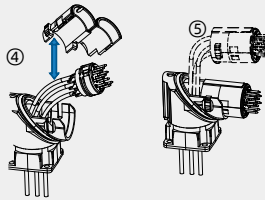
b、Strip the wire insulation husk, and then weld it to the pins of the insert.



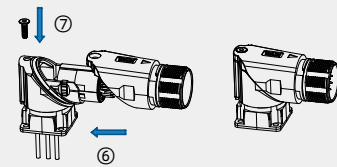
3: install the insert fixed part

a、Fasten the open fixed part with the insert; the location gap of the insert should align with the location salient point of the fixed part.

b、Insert the fixed part which installed the insert to the slot of the base.

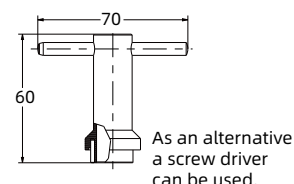


4: Lock the upper cover, and the installation is completed.





- Application
For bulkhead mounted and
cable to cable housings
and hoods: HR23-CCT-EMC

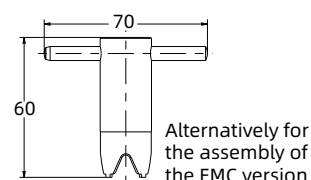


Assembly tool

Designation	Order No.
HR23-TL01/N	198 001 003 0004



- Application
For hoods:
HR23-TE-PG11
HR23-TE-M20

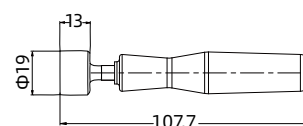


Assembly tool

Designation	Order No.
HR23-TL02/N	198 001 003 0005



- Application
For angled bulkhead
mounted housings:
HR23-BK-SE-OD2.7

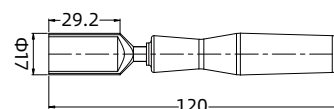


Assembly tool

Designation	Order No.
HR23-TL03	198 001 003 0006



- Application
For housings:
(except angled bulkhead
mounted and EMC housings)



Assembly tool

Designation	Order No.
HR23-TL04	198 001 003 0014



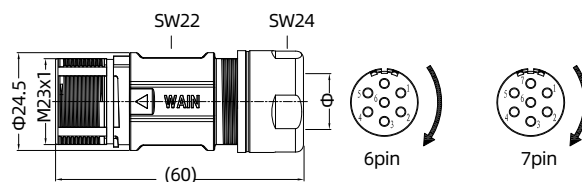


- MR23 - Technical characteristics

Specifications			
DIN EN 60 664		DIN EN 61 984	
Electrical data			
Number of contacts	6	7	12
Rated current	20A	20A	7A
mm²/ AWG	(0.35-2.5 mm² / AWG 22-14)	(0.03-1.0 mm² / AWG 32-16)	(0.03-1.0 mm² / AWG 32-18)
Rated current	300 V	300 V	160 V
Test voltage Urms	2.5 kV	2.5 kV	2.5 kV
Pollution degree	3	3	3
Flammability acc. to UL 94	V0 (UL94)	V0 (UL94)	V0 (UL94)
Surge voltage category	III	III	III
Electrical data		Electrical data	
Number of contacts	17	Number of contacts	19(16+3)
Rated current	7A	signal	0.03-1.0 mm² / AWG 32-18
mm²/ AWG	(0.03-1.0 mm² / AWG 32-18)	power	0.14-1.5 mm² / AWG 20-16
Rated current	125 V	Rated current	7A
Test voltage Urms	2.0 kV	Rated voltage	63 V
Pollution degree	3	Test voltage Urms	1.5 kV
Flammability acc. to UL 94	V0 (UL94)	Pollution degree	3
Surge voltage category	III	Flammability acc. to UL 94	V0 (UL94)
		Surge voltage category	III
Mechanical date			
Housing material	Copper alloy, zinc alloy		
Housing surface	Nickel-plated		
Contact resistance	≤ 5 mΩ		
Insulating bodies	PBT		
Contact material	Copper alloy		
Contact surface	Hard-gold plated		
Mechanical working life	>500		
degree of protection	IP67		
Temperature range	-40°C ...+130°C		



- Order crimp contacts separately

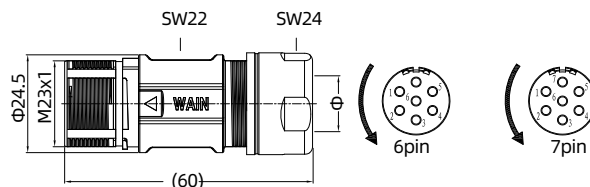


Forward coding
Crimp terminal
32V- 20A

Contacts	Cable outlet	Designation	Order No.
6	4.5-8mm	MR23-006-CCT-D8-SH	181 006 700 2001
	6-10mm	MR23-006-CCT-D10-SH	181 006 700 2002
	9-14.5mm	MR23-006-CCT-D14.5-SH	181 006 700 2003
7	4.5-8mm	MR23-007-CCT-D8-SH	181 007 700 2001
	6-10mm	MR23-007-CCT-D10-SH	181 007 700 2002
	9-14.5mm	MR23-007-CCT-D14.5-SH	181 007 700 2003



- Order crimp contacts separately



Reverse coding
Crimp terminal
32V- 20A

Contacts	Cable outlet	Designation	Order No.
6	4.5-8mm	MR23-006R-CCT-D8-SH	181 006 700 2004
	6-10mm	MR23-006R-CCT-D10-SH	181 006 700 2005
	9-14.5mm	MR23-006R-CCT-D14.5-SH	181 006 700 2006
7	4.5-8mm	MR23-007R-CCT-D8-SH	181 007 700 2004
	6-10mm	MR23-007R-CCT-D10-SH	181 007 700 2005
	9-14.5mm	MR23-007R-CCT-D14.5-SH	181 007 700 2006

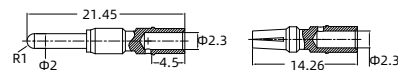
Accessories

Crimp contacts 20A

20A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.35-2.5	MR23-MC20G-2.5	101 020 210 1001
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.35-2.5	MR23-FC20G-2.5	101 020 220 1001



Crimping tool

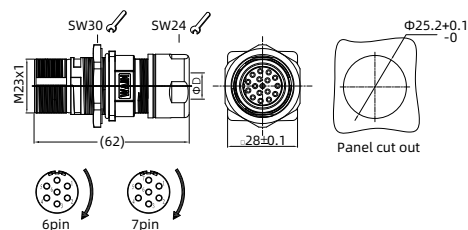


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately



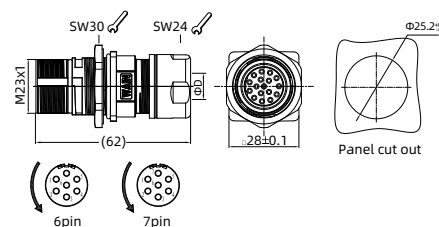
Forward coding Crimp terminal

300V- 20A

Contacts	Cable outlet	Designation	Order No.
6	4.5-8mm	MR23-006-CCT/R-D8-SH	181 006 700 2007
	6-10mm	MR23-006-CCT/R-D10-SH	181 006 700 2008
	9-14.5mm	MR23-006-CCT/R-D14.5-SH	181 006 700 2009
7	4.5-8mm	MR23-007-CCT/R-D8-SH	181 007 700 2007
	6-10mm	MR23-007-CCT/R-D10-SH	181 007 700 2008
	9-14.5mm	MR23-007-CCT/R-D14.5-SH	181 007 700 2009



- Order crimp contacts separately



Reverse coding Crimp terminal

300V- 20A

Contacts	Cable outlet	Designation	Order No.
6	4.5-8mm	MR23-006R-CCT/R-D8-SH	181 006 700 2010
	6-10mm	MR23-006R-CCT/R-D10-SH	181 006 700 2011
	9-14.5mm	MR23-006R-CCT/R-D14.5-SH	181 006 700 2012
7	4.5-8mm	MR23-007R-CCT/R-D8-SH	181 007 700 2010
	6-10mm	MR23-007R-CCT/R-D10-SH	181 007 700 2011
	9-14.5mm	MR23-007R-CCT/R-D14.5-SH	181 007 700 2012

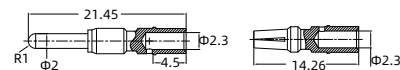
Accessories

Crimp contacts 20A

20A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.35-2.5	MR23-MC20G-2.5	101 020 210 1001
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.35-2.5	MR23-FC20G-2.5	101 020 220 1001



Crimping tool



Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

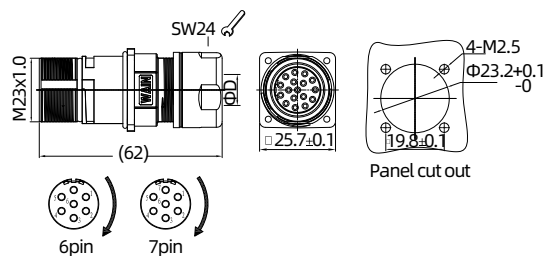
Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



NEW

- Order crimp contacts separately

Forward coding
Crimp terminal
300V- 20A



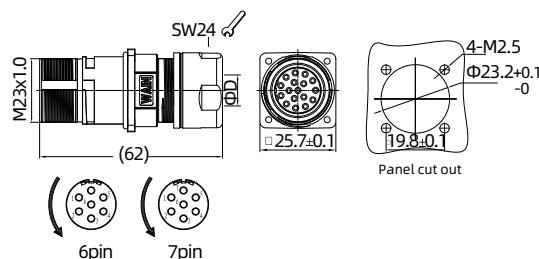
Contacts	Cable outlet	Designation	Order No.
6	4.5-8mm	MR23-006-CCT/R26-D8-SH	181 006 700 2013
	6-10mm	MR23-006-CCT/R26-D10-SH	181 006 700 2014
	9-14.5mm	MR23-006-CCT/R26-D14.5-SH	181 006 700 2015
7	4.5-8mm	MR23-007-CCT/R26-D8-SH	181 007 700 2013
	6-10mm	MR23-007-CCT/R26-D10-SH	181 007 700 2014
	9-14.5mm	MR23-007-CCT/R26-D14.5-SH	181 007 700 2015



NEW

- Order crimp contacts separately

Reverse coding
Crimp terminal
300V- 20A



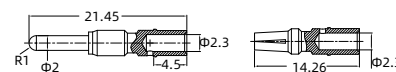
Contacts	Cable outlet	Designation	Order No.
6	4.5-8mm	MR23-006R-CCT/R26-D8-SH	181 006 700 2016
	6-10mm	MR23-006R-CCT/R26-D10-SH	181 006 700 2017
	9-14.5mm	MR23-006R-CCT/R26-D14.5-SH	181 006 700 2018
7	4.5-8mm	MR23-007R-CCT/R26-D8-SH	181 007 700 2016
	6-10mm	MR23-007R-CCT/R26-D10-SH	181 007 700 2017
	9-14.5mm	MR23-007R-CCT/R26-D14.5-SH	181 007 700 2018

Accessories

Crimp contacts 20A
20A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.35-2.5	MR23-MC20G-2.5	101 020 210 1001
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.35-2.5	MR23-FC20G-2.5	101 020 220 1001



Crimping tool



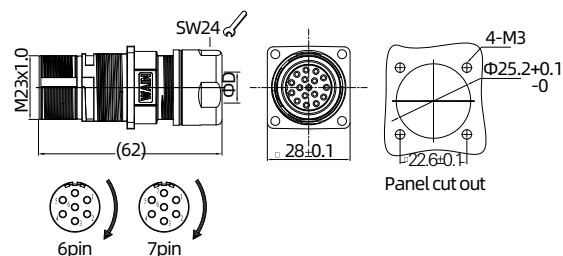
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Forward coding
Crimp terminal
300V- 20A

- Order crimp contacts separately

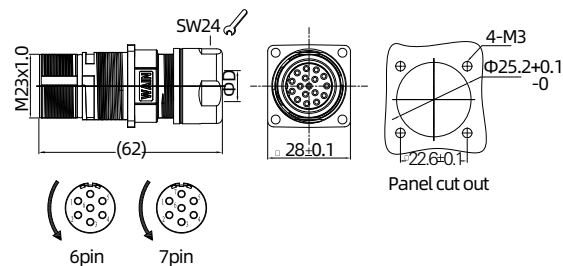


Contacts	Cable outlet	Designation	Order No.
6	4.5-8mm	MR23-006-CCT/R28-D8-SH	181 006 700 2019
	6-10mm	MR23-006-CCT/R28-D10-SH	181 006 700 2020
	9-14.5mm	MR23-006-CCT/R28-D14.5-SH	181 006 700 2021
7	4.5-8mm	MR23-007-CCT/R28-D8-SH	181 007 700 2019
	6-10mm	MR23-007-CCT/R28-D10-SH	181 007 700 2020
	9-14.5mm	MR23-007-CCT/R28-D14.5-SH	181 007 700 2021



Reverse coding
Crimp terminal
300V- 20A

- Order crimp contacts separately



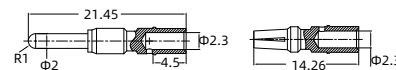
Contacts	Cable outlet	Designation	Order No.
6	4.5-8mm	MR23-006R-CCT/R28-D8-SH	181 006 700 2022
	6-10mm	MR23-006R-CCT/R28-D10-SH	181 006 700 2023
	9-14.5mm	MR23-006R-CCT/R28-D14.5-SH	181 006 700 2024
7	4.5-8mm	MR23-007R-CCT/R28-D8-SH	181 007 700 2022
	6-10mm	MR23-007R-CCT/R28-D10-SH	181 007 700 2023
	9-14.5mm	MR23-007R-CCT/R28-D14.5-SH	181 007 700 2024

Accessories

Crimp contacts 20A
20A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.35-2.5	MR23-MC20G-2.5	101 020 210 1001
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.35-2.5	MR23-FC20G-2.5	101 020 220 1001



Crimping tool

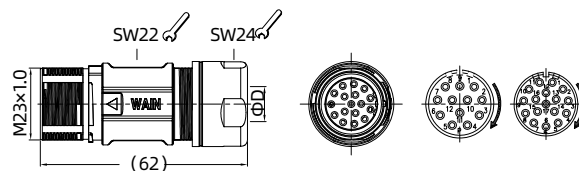


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately

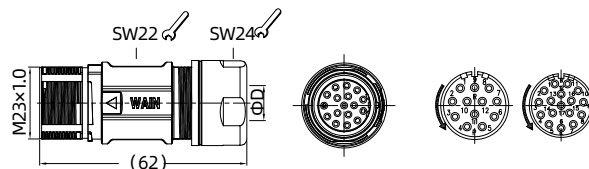


Forward coding
Crimp terminal
160V/125V- 7A

Contacts	Cable outlet	Designation	Order No.
12	4.5-8mm	MR23-012-CCT-D8-SH	181 012 700 4004
	6-10mm	MR23-012-CCT-D10-SH	181 012 700 4005
	9-14.5mm	MR23-012-CCT-D14.5-SH	181 012 700 4007
17	4.5-8mm	MR23-017-CCT-D8-SH	181 017 700 2011
	6-10mm	MR23-017-CCT-D10-SH	181 017 400 2011
	9-14.5mm	MR23-017-CCT-D14.5-SH	181 017 421 2011



- Order crimp contacts separately



Reverse coding
Crimp terminal
160V/125V- 7A

Contacts	Cable outlet	Designation	Order No.
12	4.5-8mm	MR23-012R-CCT-D8-SH	181 012 700 4008
	6-10mm	MR23-012R-CCT-D10-SH	181 012 421 2010
	9-14.5mm	MR23-012R-CCT-D14.5-SH	181 012 700 4009
17	4.5-8mm	MR23-017R-CCT-D8-SH	181 017 700 4004
	6-10mm	MR23-017R-CCT-D10-SH	181 017 700 2009
	9-14.5mm	MR23-017R-CCT-D14.5-SH	181 017 700 2010

Accessories

Crimp contacts 9A

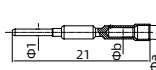
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801

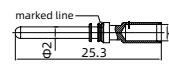
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool

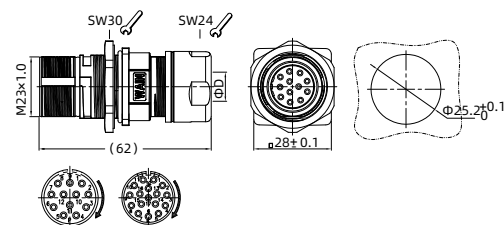


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



• Order crimp contacts separately

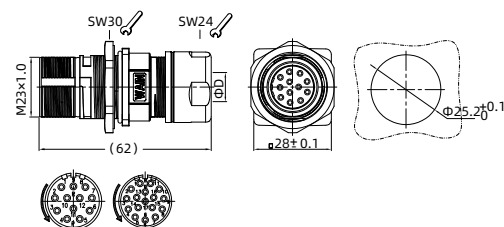


Forward coding
Crimp terminal
160V/125V- 7A

Contacts	Cable outlet	Designation	Order No.
12	4.5-8mm	MR23-012-CCT/R-D8-SH	181 012 700 2008
	6-10mm	MR23-012-CCT/R-D10-SH	181 012 700 2007
	9-14.5mm	MR23-012-CCT/R-D14.5-SH	181 012 700 4011
17	4.5-8mm	MR23-017-CCT/R-D8-SH	181 017 700 2008
	6-10mm	MR23-017-CCT/R-D10-SH	181 017 400 2014
	9-14.5mm	MR23-017-CCT/R-D14.5-SH	181 017 700 2007



• Order crimp contacts separately



Reverse coding
Crimp terminal
160V/125V- 7A

Contacts	Cable outlet	Designation	Order No.
12	4.5-8mm	MR23-012R-CCT/R-D8-SH	181 012 700 2014
	6-10mm	MR23-012R-CCT/R-D10-SH	181 012 700 2012
	9-14.5mm	MR23-012R-CCT/R-D14.5-SH	181 012 700 2013
17	4.5-8mm	MR23-017R-CCT/R-D8-SH	181 017 700 2021
	6-10mm	MR23-017R-CCT/R-D10-SH	181 017 700 2019
	9-14.5mm	MR23-017R-CCT/R-D14.5-SH	181 017 700 2020

Accessories

Crimp contacts 9A

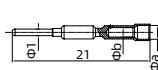
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801

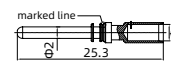
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool



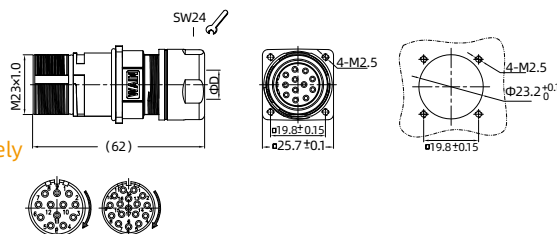
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



NEW

- Order crimp contacts separately



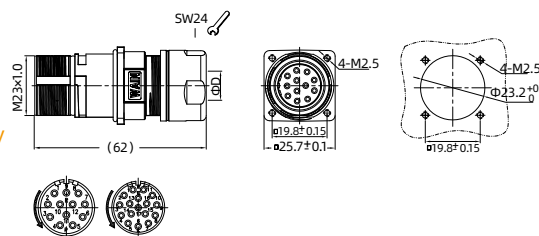
Forward coding
Crimp terminal
160V/125V- 7A

Contacts	Cable outlet	Designation	Order No.
12	4.5-8mm	MR23-012-CCT/R26-D8-SH	181 012 700 2003
	6-10mm	MR23-012-CCT/R26-D10-SH	181 012 700 2001
	9-14.5mm	MR23-012-CCT/R26-D14.5-SH	181 012 700 2002
17	4.5-8mm	MR23-017-CCT/R26-D8-SH	181 017 700 2003
	6-10mm	MR23-017-CCT/R26-D10-SH	181 017 700 2001
	9-14.5mm	MR23-017-CCT/R26-D14.5-SH	181 017 700 2002



NEW

- Order crimp contacts separately



Reverse coding
Crimp terminal
160V/125V- 7A

Contacts	Cable outlet	Designation	Order No.
12	4.5-8mm	MR23-012R-CCT/R26-D8-SH	181 012 700 2011
	6-10mm	MR23-012R-CCT/R26-D10-SH	181 012 700 2009
	9-14.5mm	MR23-012R-CCT/R26-D14.5-SH	181 012 700 2010
17	4.5-8mm	MR23-017R-CCT/R26-D8-SH	181 017 700 2015
	6-10mm	MR23-017R-CCT/R26-D10-SH	181 017 700 2013
	9-14.5mm	MR23-017R-CCT/R26-D14.5-SH	181 017 700 2014

Accessories

Crimp contacts 9A

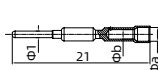
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801

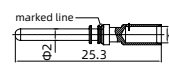
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool



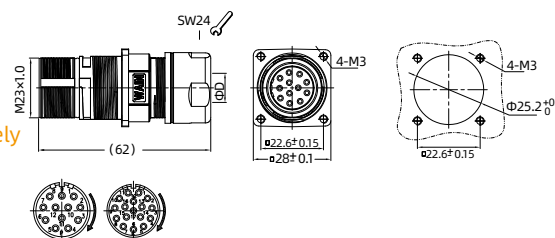
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Forward coding
Crimp terminal
160V/125V- 7A

• Order crimp contacts separately

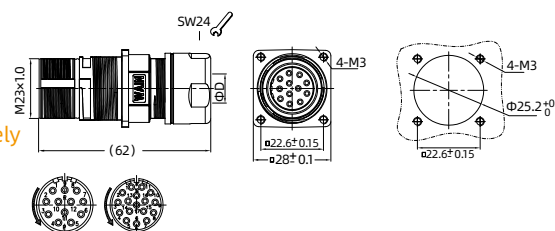


Contacts	Cable outlet	Designation	Order No.
12	4.5-8mm	MR23-012-CCT/R28-D8-SH	181 012 700 2006
	6-10mm	MR23-012-CCT/R28-D10-SH	181 012 700 2004
	9-14.5mm	MR23-012-CCT/R28-D14.5-SH	181 012 700 2005
17	4.5-8mm	MR23-017-CCT/R28-D8-SH	181 017 700 2006
	6-10mm	MR23-017-CCT/R28-D10-SH	181 017 700 2004
	9-14.5mm	MR23-017-CCT/R28-D14.5-SH	181 017 700 2005



Reverse coding
Crimp terminal
160V/125V- 7A

• Order crimp contacts separately



Contacts	Cable outlet	Designation	Order No.
12	4.5-8mm	MR23-012R-CCT/R28-D8-SH	181 012 799 2010
	6-10mm	MR23-012R-CCT/R28-D10-SH	181 012 799 2011
	9-14.5mm	MR23-012R-CCT/R28-D14.5-SH	181 012 799 2012
17	4.5-8mm	MR23-017R-CCT/R28-D8-SH	181 017 700 2018
	6-10mm	MR23-017R-CCT/R28-D10-SH	181 017 700 2016
	9-14.5mm	MR23-017R-CCT/R28-D14.5-SH	181 017 700 2017

Accessories

Crimp contacts 9A

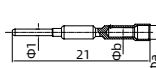
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801

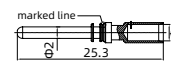
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool

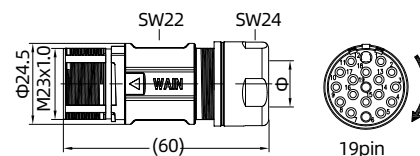


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately

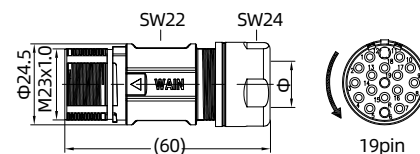


Forward coding
Crimp terminal
63V- 7A

Contacts	Cable outlet	Designation	Order No.
19	4.5-8mm	MR23-019-CCT-D8-SH	181 019 700 2001
	6-10mm	MR23-019-CCT-D10-SH	181 019 700 2002
	9-14.5mm	MR23-019-CCT-D14.5-SH	181 019 700 2003



- Order crimp contacts separately

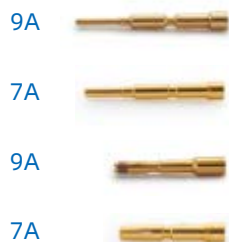


Reverse coding
Crimp terminal
63V- 7A

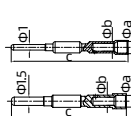
Contacts	Cable outlet	Designation	Order No.
19	4.5-8mm	MR23-019R-CCT-D8-SH	181 019 700 2004
	6-10mm	MR23-019R-CCT-D10-SH	181 019 700 2005
	9-14.5mm	MR23-019R-CCT-D14.5-SH	181 019 700 2006

Accessories

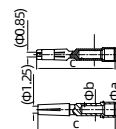
Crimp contacts 9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.14-1.4	MR23-MC7G-1.0	101 015 210 0801
④	0.5-1.5	MR23-MC7G-1.5	101 015 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.14-1.4	MR23-FC7G-1.0	101 015 220 0801
④	0.5-1.5	MR23-FC7G-1.5	101 015 220 0901



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	21	4mm
②	2.1	1.45	21	4mm
③	2.1	1.45	20.65	6mm
④	2.1	1.75	20.65	6mm



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	2.1	1.45	13.9	6mm
④	2.1	1.75	13.9	6mm

Crimping tool



Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

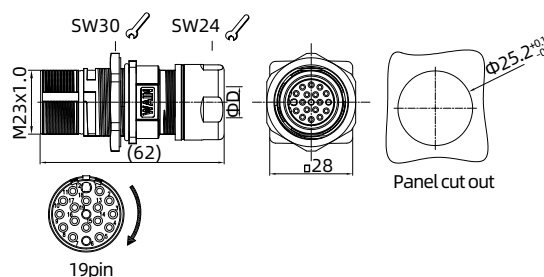
Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



NEW

Forward coding
Crimp terminal
63V- 7A

- Order crimp contacts separately



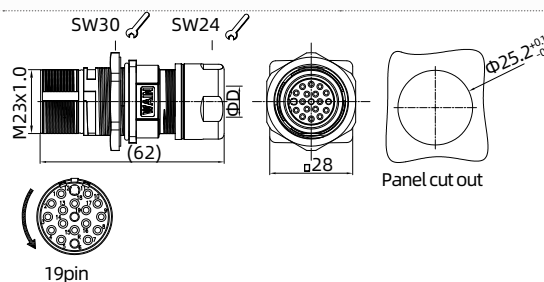
Contacts	Cable outlet	Designation	Order No.
19	4.5-8mm	MR23-019-CCT/R-D8-SH	181 019 700 2007
	6-10mm	MR23-019-CCT/R-D10-SH	181 019 700 2008
	9-14.5mm	MR23-019-CCT/R-D14.5-SH	181 019 700 2009



NEW

Reverse coding
Crimp terminal
63V- 7A

- Order crimp contacts separately



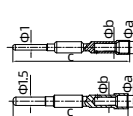
Contacts	Cable outlet	Designation	Order No.
19	4.5-8mm	MR23-019R-CCT/R-D8-SH	181 019 700 2010
	6-10mm	MR23-019R-CCT/R-D10-SH	181 019 700 2011
	9-14.5mm	MR23-019R-CCT/R-D14.5-SH	181 019 700 2012

Accessories

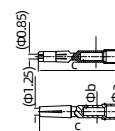
Crimp contacts 9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.14-1.4	MR23-MC7G-1.0	101 015 210 0801
④	0.5-1.5	MR23-MC7G-1.5	101 015 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.14-1.4	MR23-FC7G-1.0	101 015 220 0801
④	0.5-1.5	MR23-FC7G-1.5	101 015 220 0901



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	21	4mm
②	2.1	1.45	21	4mm
③	2.1	1.45	20.65	6mm
④	2.1	1.75	20.65	6mm



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	2.1	1.45	13.9	6mm
④	2.1	1.75	13.9	6mm

Crimping tool

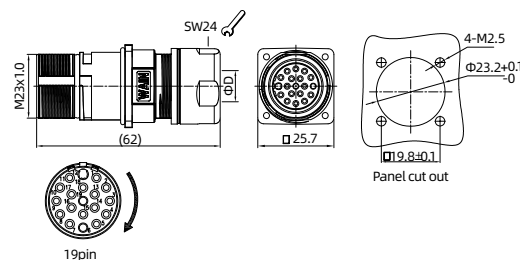


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately

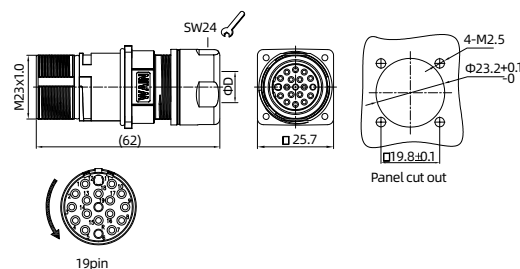


Forward coding
Crimp terminal
63V- 7A

Contacts	Cable outlet	Designation	Order No.
19	4.5-8mm	MR23-019-CCT/R26-D8-SH	181 019 700 2013
	6-10mm	MR23-019-CCT/R26-D10-SH	181 019 700 2014
	9-14.5mm	MR23-019-CCT/R26-D14.5-SH	181 019 700 2015



- Order crimp contacts separately

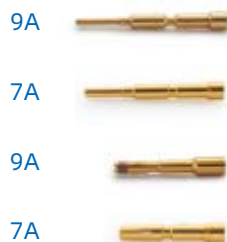


Reverse coding
Crimp terminal
63V- 7A

Contacts	Cable outlet	Designation	Order No.
19	4.5-8mm	MR23-019R-CCT/R26-D8-SH	181 019 700 2016
	6-10mm	MR23-019R-CCT/R26-D10-SH	181 019 700 2017
	9-14.5mm	MR23-019R-CCT/R26-D14.5-SH	181 019 700 2018

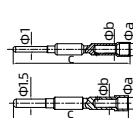
Accessories

Crimp contacts 9A

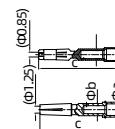


NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.14-1.4	MR23-MC7G-1.0	101 015 210 0801
④	0.5-1.5	MR23-MC7G-1.5	101 015 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.14-1.4	MR23-FC7G-1.0	101 015 220 0801
④	0.5-1.5	MR23-FC7G-1.5	101 015 220 0901

Crimping tool



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	21	4mm
②	2.1	1.45	21	4mm
③	2.1	1.45	20.65	6mm
④	2.1	1.75	20.65	6mm



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	2.1	1.45	13.9	6mm
④	2.1	1.75	13.9	6mm

Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

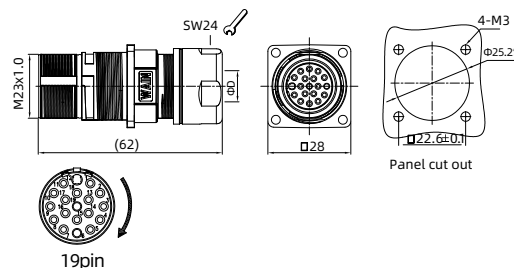
Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



NEW

Forward coding
Crimp terminal
63V- 7A

- Order crimp contacts separately



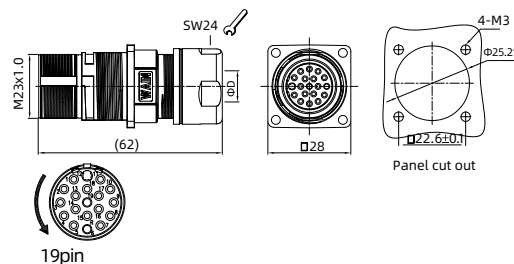
Contacts	Cable outlet	Designation	Order No.
19	4.5-8mm	MR23-019-CCT/R28-D8-SH	181 019 700 2019
	6-10mm	MR23-019-CCT/R28-D10-SH	181 019 700 2020
	9-14.5mm	MR23-019-CCT/R28-D14.5-SH	181 019 700 2021



NEW

Reverse coding
Crimp terminal
63V- 7A

- Order crimp contacts separately



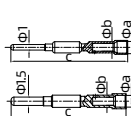
Contacts	Cable outlet	Designation	Order No.
19	4.5-8mm	MR23-019R-CCT/R28-D8-SH	181 019 700 2022
	6-10mm	MR23-019R-CCT/R28-D10-SH	181 019 700 2023
	9-14.5mm	MR23-019R-CCT/R28-D14.5-SH	181 019 700 2024

Accessories

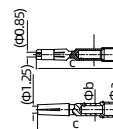
Crimp contacts 9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.14-1.4	MR23-MC7G-1.0	101 015 210 0801
④	0.5-1.5	MR23-MC7G-1.5	101 015 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.14-1.4	MR23-FC7G-1.0	101 015 220 0801
④	0.5-1.5	MR23-FC7G-1.5	101 015 220 0901



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	21	4mm
②	2.1	1.45	21	4mm
③	2.1	1.45	20.65	6mm
④	2.1	1.75	20.65	6mm



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	2.1	1.45	13.9	6mm
④	2.1	1.75	13.9	6mm

Crimping tool



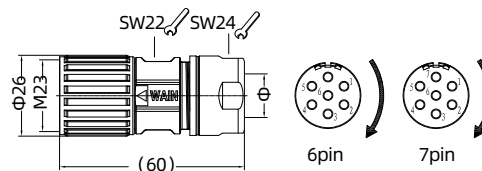
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Forward coding
Crimp terminal
300V- 20A

- Order crimp contacts separately

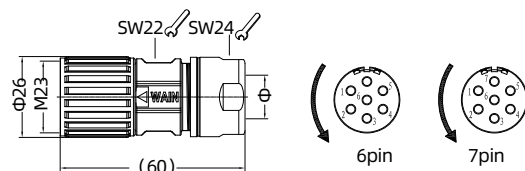


Contacts	Cable outlet	Designation	Order No.
6	4.5-8mm	MR23-006-T-D8-SH	181 006 400 2001
	6-10mm	MR23-006-T-D10-SH	181 006 400 2002
	9-14.5mm	MR23-006-T-D14.5-SH	181 006 400 2003
7	4.5-8mm	MR23-007-T-D8-SH	181 007 400 2001
	6-10mm	MR23-007-T-D10-SH	181 007 400 2002
	9-14.5mm	MR23-007-T-D14.5-SH	181 007 400 2003



Reverse coding
Crimp terminal
300V- 20A

- Order crimp contacts separately



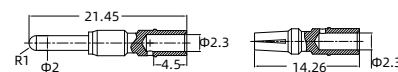
Contacts	Cable outlet	Designation	Order No.
6	4.5-8mm	MR23-006R-T-D8-SH	181 006 400 2004
	6-10mm	MR23-006R-T-D10-SH	181 006 400 2005
	9-14.5mm	MR23-006R-T-D14.5-SH	181 006 400 2006
7	4.5-8mm	MR23-007R-T-D8-SH	181 007 400 2004
	6-10mm	MR23-007R-T-D10-SH	181 007 400 2005
	9-14.5mm	MR23-007R-T-D14.5-SH	181 007 400 2006

Accessories

Crimp contacts 20A
20A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.35-2.5	MR23-MC20G-2.5	101 020 210 1001
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.35-2.5	MR23-FC20G-2.5	101 020 220 1001



Crimping tool



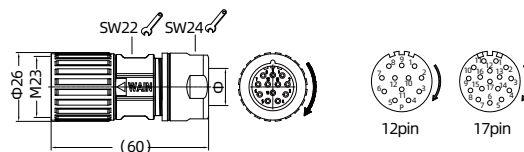
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Forward coding
Crimp terminal
160V 7A

• Order crimp contacts separately

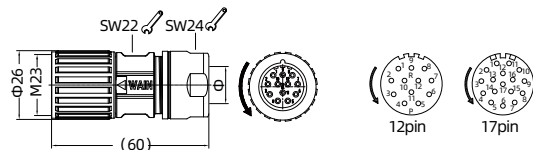


Contacts	Cable outlet	Designation	Order No.
12	4.5-8mm	MR23-012-T-D8-SH	181 012 421 3001
	6-10mm	MR23-012-T-D10-SH	181 012 421 3002
	9-14.5mm	MR23-012-T-D14.5-SH	181 012 421 3003
17	4.5-8mm	MR23-017-T-D8-SH	181 017 400 2001
	6-10mm	MR23-017-T-D10-SH	181 017 400 2002
	9-14.5mm	MR23-017-T-D14.5-SH	181 017 400 2003



Reverse coding
Crimp terminal
160V 7A

• Order crimp contacts separately



Contacts	Cable outlet	Designation	Order No.
12	4.5-8mm	MR23-012R-T-D8-SH	181 012 421 3004
	6-10mm	MR23-012R-T-D10-SH	181 012 421 3005
	9-14.5mm	MR23-012R-T-D14.5-SH	181 012 421 3006
17	4.5-8mm	MR23-017R-T-D8-SH	181 017 400 2004
	6-10mm	MR23-017R-T-D10-SH	181 017 400 3005
	9-14.5mm	MR23-017R-T-D14.5-SH	181 017 400 2005

Accessories

Crimp contacts 9A

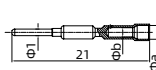
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801

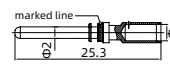
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool



Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

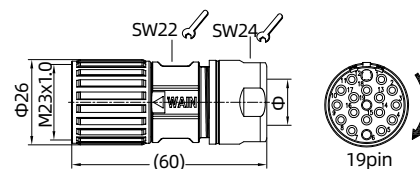
Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



NEW

Forward coding
Crimp terminal
63V- 7A

- Order crimp contacts separately



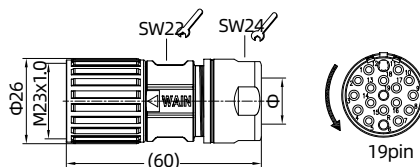
Contacts	Cable outlet	Designation	Order No.
19	4.5-8mm	MR23-019-T-D8-SH	181 019 400 2001
	6-10mm	MR23-019-T-D10-SH	181 019 400 2002
	9-14.5mm	MR23-019-T-D14.5-SH	181 019 400 2003



NEW

Reverse coding
Crimp terminal
63V- 7A

- Order crimp contacts separately



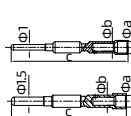
Contacts	Cable outlet	Designation	Order No.
19	4.5-8mm	MR23-019R-T-D8-SH	181 019 400 2004
	6-10mm	MR23-019R-T-D10-SH	181 019 400 2005
	9-14.5mm	MR23-019R-T-D14.5-SH	181 019 400 2006

Accessories

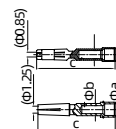
Crimp contacts 9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.14-1.4	MR23-MC7G-1.0	101 015 210 0801
④	0.5-1.5	MR23-MC7G-1.5	101 015 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.14-1.4	MR23-FC7G-1.0	101 015 220 0801
④	0.5-1.5	MR23-FC7G-1.5	101 015 220 0901



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	21	4mm
②	2.1	1.45	21	4mm
③	2.1	1.45	20.65	6mm
④	2.1	1.75	20.65	6mm



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	2.1	1.45	13.9	6mm
④	2.1	1.75	13.9	6mm

Crimping tool

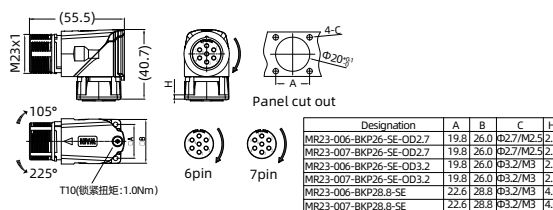


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately

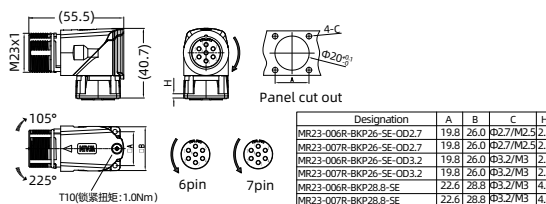


Forward coding
Crimp terminal
300V- 20A

Contacts	Designation	Order No.
6	MR23-006-BKP26-SE-OD2.7	181 006 600 3001
	MR23-007-BKP26-SE-OD2.7	181 007 600 3001
	MR23-006-BKP26-SE-OD3.2	181 006 600 3002
7	MR23-007-BKP26-SE-OD3.2	181 007 600 3002
	MR23-006-BKP28.8-SE	181 006 600 3003
	MR23-007-BKP28.8-SE	181 007 600 3003



- Order crimp contacts separately



Reverse coding
Crimp terminal
300V- 20A

Contacts	Designation	Order No.
6	MR23-006R-BKP26-SE-OD2.7	181 006 600 3004
	MR23-007R-BKP26-SE-OD2.7	181 007 600 3004
	MR23-006R-BKP26-SE-OD3.2	181 006 600 3005
7	MR23-007R-BKP26-SE-OD3.2	181 007 600 3005
	MR23-006R-BKP28.8-SE	181 006 600 3006
	MR23-007R-BKP28.8-SE	181 007 600 3006

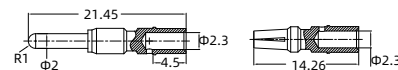
• Accessories

Crimp contacts 20A
20A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.35-2.5	MR23-MC20G-2.5	101 020 210 1001
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.35-2.5	MR23-FC20G-2.5	101 020 220 1001

Crimping tool



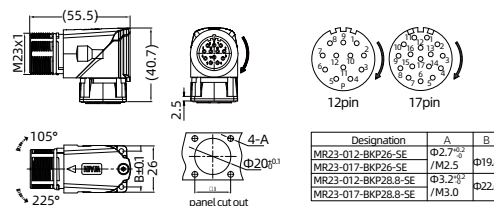
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Forward coding
Crimp terminal
160V 7A

• Order crimp contacts separately

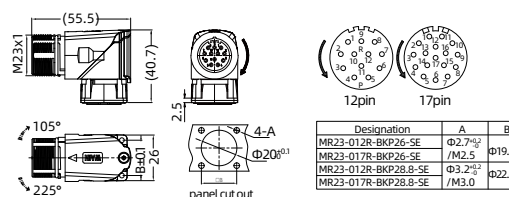


Contacts	Designation	Order No.
12	MR23-012-BKP26-SE	181 012 600 3001
17	MR23-017-BKP26-SE	181 017 600 2003
12	MR23-012-BKP28.8-SE	181 012 600 2001
17	MR23-017-BKP28.8-SE	181 017 600 2001



Reverse coding
Crimp terminal
160V 7A

• Order crimp contacts separately



Contacts	Designation	Order No.
12	MR23-012R-BKP26-SE	181 012 600 3002
17	MR23-017R-BKP26-SE	181 017 600 2004
12	MR23-012R-BKP28.8-SE	181 012 600 2002
17	MR23-017R-BKP28.8-SE	181 017 600 2002

Accessories

Crimp contacts 9A

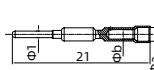
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801

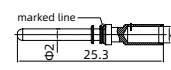
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool



Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

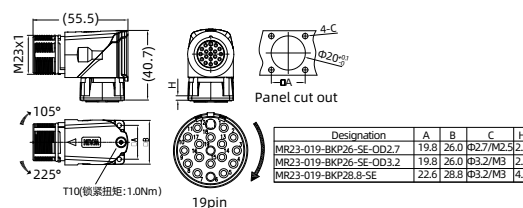
Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



NEW

- Order crimp contacts separately

Forward coding
Crimp terminal
63V- 7A



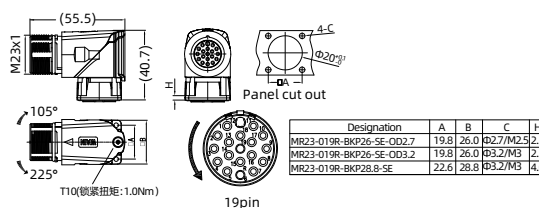
Contacts	Designation	Order No.
19	MR23-019-BKP26-SE-OD2.7	181 019 300 1001
	MR23-019-BKP26-SE-OD3.2	181 019 300 1002
	MR23-019-BKP28.8-SE	181 019 300 1003



NEW

- Order crimp contacts separately

Reverse coding
Crimp terminal
63V- 7A



Contacts	Designation	Order No.
19	MR23-019R-BKP26-SE-OD2.7	181 019 300 1004
	MR23-019R-BKP26-SE-OD3.2	181 019 300 1005
	MR23-019R-BKP28.8-SE	181 019 300 1006

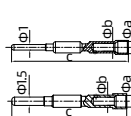
Accessories

Crimp contacts 9A

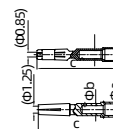


NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.14-1.4	MR23-MC7G-1.0	101 015 210 0801
④	0.5-1.5	MR23-MC7G-1.5	101 015 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.14-1.4	MR23-FC7G-1.0	101 015 220 0801
④	0.5-1.5	MR23-FC7G-1.5	101 015 220 0901

Crimping tool



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	21	4mm
②	2.1	1.45	21	4mm
③	2.1	1.45	20.65	6mm
④	2.1	1.75	20.65	6mm



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	2.1	1.45	13.9	6mm
④	2.1	1.75	13.9	6mm

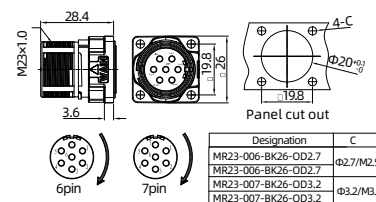
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately

Forward coding
Crimp terminal
300V- 20A

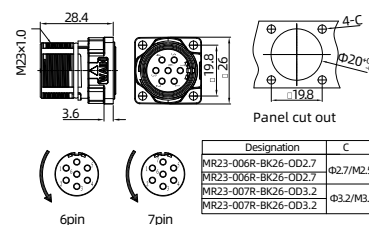


Contacts	Designation	Order No.
6	MR23-006-BK26-OD2.7	181 006 300 3001
	MR23-007-BK26-OD2.7	181 007 300 3001
7	MR23-006-BK26-OD3.2	181 006 300 3002
	MR23-007-BK26-OD3.2	181 007 300 3002



- Order crimp contacts separately

Reverse coding
Crimp terminal
300V- 20A



Contacts	Designation	Order No.
6	MR23-006R-BK26-OD2.7	181 006 300 3003
	MR23-007R-BK26-OD2.7	181 007 300 3003
7	MR23-006R-BK26-OD3.2	181 006 300 3004
	MR23-007R-BK26-OD3.2	181 007 300 3004

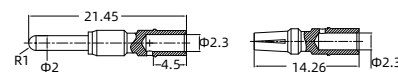
Accessories

Crimp contacts 20A
20A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.35-2.5	MR23-MC20G-2.5	101 020 210 1001

NO.	Wire gauge(mm ²)	Female	Order No.
①	0.35-2.5	MR23-FC20G-2.5	101 020 220 1001



Crimping tool



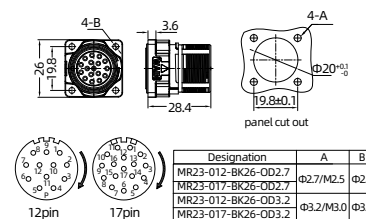
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Forward coding
Crimp terminal
160V 7A

• Order crimp contacts separately

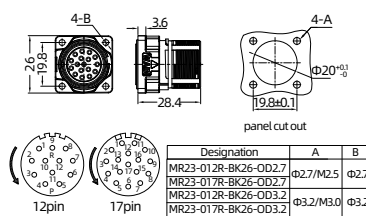


Contacts	Designation	Order No.
12	MR23-012-BK26-OD2.7	181 012 300 2001
17	MR23-017-BK26-OD2.7	181 017 300 2001
12	MR23-012-BK26-OD3.2	181 012 300 3001
17	MR23-017-BK26-OD3.2	181 017 300 3001



Reverse coding
Crimp terminal
160V 7A

• Order crimp contacts separately



Contacts	Designation	Order No.
12	MR23-012R-BK26-OD2.7	181 012 300 2002
17	MR23-017R-BK26-OD2.7	181 017 300 2002
12	MR23-012R-BK26-OD3.2	181 012 300 3002
17	MR23-017R-BK26-OD3.2	181 017 300 2003

Accessories

Crimp contacts 9A

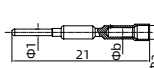
9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801

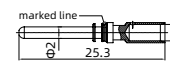
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	1 marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool



Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

WAIN®



63V- 7A

-
- Technical drawing of the MR23-D19-BK26-OD2.7 connector. The drawing includes a side view, a top view, and a panel cut out view. The side view shows a length of 28.4, a width of 3.6, and a thread of M23x1.0. The top view shows a diameter of 19.8, a width of 7.6, and a 4-C feature. The panel cut out view shows a diameter of 19.8 and a 4-C feature. A table lists the designations and dimensions for two versions of the connector.
- | Designation | C |
|---------------------|-----------|
| MR23-D19-BK26-OD2.7 | Φ2.7/M2.5 |
| MR23-D19-BK26-OD3.2 | Φ3.2/M3.0 |
- 19pin



63V- 7A

-
- Technical drawings of the MR23-019R-BK26-OD2.7 connector. The drawings include a side view showing dimensions 28.4, 3.6, and M23x1.0; a top view showing dimensions 19.6, 14.6, and 19.8; a panel cut out view showing dimensions 4-C and $\Phi 20^{+0.1}$; and a 19-pin circular pinout diagram with a rotation arrow. A table provides designations and dimensions for two versions: MR23-019R-BK26-OD2.7 ($\Phi 2.7/M2.5$) and MR23-019R-BK26-OD3.2 ($\Phi 3.2/M3.0$).

9A

7A

9A

7A

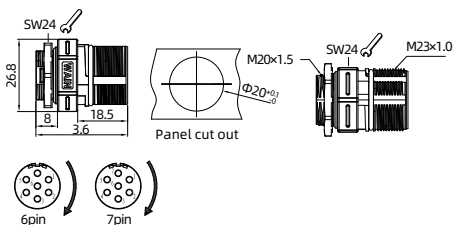
NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.14-1.4	MR23-MC7G-1.0	101 015 210 0801
④	0.5-1.5	MR23-MC7G-1.5	101 015 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.14-1.4	MR23-FC7G-1.0	101 015 220 0801
④	0.5-1.5	MR23-FC7G-1.5	101 015 220 0901

NO.	Φa	Φb	C	Stripping Length						
①	1.7	0.9	21	4mm						
②	2.1	1.45	21	4mm						
③	2.1	1.45	20.65	6mm						
④	2.1	1.75	20.65	6mm						

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



• Order crimp contacts separately

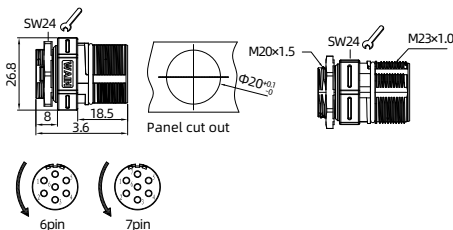


Forward coding
Crimp terminal
300V- 20A

Contacts	Designation	Order No.
6	MR23-006-BK-M20	181 006 300 3005
7	MR23-007-BK-M20	181 007 300 3005



• Order crimp contacts separately



Reverse coding
Crimp terminal
300V- 20A

Contacts	Designation	Order No.
6	MR23-006R-BK-M20	181 006 300 3006
7	MR23-007R-BK-M20	181 007 300 3006

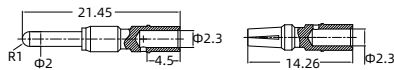
• Accessories

Crimp contacts 20A
20A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.35-2.5	MR23-MC20G-2.5	101 020 210 1001

NO.	Wire gauge(mm ²)	Female	Order No.
①	0.35-2.5	MR23-FC20G-2.5	101 020 220 1001



Crimping tool

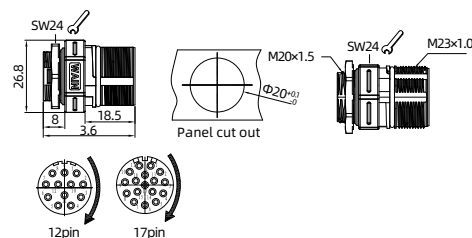


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately

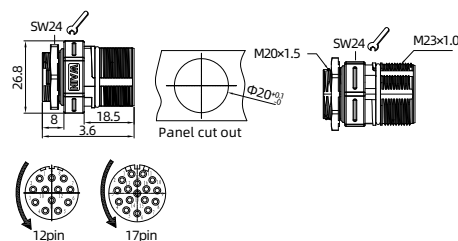


Forward coding
Crimp terminal
160V 7A

Contacts	Designation	Order No.
12	MR23-012-BK-M20	181 012 300 3003
17	MR23-017-BK-M20	181 017 300 3002



- Order crimp contacts separately



Reverse coding
Crimp terminal
160V 7A

Contacts	Designation	Order No.
12	MR23-012R-BK-M20	181 012 300 3004
17	MR23-017R-BK-M20	181 017 300 3003

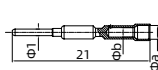
Accessories

Crimp contacts 9A
9A



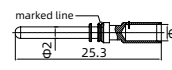
NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool



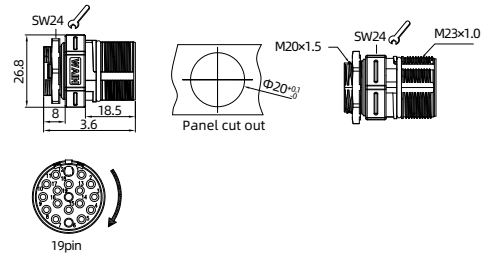
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Forward coding
Crimp terminal
63V- 7A

- Order crimp contacts separately

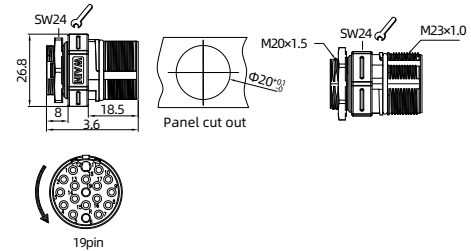


Contacts	Designation	Order No.
19	MR23-019-BK-M20	181 019 300 1011



Reverse coding
Crimp terminal
63V- 7A

- Order crimp contacts separately



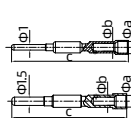
Contacts	Designation	Order No.
19	MR23-019R-BK-M20	181 019 300 1012

Accessories

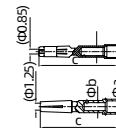
Crimp contacts 9A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.14-1.4	MR23-MC7G-1.0	101 015 210 0801
④	0.5-1.5	MR23-MC7G-1.5	101 015 210 0901
NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.14-1.4	MR23-FC7G-1.0	101 015 220 0801
④	0.5-1.5	MR23-FC7G-1.5	101 015 220 0901



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	21	4mm
②	2.1	1.45	21	4mm
③	2.1	1.45	20.65	6mm
④	2.1	1.75	20.65	6mm



NO.	Φa	Φb	C	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	2.1	1.45	13.9	6mm
④	2.1	1.75	13.9	6mm

Crimping tool

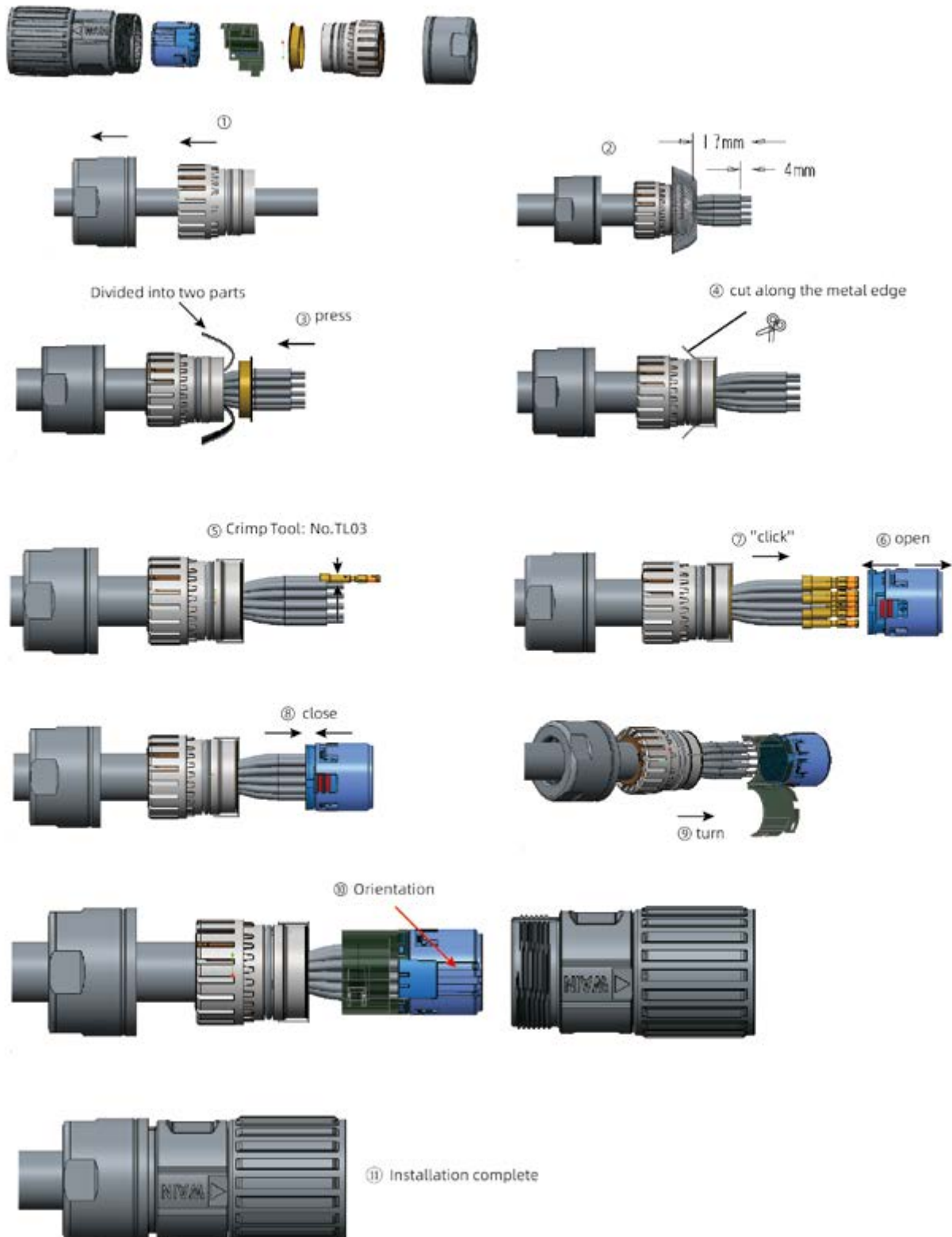


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

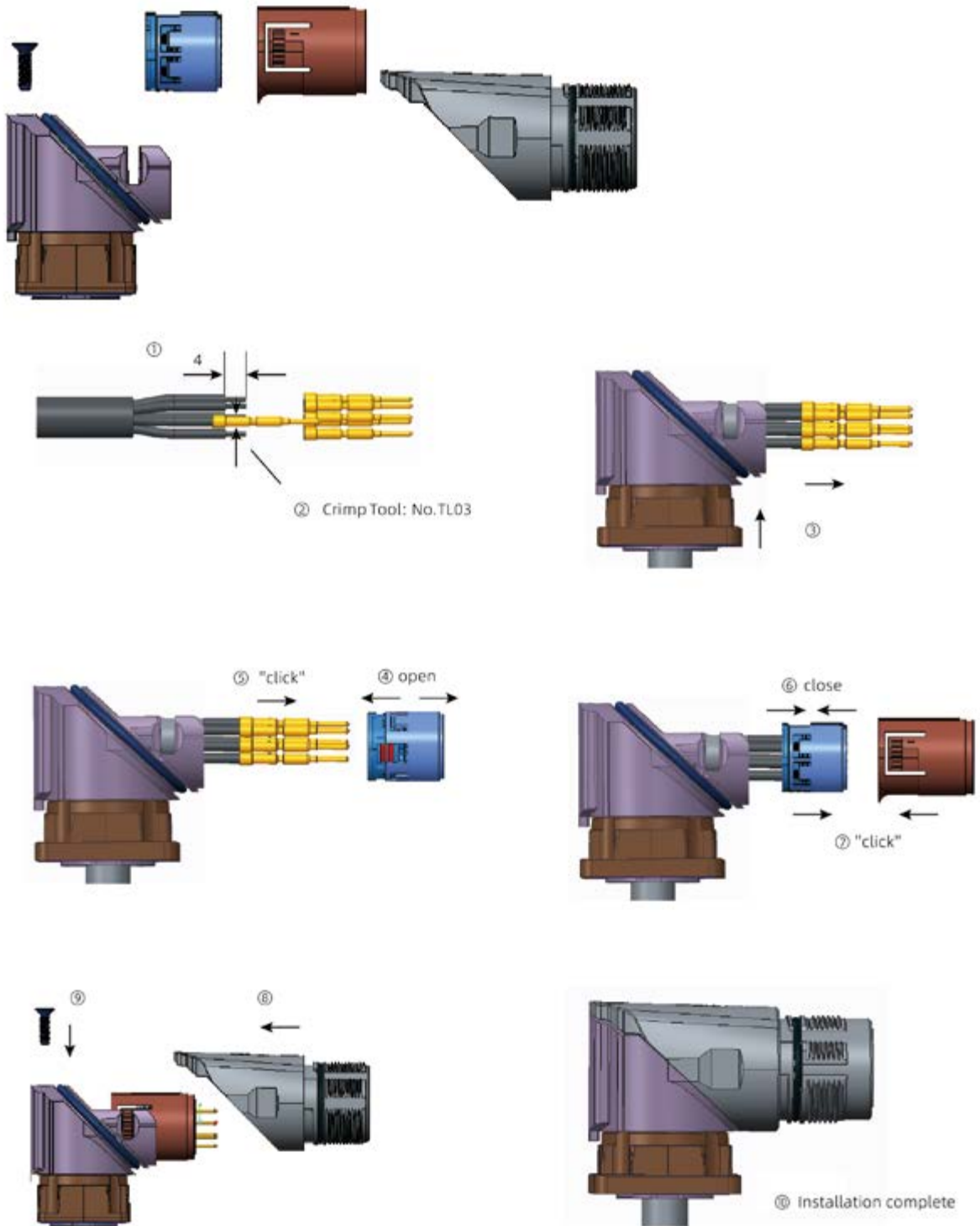
- Operating Instruction(MR23-0XX-T-DXX-SH)

- Installation Step



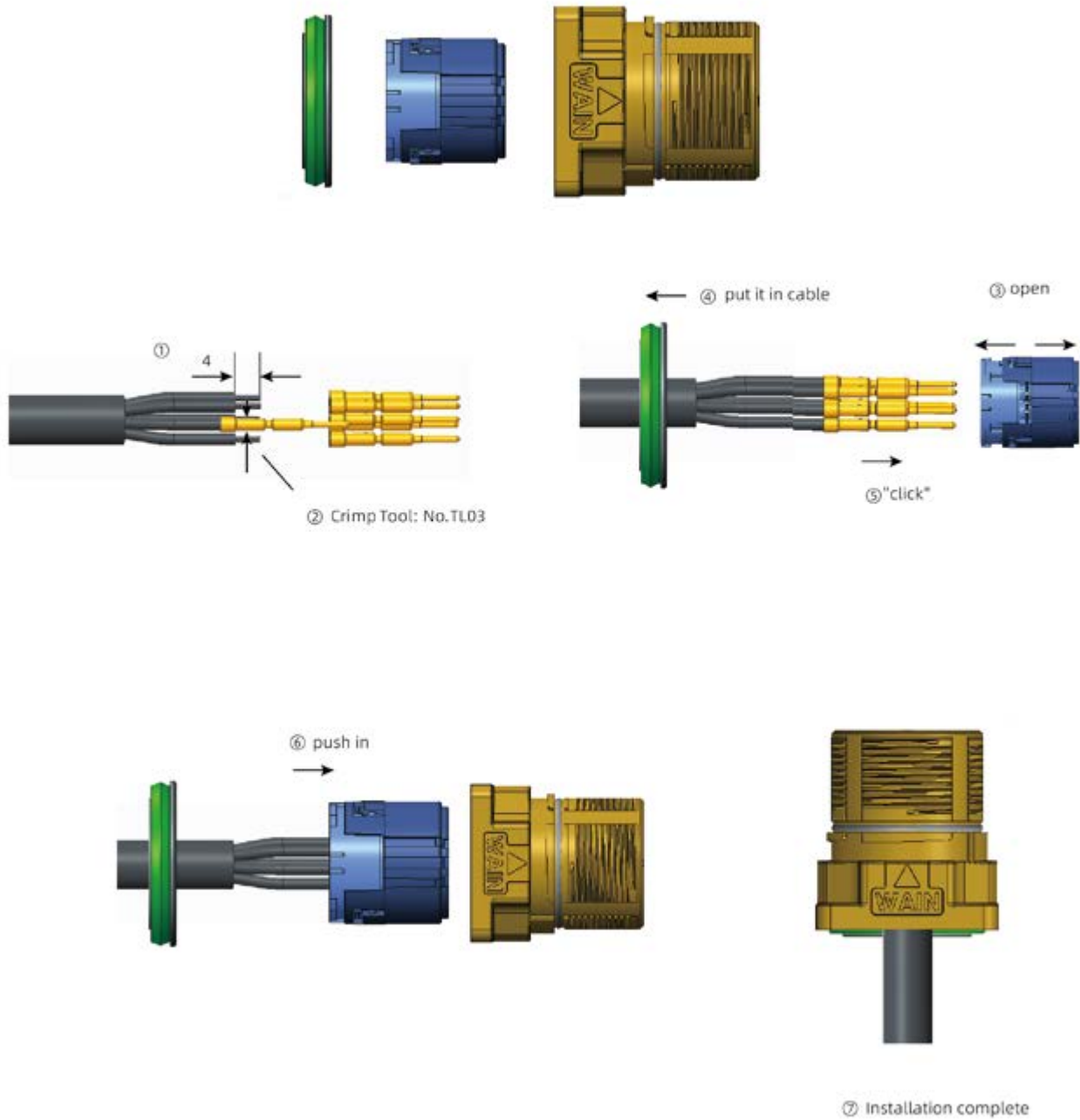
- Operating Instruction(MR23-0XX-BKP26-SE)

- Installation Step



- Operating Instruction(MR23-0XX-BK26-OD3.2/2.7)

• Installation Step





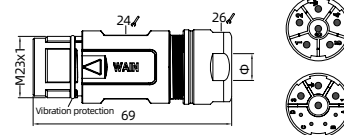


- M23 - Technical characteristics

Specifications			
DIN EN 60 664		DIN EN 61 984	
Electrical data			
Number of contacts	6(5+PE)		8(4+3+PE)
Contacts	5+PE	4	3+PE
ContactsΦ(mm)	2	1	2
mm²/AWG			
- Plugs	0.35...4.0/22-12	0.14...1.5/26-16	0.35...4.0/22-12
- BK socket	0.1...4.0/28-12	0.03...1.0/32-18	0.1...4.0/28-12
Rated current(25°C)	30	9	30
Rated voltage	630	250	630
Test voltage Urms (AC)	6kV	4kV	6kV
Surge voltage category	III		III
Pollution degree	3		3
Mechanical date	Plugs		BK socket
Housing material	CuZn,Zinc(GD-Zn)		CuZn,Zinc(GD-Zn)
Housing surface	Nickel-plated		Nickel-plated
Insulating bodies	Polyamide		Polyamide
Contact material	Copper alloy		Copper alloy
Contact surface	Hard-gold plated		Hard-gold plated
Terminal	Crimp version		Crimp version
Gasket and O ring	Fluorine rubber		Fluorine rubber
Ambient temperature	-40°C ...+130°C		-40°C ...+130°C
Conductor entry	7.5-17mm shielded		---
locking type	M23 screw locking		M23 screw locking
Mechanical working life	> 500		> 500
degree of protection	IP67		IP67



• Order crimp contacts separately



Male, Crimp terminal

630/250V 30/9A

Contacts	Cable outlet	Designation	Order No.
6(5+PE)	4.2-6.6mm	M23-MC06-TH-D6.6-SH	166 006 110 2007
	7.5-12mm	M23-MC06-TH-D12-SH	166 006 110 2001
	9.5-14.5mm	M23-MC06-TH-D14.5-SH	166 006 110 2002
	14-17mm	M23-MC06-TH-D17-SH	166 006 110 2003
8(4+3+PE)	4.2-6.6mm	M23-MC04/4-TH-D6.6-SH	166 008 110 2007
	7.5-12mm	M23-MC04/4-TH-D12-SH	166 008 110 2001
	9.5-14.5mm	M23-MC04/4-TH-D14.5-SH	166 008 110 2002
	14-17mm	M23-MC04/4-TH-D17-SH	166 008 110 2003

Accessories

Crimp contacts 9A/30A

9A

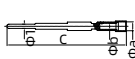


30A



NO.	Wire gauge(mm ²)	Male	Order No.
①	0.14-1.0	M23-MCL9G-1.0	101 031 210 0802
②	0.5-1.5	M23-MCL9G-1.5	101 031 210 0902
③	0.35-2.5	M23-MCL30G-2.5	101 031 210 1002
④	2.5-4.0	M23-MCL30G-4.0	101 031 210 1202

9A



NO.	Φa	c	Φb	Stripping Length
①	2.1	28.3	1.45	4mm
②	1.75	30.9	-	4mm

30A



NO.	marked line	Φ	Stripping Length
③	h marked line	2.25	7.5mm
④	-	2.85	7.5mm

Crimping tool



Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

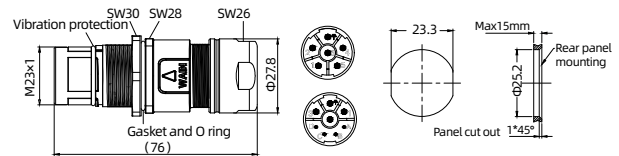


Male, Crimp terminal
630/250V 30/9A



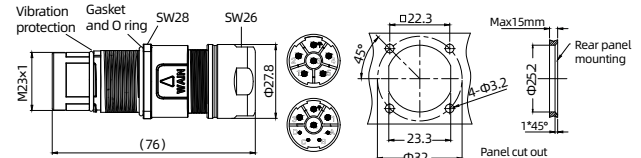
Male, Crimp terminal
630/250V 30/9A

- Order crimp contacts separately



Contacts	Cable outlet	Designation	Order No.
6(5+PE)	4.2-6.6mm	M23-MC06-CCT/R-D6.6-SH	166 006 110 2008
	7.5-12mm	M23-MC06-CCT/R-D12-SH	166 006 710 2005
	9.5-14.5mm	M23-MC06-CCT/R-D14.5-SH	166 006 710 2006
	14-17mm	M23-MC06-CCT/R-D17-SH	166 006 710 2002
8(4+3+PE)	4.2-6.6mm	M23-MC04/4-CCT/R-D6.6-SH	166 008 110 2008
	7.5-12mm	M23-MC04/4-CCT/R-D12-SH	166 008 710 2005
	9.5-14.5mm	M23-MC04/4-CCT/R-D14.5-SH	166 008 710 2006
	14-17mm	M23-MC04/4-CCT/R-D17-SH	166 008 710 2004

- Order crimp contacts separately



Contacts	Cable outlet	Designation	Order No.
6(5+PE)	4.2-6.6mm	M23-MC06-CCT/R28-D6.6-SH	166 006 110 2009
	7.5-12mm	M23-MC06-CCT/R28-D12-SH	166 006 710 2007
	9.5-14.5mm	M23-MC06-CCT/R28-D14.5-SH	166006 710 2008
	14-17mm	M23-MC06-CCT/R28-D17-SH	166 006 710 2001
8(4+3+PE)	4.2-6.6mm	M23-MC04/4-CCT/R28-D6.6-SH	166 008 110 2009
	7.5-12mm	M23-MC04/4-CCT/R28-D12-SH	166 008 710 2007
	9.5-14.5mm	M23-MC04/4-CCT/R28-D14.5-SH	166 008 710 2008
	14-17mm	M23-MC04/4-CCT/R28-D17-SH	166 008 710 2002

Accessories

Crimp contacts 9A/30A

9A

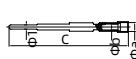


30A



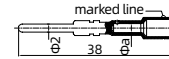
NO.	Wire gauge(mm ²)	Male	Order No.
①	0.14-1.0	M23-MCL9G-1.0	101 031 210 0802
②	0.5-1.5	M23-MCL9G-1.5	101 031 210 0902
③	0.35-2.5	M23-MCL30G-2.5	101 031 210 1002
④	2.5-4.0	M23-MCL30G-4.0	101 031 210 1202

9A



NO.	Φa	c	Φb	Stripping Length
①	2.1	28.3	1.45	4mm
②	1.75	30.9	-	4mm

30A



NO.	marked line	Φ	Stripping Length
③	1 marked line	2.25	7.5mm
④	-	2.85	7.5mm

Crimping tool



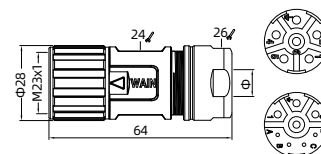
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Female Crimp terminal
630/250V 30/9A

• Order crimp contacts separately

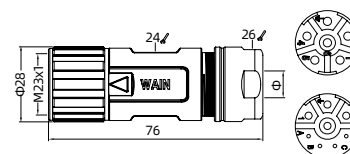


Contacts	Cable outlet	Designation	Order No.
6(5+PE)	4.2-6.6mm	M23-FC06-T-D6.6-SH	166 006 420 2007
	7.5-12mm	M23-FC06-T-D12-SH	166 006 420 2001
	9.5-14.5mm	M23-FC06-T-D14.5-SH	166 006 420 2002
	14-17mm	M23-FC06-T-D17-SH	166 006 420 2003
8(4+3+PE)	4.2-6.6mm	M23-FC04/4-T-D6.6-SH	166 008 120 2004
	7.5-12mm	M23-FC04/4-T-D12-SH	166 008 420 2001
	9.5-14.5mm	M23-FC04/4-T-D14.5-SH	166 008 420 2002
	14-17mm	M23-FC04/4-T-D17-SH	166 008 420 2003



Female Crimp terminal
630/250V 30/9A

• Order crimp contacts separately



Contacts	Cable outlet	Designation	Order No.
6(5+PE)	4.2-6.6mm	M23-FC06-TH-D6.6-SH	166 006 420 2008
	7.5-12mm	M23-FC06-TH-D12-SH	166 006 120 2001
	9.5-14.5mm	M23-FC06-TH-D14.5-SH	166 006 120 2002
	14-17mm	M23-FC06-TH-D17-SH	166 006 120 2003
8(4+3+PE)	4.2-6.6mm	M23-FC04/4-TH-D6.6-SH	166 008 120 2005
	7.5-12mm	M23-FC04/4-TH-D12-SH	166 008 120 2001
	9.5-14.5mm	M23-FC04/4-TH-D14.5-SH	166 008 120 2002
	14-17mm	M23-FC04/4-TH-D17-SH	166 008 120 2003

Accessories

Crimp contacts 9A/30A

9A

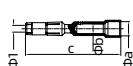


30A

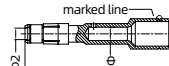


NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.5-1.5	M23-FC9G-1.5	101 031 220 0901
④	0.35-2.5	M23-FC30G-2.5	101 032 220 1001
⑤	2.5-4.0	M23-FC30G-4.0	101 032 220 1201

9A



30A



NO.	Φa	Φb	c	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	1.75	-	16.7	4.9mm

NO.	marked line	Φ	Stripping Length
④	marked line	2.25	7.5mm
⑤	-	2.85	7.5mm

Crimping tool



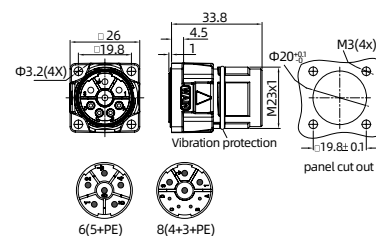
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Male, Crimp terminal
630/250V 30/9A

• Order crimp contacts separately

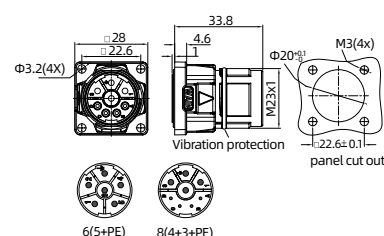


Contacts	Designation	Order No.
6(5+PE)	M23-MC06-BK26	166 006 310 1001
8(4+3+PE)	M23-MC04/4-BK26	166 008 310 1001



Male, Crimp terminal
630/250V 30/9A

• Order crimp contacts separately



Contacts	Designation	Order No.
6(5+PE)	M23-MC06-BK28	166 006 310 1002
8(4+3+PE)	M23-MC04/4-BK28	166 008 310 1002

Accessories

Crimp contacts 9A/30A

9A

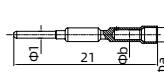


30A



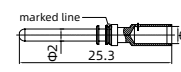
NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.1-0.5	M23-MC30G-0.5	101 032 210 0401
④	0.35-2.5	M23-MC30G-2.5	101 032 210 1001
⑤	2.5-4.0	M23-MC30G-4.0	101 032 210 1201

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	1 marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool



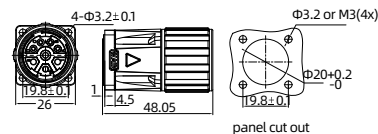
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Female
Crimp terminal
630/250V 30/9A

• Order crimp contacts separately

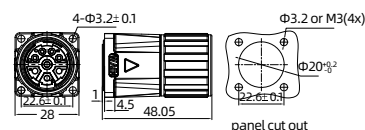


Contacts	Designation	Order No.
6(5+PE)	M23-FC06-BK26	166 006 320 1001
8(4+3+PE)	M23-FC04/4-BK26	166 008 020 1001



Female
Crimp terminal
630/250V 30/9A

• Order crimp contacts separately



Contacts	Designation	Order No.
6(5+PE)	M23-FC06-BK28	166 006 320 1002
8(4+3+PE)	M23-FC04/4-BK28	166 008 020 1002

• Accessories

• Crimp contacts 9A/30A

9A

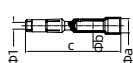


30A

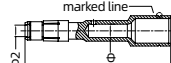


NO.	Wire gauge(mm ²)	Female	Order No.
①	0.03-0.34	M23-FC9G-0.34	101 031 220 2501
②	0.14-1.0	M23-FC9G-1.0	101 031 220 0801
③	0.5-1.5	M23-FC9G-1.5	101 031 220 0901
④	0.35-2.5	M23-FC30G-2.5	101 032 220 1001
⑤	2.5-4.0	M23-FC30G-4.0	101 032 220 1201

9A



30A



NO.	Φa	Φb	c	Stripping Length
①	1.7	0.9	14	4mm
②	2.1	1.45	14	4mm
③	1.75	-	16.7	4.9mm

NO.	marked line	Φ	Stripping Length
④	1 marked line	2.25	7.5mm
⑤	-	2.85	7.5mm

• Crimping tool

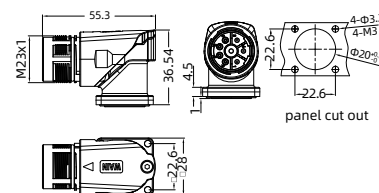


Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately
- Elbow without rotated function



Male, Crimp terminal
630/250V 30/9A

Contacts	Designation	Order No.
6(5+PE)	M23-MC06-BK28-SE	166 006 610 1002
8(4+3+PE)	M23-MC04/4-BK28-SE	166 008 610 1002

Accessories

Crimp contacts 9A/30A

9A

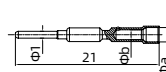


30A



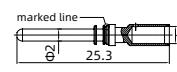
NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.1-0.5	M23-MC30G-0.5	101 032 210 0401
④	0.35-2.5	M23-MC30G-2.5	101 032 210 1001
⑤	2.5-4.0	M23-MC30G-4.0	101 032 210 1201

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	1 marked line	2.25	6mm
⑤	-	2.85	6mm

Crimping tool



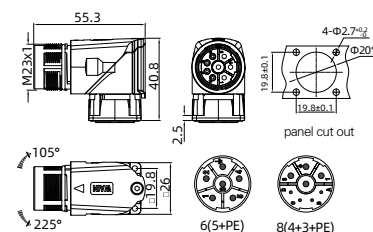
Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Male, Crimp terminal
630/250V 30/9A

- Order crimp contacts separately
- Elbow with rotated function

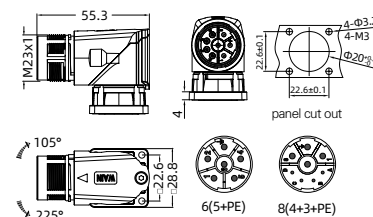


Contacts	Designation	Order No.
6(5+PE)	M23-MC06-BKP26-SE	166 006 610 1003
8(4+3+PE)	M23-MC04/4-BKP26-SE	166 008 610 1011



Male, Crimp terminal
630/250V 30/9A

- Order crimp contacts separately
- Elbow with rotated function



Contacts	Designation	Order No.
6(5+PE)	M23-MC06-BKP28.8-SE	166 006 310 1003
8(4+3+PE)	M23-MC04/4-BKP28.8-SE	166 008 310 1003

Accessories

Crimp contacts 9A/30A

9A

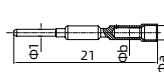


30A



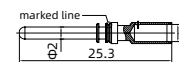
NO.	Wire gauge(mm ²)	Male	Order No.
①	0.03-0.34	M23-MC9G-0.34	101 031 210 2501
②	0.14-1.0	M23-MC9G-1.0	101 031 210 0801
③	0.1-0.5	M23-MC30G-0.5	101 032 210 0401
④	0.35-2.5	M23-MC30G-2.5	101 032 210 1001
⑤	2.5-4.0	M23-MC30G-4.0	101 032 210 1201

9A



NO.	Φa	Φb	Stripping Length
①	1.7	0.9	4mm
②	2.1	1.45	4mm

30A



NO.	marked line	Φ	Stripping Length
③	-	1.15	7mm
④	1 marked line	2.25	6mm
⑤	-	2.85	6mm

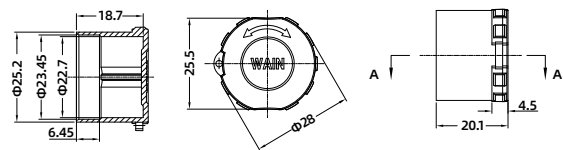
Crimping tool



Wire gauge	Designation	Order No.
0.14-6 mm ²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

- Protection covers (IP67)

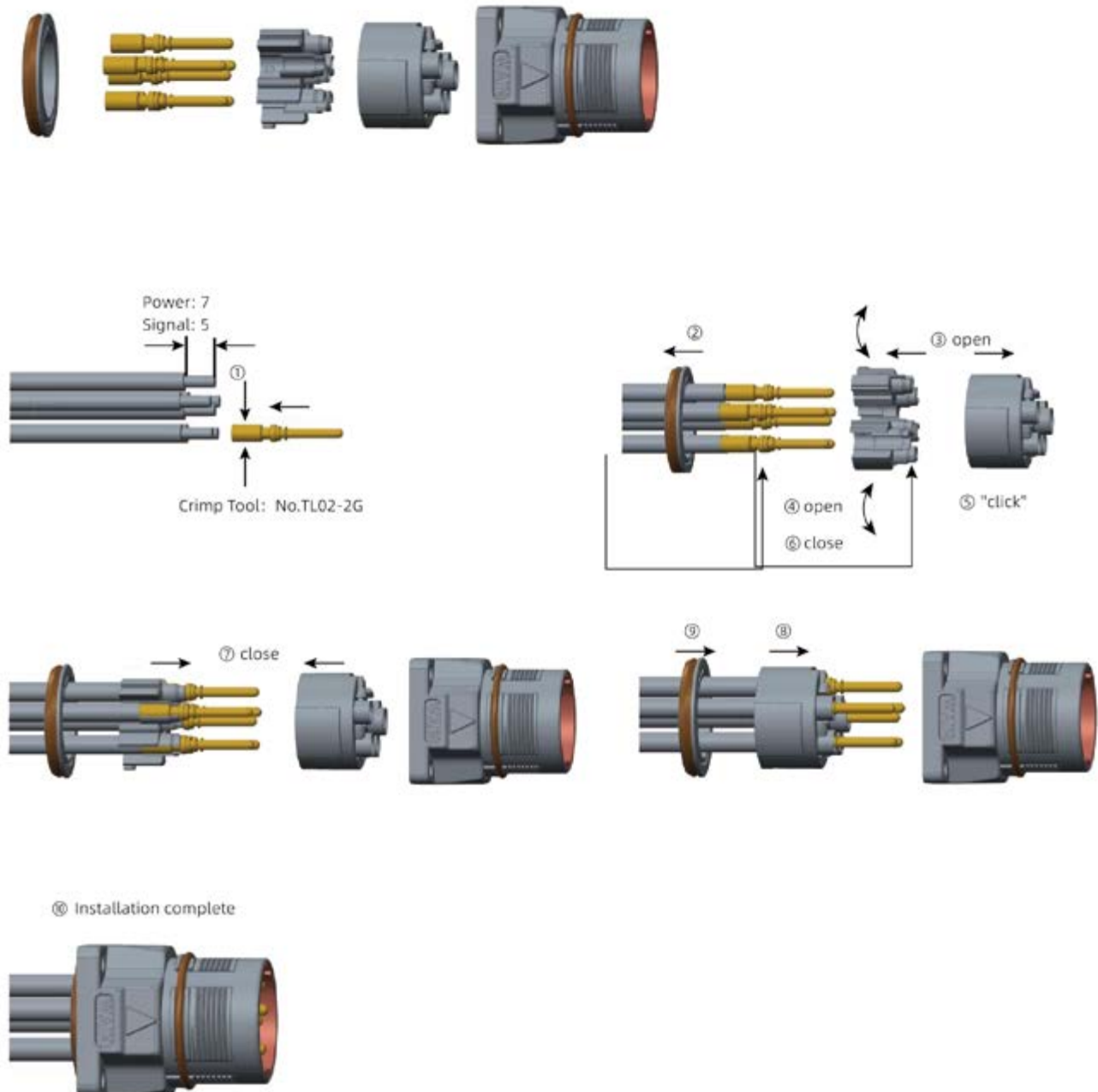


Protection covers
for male cable connector

Description	Designation	Order No.
Black	M23-CV-F	266 000 000 9001
transparent	M23-CV-F3	166 000 000 9001

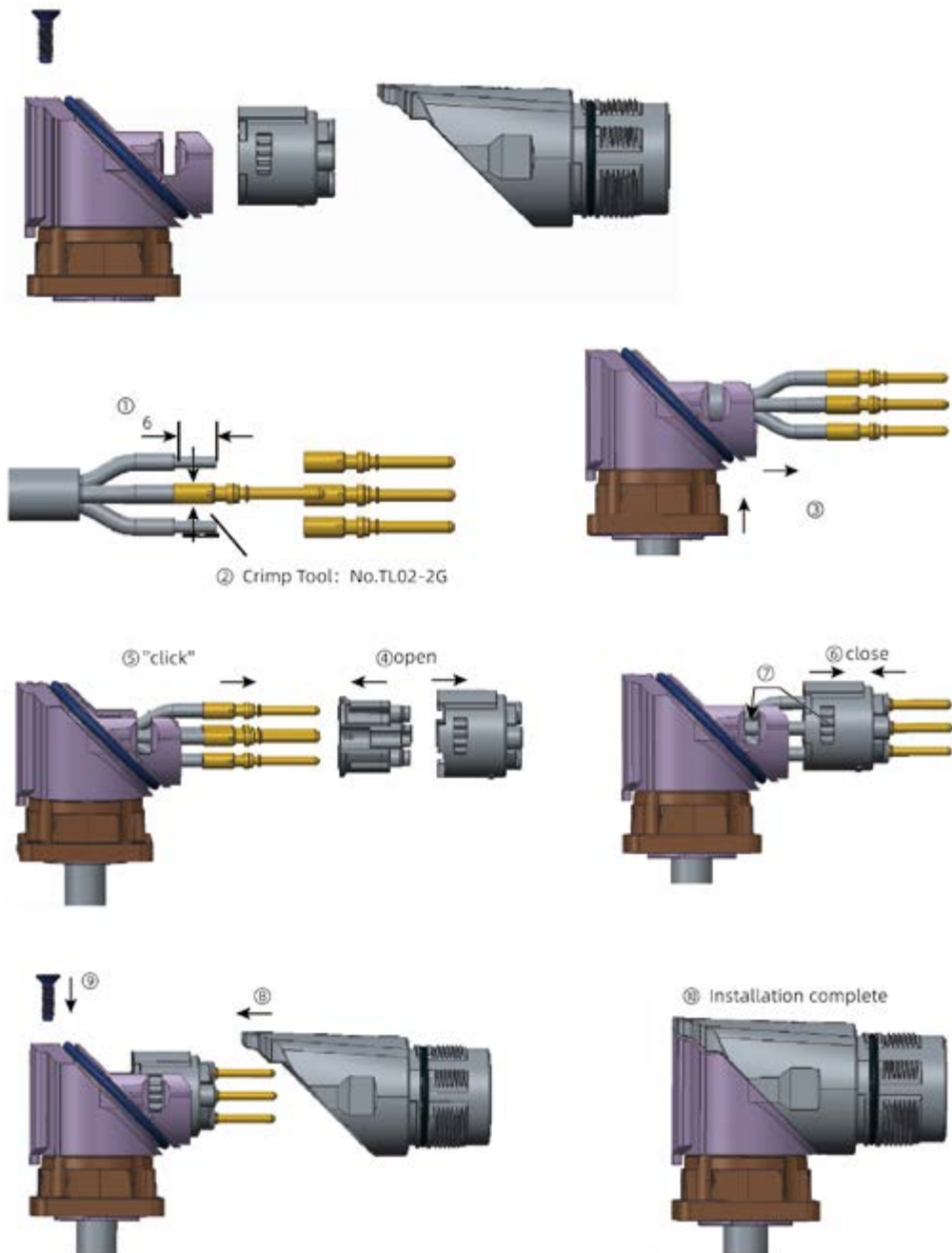
- Operating Instruction (Serie M23 Socket male)

- Installation Step



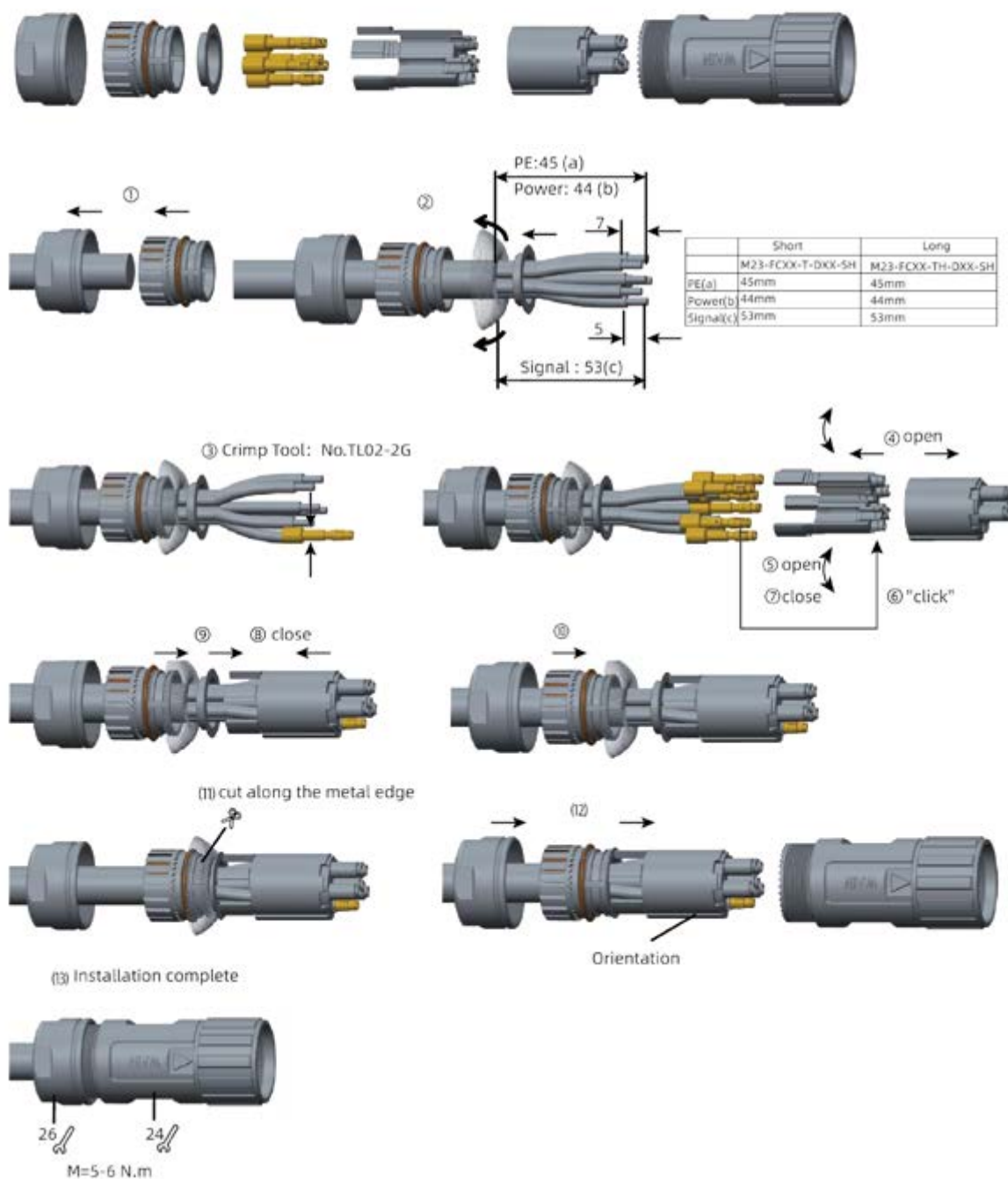
- Operating Instruction(Power Motor connector)

- Installation Step



• Operating Instruction (Serie M23 Plug female)

• Installation Step







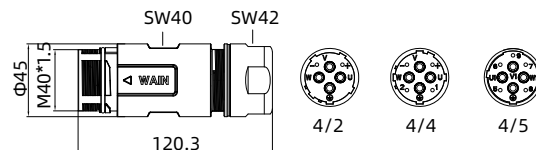
- M40 - Technical characteristics

Specifications	
DIN EN 60 664	DIN EN 61 984
Number of contacts 4/4	
Electrical properties	
-Rated current	63A (power) 20A (signal)
-Rated voltage	630V (power) 250V (signal)
-Rated impulse voltage	6000V (power) 4000V (signal)
-Contact resistance	$\phi 3.6$ (power): $\leq 1 \text{ m}\Omega$ $\phi 2$ (signal): $\leq 3 \text{ m}\Omega$
Materials and surface treatment	
-Hoods/Housings	The copper alloy/zinc alloy plating nickel
-contact	gold-planted copper alloy
-Insulating material	PA
-Sealing element	FKM
Mechanical properties	
-Mechanical working life	≥ 500
-Lock mode	Thread locking
-Cable and outlet diameter	$\phi 19$ - $21.5/\phi 22$
Environmental performance	
-Working temperature	-40°C ...+130°C
-Degree of Protection	IP67
-Pollution Degree	3



Crimp terminal
630/250V 75/30A

• Order crimp contacts separately



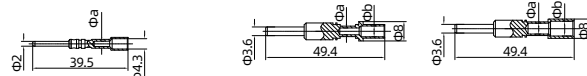
Insert	Cable outlet	Designation	Order No.
Male	7-9mm	M40-MC04/2-T-D9-SH	170 006 410 2002
	9-16mm	M40-MC04/2-T-D16-SH	170 006 410 2001
	16.5-25mm	M40-MC04/2-T-D25-SH	170 006 410 2003
	7-9mm	M40-MC04/4-T-D9-SH	170 008 410 2001
	9-16mm	M40-MC04/4-T-D16-SH	170 008 430 2001
	16.5-25mm	M40-MC04/4-T-D25-SH	170 008 410 2003
	7-9mm	M40-MC04/5-T-D9-SH	170 009 410 2001
	9-16mm	M40-MC04/5-T-D16-SH	170 009 410 2002
	16.5-25mm	M40-MC04/5-T-D25-SH	170 009 410 2003

• Accessories

Crimp contacts



NO.	Wire gauge(mm²)	Male	Order No.
①	0.35-2.5	M40-MCL30G-2.5	101 032 210 1012
②	2.5-4.0	M40-MCL30G-4.0	101 032 210 1202
③	1.5-4/6-10	M40-MCL75G-10	101 034 210 1401
④	6-10/10-16	M40-MCL75G-16	101 034 210 1501



NO.	Φa	Stripping length	NO.	Φa	Φb	Stripping length
①	Φ2.25	7 mm	③	Φ2.85	Φ4.5	9 mm
②	Φ2.85	7 mm	④	Φ4.5	Φ6.1	9 mm

Tools

Crimping tool



Wire gauge	Designation	Order No.
4/6/10 mm²	TL02-3G	198 002 000 0013

Wire gauge	Designation	Order No.
0.14-6 mm²	TL02-2G	198 001 001 0014

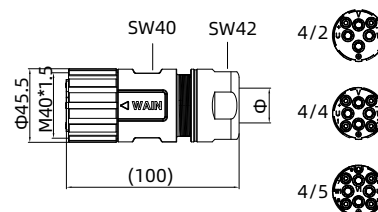
Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



Crimp terminal

630/250V 75/30A

- Order crimp contacts separately



Insert	Cable outlet	Designation	Order No.
Female	7-9mm	M40-FC04/2-T-D9-SH	170 004 420 2005
	9-16mm	M40-FC04/2-T-D16-SH	170 004 420 2001
	16.5-25mm	M40-FC04/2-T-D25-SH	170 004 420 2004
	7-9mm	M40-FC04/4-T-D9-SH	170 008 420 2010
	9-16mm	M40-FC04/4-T-D16-SH	170 008 420 2004
	16.5-25mm	M40-FC04/4-T-D25-SH	170 008 420 2005
	7-9mm	M40-FC04/5-T-D9-SH	170 009 420 2007
	9-16mm	M40-FC04/5-T-D16-SH	170 009 420 2001
	16.5-25mm	M40-FC04/5-T-D25-SH	170 009 420 2006

Accessories

Crimp contacts

Signal



Power



NO.	Wire gauge(mm²)	Female	Order No.
①	0.35-2.5	M23-FC30G-2.5	101 032 220 1001
②	2.5-4.0	M23-FC30G-4.0	101 032 220 1201
③	1.5-4/6-10	M40-FC75G-10	101 034 220 1401
④	6-10/10-16	M40-FC75G-16	101 024 220 1501

Technical drawing of crimp contact 1 shows a side view with dimensions: $\Phi 1.95$ (wire diameter), 25.59 (length), Φa (wire diameter), and $\Phi 4.4$ (crimp diameter).

NO.	Φa	Stripping length
①	$\Phi 2.25$	7 mm
②	$\Phi 2.85$	7 mm

Technical drawing of crimp contact 3 shows a side view with dimensions: $\Phi 3.6$ (wire diameter), 34.8 (length), Φa (wire diameter), Φb (crimp diameter), and $\Phi 8$ (crimp diameter).

NO.	Φa	Φb	Stripping length
③	$\Phi 2.85$	$\Phi 4.5$	9 mm
④	$\Phi 4.5$	$\Phi 6.1$	9 mm

Technical drawing of crimp contact 4 shows a side view with dimensions: $\Phi 3.6$ (wire diameter), 34.8 (length), Φa (wire diameter), Φb (crimp diameter), and $\Phi 8$ (crimp diameter).

Tools

Crimping tool



Wire gauge	Designation	Order No.
4/6/10 mm²	TL02-3G	198 002 000 0013

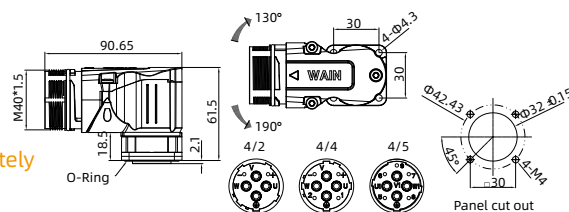
Wire gauge	Designation	Order No.
0.14-6 mm²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

M40 Circular connector



- Order crimp contacts separately



Crimp terminal

630/250V 65/30A

Insert	Cable outlet	Designation	Order No.
Male	Φ22	M40-MC04/2-BKP40-SE	170 006 410 1006
	Φ22	M40-MC04/4-BKP40-SE	170 008 610 1002
	Φ22	M40-MC04/5-BKP40-SE	170 009 610 3001

Accessories

Crimp contacts

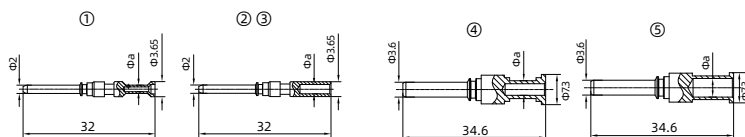
Signal



Power



NO.	Wire gauge(mm²)	Male	Order No.
①	0.1-0.5	M40-MC30G-0.5	101 032 210 0402
②	0.35-2.5	M40-MC30G-2.5	101 032 210 1013
③	2.5-4.0	M40-MC30G-4.0	101 032 210 1203
④	1.5-4.0	M40-MC75G-4.0	101 034 210 1201
⑤	6-10	M40-MC75G-10	101 034 210 1402



NO.	Φa	Stripping length
①	Φ1.15	7 mm
②	Φ2.25	7 mm
③	Φ2.85	7 mm

NO.	Φa	Stripping length
④	Φ2.85	9mm
⑤	Φ4.5	9mm

Tools

Crimping tool



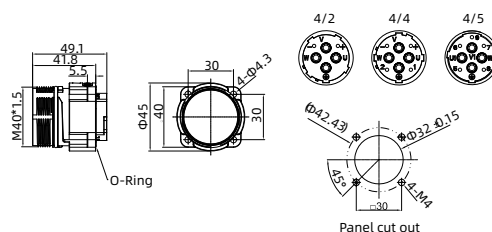
Wire gauge	Designation	Order No.
4/6/10 mm²	TL02-3G	198 002 000 0013

Wire gauge	Designation	Order No.
0.14-6 mm²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



- Order crimp contacts separately



Crimp terminal

630/250V 65/30A

Insert	Cable outlet	Designation	Order No.
Male	-	M40-MC04/2-BK40	170 006 310 1001
	-	M40-MC04/4-BK40	170 008 310 3001
	-	M40-MC04/5-BK40	170 009 310 3001

Accessories

Crimp contacts

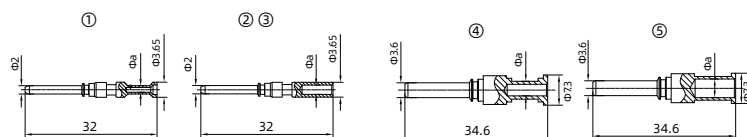
Signal



Power



NO.	Wire gauge(mm²)	Male	Order No.
①	0.1-0.5	M40-MC30G-0.5	101 032 210 0402
②	0.35-2.5	M40-MC30G-2.5	101 032 210 1013
③	2.5-4.0	M40-MC30G-4.0	101 032 210 1203
④	1.5-4.0	M40-MC75G-4.0	101 034 210 1201
⑤	6-10	M40-MC75G-10	101 034 210 1402



NO.	Φa	Stripping length
①	Φ1.15	7 mm
②	Φ2.25	7 mm
③	Φ2.85	7 mm

NO.	Φa	Stripping length
④	Φ2.85	9mm
⑤	Φ4.5	9mm

Tools

Crimping tool



Wire gauge	Designation	Order No.
4/6/10 mm²	TL02-3G	198 002 000 0013

Wire gauge	Designation	Order No.
0.14-6 mm²	TL02-2G	198 001 001 0014

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

WAIN®



Technical drawing of the SW40 wheel assembly. The side view shows a total width of 51.7, a main body diameter of $\Phi 45.5$, a central hub diameter of $\Phi 42.5$, and a total length of 111.3. The main body is labeled 'MAIN' and 'SW40'. The hub is labeled 'SW38'. The front view shows a wheel with a central hub and four spokes.



Technical drawing of the M40*1.5 panel cut out showing side, front, and top views with dimensions.

- Crimp contacts

NO.	Male	Order No.	Female	Order No.
①	M40-AMC30G-1.0	101 032 210 0811	M40-AFC30G-1.0	101 032 220 0811
②	M40-AMC30G-1.5	101 032 210 0911	M40-AFC30G-1.5	101 032 220 0911
③	M40-AMC30G-2.5	101 032 210 1011	M40-AFC30G-2.5	101 032 220 1011
④	M40-AMC75G-4	101 024 210 1201	M40-AFC75G-4	101 024 220 1201
⑤	M40-AMC75G-6	101 024 210 1301	M40-AFC75G-6	101 024 220 1301
⑥	M40-AMC75G-10	101 024 210 1401	M40-AFC75G-10	101 024 220 1401

Technical drawing of a shaft assembly. The drawing shows a shaft with a total length of 37.6. The shaft has a diameter of $\phi 5.7$ at the left end, a diameter of $\phi 6.3$ in the middle section, and a diameter of $\phi 3.6$ at the right end. The distance from the left end to the start of the $\phi 6.3$ section is labeled 'a', and the distance from the end of the $\phi 6.3$ section to the right end is labeled 'b'.

NO.	wire gauge	Stripping length	a	b
①	1 mm ²	7 mm	Φ1.45	Φ2.6
②	1.5 mm ²	7 mm	Φ1.75	Φ3/Φ3.1
③	2.5 mm ²	7 mm	Φ2.25	Φ3.4

NO.	wire gauge	Stripping length	a	b
④	4 mm ²	10 mm	Φ2.85	Φ3.9
⑤	6 mm ²	10 mm	Φ3.5	Φ5
⑥	10 mm ²	10 mm	Φ4.5	Φ5.7

Crimping tool



Wire gauge	Designation	Order No.
4/6/10 mm ²	TL02-3G	198 002 000 0013
0.14-4 mm ²	TL02G	198 001 001 0011

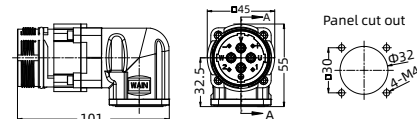
Application	Designation	Order No.
for crimp contacts 75A	M40-TL01	198 001 000 0027
for crimp contacts 30A	M40-TL02	198 001 000 0028

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Crimp terminal
Stationary type
630/250V 63/20A

- Order crimp contacts separately
- Elbow without rotated function

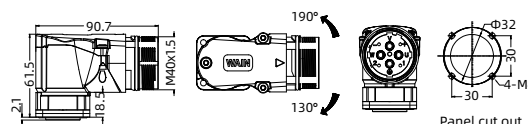


Insert	Designation	Order No.
Male	M40-MC04/4-BK-SE	170 008 610 1001



Crimp terminal
Rotation type
630/250V 63/20A

- Order crimp contacts separately
- After fixing, the angle can be rotated up to 320°.



Insert	Designation	Order No.
Male	M40-MC04/4-BKP-SE	170 008 610 1011

Accessories

Crimp contacts

Signal

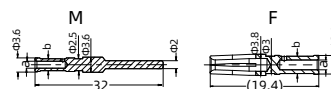


Power



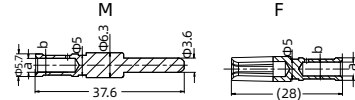
NO.	Male	Order No.
①	M40-AMC30G-1.0	101 032 210 0811
②	M40-AMC30G-1.5	101 032 210 0911
③	M40-AMC30G-2.5	101 032 210 1011
④	M40-AMC75G-4	101 024 210 1201
⑤	M40-AMC75G-6	101 024 210 1301
⑥	M40-AMC75G-10	101 024 210 1401

Signal



NO.	wire gauge	Stripping length	a	b
①	1 mm ²	7 mm	Φ1.45	Φ2.6
②	1.5 mm ²	7 mm	Φ1.75	Φ3/Φ3.1
③	2.5 mm ²	7 mm	Φ2.25	Φ3.4

Power



NO.	wire gauge	Stripping length	a	b
④	4 mm ²	10 mm	Φ2.85	Φ3.9
⑤	6 mm ²	10 mm	Φ3.5	Φ5
⑥	10 mm ²	10 mm	Φ4.5	Φ5.7

Tools

Crimping tool



Contact removal tool



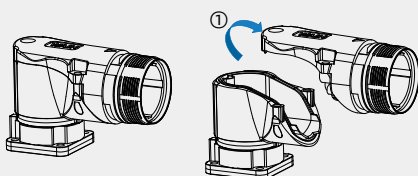
Wire gauge	Designation	Order No.
4/6/10 mm ²	TL02-3G	198 002 000 0013
0.14-4 mm ²	TL02G	198 001 001 0011

Application	Designation	Order No.
for crimp contacts 75A	M40-TL01	198 001 000 0027
for crimp contacts 30A	M40-TL02	198 001 000 0028

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

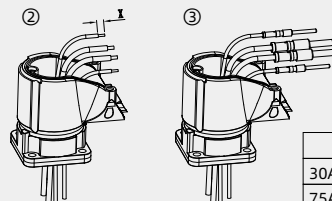
- M40-MC04/4-BKP-SE Power connector

1: Open the upper cover horizontally



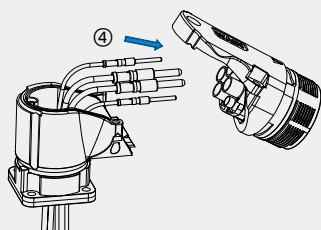
2: pin wiring

- The cable passes through the fixed base.
- Strip the wire insulation husk, and then weld pin to the wire.

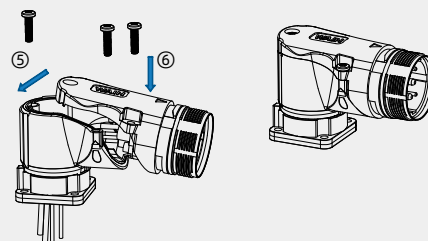


	Stripping length(X)
30A	7 mm
75A	10 mm

3: Insert the pins to the corresponding insert holes in order.



4: Lock the upper cover, and fasten the screws. The installation is completed.





- Technical characteristics

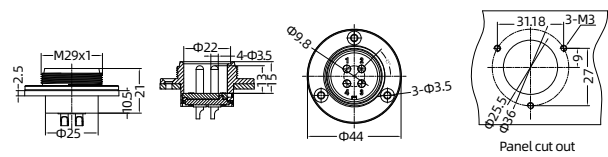
Specifications				
DIN EN 60 664 DIN EN 61 984				
Number of contacts	4	5	6	6(The open circuit)
Electrical properties				
-Rated current	40A	20A	25A	40A
-Rated voltage	250V (AC)	250V (AC)	250V (AC)	250V (AC)
-Rated impulse voltage	2KV (AC)	2.0KV(normal temperature) 1.0KV(muggy)	2KV (AC)	2KV
-Insulation resistance	≥ 2000MΩ(normal temperature)	≥ 2000 MΩ(normal temperature) ≥ 50 MΩ(muggy)	≥ 2000MΩ(normal temperature)	≥ 2000MΩ(normal temperature)
-Welding wire specifications	plugs 2.0mm ² ~3.3mm ² (Φ2.2mm)	DiameterΦ1.8mm		
	socket 2.0mm ² ~4mm ² (Φ2.7mm)			
-Contact resistance	≤ 0.75mΩ	≤ 2 mΩ	≤ 1 mΩ	≤ 1 mΩ
Materials and surface treatment				
-Hoods/Housings	The copper alloy plating nickel	The copper alloy plating nickel	Copper alloy	The copper alloy plating nickel
-contact	Gold-plated copper alloy	Gold-plated copper alloy	Gold-plated copper alloy	Gold-plated copper alloy
-Insulating material	Thermosets	Thermosets	Thermosets	PA
-Sealing element	Rubber		Rubber	Silicone rubber、FKM
Mechanical properties				
-Vibration	10~2000Hz,147m/s ² , instant break ≤ 1us	10~2000Hz,147m/s ² , instant break ≤ 1us	10~2000Hz,147m/s ² , instant break ≤ 1us	10~2000Hz,147m/s ² , instant break ≤ 1us
-Shock	accelerated speed 490m/s ² , instant break ≤ 1us	accelerated speed 490m/s ² , instant break ≤ 1us	accelerated speed 490m/s ² , instant break ≤ 1us	accelerated speed 490m/s ² , instant break ≤ 1us
-Mechanical working life	≥ 500 次	≥ 500 次	≥ 500 次	≥ 500 次
-Lock mode	Thread locking	Thread locking	Thread locking	Bayonet locking
-Cable and outlet diameter	Φ10.5mm	Φ10.5mm	Φ12.5mm	Φ13mm
Environmental performance				
-Relative humidity	90%~95% (40°C ±2°C时)	90%~95% (40°C ±2°C时)	90%~95% (40°C ±2°C时)	90%~95% (40°C ±2°C时)
-Working temperature	-40°C—+105°C	-40°C—+105°C	-40°C—+105°C	-40°C—+105°C
-Salt mist test requirements	5%NaCl neutral steady salt mist 96 h	5%NaCl neutral steady salt mist 96 h	5%NaCl neutral steady salt mist 96 h	5%NaCl neutral steady salt mist 96 h
-Degree of Protection	IP65	IP65	IP65	IP65

- Technical characteristics

Specifications			
DIN EN 60 664 DIN EN 61 984			
Number of contacts	10(4+6)	26	Two sides RJ-45/3 pins
Electrical properties			
-Rated current	6X ϕ 1.59: 13A 4X ϕ 2: 20A	20A	-/1A
-Rated voltage	250V (AC)	250V (AC)	-/220V(AC)
-Rated impulse voltage	2KV	2.0KV	500V(AC)/1500V(AC)
-Insulation resistance	$\geq 2000\text{M}\Omega$ (normal temperature)	$\geq 2000\text{M}\Omega$ (normal temperature)	$\geq 500\text{M}\Omega$ (normal temperature)
-Welding wire specifications	Diameter ϕ 1.8mm	Diameter ϕ 1.8mm	Power line: 1 mm ² Reticle: 24 AWG
-Contact resistance	ϕ 1.59: $\leq 3\text{ m}\Omega$ ϕ 2: $\leq 2\text{ m}\Omega$	$\leq 2\text{ m}\Omega$	$\leq 20\text{m}\Omega$ / $\leq 7.5\text{m}\Omega$
Materials and surface treatment			
-Hoods/Housings	The copper alloy plating nickel	The copper alloy plating nickel	The copper alloy plating chromium
-contact	Gold-plated copper alloy	Gold-plated copper alloy	Gold-plated copper alloy
-Insulating material	Thermosets	Thermosets	Thermosets
-密封件		Silicone rubber, FKM	
Mechanical properties			
-Vibration	10~2000Hz,147m/s ² , instant break $\leq 1\text{us}$	10~2000Hz,147m/s ² , instant break $\leq 1\text{us}$	10~2000Hz,147m/s ² , instant break $\leq 1\text{us}$
-Shock	accelerated speed 490m/s ² , instant break $\leq 1\text{us}$	accelerated speed 490m/s ² , instant break $\leq 1\text{us}$	accelerated speed 490m/s ² , instant break $\leq 1\text{us}$
-Mechanical working life	≥ 500	≥ 500	≥ 500 次
-Lock mode	Thread locking	Thread locking	Bayonet locking
-Cable and outlet diameter	ϕ 13mm	Cable duo2*12mm	ϕ 11.5mm
Environmental performance			
-Relative humidity	90%~95% (40°C $\pm$ 2°C时)	90%~95% (40°C $\pm$ 2°C时)	90%~95% (40°C $\pm$ 2°C时)
-Working temperature	-40°C—+105°C	-40°C—+105°C	-40°C—+105°C
-Salt mist test requirements	5%NaCl neutral steady salt mist 96 h	5%NaCl neutral steady salt mist 96 h	5%NaCl neutral steady salt mist 96 h
-Degree of Protection	IP65	IP65	IP65



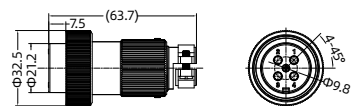
Solder terminal
250V 40A



Insert	Designation	Order No.
Male	HY-Z2504-S01E0-GM	169 004 313 1001



Solder terminal
250V 40A

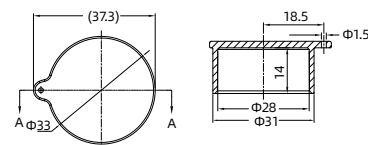


Insert	Designation	Order No.
Female	HY-T2504-S01E1-GF	169 004 423 1001

• Accessory



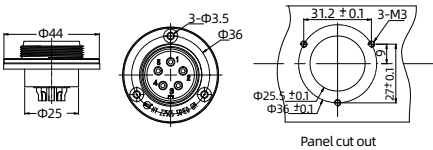
Protection cover



Description	Designation	Order No.
for male	HY-Z25-CV	269 000 000 9001



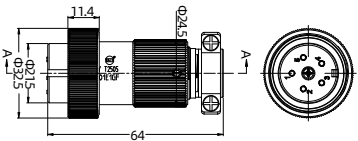
Solder terminal
250V 20A



Insert	Designation	Order No.
Male	HY-Z2505-S01E0-GM	169 005 313 1001



Solder terminal
250V 20A

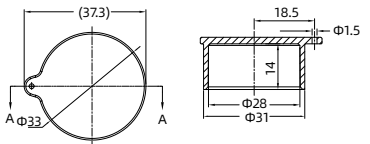


Insert	Designation	Order No.
Female	HY-T2505-S01E1-GF	169 005 423 1001

• Accessory



Protection cover

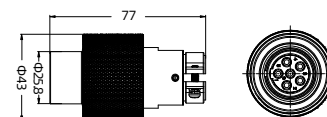


Description	Designation	Order No.
for male	HY-Z25-CV	269 000 000 9001



□ **Crimp terminal**
250V 25A

- Order crimp contacts separately

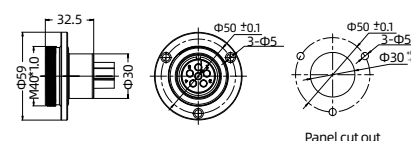


Insert	Designation	Order No.
Male	HY-T3006-S01E1-GMC	169 006 410 1001



□ **Crimp terminal**
250V 25A

- Order crimp contacts separately
- Can match the Protection cover:
HY-Z30-CV



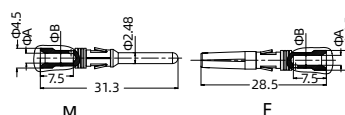
Insert	Designation	Order No.
Female	HY-Z3006-S01E0-GFC	169 006 320 1001

• Accessory

□ **Crimp contacts 25A**
Contact resistance $\leq 1 \text{ m}\Omega$



NO.	Male	Order No.	Female	Order No.
①	CYGM25-0.5	101 021 210 0401	CYGF25-0.5	101 021 220 0401
②	CYGM25-0.75	101 021 210 0601	CYGF25-0.75	101 021 220 0601
③	CYGM25-1.0	101 021 210 0801	CYGF25-1.0	101 021 220 0801
④	CYGM25-1.5	101 021 210 0901	CYGF25-1.5	101 021 220 0901
⑤	CYGM25-2.5	101 021 210 1001	CYGF25-2.5	101 021 220 1001
⑥	CYGM25-3.0	101 021 210 1101	CYGF25-3.0	101 021 220 1101



NO.	Identifi- cation	ΦA/mm	ΦB/mm	Wire gauge
①	no groove	1.15	2.60	0.5 mm ² AWG20
②	1 groove	1.30	2.60	0.75 mm ² AWG18
③	1 groove	1.45	2.60	1.0mm ² AWG18
④	2 groove	1.75	3.00	1.5 mm ² AWG16
⑤	3 groove	2.25	3.50	2.5 mm ² AWG14
⑥	2 groove	2.55	3.75	3.0mm ² AWG12

□ Tools

Crimping



Contact removal tool



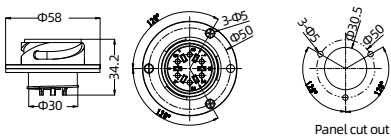
Wire gauge	Designation	Order No.
0.14-4mm ²	TL02G	198 002 000 0011

Application	Designation	Order No.
for crimp contacts 25A	HY-TL01	198 001 000 0020

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



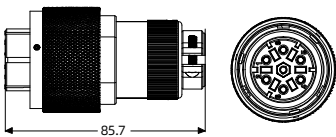
Solder terminal
250V 40A



Insert	Designation	Order No.
Male	HY-PZ3006-S01E0-GM	169 006 313 1001



Solder terminal
250V 40A

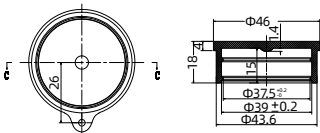


Insert	Designation	Order No.
Female	HY-PT3006-S01E1-GF	169 006 423 1001

• Accessory



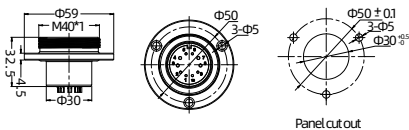
Protection cover



Description	Designation	Order No.
for male	HY-Z30-CV	269 000 000 9002



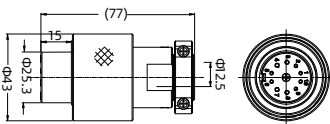
Solder terminal
250V 13/20A



Insert	Designation	Order No.
Male	HY-Z3010-S01E0-GM	169 010 313 1001



Solder terminal
250V 13/20A

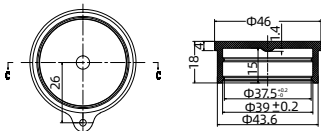


Insert	Designation	Order No.
Female	HY-T3010-S01E1-GF	169 010 423 1001

• Accessory



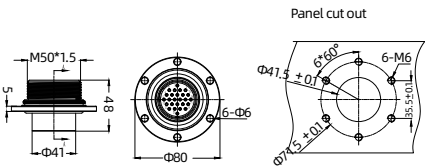
Protection cover



Description	Designation	Order No.
for male	HY-Z30-CV	269 000 000 9002



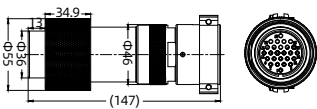
Solder terminal
250V 20A



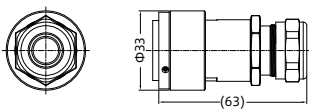
Insert	Designation	Order No.
Male	HY-Z4126-S01E0-GM	169 026 313 1001



Solder terminal
250V 20A

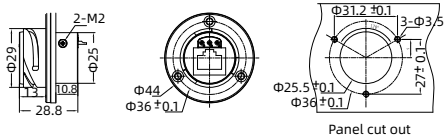


Insert	Designation	Order No.
Female	HY-T4126-S01E2/12-GF	169 026 423 1001



Solder terminal
200V 1A

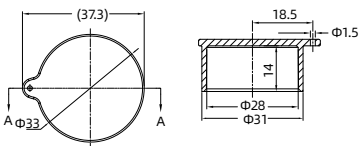
Insert	Designation	Order No.
Male	HY-ET2511-S02E1-GM	169 011 410 1001



Solder terminal
200V 1A

Insert	Designation	Order No.
Female	HY-EZ2511-S02E0-GF	169 011 323 1001

• Accessory



Protection cover

Description	Designation	Order No.
for male	HY-Z25-CV	269 000 000 9001



Advantages:

- The male plug is provided with a quick-connect nut anti-rotation device to play the role of nut anti-rotation.
- Increase the assembly clearance of pin to prevent damage of connector caused by thermal expansion and cold contraction.
- Add a variety of coding to the insertion of male and female plugs to avoid wrong insertion.
- Color codes distinguish three - phase cables.
- Double crown spring is adopted to increase the contact area of male and female pins.
- Protection against electric shock.
- Add the wire size mark to the pin.

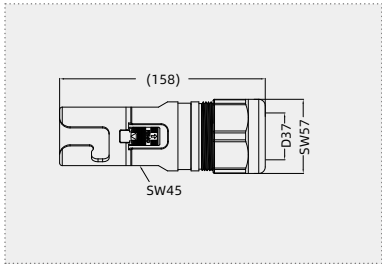
• Technical characteristics

Specifications			
DIN EN 60 664		DIN EN 61 984	
Electrical parameters :		Mechanical date	
Number of contacts	1	Housing material	PA
Rated current	800A	Contact material	Copper alloy
Rated voltage	1000V	surface	Hard-gold plated
Test voltage Urms (AC)	12KV	Terminal	Crimp version
Wire gauge	240mm²	Gasket and O ring	FPM
Surge voltage category	III	Ambient temperature	-40°C ...+125°C
Pollution degree	3	Locking type	Quick lock
		Mechanical working life	> 100
		Degree of protection	IP65
		Cable diameter	32-37mm

Male Crimp terminal



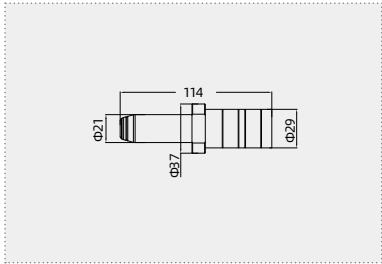
Insert	Designation	Order No.
Male	HW-MC01-T-D37	182 000 410 3001



Male Crimp contacts



Wire gauge(mm²)	Designation	Order No.
240	HW-MC800S-240	101 035 110 2401



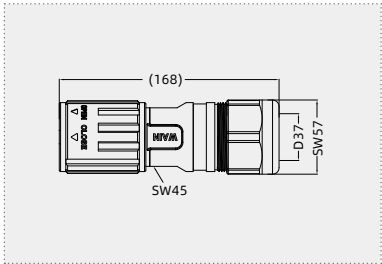
• Technical characteristics

Specifications			
DIN EN 60 664		DIN EN 61 984	
Electrical parameters :		Mechanical data	
Number of contacts	1	Housing material	PA
Rated current	800A	Contact material	Copper alloy
Rated voltage	1000V	surface	Hard-gold plated
Test voltage Urms (AC)	12KV	Terminal	Crimp version
Wire gauge	240mm ²	Gasket and O ring	FPM
Surge voltage category	III	Ambient temperature	-40°C ...+125°C
Pollution degree	3	Locking type	Quick lock
		Mechanical working life	> 100
		Degree of protection	IP65
		Cable diameter	32-37mm

Female Crimp terminal



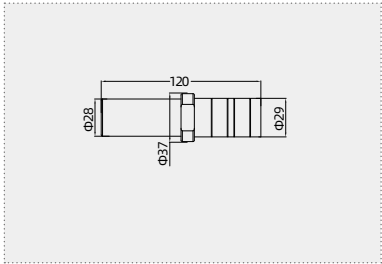
Insert	Designation	Order No.
Female	HW-FC01-T-D37	182 000 420 3001



Female Crimp contacts



Wire gauge(mm ²)	Designation	Order No.
240	HW-FC800S-240	101 035 120 2401

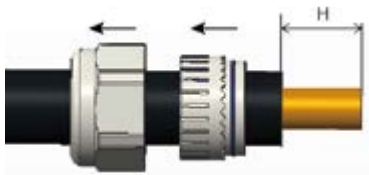


- Assembly instructions

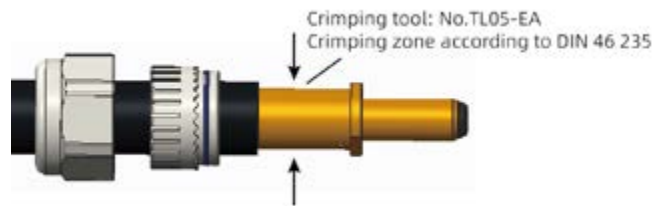
- Installation steps



Step 1



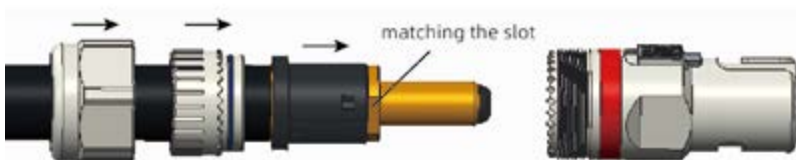
Step 2: Crimping



Step 3: fastening



Step 4: matching the slot



Step 5: installation complete



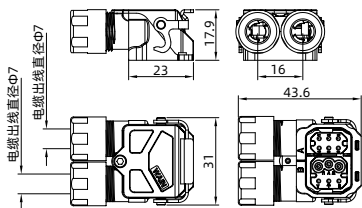


• Technical characteristics

Number of contacts	6+6(5+PE)
Rated current (40°C)	6A(power), 1A(signal)
Rated voltage	400V(power), 30V(signal)
Rated impulse voltage	4000V(power), 500V(signal)
Pollution degree	3
Contact resistance	≤ 5 mΩ
Termination	crimp terminal
Wire gauge	MAX0.75mm ²
Degree of protection	IP67(Acc. to EN60529 for coupled connector)
Limiting temperature	-40°C ...+130°C
Flammability acc. to UL 94	V0
Contact plating	Au



- Male
- Shielded
- Crimp terminal
- Order crimp contacts separately



Angeled double
zone double cable
shielded connector
400/30V 6/1A

Contacts	Cable outlet	Designation	Order No.
6+6(5+PE)	7.5mm	MI-MC06/6-BK-OD2.7	173 012 310 4001

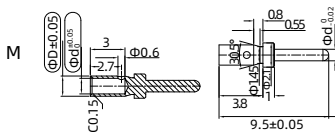
• Accessories

▣ Crimp contacts

Contact resistance
≤ 3mΩ
Gold plated



Wire gauge(mm ²)	Male	Order No.
0.09-0.25	MI-MC6G2-0.25	101 040 210 0101
0.13-0.52	MI-MC6G-0.38	101 040 210 3801
0.52-0.75	MI-MC6G-0.75	101 040 210 0601



▣ Crimping tool



Wire gauge	Designation	Order No.
0.09-0.82mm ²	TL03	198 001 001 0002

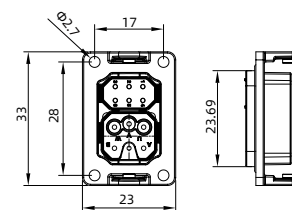
- Notes: The tools for crimp terminal may influence the product quality and stability.
Please select the tools recognized by our company.

• Technical characteristics

Number of contacts	6+6(5+PE)
Rated current (40°C)	6A(power), 1A(signal)
Rated voltage	400V(power), 30V(signal)
Rated impulse voltage	4000V(power), 500V(signal)
Pollution degree	3
Contact resistance	≤ 5 mΩ
Termination	crimp terminal
Wire gauge	MAX0.75mm ²
Degree of protection	IP67(Acc. to EN60529 for coupled connector)
Limiting temperature	-40°C ...+130°C
Flammability acc. to UL 94	V0
Contact plating	Au



- Female
- Shielded
- Crimp terminal
- Order crimp contacts separately



Angled double
zone double cable
shielded connector
400/30V 6/1A

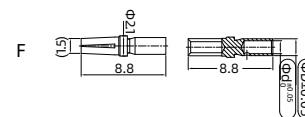
Contacts	Cable outlet	Designation	Order No.
6+6(5+PE)	7.5mm	MI-FC06/6-SE-2D7.5-SH	173 012 520 2001

• Accessories

- ▣ **Crimp contacts**
Contact resistance
≤ 3mΩ
Gold plated



Wire gauge(mm ²)	Female	Order No.
0.09-0.25	MI-FC6G2-0.25	101 040 220 0101
0.13-0.52	MI-FC6G-0.38	101 040 220 3801
0.52-0.75	MI-FC6G-0.75	101 040 220 0601



- ▣ **Crimping tool**



Wire gauge	Designation	Order No.
0.09-0.82mm ²	TL03	198 001 001 0002

- Notes: The tools for crimp terminal may influence the product quality and stability.
Please select the tools recognized by our company.



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