2025

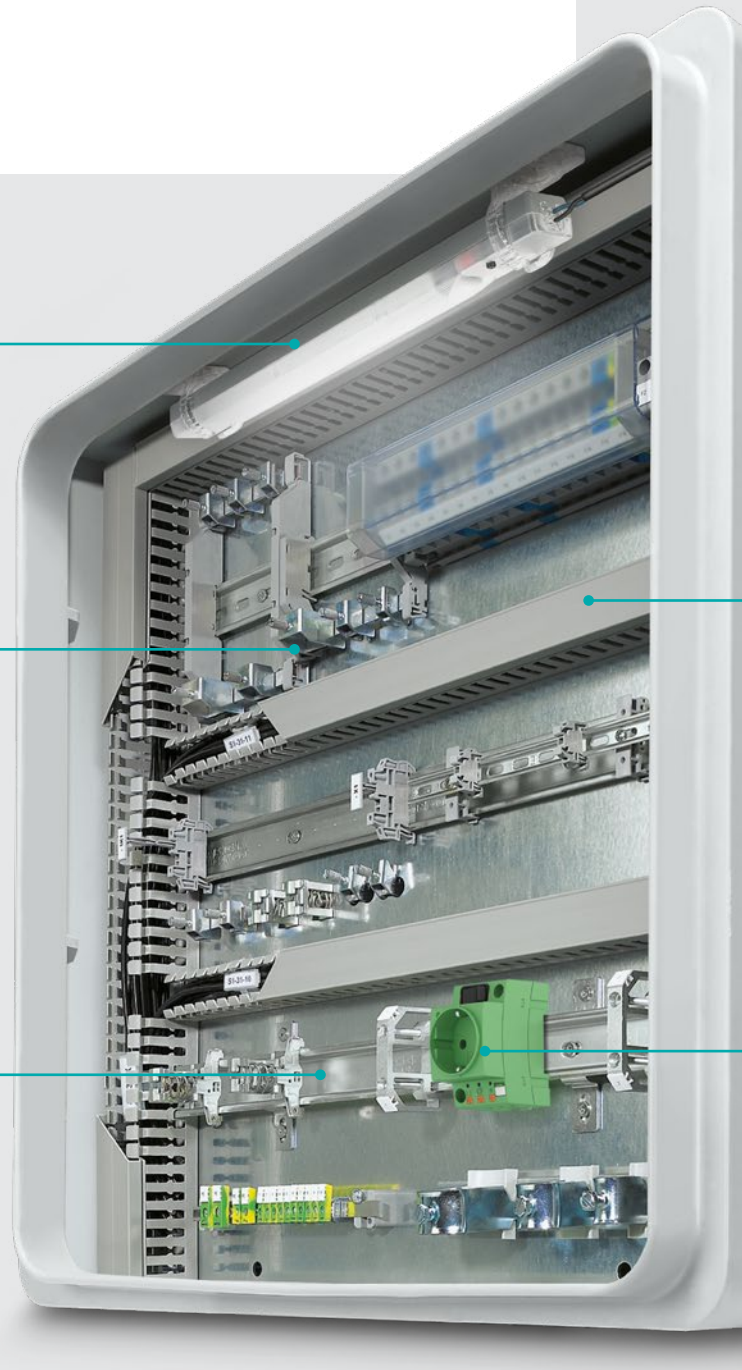
Control cabinet accessories

Cable management and mounting material

PHOENIX CONTACT

Everything for best cabinets

A perfectly designed control cabinet is not just a great way to attract customers. The right mounting material saves valuable space. Optimum cable routing reduces wiring time. Clever accessories make mounting and cabling quick and convenient. As an expert partner in the installation field, Phoenix Contact provides all products from a single source: from the entry into the control cabinet and cable protection systems and ducts, to small components such as cable ties. We promise precision functionality and high quality down to the very last detail.



5 **Control cabinet lighting**

The enclosure lights provide optimal illumination for your control cabinet.

› More information starting on page 70

6 **Shield clamps**

Shield clamps protect your systems against electromagnetic interference. This interference can lead to malfunctions or even failure of entire systems.

› More information starting on page 76

3 **Mounting material**

The mounting material allows users to easily mount various control cabinet products, such as the installation of terminal blocks.

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1

Cable entry

Cable entry systems and cable glands enable the water- and dust-protected entry of cables into the control cabinet.

› More information starting on page 4

2

Cable protection and cable routing

Use protective hoses to guide cables and lines safely to the control cabinet. Cable ducts and cable ties ensure orderly cable routing and a clear overview.

› More information starting on page 26

4

Sockets and service interfaces

Electrical outlets and service interfaces make it easier to work on switching devices. Receive the right hardware for maintenance, servicing, and diagnostics.

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Cable entry

1

Phoenix Contact offers various solutions for inserting cables and wires into the control cabinet. Cable glands are suitable for the safe installation of individual cables. Membrane plates are the best solution for the convenient feedthrough of multiple conductors. And with the CES modular cable entry system, assembled cables and lines can be routed through a control cabinet panel easily and with a tight seal.

Cable glands

Where cables are subject to high tensile force, cable glands are an excellent alternative to panel feed-through systems. In addition to standard products, the portfolio includes special versions for use in explosion-protected areas or with EMC shielding, for example.

› More information starting on page 6

Cable feed-through plates

CES Multigates are metal-reinforced cable entry plates. They provide you with numerous options for guiding cables through a control cabinet panel with a tight seal. The plates are also suitable for outdoor applications.

› More information starting on page 16

Modular cable entry system

Using the cable seals from CES modular, which can be combined in various ways, you can mount assembled as well as unassembled cables quickly and flexibly. The individual elements are available in a variety of shapes and for a wide range of cable diameters. The cable seals are very robust and provide a reliable seal with IP54 degree of protection.

› More information starting on page 20

Cable glands

The use of cable glands ensures particularly reliable and robust control cabinet entry for individual cables. The comprehensive product portfolio includes a wide range of materials and types. High strain relief force, a reliable seal, and vibration-resistant plastic screw connections ensure reliability even under extreme conditions. With versions for the Ex area or EMC use, Phoenix Contact satisfies the requirements of numerous applications.

Your advantages

- High strain relief forces with the laminated clamping cage principle
- Optimum housing seal, thanks to molded sealing lip and O-ring
- Vibration-resistant plastic screw connection with protection against over-tightening the cap nut
- International approvals
- Ex versions: permanent braided shield contact by means of grounding cones in the EMC screw connections

More information about cable glands

Material

Our standard cable glands are available in polyamide and brass versions. The plastic versions are particularly easy to install and support universal use, while the metal screw connections are characterized by their excellent resistance to temperature.

Explosion protection

Cable glands for Ex applications offer you high-level safety in potentially explosive areas. The plastic screw connections are Ex e and Ex i-approved and satisfy the requirements of the ATEX and IECEx directives. Metal ex screw connections are available in standard and EMC versions.

Electromagnetic compatibility

For shielded cables, reliable EMC cable glands made of brass are available with elastic shield contact springs for easy assembly. Furthermore, highly conductive laminated elements offer reliable connection with very low ohmic and inductive resistance between the cable shield and the connector housing or the control cabinet panel.

IP degree of protection

With IP68 degree of protection (IP69K in part), chloroprene seals and NBR O-rings ensure an optimum seal on the housing.

Thread

The cable glands are available with metric threads in sizes M12 to M63. Pg and self-sealing NPT threads are also available.

Divisible seal

Cable glands with slotted or two-piece seal allow the easy and tight insertion of preassembled cables.

Product overview – cable glands

Cable glands

		PA			Brass, nickel-plated		Stainless steel 1.4305
						EMC	
Thread	**Clamping range**	**Jet black**	**Silver gray**	**Light gray**	**Silver colored**		
M12	3 mm ... 6.5 mm	1411131	1411123	1417652	1411160		1424541
	4 mm ... 6.5 mm					1411187	
M16	4 mm ... 8 mm	1424480	1424475	1424470	1424526		
	5 mm ... 10 mm	1411132	1411124	1417653	1411162	1077099	1424542
M20	6 mm ... 12 mm	1411133	1411125	1414568	1411163		1424543
	9 mm ... 13 mm					1411189	
	10 mm ... 14 mm	1424481	1424476	1424471			
M25	10 mm ... 14 mm				1424527		
	11 mm ... 17 mm	1411134	1411126	1417654	1411165	1411190	1424544
	13 mm ... 18 mm	1424482	1424477	1424472			
M32	13 mm ... 18 mm				1424528		
	14 mm ... 21 mm					1411191	
	15 mm ... 21 mm	1411136	1411127	1417655	1411166		1424545
	18 mm ... 25 mm	1424483	1424478	1424473			
M40	18 mm ... 25 mm				1424529		
	19 mm ... 28 mm	1411137	1411128	1417656	1411167	1411192	1424546
	22 mm ... 32 mm	1424484	1424479	1424474			
M50	22 mm ... 32 mm				1424530		
	24 mm ... 35 mm					1411193	
	27 mm ... 38 mm				1411168		
	30 mm ... 36 mm	1411138	1411129	1417657			
M63	32 mm ... 42 mm					1411194	
	34 mm ... 44 mm	1411139	1411130	1417658	1411169		
	37 mm ... 53 mm				1424531		
Pg7	3 mm ... 6.5 mm	1424495	1411140	1424485	1411170	1411195	
Pg9	4 mm ... 8 mm	1424496	1411141	1424486	1411171	1411196	
Pg11	5 mm ... 10 mm	1424497	1411142	1424487	1411172	1411197	
Pg13.5	6 mm ... 12 mm	1424498	1411143	1424488	1411173	1411198	
Pg16	10 mm ... 14 mm	1424499	1411144	1424489	1411174	1411199	
Pg21	13 mm ... 18 mm	1424500	1411145	1424490	1411175	1411200	
Pg29	18 mm ... 25 mm	1424501	1411146	1424491	1411176	1411201	
Pg36	22 mm ... 32 mm	1424502	1411147	1424492	1411178	1411202	
Pg42	30 mm ... 38 mm	1424503	1411149	1424493	1411179	1411203	
Pg48	34 mm ... 44 mm	1424504	1411150	1424494	1411181	1411204	

Product overview – cable glands

Locking nuts							
	PA		PA 6.6 GF		Brass, nickel-plated		Stainless steel 1.4305
						Ribbed	
Thread	**Jet black**	**Silver gray**	**Jet black**	**Light gray**	**Silver colored**		
M12	1411213	1411205		1417659	1411240	1411267	1425175
M16	1411214	1411206		1417660	1411241	1411268	1425176
M20	1411215	1411207		1414570	1411242	1411269	1411249
M25	1411216	1411208		1417661	1411243	1411270	1411250
M32	1411217	1411209		1417662	1411244	1411271	1411251
M40	1411218	1411210		1417664	1411246	1411272	1411252
M50	1411219	1411211		1417665	1411247	1411273	1411253
M63	1411220	1411212		1417666	1411248	1411274	1411254
Pg7		1411221	1424558	1424548	1411255	1411275	
Pg9		1411222	1424559	1424549	1411256	1411276	
Pg11		1411223	1424560	1424550	1411257	1411277	
Pg13.5		1411224	1424561	1424551	1411259	1411278	
Pg16		1411225	1424562	1424552	1411260	1411279	
Pg21		1411226	1424563	1424553	1411262	1411280	
Pg29		1411227	1424564	1424554	1411263	1411281	
Pg36		1411228	1424565	1424555	1411264	1411282	
Pg42		1411229	1424566	1424556	1411265		
Pg48		1411230	1424567	1424557	1411266		

Product overview – cable glands

Cable glands with bend protection

		PA		Brass, nickel-plated
Thread	**Clamping range**	**Jet black**	**Light gray**	**Silver colored**
M12	3 mm ... 7 mm	1415177	1415171	
M16	4.5 mm ... 10 mm	1415178	1415172	
M20	6 mm ... 13 mm	1415179	1415174	1415182
M25	9 mm ... 17 mm	1415180	1415175	1415183
M32	13 mm ... 21 mm	1415181	1415176	1415184
M40	16 mm ... 28 mm			1415185

Cable glands with strain relief

		With external strain relief		With cable bend protection and strain relief	With strain relief clamp
		PA	Brass, nickel-plated		
Thread	**Clamping range**	**Jet black**	**Silver colored**		
M20	6 mm ... 13 mm	1415189	1415192		
	7.5 mm ... 15 mm			1646188	
M25	9 mm ... 17 mm	1415190	1415193		
	10 mm ... 19 mm			1646191	
M32	13 mm ... 21 mm	1415191	1415194		
	18 mm ... 27 mm			1646201	1646162
M40	16 mm ... 28 mm		1415195		
	24 mm ... 33 mm				1646175

Product overview – cable glands

Pressure compensation glands

		PA		Brass, nickel-plated
Thread	**Clamping range**	**Jet black**	**Light gray**	**Silver colored**
M12	4 mm ... 7 mm	1424535	1424532	1424538
M16	4 mm ... 7 mm	1424536	1424533	1424539
M20	6 mm ... 11 mm	1424537	1424534	1424540

Pressure compensation element

		PA		Stainless steel 1.4305
Thread		**Jet black**	**Light gray**	**Silver colored**
M12		1415223	1415222	1415224

Membrane screw connection

		PP
Thread	**Clamping range**	**Light gray**
M16	4 mm ... 10 mm	1415186
M20	6 mm ... 13 mm	1415187
M25	9 mm ... 17 mm	1415188

Product overview – cable glands

Screw plugs			
	PA		Brass, nickel-plated
Thread	**Jet black**	**Light gray**	**Silver colored**
M12	1045816	1045815	1046636
M16	1045817	1045818	1646227
M20	1415206	1424519	1645846
M25	1415207	1424520	1645859
M32	1415208	1424521	1645862
M40	1415210	1424522	1645875
Pg7	1047561	1047562	1046670
Pg9	1047272	1047273	1046669
Pg11	1047271	1047270	1674493
Pg13.5	1046790	1046792	1674503
Pg16	1415213	1424523	1674516
Pg21	1415214	1424524	1674529
Pg29	1415215	1424525	1674532
Pg36			1674545

Product overview – cable glands

Reducing adapters		
	PA	Brass, nickel-plated
Thread	**Jet black**	**Silver colored**
M20 / M16		1647611
M25 / M20	1411232	1647624
M32 / M20	1410725	
M32 / M25	1410712	1647637
M40 / M25	1410741	
M40 / M32	1410738	1647640
Pg16 / Pg13.5		1415216
Pg21 / Pg16		1415217
Pg29 / Pg21		1415218

Extension adapters	
	Brass, nickel-plated
Thread	**Silver colored**
M16 / M20	1647653
M20 / M25	1647666
M25 / M32	1647679
M32 / M40	1647682
Pg13.5 / Pg16	1415219
Pg16 / Pg21	1415220
Pg21 / Pg29	1415221

Product overview – Ex cable glands

Ex cable glands

		PA		Brass, nickel-plated	
					EMC
Thread	**Clamping range**	**Jet black**	**Black/blue**	**Silver colored**	
M12	3 mm ... 6 mm	1415106	1415114		
	4 mm ... 7 mm			1415123	1415148
M16	4.5 mm ... 9 mm	1415107	1415116	1415124	1415149
M20	6 mm ... 13 mm			1415125	1415163
	7 mm ... 13 mm	1415108	1415117		
M25	10 mm ... 17 mm	1415109	1415118	1415126	1415165
M32	13 mm ... 21 mm	1415110	1415119	1415127	1415166
M40	16 mm ... 28 mm			1415129	1415168
	17 mm ... 28 mm	1415111	1415120		
M50	21 mm ... 35 mm			1415146	1415169
	23 mm ... 35 mm		1415121		
M63	34 mm ... 48 mm			1415147	1415170

Ex cable glands for non-reinforced cables

		Brass, nickel-plated	Stainless steel 316L
Thread	**Clamping range**	**Silver colored**	
M20	6.5 mm ... 14 mm	1411075	1411076
M25	11.1 mm ... 20 mm	1411077	1411078
M32	17 mm ... 26.3 mm	1411079	1411080
M40	23.5 mm ... 32.2 mm	1411081	1411082
M50	35.6 mm ... 44.1 mm	1411084	1411085
M63	47.2 mm ... 56 mm	1411086	1411087

Product overview – Ex cable glands

Ex cable glands for reinforced cables

		Brass, nickel-plated	Stainless steel 316L
		EMC	
Thread	**Clamping range**	**Silver colored**	
M20	9.5 mm ... 15.9 mm	1411088	1411089
	12.5 mm ... 20.9 mm	1411090	1411091
M25	18.2 mm ... 26.2 mm	1411092	1411093
M32	23.7 mm ... 33.9 mm	1411094	1411095
M40	27.9 mm ... 40.4 mm	1411097	1411099
M50	40.4 mm ... 53.1 mm	1411100	1411101
M63	54.6 mm ... 65.9 mm	1411102	

Ex pressure compensation element

	Brass, nickel-plated	Stainless steel 1.4404
Thread	**Silver colored**	
M20	1411117	1411118
M25	1411120	1411121

Ex screw plugs

	Brass, nickel-plated	Stainless steel 316L
Thread	**Silver colored**	
M20	1411104	1411105
M25	1411107	1411108
M32	1411109	1411110
M40	1411111	1411112
M50	1411113	
M63	1411115	1411116

Cable feed-through plates

CES Multigates are metal-reinforced plates for cable feed-through. The cable feed-through plates provide you with numerous options for routing cables through a control cabinet panel with a tight seal. With CES Multigates, you can feed up to 37 unassembled cables into the control cabinet in a structured way using a single element. The cable entry plates are also suitable for outdoor applications.

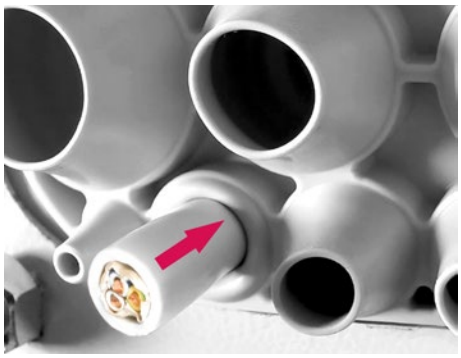
Your advantages

- Space-saving feed-through of up to 37 cables
- High degree of protection with the membrane seal
- Fast installation of unassembled cables
- Suitable for cable sizes from 5 mm to 60 mm
- Can also be mounted on the control cabinet base in combination with the module plate

More information about cable feed-through plates

Individually adjustable

To feed unassembled cables into the control cabinet, all you need to do is cut the CES Multigates cable seals open to the right diameter.



High degree of protection

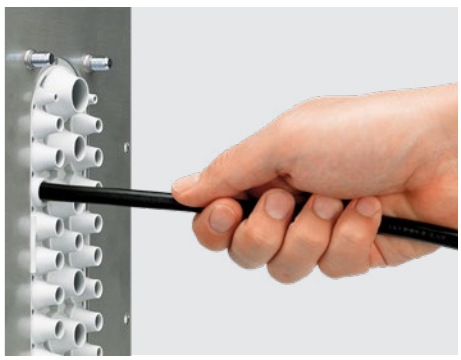
The double membrane seal protects your installation up to degree of protection IP66/IP67. The metal-reinforced plates also provide a reliable seal in outdoor applications.

Space-saving

CES Multigates offer space-saving feed-through for up to 37 cables using a single plate. The openings are methodically arranged and ensure orderly cable entry.

High variability

CES Multigates enable a high degree of flexibility as they can be used in various ways for cable sizes that are 5 to 60 mm in diameter, thereby covering a wide range of applications.



Flexible use

When used in combination with a module plate, CES Multigates can be mounted not only in the control cabinet panel, but on the control cabinet base as well.

For extreme conditions

The plates are flame-retardant (flammability rating V0, UL 94), oil-resistant (black material), and can be used at temperatures from -40 to +100°C.

Product overview – cable feed-through plates

CES Multigates cable feed-through, light gray, size 222 mm x 92 mm					
Number of cables	**7**	**25**	**27**	**35**	**37**
External cable diameter	1 x 30 mm ... 60 mm 4 x 10 mm ... 14 mm 2 x 24 mm ... 54 mm	4 x 5 mm ... 7 mm 4 x 8 mm ... 12 mm 12 x 10 mm ... 14 mm 4 x 14 mm ... 20 mm 1 x 20 mm ... 26 mm	4 x 5 mm ... 7 mm 4 x 8 mm ... 12 mm 13 x 10 mm ... 14 mm 4 x 14 mm ... 20 mm 2 x 20 mm ... 26 mm	2 x 6 mm ... 10 mm 14 x 8 mm ... 12 mm 16 x 10 mm ... 14 mm 2 x 12 mm ... 18 mm 1 x 17 mm ... 32 mm	4 x 6 mm ... 10 mm 14 x 8 mm ... 12 mm 16 x 10 mm ... 14 mm 2 x 12 mm ... 18 mm 1 x 17 mm ... 32 mm
Item no.	1415234	1422348	1415236	1422350	1415240

CES Multigates cable feed-through, black, oil-resistant in accordance with UL 157, size 222 mm x 92 mm					
Number of cables	**7**	**25**	**27**	**35**	**37**
External cable diameter	1 x 30 mm ... 60 mm 4 x 10 mm ... 14 mm 2 x 24 mm ... 54 mm	4 x 5 mm ... 7 mm 4 x 8 mm ... 12 mm 12 x 10 mm ... 14 mm 4 x 14 mm ... 20 mm 1 x 20 mm ... 26 mm	4 x 5 mm ... 7 mm 4 x 8 mm ... 12 mm 13 x 10 mm ... 14 mm 4 x 14 mm ... 20 mm 2 x 20 mm ... 26 mm	2 x 6 mm ... 10 mm 14 x 8 mm ... 12 mm 16 x 10 mm ... 14 mm 2 x 12 mm ... 18 mm 1 x 17 mm ... 32 mm	4 x 6 mm ... 10 mm 14 x 8 mm ... 12 mm 16 x 10 mm ... 14 mm 2 x 12 mm ... 18 mm 1 x 17 mm ... 32 mm
Item no.	1415235	1422349	1415237	1422351	1415241

CES B24 Multigates cable feed-through, black, size 154 mm x 56 mm			
Number of cables	**10**	**25**	**27**
External cable diameter	6 x 2 mm ... 8 mm 2 x 2 mm ... 18 mm 2 x 2 mm ... 30 mm	3 x 3 mm ... 6 mm 9 x 3 mm ... 7 mm 8 x 6 mm ... 9 mm 4 x 6 mm ... 12 mm 1 x 10 mm ... 20 mm	26 x 3 mm ... 6 mm 1 x 10 mm ... 20 mm
Item no.	1424584	1424582	1424583

CES cable feed-through plates

With CES Multigates, you can feed up to 37 unassembled cables and lines into the control cabinet without interruption using a single element. Various cone sleeves are attached to the metal-reinforced membrane plates. You can cut them out and use as required. This means that cable diameters from 5 to 60 mm are covered. The double membrane seal, which guarantees IP66/IP67 degree of protection, therefore provides reliable protection against the ingress of dust and moisture.

The cable feed-through plates offer significant space savings on the control cabinet by relocating the plug connection to the interior. With its robust and oil-resistant versions, the CES range features easy handling and high-level reliability. The extensive product range features the right feed-through for different cable types.

Modular cable entry system

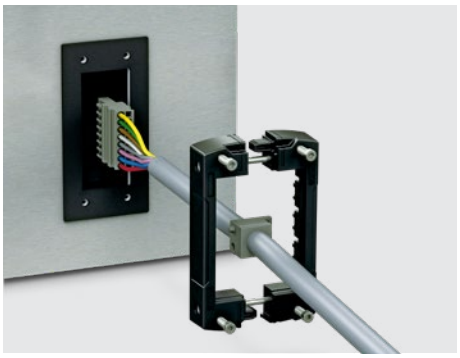
Cables can be clearly and systematically routed into the control cabinet with the CES modular cable entry system. Using cable seals that can be flexibly combined, you can mount or replace assembled and unassembled cables quickly.

The cable seals are available in various shapes and diameters. They are particularly robust, resisting even extreme environmental influences, and provide a reliable seal with IP54 degree of protection.

Your advantages

- Space savings in the control cabinet due to installation of the connector in the interior
- Easy handling: no special tools required
- High degree of safety, thanks to robust and oil-resistant designs
- Reliable seal, thanks to multi-area sleeves with strain relief
- Comprehensive product range with sleeves for a wide range of applications

More information about the cable feed-through system



Reliable seal and strain relief

The sealing frames, which can be split, provide a reliable seal and strain relief for preassembled cables in accordance with DIN EN 50262. The connectors are simply guided through the panel cutouts.

Variable mounting on standard panel cutouts

The CES sealing frames can be mounted directly on standard panel cutouts for industrial connectors. Snap-on frames simplify on-site installation.

Locking latch and screw locking mechanism

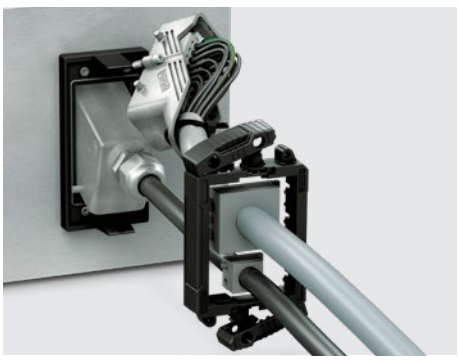
Choose between sealing frames which can be split with screw locking or locking latch. The locking latch does not require any tools, which makes it really quick and easy to mount, even in places that are difficult to access.

Sleeves for all requirements

Using the slotted sleeves, you can install and mount preassembled cables easily – even later on. In addition, cone sleeves that can be cut to size flexibly are available. They seal a wide range of cable diameters up to IP65 degree of protection.

Robust cable seals

The gray thermoplastic sleeves feature a low level of flammability in accordance with UL 94 V0 and are resistant to acids and lyes. The NBR black rubber sleeves are resistant to fuels, oil, and grease and keep their elasticity even at low temperatures.



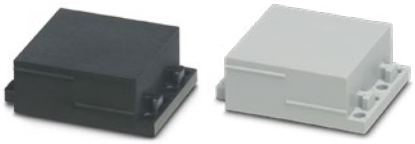
Ideal for industrial connectors

By widening the standard Rittal cutouts from 35 mm to 51 mm, even the rectangular HEAVYCON industrial connectors can be routed through mounting panels and sealed.

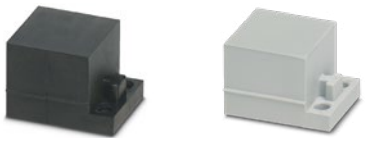
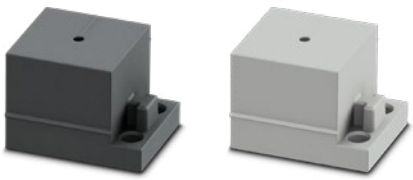
Product overview – cable entry system

Sealing frames for cable seals				
	Description	**Number of cable seals**	**Design**	**Item no.**
	Snap-on frames		B10	0801655
			B16	0801651
			B24	0801647
	Sealing frames with locking latch	6	B10	0801663
		8	B16	0801662
		10	B24	0801661
	Sealing frames with screw locking mechanism	6	B10	0801660
		8	B16	0801659
		10	B24	0801658
	Sealing frames with cone-shaped cable seals and screw locking mechanism	8	B16	1411073
		10	B24	1411074

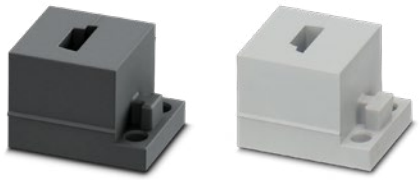
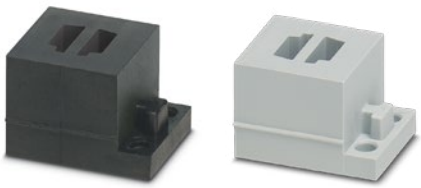
Product overview – cable entry system

Cable seals, large				
	Number of cables	External cable diameter	NBR (rubber), black	SEBS (thermoplastics), gray
	0		0801671	0801716
	1	14.0 mm ... 15.0 mm	0801619	0801687
		15.0 mm ... 16.0 mm	0801621	0801688
		16.0 mm ... 17.0 mm	0801624	0801689
		17.0 mm ... 18.0 mm	0801626	0801690
		18.0 mm ... 19.0 mm	0801629	0801691
		19.0 mm ... 20.0 mm	0801631	0801692
		20.0 mm ... 21.0 mm	0801634	0801693
		21.0 mm ... 22.0 mm	0801637	0801695
		22.0 mm ... 23.0 mm	0801638	0801696
		23.0 mm ... 24.0 mm	0801639	0801697
		24.0 mm ... 25.0 mm	0801640	0801698
		25.0 mm ... 26.0 mm	0801643	0801699
		26.0 mm ... 27.0 mm	0801644	0801700
		27.0 mm ... 28.0 mm	0801646	0801701
		28.0 mm ... 29.0 mm	0801648	0801702
		29.0 mm ... 30.0 mm	0801650	0801703
		30.0 mm ... 31.0 mm	0801653	0801705
		31.0 mm ... 32.0 mm	0801654	0801706
		32.0 mm ... 33.0 mm	0801656	0801707

Product overview – cable entry system

Cable seals, small				
	Number of cables	External cable diameter	NBR (rubber), black	SEBS (thermoplastics), gray
	0		0801670	0801715
	1	1.0 mm ... 2.0 mm	0801635	0801672
		2.0 mm ... 3.0 mm	0801633	0801673
		3.0 mm ... 4.0 mm	0801632	0801674
		4.0 mm ... 5.0 mm	0801630	0801675
		5.0 mm ... 6.0 mm	0801628	0801676
		6.0 mm ... 7.0 mm	0801627	0801677
		7.0 mm ... 8.0 mm	0801625	0801679
		8.0 mm ... 9.0 mm	0801622	0801680
		9.0 mm ... 10.0 mm	0801620	0801682
		10.0 mm ... 11.0 mm	0801618	0801683
		11.0 mm ... 12.0 mm	0801617	0801684
		12.0 mm ... 13.0 mm	0801616	0801685
		13.0 mm ... 14.0 mm	0801615	0801686
		13.9 mm ... 14.2 mm		1410521
		14.0 mm ... 15.0 mm	1410563	
		14.9 mm ... 15.2 mm		1410534
		15.0 mm ... 16.0 mm	1410576	
		15.9 mm ... 16.2 mm		1410547
		16.0 mm ... 17.0 mm	1410589	
	2	2.0 mm ... 3.0 mm	1410398	
		2.4 mm ... 2.7 mm		1410424
		3.0 mm ... 4.0 mm	1410408	
		3.4 mm ... 3.7 mm		1410438
		4.0 mm ... 5.0 mm	0801657	0801708
		5.0 mm ... 6.0 mm	0801664	0801709
		6.0 mm ... 7.0 mm	1410084	
		6.4 mm ... 6.7 mm		1410110
		7.0 mm ... 8.0 mm	1410097	
		7.4 mm ... 7.7 mm		1410123
		8.0 mm ... 9.0 mm	1410411	
		8.4 mm ... 8.7 mm		1410440
	4	2.0 mm ... 3.0 mm	0801665	0801710
		3.0 mm ... 4.0 mm	0801666	0801711
		4.0 mm ... 5.0 mm	1410107	
		4.4 mm ... 4.7 mm		1410136
		5.0 mm ... 6.0 mm	1410152	
		5.4 mm ... 5.7 mm		1410149

Product overview – cable entry system

Cable seals, small, for AS-Interface cables				
	Number of cables	**Cable profile**	**NBR (rubber), black**	**SEBS (thermoplastics), gray**
	1	Right	0801667	0801712
		Left	1410042	1410068
	2	Left Right	0801669	0801714
		Right Right	0801668	0801713
		Left Left	1410055	1410071

Cone sleeves			
	Number of cables	**External cable diameter**	**NBR (rubber), black**
	1	2.0 mm ... 11.0 mm	0801718
		7.0 mm ... 24.0 mm	0801719

Cable protection and cable routing

2

Various cable ducts, cable guiding systems, and cable ties are available for clear and structured cable routing. To additionally protect your cables from external influences like weather conditions, use the various protective hoses as cable protection. This also provides greater clarity and safety for your cable routing.

Cable guiding system

The Cable Guiding System (CGS) enables simple and safe cable routing to the control cabinet door or to mounting frames that can be swiveled.

› More information starting on page 28

Cable ties and cable twist ties

Cable ties are a quick and easy way to bundle cables and conductors. Different versions also enable the cable bundles to be fixed in place.

› More information starting on page 30

Protective hoses

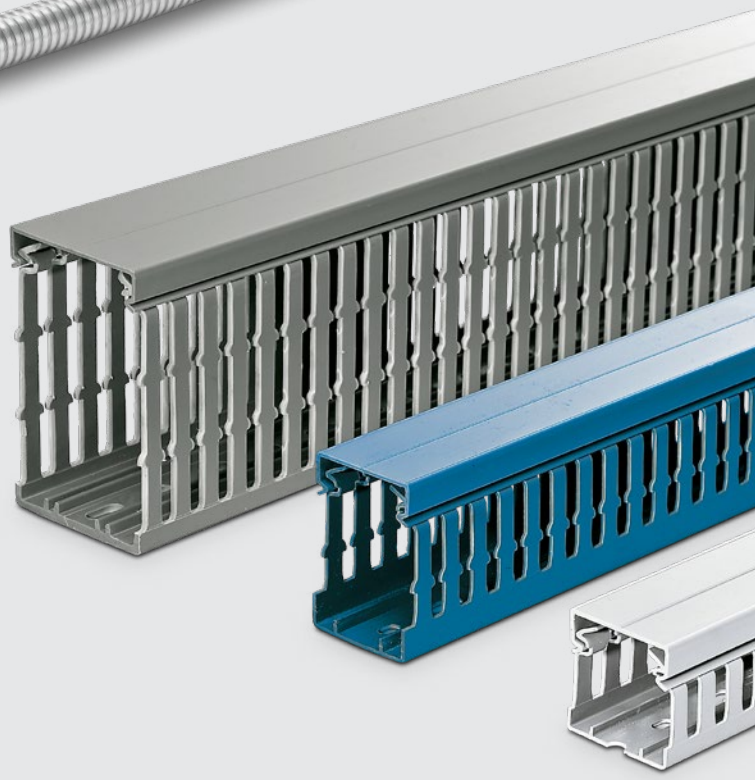
The protective hoses protect the cables from external influences such as weather conditions. With the various materials, the hoses can be used in diverse environments.

› More information starting on page 36

Cable ducts

The cable ducts ensure clear and fast control cabinet cabling by enabling the orderly cabling of cables and cable harnesses.

› More information starting on page 44



Cable guiding system

The CGS cable guiding system is suitable for clear and structured cable routing to the control cabinet door or to mounting panels that can be swiveled. With a simple swivel arm, the conductors and cables are neither kinked nor pinched when opening and closing the control cabinet.

Your advantages

- Easy cable routing with an innovative swivel joint
- Fast subsequent wiring with the tool-free swivel joint openings
- Cable routing for the control cabinet door can be planned using the CAD system
- Easy mounting with integrated flanges with strain relief

More information about the cable guiding system

Cable guiding system

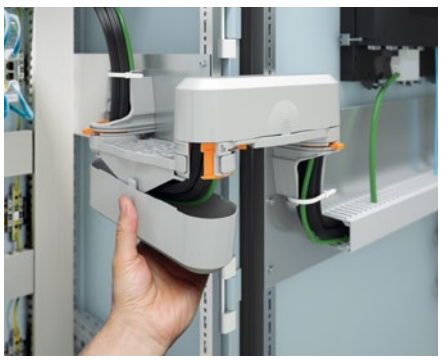
The swivel arm of the cable guiding system makes it particularly easy and safe to install your conductors, cables, and cable harnesses for the control cabinet door or swivel mounting frame. The CGS cable guiding system is particularly time-saving, as the orange swivel joints can be opened tool-free, allowing preassembled cables to be fed through or re-routed without tools. Up to 100 x 1.5 mm² conductors are routed to the control cabinet door using a single CGS cable guiding system.

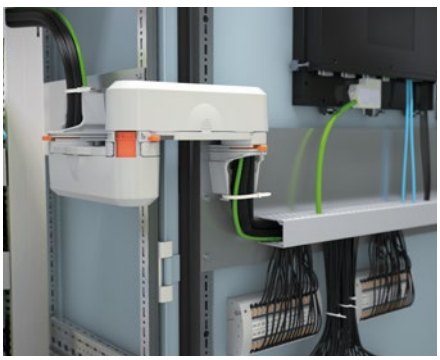
In contrast to cable conduits, the CGS cable guiding system also simplifies your design work, because it can be planned and visualized in the CAD system. Cable lengths are therefore predefined and can also be planned. Integrated flanges simplify mounting compared to the use of cable conduits.

The integrated strain relief of the cable guiding system is ensured using conventional cable binders. Additional strain relief is not required.

Standard of quality

The cable guiding system has been designed for use with standard cables. This is made possible by using large bending radii and defined movements. The CGS was assembled with 100 x 1.5 mm² cables (H05Z-K) and data cables (Cat. 5 Ethernet cables) and was opened and closed 2,000 times. There was no damage found on the wires.





CGS cable guiding system			
Item no.	3071401	3071400	3071410
Description	Cable guiding system, with swivel joint for opening, depth: 140.5 mm, width: 68 mm, height: 218 mm, diameter: 42 mm, color: gray	Cable guiding system, with closed swivel joint, depth: 140.5 mm, width: 68 mm, height: 218 mm, diameter: 42 mm, color: gray	Cover, packed in pairs, depth: 54.5 mm, width: 63 mm, height: 214 mm, color: gray

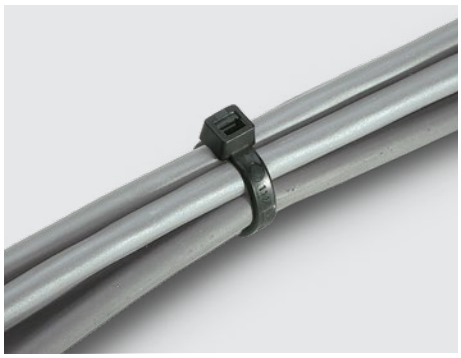
Cable ties and cable twist ties

The portfolio for simple and secure cable bundling is very versatile. In addition to plastic cable ties, it includes special cable ties for high temperatures and for UV and weather resistance. Stainless steel cable ties are also available for harsh ambient conditions. You also receive detectable cable ties specifically for the food, chemical, and pharmaceutical industries. For detachable cable bundles, you can use detachable cable ties or cable twist ties.

Your advantages

- High tensile strength
- Oil and chemical resistant cable tie versions
- UV and weatherproof versions
- Detachable and permanent cable bundles

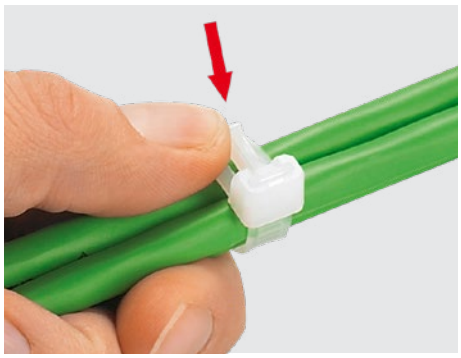
Cable tie versions



Cable bundling (permanent)

The simple cable ties are available in various materials and dimensions. Use the ties for the long-term bundling and fixing of cable harnesses and individual cables.

The cable ties are available as plastic PA 6.6 versions and in stainless steel versions. Depending on the model, the versions differ in tensile strength, temperature range, and UV resistance.



Cable ties (detachable)

The PA 6.6 plastic cable ties are also available as a detachable version in lengths of 200, 250, and 350 mm.

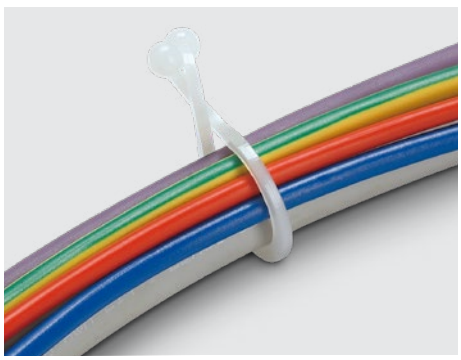
The detachable cable ties are particularly suitable for the temporary bundling and fastening of cable harnesses and individual cables.

In addition to temporary bundling, however, the ties are also suitable for long-term bundling.

Cable ties with fastening lug, PA 6.6

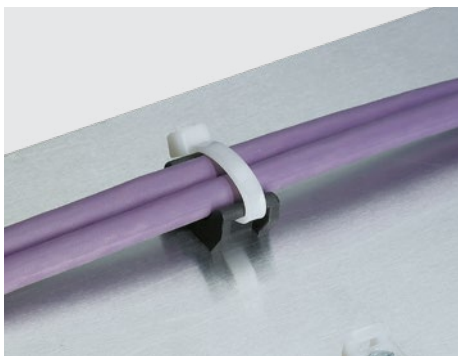
The cable ties with fastening lug are suitable primarily for fixing cables and cable harnesses.

After bundling, the ties can be fixed in any position via screws. This means that you do not have to rely on the surroundings or special accessories for fixing them.



Cable twist ties, PA 6.6

The cable twist ties are suitable for the quick bundling of individual cables and cable harnesses. Unlike the cable ties, the cable twist ties can be opened and closed quickly and easily. This makes it easy to remove cables and add new cables. The disadvantage of the cable twist tie is its static design. Due to their diameter and the twist mechanics, cable twist ties are bound to a certain diameter.



Cable tie bases

The cable tie bases enable cables and cable harnesses to be secured easily in a wide range of locations. The cable tie bases are available for various mounting types and hole widths.

Product overview – cable ties

Cable bundling (permanent), material PA 6.6								
Width x length	**Bundling diameter**	**Tensile strength**	**Ambient temperature**	**Bulk packaged**	**Heat stabilized up to 125°C**	**UV-resistant**	**Item no.**	
							Black	**Transparent**
2.5 mm x 98 mm	21 mm	80 N	-40°C ... 85°C				3240733	3240732
2.6 mm x 160 mm	40 mm						3240737	3240736
2.6 mm x 200 mm	52 mm						3240741	3240740
3.6 mm x 290 mm	80 mm	130 N					3240753	3240752
3.6 mm x 200 mm	50 mm						3240749	3240748
3.6 mm x 140 mm	35 mm						3240745	3240744
4.5 mm x 160 mm	40 mm	220 N					3240757	3240756
4.8 mm x 200 mm	50 mm						3240761	3240760
4.8 mm x 290 mm	79 mm						3240765	3240764
4.8 mm x 360 mm	100 mm						3240769	3240768
4.8 mm x 430 mm	115 mm						3240771	3240770
7.8 mm x 365 mm	100 mm	540 N					3240775	3240774
7.8 mm x 300 mm	80 mm						3240773	3240772
7.8 mm x 540 mm	158 mm						3240721	3240719
9 mm x 780 mm	233 mm	700 N					3240779	3240778
12.6 mm x 850 mm	143 mm	1080 N					3240731	3240730
12.6 mm x 1000 mm	302 mm						3240729	3240728
2.5 mm x 98 mm	21 mm	80 N	-40°C ... 105°C			Yes	3240831	
3.6 mm x 140 mm	35 mm	130 N					3240832	
3.6 mm x 200 mm	50 mm						3240833	
4.5 mm x 290 mm	79 mm	220 N					3240835	
4.5 mm x 200 mm	50 mm						3240834	
7.8 mm x 365 mm	100 mm	540 N					3240837	
2.5 mm x 98 mm	21 mm	80 N	-40°C ... 125°C		Yes		3240781	3240780
3.6 mm x 140 mm	35 mm	130 N					3240783	3240782
3.6 mm x 200 mm	50 mm						3240785	3240784
4.8 mm x 200 mm		220 N					3240787	3240786
4.8 mm x 290 mm	79 mm						3240789	3240788
7.8 mm x 365 mm	100 mm	540 N					3240793	3240792
2.5 mm x 98 mm	21 mm	80 N	-40°C ... 85°C	Yes			3240734	3240735
2.6 mm x 200 mm	52 mm						3240742	3240743
3.6 mm x 290 mm	80 mm	130 N					3240754	3240755
3.6 mm x 200 mm	50 mm						3240750	3240751
3.6 mm x 140 mm	35 mm						3240746	3240747
4.8 mm x 200 mm	50 mm	220 N					3240762	3240763

Product overview – cable ties

Cable bundling (permanent), material stainless steel 1.4401 / AISI 316					
Width x length	**Bundling diameter**	**Tensile strength**	**Ambient temperature**	**UV-resistant**	**Item no.** **Silver**
4.6 mm x 679 mm	203 mm	890 N	-80°C ... 538°C	Yes	3240825
4.6 mm x 520 mm	152 mm				3240824
4.6 mm x 360 mm	102 mm				3240823
4.6 mm x 259 mm	69 mm				3240822
4.6 mm x 201 mm	50 mm				3240821
4.6 mm x 150 mm	30 mm				3240820
4.6 mm x 1067 mm	305 mm				3240818
4.8 mm x 360 mm	254 mm	1335 N			3240766
7.6 mm x 380 mm		890 N			3240727
7.9 mm x 679 mm	203 mm	1335 N			3240830
7.9 mm x 520 mm	152 mm				3240829
7.9 mm x 360 mm	102 mm				3240828
7.9 mm x 259 mm	69 mm				3240827
7.9 mm x 1067 mm	305 mm				3240826

Cable bundling (permanent), stainless steel 1.4301 / AISI 304					
Width x length	**Bundling diameter**	**Tensile strength**	**Ambient temperature**	**UV-resistant**	**Item no.** **Silver**
4.6 mm x 679 mm	203 mm	890 N	-80°C ... 538°C	Yes	3240812
4.6 mm x 520 mm	152 mm				3240811
4.6 mm x 360 mm	102 mm				3240810
4.6 mm x 259 mm	69 mm				3240809
4.6 mm x 201 mm	50 mm				3240808
4.6 mm x 150 mm	30 mm				3240807
4.6 mm x 1067 mm	305 mm				3240805
4.6 mm x 838 mm	254 mm				3240723
7.9 mm x 679 mm	203 mm	1335 N			3240817
7.9 mm x 520 mm	152 mm				3240816
7.9 mm x 360 mm	102 mm				3240815
7.9 mm x 1067 mm	305 mm				3240813
7.9 mm x 838 mm	254 mm				3240725
7.9 mm x 259 mm	69 mm				3240814

Product overview – cable ties and cable twist ties

Cable ties, detachable, PA 6.6					
Width x length	**Bundling diameter**	**Tensile strength**	**Ambient temperature**	**Item no.**	
				Black	**Transparent**
7.5 mm x 350 mm	100 mm	220 N	-40°C ... 80°C	3240717	3240716
7.5 mm x 250 mm	65 mm			3240715	3240714
7.5 mm x 200 mm	50 mm			3240713	3240712

Cable ties with fastening lug, PA 6.6				
Width x length	**Bundling diameter**	**Tensile strength**	**Ambient temperature**	**Item no.**
				Transparent
3.6 mm x 150 mm	32 mm	130 N	-40°C ... 85°C	3240718
4.8 mm x 200 mm	50 mm	220 N		3240720
7.8 mm x 380 mm	104 mm	540 N		3240726
7.8 mm x 300 mm	75 mm			3240724
7.8 mm x 200 mm	44 mm			3240722

Cable ties, with molded body-bound rivet				
Width x length	**Bundling diameter**	**Tensile strength**	**Ambient temperature**	**Item no.**
				Transparent
3.6 mm x 150 mm	38 mm	130 N	-40°C ... 85°C	3240801
4.8 mm x 200 mm	50 mm	220 N		3240803

Cable twist ties, PA 6.6					
Width x length	**Bundling diameter**	**Tensile strength**	**Ambient temperature**	**Item no.**	
				Black	**Transparent**
7.6 mm x 23 mm	7.6 mm	0 N	-40°C ... 85°C	3241100	3241099
10.2 mm x 26 mm	10.2 mm			3241102	3241101
12.7 mm x 31 mm	12.7 mm			3241104	3241103
16 mm x 35 mm	16 mm			3241106	3241105
20.3 mm x 39 mm	20.3 mm			3241108	3241107

Product overview – cable tie bases

Cable tie bases					
Width x length	**Bundling diameter**	**Tensile strength**	**Ambient temperature**	**Item no.**	
				Black	**Transparent**
9.5 mm x 15 mm	15 mm	220 N	-40°C ... 85°C	3240703	3240702
13 mm x 20 mm	20 mm		-10°C ... 65°C	3240710	
14.6 mm x 23 mm	22.5 mm	700 N	-40°C ... 85°C	3240705	3240704
19 mm x 19 mm	19 mm	220 N	-40°C ... 60°C	3240707	3240706
20.5 mm x 10 mm	20.5 mm		-40°C ... 85°C		3240711
27 mm x 27 mm	27 mm		-40°C ... 60°C	3240709	3240708

Protective hoses

With its comprehensive range of plastic and metal protective hoses, Phoenix Contact offers reliable solutions for a wide range of applications. Even under extreme temperature influences, (e.g., when used with welding robots) and with degrees of protection up to IP69K, the reliable protection of conductors and cables is therefore ensured.

Your advantages

- Cable protection for all requirements, from cable bundling to watertight versions
- Suitable screw connections for heavy-duty connectors and housing bore holes
- Can be used in all sectors and industries due to their comprehensive approvals

More information about cable routing and cable protection

Reliable in every application

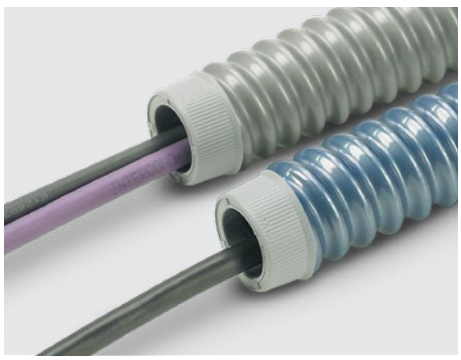
Cable protection systems from Phoenix Contact satisfy all the necessary standards in order to ensure absolute safety even under extreme conditions. Flame-retardant versions, versions that are resistant to chemicals, and explosion-protected versions are available for your specific requirements.

Protective hose screw connections

In addition to cable glands, Phoenix Contact offers screw connections for protective hoses for fast tool-free mounting with vibration-resistant, automatic latching. They are available with metric or Pg threads, in straight or angled versions, made from plastic or stainless steel.

Plastic hoses

Plastic hoses are resistant to oils, acids, and solvents. The materials used are free from silicone, halogen, and cadmium and feature up to IP69K degree of protection and flammability rating V0.



PVC and PU hoses

Plastic hoses with soft PVC or PU-coated spring wire helix are highly flexible, very robust, and protected against a wide range of extreme environmental influences. PU hoses are resistant to oil and gasoline, and free from silicone, halogen, and cadmium.

Metal hoses

Metal hoses made from galvanized steel or stainless steel are watertight and weatherproof. They are also suitable for use in the Ex area in accordance with EN 60079-14 and EN 61241-14.

Spiral tubes

Spiral tubes for the easy bundling and routing of cables and conductors offer protection in the case of minimal mechanical strain. They can be easily retrofitted; the individual cables and conductors can be brought out of the structure at any point.

Product overview – protective hoses

Protective hoses				
		PA, slotted	PA 6 - V0	PA 6 - HB
Outside diameter	**Inside diameter**	**Black**		
10 mm	6.5 mm		3240680	3240838
13 mm	10 mm		3240681	3240839
15.8 mm	12 mm		3240682	3240840
21.2 mm	16.5 mm	3240845	3240683	3240841
28.5 mm	23 mm	3240846	3240684	3240842
34.5 mm	29 mm	3240847	3241088	3240843
42.5 mm	36 mm	3240848	3241089	3240844
54.5 mm	48 mm		0803381	
		PVC-sheathed spring steel	PUR-sheathed spring steel	Steel, galvanized / PVC
Outside diameter	**Inside diameter**	**Gray**	**Blue**	**Black**
10 mm	7 mm	3240849	3240856	3240867
14 mm	10 mm	3240850	3240857	3240868
17 mm	13 mm	3240851	3240858	3240869
21 mm	16 mm	3240852	3240859	3240870
27 mm	22 mm	3240853	3240860	3240871
36 mm	29 mm	3240854	3240861	3240872
45 mm	38 mm	3240855	3240862	3240873
		Steel, galvanized	Stainless steel	
Outside diameter	**Inside diameter**	**Silver colored**		
10 mm	8 mm	3240697	3240686	
14 mm	11 mm	3240865	3240687	
17 mm	14 mm	3240698	3240863	
21 mm	18 mm	3240699	3240688	
27 mm	23 mm	3240866	3240864	
36 mm	31 mm	3240700	3240689	
45 mm	40 mm	3240701	3240690	

Product overview – end sleeves

End sleeves for protective hoses with uncoated spirals and steel			
	End sleeve		
	PP	Brass	Brass, nickel-plated
Outside diameter	**Gray**	**Silver colored**	
10 mm	3241016	3241072	3241065
14 mm	3241017	3241073	3241066
17 mm	3241018	3241074	3241067
21 mm	3241019	3241075	3241068
27 mm	3241020	3241076	3241069
36 mm	3241021	3241077	3241070
45 mm	3241022	3241078	3241071

Transition and end sleeves for PA protective hoses		
	Transition sleeve	End sleeve
	TPE	PA 6
Outside diameter	**Black**	
10 mm	3240974	3240981
13 mm	3240975	3240982
15.8 mm	3240976	3240983
21.2 mm	3240977	3240984
28.5 mm	3240978	3240985
34.5 mm	3240979	3240986
42.5 mm	3240980	3240987

Product overview – protective hose screw connections

Screw connections for PA protective hoses							
		PA 6					
		Straight				Angled	
				With strain relief			
Outside diameter	**Thread**	**IP66**	**IP68 / IP69K**	**IP66**	**IP68 / IP69K**	**IP66**	**IP68 / IP69K**
10 mm	M10	3240895	3240881			3240923	3240909
	M12			3240952	3240938		
13 mm		3240896	3240882			3240924	3240910
	M16			3240953	3240939	3240925	
15.8 mm		3240897	3240883				3240911
	M20			3240954	3240940	3240926	
21.2 mm		3240898	3240884				3240912
	M25			3240955	3240941	3240927	
28.5 mm		3240899	3240885				3240913
	M32			3240956	3240942	3240928	
34.5 mm		3240900	3240886				3240914
	M40			3240957	3240943	3240929	
42.5 mm		3240901	3240887				3240915
10 mm	Pg7	3240888	3240874	3240944	3240930	3240916	3240902
13 mm	Pg9	3240889	3240875	3240945		3240917	3240903
15.8 mm	Pg11	3240890	3240876	3240946		3240918	3240904
21.2 mm	Pg16	3240891	3240877	3240947	3240933	3240919	3240905
28.5 mm	Pg21	3240892	3240878	3240948	3240934	3240920	3240906
34.5 mm	Pg29	3240893	3240879	3240949	3240935	3240921	3240907
42.5 mm	Pg36	3240894		3240950	3240936	3240922	3240908

Product overview – protective hose screw connections

Screw connections for protective hoses with uncoated spirals, made of steel and stainless steel						
		Brass, nickel-plated			PP	
		Straight				
				Can be rotated		Can be rotated
Outside diameter	**Thread**	**IP40**	**IP65**	**IP40**	**IP65**	**IP54**
10 mm	M10	3241044	3241058		3240995	
	M12					3241010
14 mm		3241045	3241059	3241031	3240996	
	M16					3241011
17 mm		3241046	3241060	3241032	3240997	
	M20					3241012
21 mm		3241047	3241061	3241033	3240998	
	M25					3241013
27 mm		3241048	3241062	3241034	3240999	
	M32					3241014
36 mm		3241049	3241063	3241035	3241000	
	M40					3241015
45 mm		3241050	3241064	3241036	3241001	
10 mm	Pg7	3241037	3241051	3241023	3240988	3241002
14 mm	Pg9	3241038		3241024	3240989	3241003
17 mm	Pg11	3241039	3241053	3241025	3240990	3241004
21 mm	Pg16	3241040	3241054	3241026	3240991	3241005
27 mm	Pg21	3241041	3241055	3241027	3240992	3241006
36 mm	Pg29	3241042	3241056	3241028	3240993	3241007
45 mm	Pg36	3241043	3241057		3240994	3241008

Product overview – protective hose accessories

Locking nuts for screw connections		
	PA, glass-fiber reinforced	Brass, nickel-plated
Thread	**Gray**	**Silver colored**
M10		3241145
M12	3241132	3241146
M16	3241133	3241147
M20	3241134	3241148
M25	3241135	3241149
M32	3241136	3241150
M40	3241137	3241151
Pg7	3241138	3241152
Pg9	3241139	3241153
Pg11	3241140	3241154
Pg16	3241141	3241155
Pg21	3241142	3241156
Pg29	3241143	3241157
Pg36	3241144	3241158

Spiral tubes		
Bundling diameter	**Transparent**	**Black**
15 mm	3241109	3241110
20 mm	3241111	3241112
40 mm	3241113	3241114
50 mm	3241115	3241116
70 mm	3241117	3241118
80 mm	3241119	3241120
120 mm	3241121	3241122
150 mm	3241123	3241124

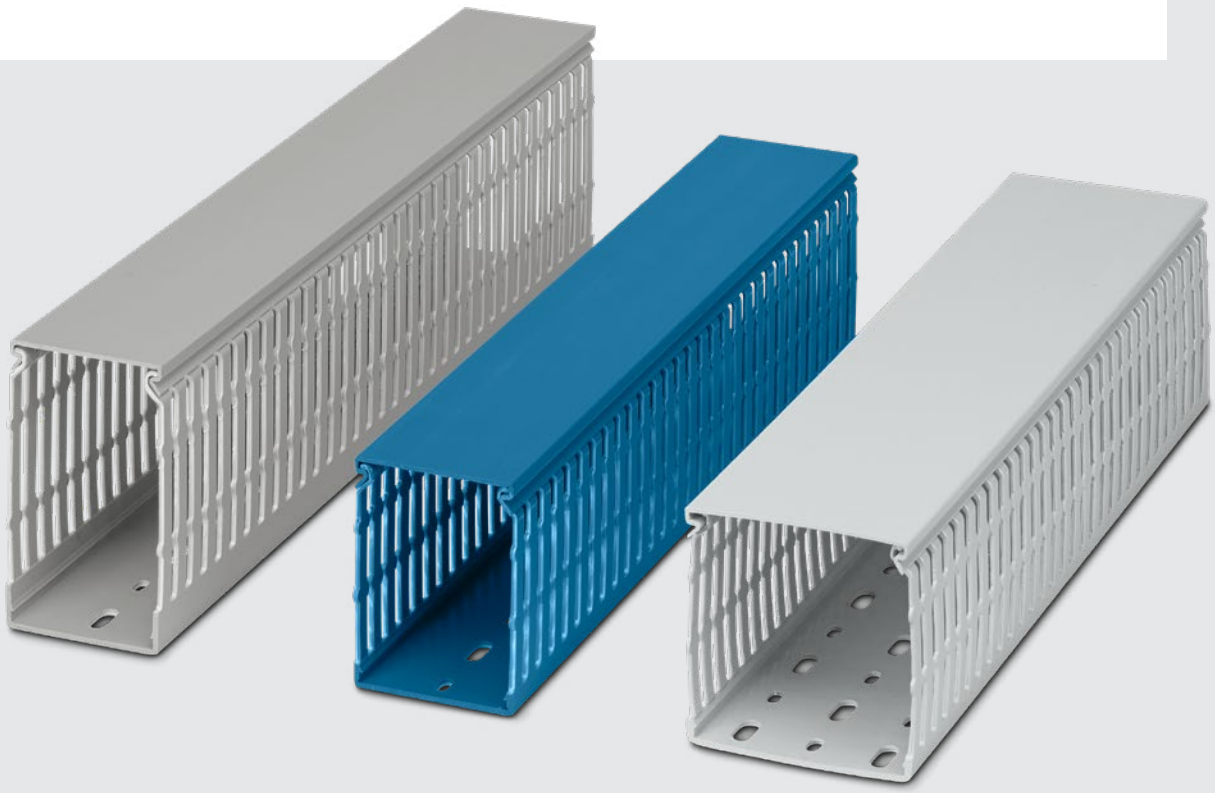
Product overview – protective hose accessories

Protective hose holders		
	Protective hose clip	Protective hose holder with cover
	Steel, galvanized	PA
Outside diameter	**Black/silver-colored**	**Black**
10 mm	3240965	3240958
13 mm	3240966	3240959
14 mm	3240967	
15.8 mm	3240968	3240960
17 mm	3240969	
21.2 mm		3240961
22 mm	3240970	
28.5 mm		3240962
29 mm	3240971	
34.5 mm		3240963
36 mm	3240972	
42.5 mm		3240964
45 mm	3240973	

Fixing bracket	
	Steel, galvanized
Thread	**Silver colored**
M16	3241083
M20	3241084
M25	3241085
M32	3241086
M40	3241087
Pg16	3241079
Pg21	3241080
Pg29	3241081
Pg36	3241082

Cable ducts

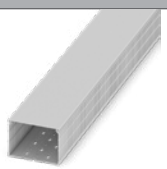
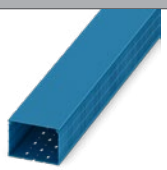
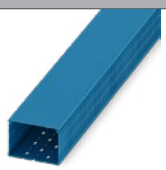
Use cable ducts to bring order to your control cabinet. The portfolio consists of different cable duct sizes, colors, and material types. Which cable duct is best suited for your application depends on the place of use, the number of conductors, and the dimensions of your control cabinet. The various cable ducts allow you to keep cables neatly organized.



Your advantages

- Clear control cabinet wiring
- Easy rewiring with the removable cover
- Easy cable entry with the lamellar design
- Fast assembly with direct mounting via screw
- Mechanical cable protection and bundling

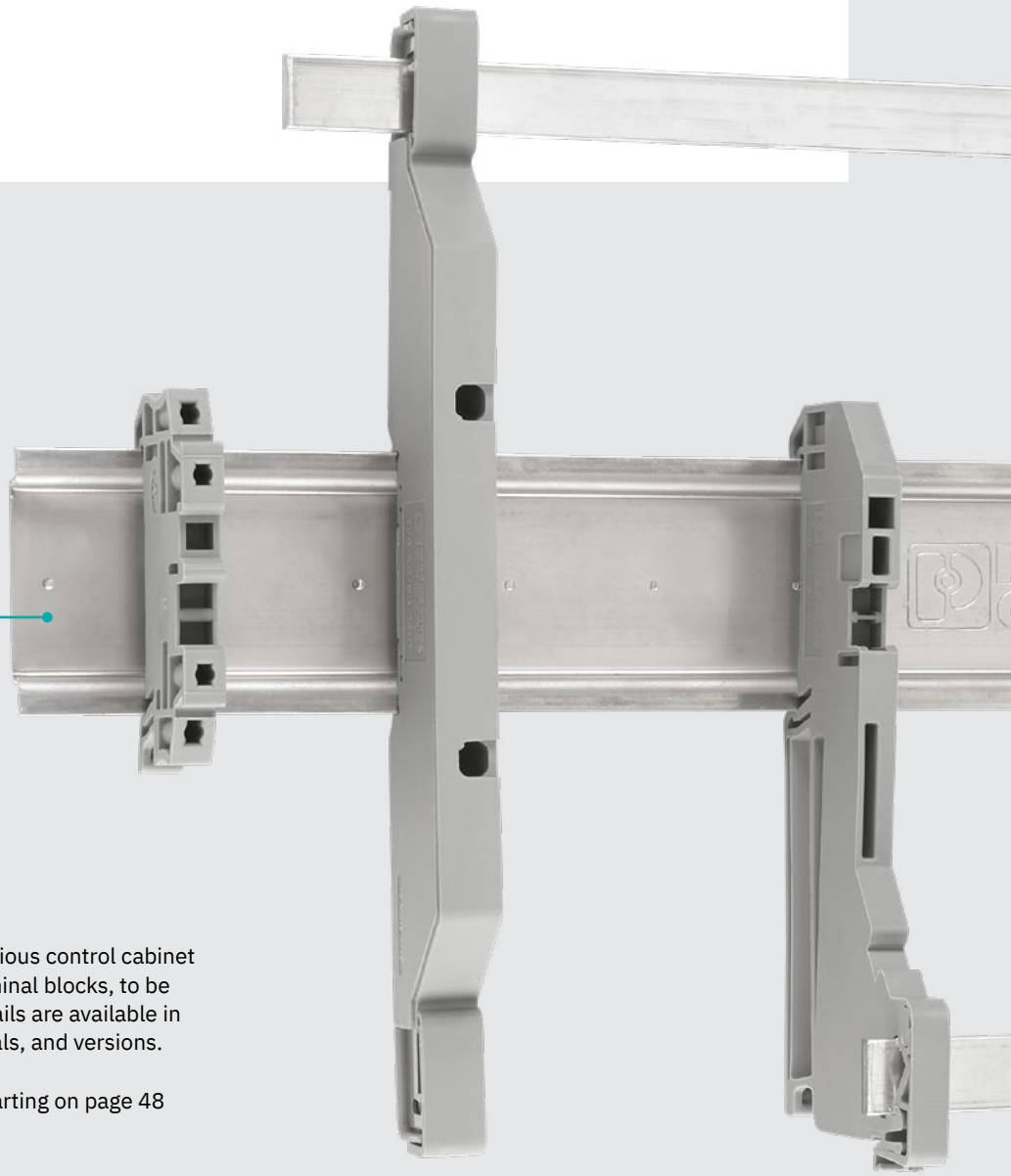
Product overview – cable ducts

Cable ducts					
					
Width x height	**Gray**	**Light gray, halogen-free**	**Blue**	**Blue, halogen-free**	**White**
120 mm x 80 mm	3240202	3240366	3240327	3240608	3240642
100 mm x 100 mm	3240205	3240364	3240325	3240606	3240640
100 mm x 80 mm	3240201	3240363	3240324	3240605	3240639
80 mm x 100 mm	3240264	3240360	3240321	3240602	3240636
80 mm x 80 mm	3240200	3240359	3240320	3240601	3240635
80 mm x 60 mm	3240194	3240358			
60 mm x 100 mm	3240263	3240355	3240316	3240597	3240631
60 mm x 80 mm	3240199	3240354	3240315	3240596	3240630
60 mm x 60 mm	3240193	3240353	3240314	3240595	3240629
60 mm x 40 mm	3240190	3240352			
40 mm x 100 mm	3240294	3240351	3240312	3240593	3240627
40 mm x 80 mm	3240198	3240350	3240311	3240592	3240626
40 mm x 60 mm	3240192	3240349	3240310		3240625
40 mm x 40 mm	3240189	3240348			
30 mm x 2000 mm					3240623
30 mm x 100 mm	3240283	3240347			
30 mm x 80 mm	3240282	3240346			
30 mm x 60 mm	3240280	3240345			
30 mm x 40 mm	3240278	3240344			
25 mm x 80 mm	3240197	3240343	3240304	3240585	3240619
25 mm x 60 mm	3240191	3240342	3240303	3240584	3240618
25 mm x 40 mm	3240188	3240341			
25 mm x 25 mm	3240187	3240340			

Mounting material

3

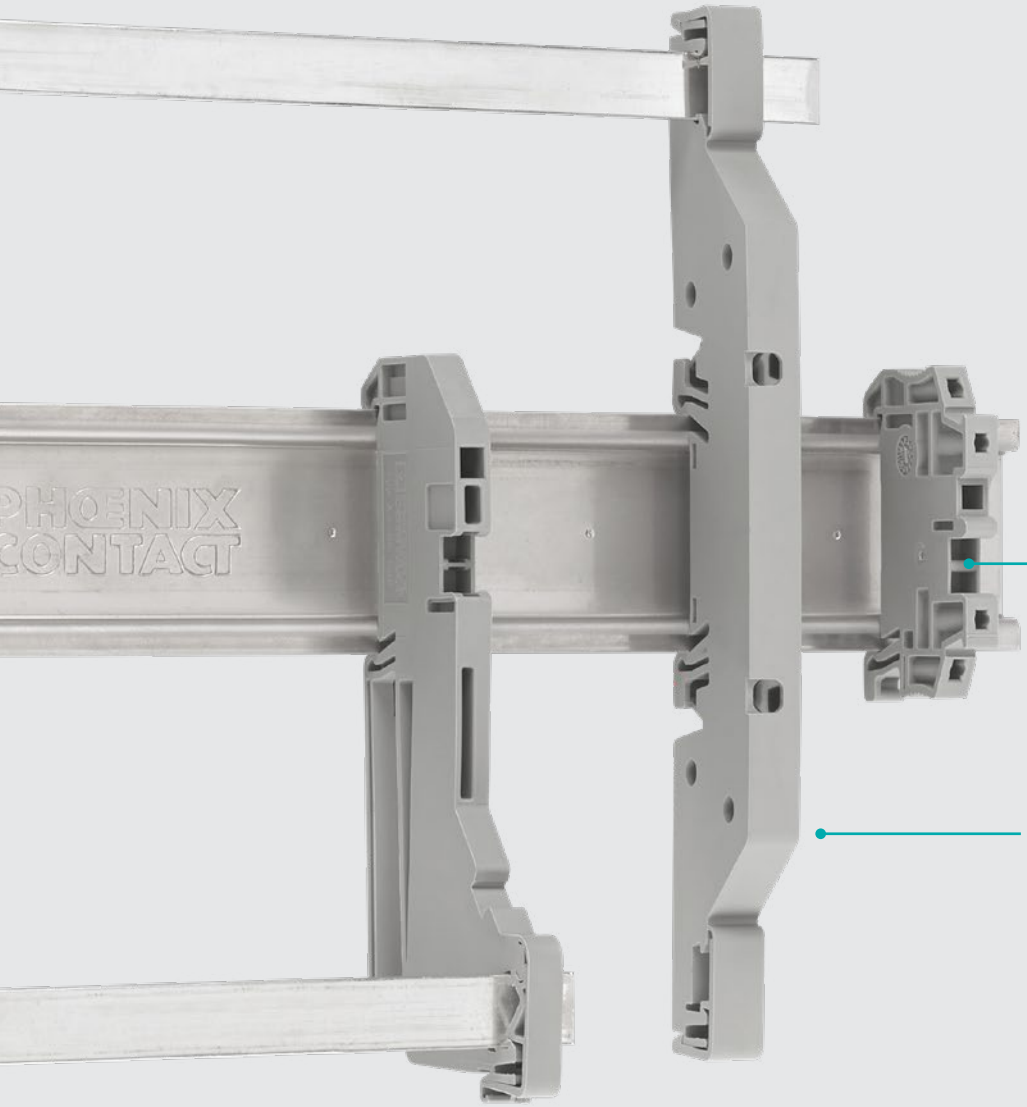
We offer a wide range of mounting materials for the control cabinet. Mount electrical connections and components securely and quickly with the appropriate mounting materials. Make optimum use of the available space in your control cabinet by combining mounting materials.



DIN rails

The DIN rails allow various control cabinet products, such as terminal blocks, to be accommodated. The rails are available in different sizes, materials, and versions.

› More information starting on page 48



End brackets

The end brackets secure the latched products from slipping sideways on the DIN rail. This reduces the associated conductor pull-out forces.

› More information starting on page 54

Support brackets

The support brackets allow easy installation of neutral busbars and can be mounted either directly on a mounting panel or on a DIN rail.

› More information starting on page 56

DIN rails

The standard DIN rail is a core product in the control cabinet. In addition to standard profiles such as NS 15 and NS 35 rails, our portfolio also includes special profiles, various materials, and surface qualities for a wide range of requirements.

Your advantages

- Standard DIN rails with high-level dimensional accuracy in accordance with DIN EN 60715
- Coated steel rails for indoor and outdoor applications
- Copper and aluminum rails with higher conductivity, can also be used as PE busbars
- Stainless steel rails for use in aggressive environments

More information about DIN rails

DIN rail types

The DIN rail portfolio is made up of various DIN rails with different profiles. Essentially, a distinction can be made between the top-hat profile, the C profile, and the G profile.

DIN rail with top-hat profile

These DIN rails are the most common versions. They are available in two sizes, NS 15 and NS 35. In addition, the NS 35 DIN rail is also available in two heights, of 7.5 mm and 15 mm. Depending on the DIN rail version, the top-hat rails are available in different materials. These include, for example, uncoated and galvanized steel, as well as copper and aluminum DIN rails. Furthermore, all versions, whether NS 15 or NS 35, are available with or without perforations. The elongated holes allow easy mounting of the assembled DIN rails. The standard elongated holes on the NS 15 DIN rails have a hole spacing of 20 mm from hole center to hole center. The elongated hole itself is 12.2 mm long and 4.2 mm wide, including the radii. The standard elongated holes on the NS 35 DIN rails have a hole spacing of 25 mm from hole center to hole center. The elongated hole itself is 15 mm long and 6.2 mm wide, including the radii.

Top-hat profile

C profile

G profile

G profile

The G-profile DIN rails are only available in the NS 32 size. The DIN rails are available in perforated or unperforated versions, but you can only choose different materials for the unperforated version. The unperforated version is also available in uncoated copper.

C profile

DIN rails with C profile are used only rarely today. For this reason, the DIN rail portfolio only includes one version. This version is an NS 30 DIN rail made of galvanized steel with elongated holes.

DIN rail (DIN rail NS 15)

Hole dimensions W x H	Length	Material	Designation	Item no.	Pcs./ Pkt.
12.2 mm x 4.2 mm	Configurable	Steel, galvanized, thick-layer passivated	NS 15 PERF/...	1208102	1
	2000 mm		NS 15 PERF 2000MM VPE 10	1401682	10
	2000 mm	Steel, galvanized, white passivated	NS 15 WH PERF 2000MM-VPE 10	1204096	10
	2000 mm	Aluminum, uncoated	NS 15 AL PERF 2000MM VPE 10	1401763	10
Unperforated	Configurable	Steel, galvanized, thick-layer passivated	NS 15 UNPERF/...	1208089	1
	Configurable		NS 15 UNPERF/SO/...	1208092	1
	2000 mm		NS 15 UNPERF 2000MM VPE 10	1401695	10

Product overview – DIN rails

DIN rail (DIN rail NS 35/7,5)					
Hole dimensions W x H	**Length**	**Material**	**Designation**	**Item no.**	**Pcs./ Pkt.**
15 mm x 6.2 mm	Configurable	Steel, galvanized, thick-layer passivated	NS 35/ 7,5 PERF/...	1208131	1
	755 mm		NS 35/ 7,5 PERF 755MM	1207640	10
	1000 mm		NS 35/ 7,5 PERF 1000MM	0807012	10
	1155 mm		NS 35/ 7,5 PERF 1155MM	1207666	10
	2000 mm		NS 35/ 7,5 PERF 2000MM	0801733	25
	2000 mm		NS 35/ 7,5 PERF 2000MM VPE 10	0843103	10
	2000 mm	Steel, galvanized	NS 35/ 7,5 ZN PERF 2000MM	1206421	25
	2000 mm		NS 35/ 7,5 ZN PERF 2000MM VPE 10	0843118	10
	2000 mm	Steel, galvanized, white passivated	NS 35/ 7,5 WH PERF 2000MM	1204119	25
	2000 mm		NS 35/ 7,5 WH PERF 2000MM VPE 10	0843116	10
	2000 mm	Aluminum, uncoated	NS 35/ 7,5 AL PERF 2000MM	0814681	25
	2000 mm		NS 35/ 7,5 AL PERF 2000MM VPE 10	0843107	10
18 mm x 5.2 mm	2000 mm	Steel, galvanized	NS 35/ 7,5 ZN PERF (18X5,2) 2M	0804278	25
	2000 mm	Steel, galvanized, thick-layer passivated	NS 35/ 7,5 PERF (18X5,2)2000MM	1210019	25
	2000 mm		NS 35/ 7,5 PERF (18X5,2)2000MM-VPE 10	0843111	10
25 mm x 5.2 mm	2000 mm	Steel, galvanized, white passivated	NS 35/ 7,5 WH PERF(5,2X25)2000MM-VPE 10	1206418	10
Unperforated	Configurable	Steel, galvanized, thick-layer passivated	NS 35/ 7,5 UNPERF/...	1208115	1
	Configurable		NS 35/ 7,5 UNPERF/SO/...	1208128	1
	1000 mm		NS 35/ 7,5 UNPERF 1000MM	1207649	20
	2000 mm		NS 35/ 7,5 UNPERF 2000MM	0801681	25
	2000 mm		NS 35/ 7,5 UNPERF 2000MM VPE 10	0843101	10
	2000 mm	Steel, galvanized, white passivated	NS 35/ 7,5 WH UNPERF 2000MM-VPE 10	1204122	10
	2000 mm	Aluminum, uncoated	NS 35/ 7,5 AL UNPERF 2000MM	0801704	25
	2000 mm		NS 35/ 7,5 AL UNPERF 2000MM VPE 10	0843102	10
	2000 mm	Copper, uncoated	NS 35/ 7,5 CU UNPERF 2000MM-VPE 10	0801762	10
	2000 mm	Steel, galvanized	NS 35/ 7,5 ZN UNPERF 2000MM	1206434	25
	2000 mm		NS 35/ 7,5 ZN UNPERF 2000MM VPE 10	0843119	10
	2000 mm	Stainless steel V2A, uncoated	NS 35/ 7,5 V2A UNPERF 2000MM	0801377	25
	2000 mm		NS 35/ 7,5 V2A UNPERF 2000MM VPE 10	0843100	10

DIN rail (C rail)					
Hole dimensions W x H	**Length**	**Material**	**Designation**	**Item no.**	**Pcs./ Pkt.**
15 mm x 6.2 mm	2000 mm	Steel, galvanized	NS 30/15 PERF 2000MM VPE 10	3240262	10

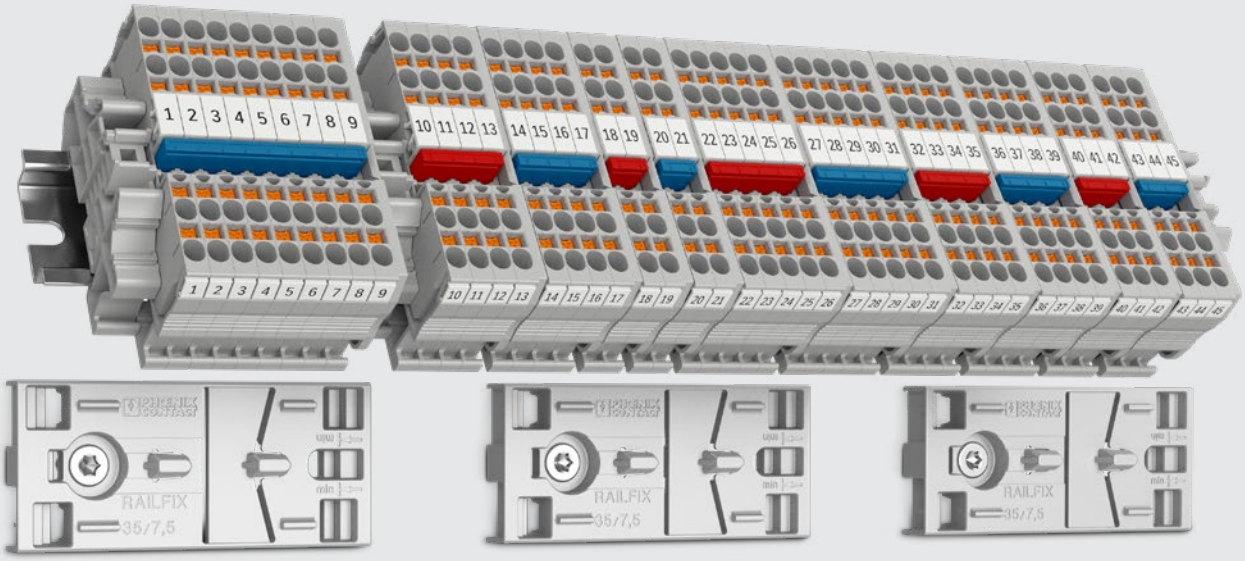
Product overview – DIN rails

DIN rail (DIN rail NS 35/15)					
Hole dimensions W x H	**Length**	**Material**	**Designation**	**Item no.**	**Pcs./ Pkt.**
15 mm x 6.2 mm	Configurable	Steel, galvanized, thick-layer passivated	NS 35/15 PERF/...	1208160	1
	755 mm		NS 35/15 PERF 755MM	1207679	10
	955 mm		NS 35/15 PERF 955MM	1207682	10
	1000 mm		NS 35/15 PERF 1000MM	1207658	10
	1155 mm		NS 35/15 PERF 1155MM	1207695	10
	2000 mm		NS 35/15 PERF 2000MM	1201730	25
	2000 mm	Steel, galvanized	NS 35/15 ZN PERF 2000MM	1206599	25
	2000 mm	Steel, galvanized, white passivated	NS 35/15 WH PERF 2000MM	0806602	25
	2000 mm		NS 35/15 WH PERF 2000MM VPE 10	0843108	10
18 mm x 5.2 mm	2000 mm	Steel, galvanized	NS 35/15 ZN PERF(18X5,2)2000MM	3240571	25
	2000 mm	Steel, galvanized, thick-layer passivated	NS 35/15 PERF (18X5,2) 2000MM-VPE 10	1210006	10
25 mm x 5.2 mm	2000 mm	Steel, galvanized, white passivated	NS 35/15 WH PERF(5,2X25)2000MM	1206476	25
Unperforated	Configurable	Steel, galvanized, thick-layer passivated	NS 35/15 UNPERF/...	1208144	1
	Configurable		NS 35/15 UNPERF/SO/...	1208157	1
	1000 mm		NS 35/15 UNPERF 1000MM	1207655	20
	2000 mm		NS 35/15 UNPERF 2000MM	1201714	25
	Configurable	Aluminum, uncoated	NS 35/15 AL UNPERF/...	1210213	1
	2000 mm		NS 35/15 AL UNPERF 2000MM	1201756	5
	2000 mm	Copper, uncoated	NS 35/15 CU UNPERF 2000MM-VPE 10	1201895	10
	2000 mm	Steel, galvanized, white passivated	NS 35/15 WH UNPERF 2000MM-VPE 10	1204135	10
	2000 mm	Steel, galvanized	NS 35/15 ZN UNPERF 2000MM	1206586	25
	2000 mm	Steel, galvanized, thick-layer passivated	NS 35/15-2,3 UNPERF 2000MM-VPE 10	1201798	10

DIN rail (G rail)					
Hole dimensions W x H	**Length**	**Material**	**Designation**	**Item no.**	**Pcs./ Pkt.**
15 mm x 6.2 mm	2000 mm	Steel, galvanized, thick-layer passivated	NS 32 PERF 2000MM-VPE 10	1201002	10
Unperforated	Configurable		NS 32 UNPERF/...	1208173	1
	Configurable		NS 32 UNPERF/SO/...	1208186	1
	2000 mm		NS 32 UNPERF 2000MM-VPE 10	1201015	10
	2000 mm	Steel, galvanized, white passivated	NS 32 WH UNPERF 2000MM-VPE 10	1204106	10
	2000 mm	Copper, uncoated	NS 32 CU/35QMM UNPERF 2000MM-VPE 10	1201358	10
	2000 mm	Aluminum, uncoated	NS 32 AL UNPERF 2000MM	1201028	5

RailFIX DIN rail adapters

The RailFIX DIN rail adapters make it quick and easy to mount fully assembled terminal strips. To secure the DIN rails, the RailFIX adapters are first attached to the mounting panel. Then the assembled DIN rails just have to be inserted onto the adapters and secured. This type of mounting does not require any space between the terminal blocks and eliminates the need for time-consuming post assembly work.



Your advantages

- Increased efficiency in the overall control cabinet mounting process
- Quick and easy mounting of fully assembled DIN rails
- No spare room required for DIN rail mounting
- No subsequent assembly after DIN rail mounting required
- Easy mounting with standard screwdriver

Further information on the DIN rail adapters

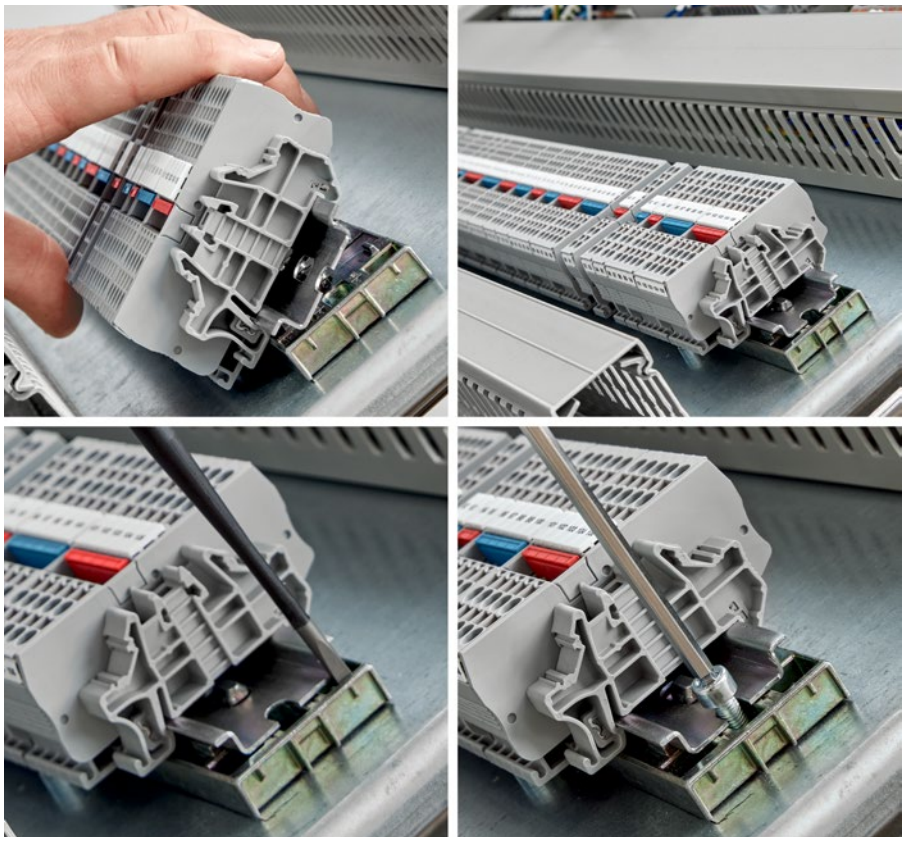
DIN rail mounting with RailFIX adapters

To mount the fully assembled DIN rails, the RailFIX adapters are first attached to the mounting panel. To save time, this step can be performed in parallel to the assembly.

Once the adapters have been secured and the DIN rail is ready for mounting, the fully equipped DIN rail is placed on the adapter. To do this, the elongated holes of the DIN rail are threaded onto the RailFIX adapters using the guide elements. In the same step, the DIN rail is moved manually to the left under the fixing hooks. The DIN rail is therefore temporarily protected against falling.

To ensure that the DIN rail actually clamps tightly under the locking clip, the DIN rail is levered under the hooks using a screwdriver, right through to the applied marking. Mounting slots on the adapters are provided for easy implementation.

For final mounting and for securing against lateral slipping of the DIN rail, an M5 screw is screwed into the threaded hole on the right-hand side of the top of the DIN rail at the last RailFIX adapter.



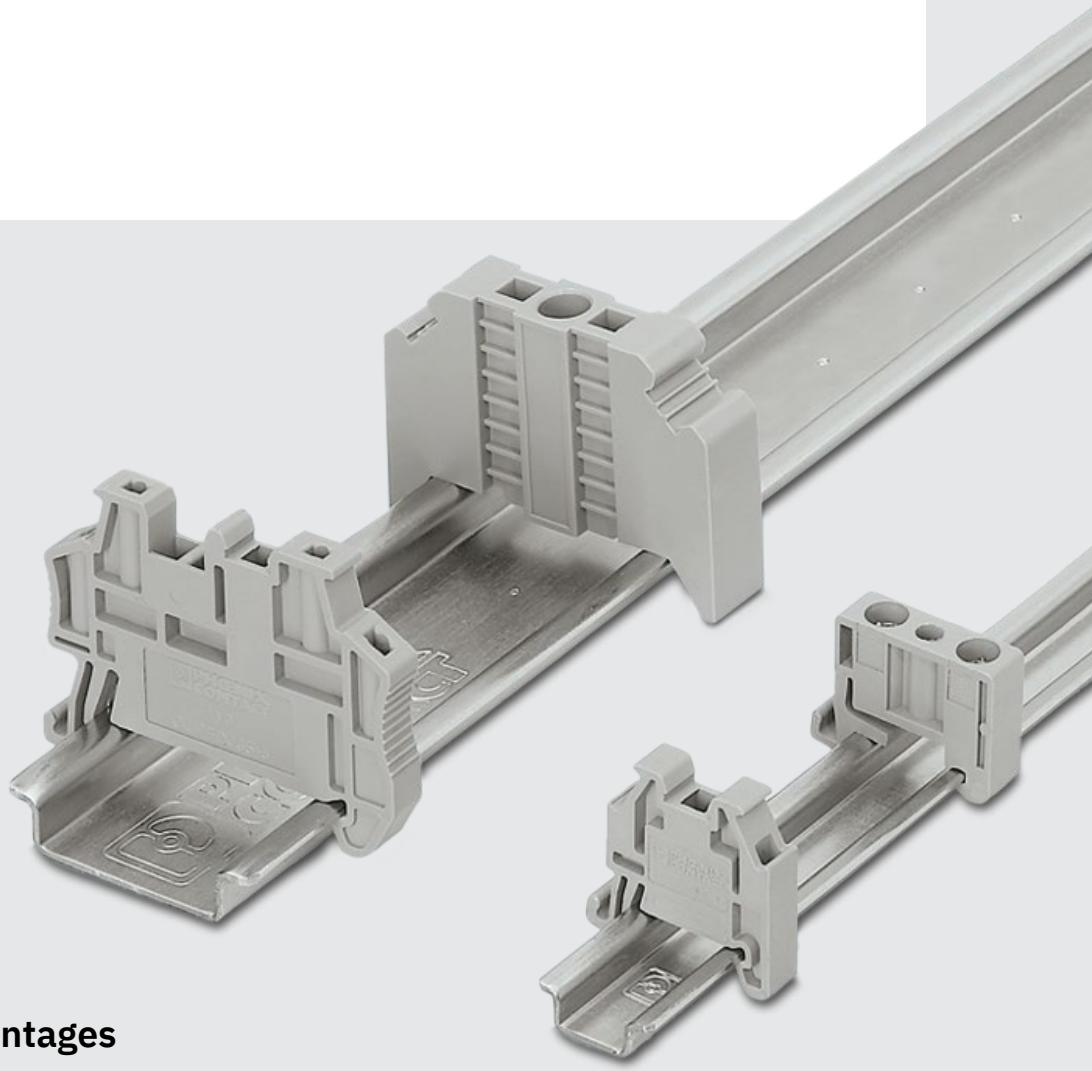
Mounting process in four steps

DIN rail adapter

	DIN rail type	Required elongated hole height	Type	Item no.
	For attaching NS 35/7,5 DIN rails to mounting panels or housing walls of control cabinets	6.2 mm	RailFIX 35/7,5	1233147
			RailFIX 35/15	1383151

End brackets

The product line of end brackets consists of various end brackets for DIN and G rails. For the widely used DIN rails, snap-on end brackets are available in addition to screw-on end brackets. These are snapped onto the DIN rail tool-free.



Your advantages

- Quick and easy mounting
- Large-surface marking
- Narrow overall width
- The right end bracket for every DIN rail

Product overview – end brackets

NS 15 end brackets				
Item no.	3022263	1421659	1421633	1401637
Mounting type	Snap-on	Screw-on	Screw-on	Screw-on
Material	PA	PA	PA	PA

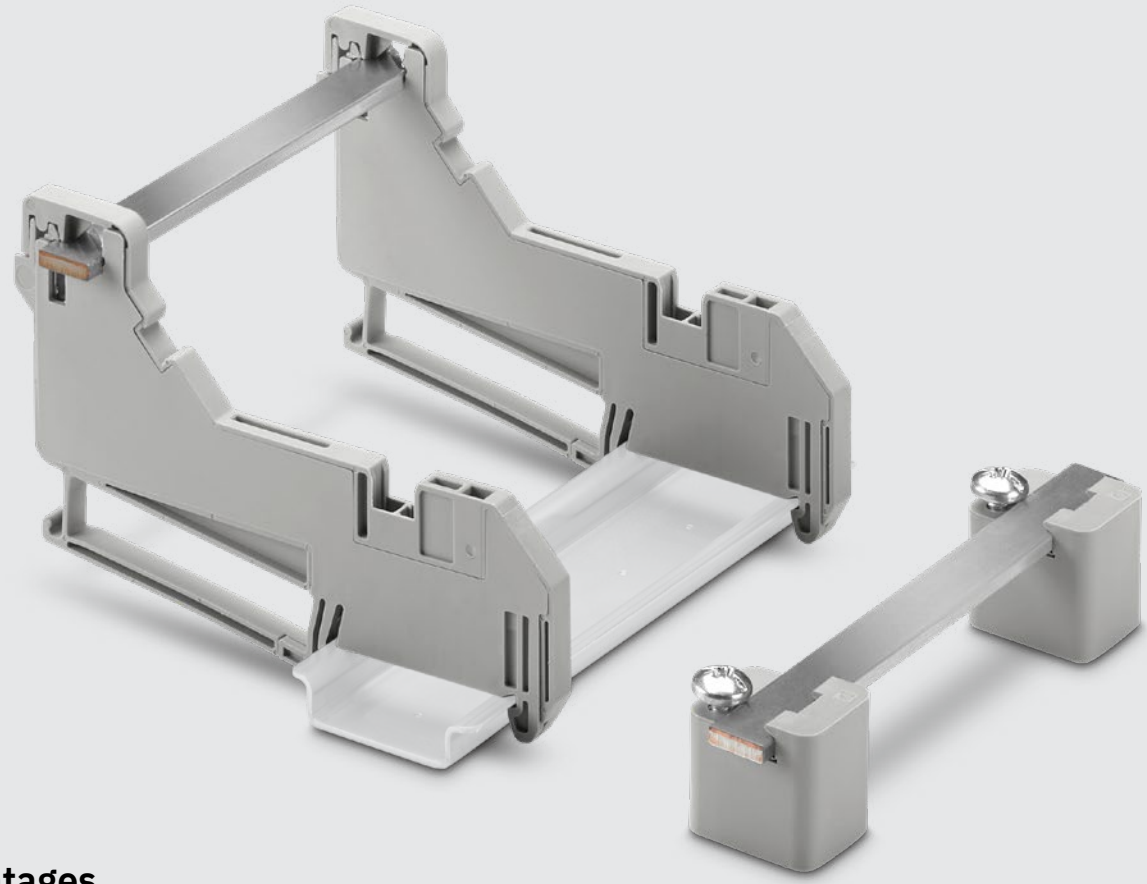
NS 35 end brackets				
Item no.	3022276	3032350	3022218	1201662
Mounting type	Snap-on	Snap-on	Snap-on	Screw-on
Material	PA	PA	PA	Aluminum

NS 35 end brackets	
Item no.	1201442
Mounting type	Screw-on
Material	PA

G DIN rail end brackets		
Item no.	1201659	1201044
Mounting type	Screw-on	Screw-on
Material	Aluminum	Steel

Neutral busbars and support brackets

For easy installation of neutral conductors, the portfolio has three different types of neutral busbars. For easy mounting, you can choose between adapters for the DIN rail or for direct mounting. The rail-mounted neutral busbar adapters are available in various designs. This choice means that the distance of the neutral busbar to the DIN rail and the height of the rail can be controlled.



Your advantages

- Easy and flexible mounting options
- Fast installation of the neutral busbar
- Wide choice of versions
- Optional discharge potential

More information about the support brackets

Support brackets

General information

Support brackets enable quick and easy mounting of the neutral busbar in the control cabinet. Essentially, a choice can be made here between the mounting types DIN rail mounting and direct mounting.

DIN rail mounting

For DIN rail mounting, there are different versions which differ in height and distance to the DIN rail. Furthermore, there is a choice between a one-sided and a two-sided design. Due to the design of the support brackets, the neutral busbar is connected to the DIN rail immediately upon mounting.

Direct mounting

In the case of direct mounting, there is a smaller choice of versions. Nevertheless, direct mounting via screw connection is very flexible, because the position of mounting can be freely determined. For direct mounting, there is a choice between support brackets with and without discharge potential.

Neutral busbars

Description	Dimensions	Designation	Item no.
Angled rail for accommodating the C-NBB busbar connector	3 mm x 10 mm x 134/134 mm	NLS 3/10 AV 134/134	3062870
Neutral busbar, DIN VDE 0611-4: 1991-02, color: silver	3 mm x 10 mm x 1000 mm	NLS-CU 3/10 SN 1000MM	0402174
Neutral busbar, DIN VDE 0611-4: 1991-02, material: copper, tinned, color: silver-colored	3 mm x 10 mm x 2000 mm	NLS-CU 3/10 SN 2000MM	0402006

Product overview – support brackets

Support brackets				
Item no.	0404428	3025888	0404415	3240224
Mounting type	Direct mounting	Direct mounting	Direct mounting	Direct mounting
Distance to the DIN rail	–	–	–	–
Item no.	3025341	3026489	3026900	3040889
Mounting type	DIN rail mounting	DIN rail mounting	DIN rail mounting	DIN rail mounting
Distance to the DIN rail	46.85 mm	65.00 mm	65.00 mm	65.00 mm
Item no.	3062090	3062074	3062100	3062087
Mounting type	DIN rail mounting	DIN rail mounting	DIN rail mounting	DIN rail mounting
Distance to the DIN rail	65.00 mm	65.00 mm	65.00 mm	65.00 mm
Item no.	3026476	3213111	1201141	0800086
Mounting type	Direct mounting	DIN rail mounting	Direct mounting	Direct mounting
Distance to the DIN rail	–	–	–	19.5 mm

Product overview – support brackets

Support brackets				
Item no.	0404460	0404431	3032431	3240223
Mounting type	Direct mounting	Direct mounting	DIN rail mounting	DIN rail mounting
Distance to the DIN rail	26 mm	26 mm	–	63.50 mm

Sockets and service interfaces

4

The electrical outlets and service interfaces provide a great deal of flexibility for various applications. The sockets and interfaces can be used in harsh industrial environments. They are suitable for control cabinets, infrastructure components, and a wide range of devices. The sockets can be installed on the DIN rail or by direct mounting.

Electrical outlets

With little installation effort, the socket for the DIN rail creates a convenient connection option for assembly tools, service devices, and other electronic equipment.

Rail-mountable sockets facilitate the connection of electrical ancillary equipment for mounting, testing, lighting, etc. They are used worldwide in switchgear, control cabinets, and in simple subdistribution systems.

› More information starting on page 62

Service interfaces

Space-saving service interfaces simplify maintenance, service, and diagnostics on control cabinets or devices. Service interfaces are available with the following inserts: D-SUB 09, RJ45, USB, sockets, SCRJ coupling.

› More information starting on page 66

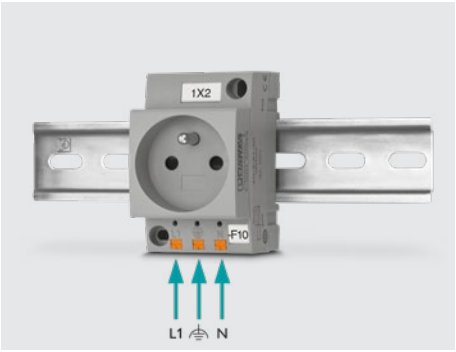
Electrical outlets

Available with eleven different plug geometries, the electrical outlets can be used internationally. Additional functions such as additional USB connections, LED indicators, fuses, switches, and circuit breakers extend the range of possible applications. When connecting the sockets, a choice is made between Push-in or screw connection technology. The sockets are mounted on the DIN rail or directly via screw or adhesive fastening.

Your advantages

- Wide product range with over 150 variants
- All regional variants for worldwide use
- Space-saving, thanks to double-slotted variants
- Integrated contact protection via shutter
- Flexible installation thanks to DIN rail mounting and direct mounting

More information about electrical outlets

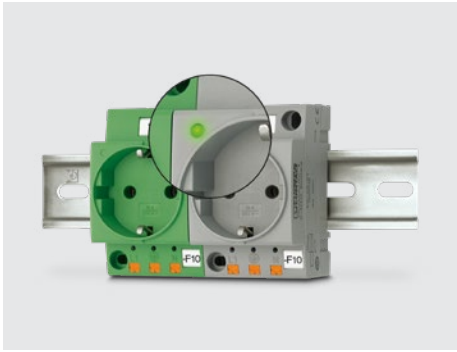


Wiring

The terminal points of the electrical outlets are all arranged on the lower side. This reduces the space required and enables convenient wiring. Along with the convenient and time-saving Push-in connection, socket versions with the classic and well proven screw connection technology are also available.

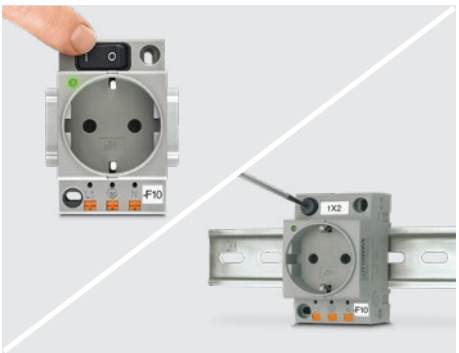
Double sockets

Double sockets are ideal in applications where two or more sockets are necessary. The internal wiring of the sockets reduces wiring outlay.



Color versions and LED display

Color versions identify sockets with particular tasks, e.g., a safety power supply from a separate power source. An LED indicates whether the socket is in operation and a voltage is present.

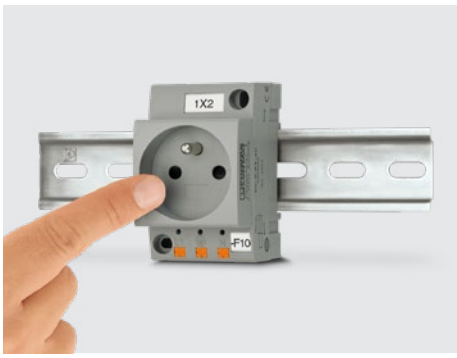


Fuses and switches

Fused sockets provide mains protection. In the event of an error, they only trip selectively, in order that other areas of the power grid remain in operation. At the same time, replacing the fuse is quick and easy. Sockets with integrated switches disconnect the current to connected devices individually, without actuation of the backup fuse or unplugging the mains plug.

Mounting options

Along with standard mounting on the DIN rail, these sockets can also be screwed directly onto a suitable surface. Thus, the products can be installed flexibly and based on the situation.



Certifications and touch protection

The sockets are designed and manufactured in accordance with the country-specific standards and directives. In this respect, the standards in some countries demand extended touch protection. This is made possible by the automatic plastic lock. The lock keeps the socket holes closed until the correct insertion of a suitable plug.

Product list – electrical outlets

Sockets, Push-in connection									
Nominal voltage		125 V AC	250 V AC						
Max. Continuous current		15 A	16 A	6 A	16 A	13 A	16 A		10 A
Nominal Frequency		60 Hz	50 Hz						50 Hz ... 60 Hz
Can be used in:		USA	Germany	India / Africa	France	Great Britain	Switzerland	Denmark	Brazil
Description		**Type AB 15A**	**Type CF**	**Type D**	**Type E**	**Type G**	**Type J**	**Type K**	**Type N**
Socket	Standard, gray	0804165	0804038	0804009			0804105	0804119	0804146
	Standard, green		0804039						
	With LED, touch protection, and switch, gray					0804070			
	With LED, gray	0804168	0804040				0804107		0804148
	With LED, green		0804041						
	With LED and fuse, gray		0804042						
	With LED and fuse, green		0804043						
	With LED and switch, gray	0804174	0804046						
	With LED and touch protection, gray				0804022	0804065			
	With LED and touch protection, green				0804023				
	With touch protection, gray				0804020	0804063			
	With touch protection, green				0804021				
	With touch protection and switch, gray					0804069			
Double socket	With LED, gray	0804177	0804049				0804110	0804123	0804150
	With LED, green		0804050						
	With residual current protection and LED, gray	1263626							

The control cabinet sockets with integrated fuse are limited to 6.3 A due to the fuse.

Product list – electrical outlets

Sockets, screw connection											
Nominal voltage		125 V AC		250 V AC							
Max. Continuous current		15 A	20 A	16 A	6 A	16 A	13 A	10 A	16 A		20 A
Nominal Frequency		60 Hz		50 Hz							50 Hz … 60 Hz
Can be used in:		USA	USA	Germany	India / Africa	France	Great Britain	China	Switzerland	Denmark	Brazil
Description		**Type AB 15A**	**Type AB 20A**	**Type CF**	**Type D**	**Type E**	**Type G**	**Type I**	**Type J**	**Type K**	**Type N**
Socket	Standard, gray	0804152	0804508	0804024	0804000			0804087	0804099	0804113	0804139
	Standard, green			0804025				0804088			0804140
	With LED, touch protection, and switch, gray						0804059				
	With LED, gray	0804155	0804509	0804026	0804003			0804089			0804142
	With LED, green			0804027							
	With LED and fuse, gray			0804029							
	With LED and fuse, green			0804030							
	With LED and switch, gray	0804160									
	With LED and touch protection, gray					0804018	0804053				
	With LED and touch protection, green					0804019	0804054				
	With touch protection, gray					0804016	0804051				
	With touch protection, green					0804017	0804052				
	With touch protection and switch, gray						0804058				
Double socket	With LED, gray	0804163		0804036							
	With LED, green			0804037							
	With residual current protection and LED, gray	1263628	1263627								

The control cabinet sockets with integrated fuse are limited to 6.3 A due to the fuse.

Service interfaces

Service interfaces make maintenance, servicing, and diagnostics even easier. The robust mounting frames with IP65 degree of protection enable use in harsh industrial environments. Data front plates offer numerous connection options in a confined space, as different contact inserts can be freely combined.

Your advantages

- Robust and temperature-resistant due to versions with IP65 degree of protection
- Space saving due to the modular design
- Comprehensive product range: large choice of data and socket inserts
- Reliable signal transmission – 360° shielding in environments subject to electromagnetic interference

Product overview – service interfaces

Data front plates				
Item no.	1657766	1656631	1404500	1404496
Description	Data front plate with contact inserts, plastic with shielding plate, 2x RJ jack/female	Data front plate, plastic with shielding plate, for 2x RJ with modular system (Keystone)	Data front plate with contact inserts, plastic, 1x RJ45, 8-pos., metal, CAT5e (female/female), 1x D-SUB 9 blind cover	Front plate with contact inserts, plastic with shielding plate, 1x RJ45, 8-pos. metal, CAT5e (female/female); 1x D-SUB 9 (female/female)
Item no.	1404501	1657708	1404512	1404504
Description	Front plate with contact inserts, plastic, 1x D-SUB 9 (female/female)	Data front plate with contact inserts, plastic, 2 x D-SUB 9 female/male	Front plate with contact inserts, plastic with shielding plate, 1x USB (female/female/0.7 m cable) design A; 1 x RJ45, 8-pos., metal, CAT5e (female/female)	Front plate with contact inserts, plastic with shielding plate, 1x USB (female/female/0.7 m cable) design A; 1x D-SUB 9 (female/male); 1x RJ45, 8-pos., metal, CAT5e (female/female)
Item no.	1404497	1404499	1404506	1658532
Description	Front plate with contact inserts, plastic with shielding plate, 1x RJ45, 8-pos., metal, CAT5e (female/female); 1x USB (female/female) design A; 1x D-SUB 9 (female/female)	Front plate with contact inserts, plastic with shielding plate, 1x USB (female/female) design A; 1x RJ45, 8-pos., metal, CAT5e (female/female)	Front plate with contact inserts, plastic with shielding plate, 2x RJ45, 8-pos., metal, CAT5e (female/female); 1x USB (female/female) design A	Data front plate, plastic, with two Freenet slots

Product overview – service interfaces

Data front plates

Item no.	1656657	1054542	1054543	1054544
Description	Front panel	Protective contact socket, plastic, for Germany, incl. RJ45 gender changer (female/female, shielded), CAT6$_A$	Protective contact socket, plastic, for France, incl. RJ45 gender changer (female/female, shielded) CAT6$_A$	Protective contact socket, plastic, for Great Britain, incl. RJ45 gender changer (female/female, shielded), CAT6$_A$
Item no.	0804522			
Description	Adapter plate			

Mounting frames

Item no.	1656482	1656495	1404493	1404494
Description	Mounting frame, for a front panel or socket, metal frame, matt nickel-plated, electrically conductive, transparent cover	Mounting frame, for two front plates or socket, metal frame, matt nickel-plated, electrically conductive, transparent cover	Mounting frame for one front panel/socket, plastic frame: black, plastic cover: transparent, closed with 3 mm two-way key bit and rotary knob, included.	Mounting frame for two front plates/sockets, plastic frame: black, plastic cover: transparent, closed with 3 mm two-way key bit and rotary knob, included.
Item no.	1407592	1407593	1407588	1407589
Description	Mounting frame for one front panel/socket, plastic frame: black, plastic cover: gray, closed with 3 mm two-way key bit and rotary knob, included.	Mounting frame for two front plates/sockets, plastic frame: black, plastic cover: gray, closed with 3 mm two-way key bit and rotary knob, included.	Mounting frame for one front panel/socket, plastic frame: black, plastic cover: metallic, closed with 3 mm two-way key bit and rotary knob, included.	Mounting frame for two front plates/sockets, plastic frame: black, plastic cover: metallic, closed with 3 mm two-way key bit and rotary knob, included.

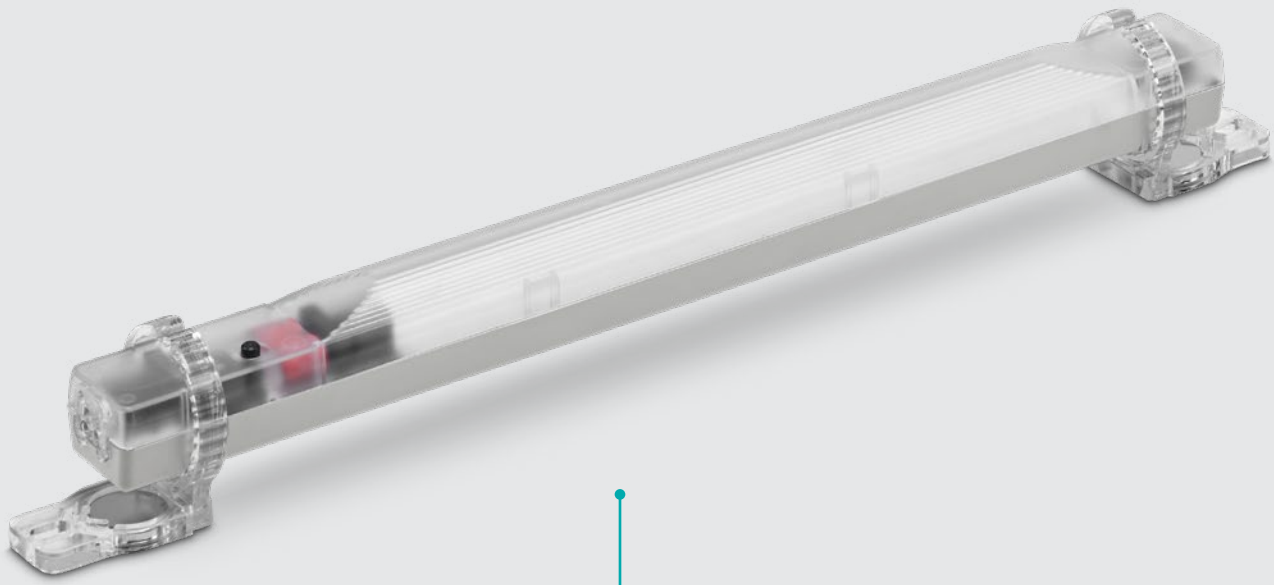
Product overview – service interfaces

Data interfaces		
Item no.	1425186	1425185
Description	Service socket with RJ45 (female/female), 8-pos., metal, CAT6$_A$ connection, with protective cover	Service socket with USB A 3.0 (female/female), with protective cover

Control cabinet lighting

5

The Phoenix Contact enclosure lights provide optimal illumination for your control cabinet. With the two performance classes, the lighting portfolio enables individual adaptation to the specific requirements of your application. The lights are available with and without motion sensor. To ensure reliable function in different voltage networks, they feature a wide-range voltage input. The portfolio is rounded off by lights with socket inserts. You can rely on quality and versatility for reliably illuminating your working environment.



Standard lights

Cost-effective and flexible. Can be swiveled, with Push-in connection, screw/magnet holder, and AC/DC input.

› More information starting on page 72

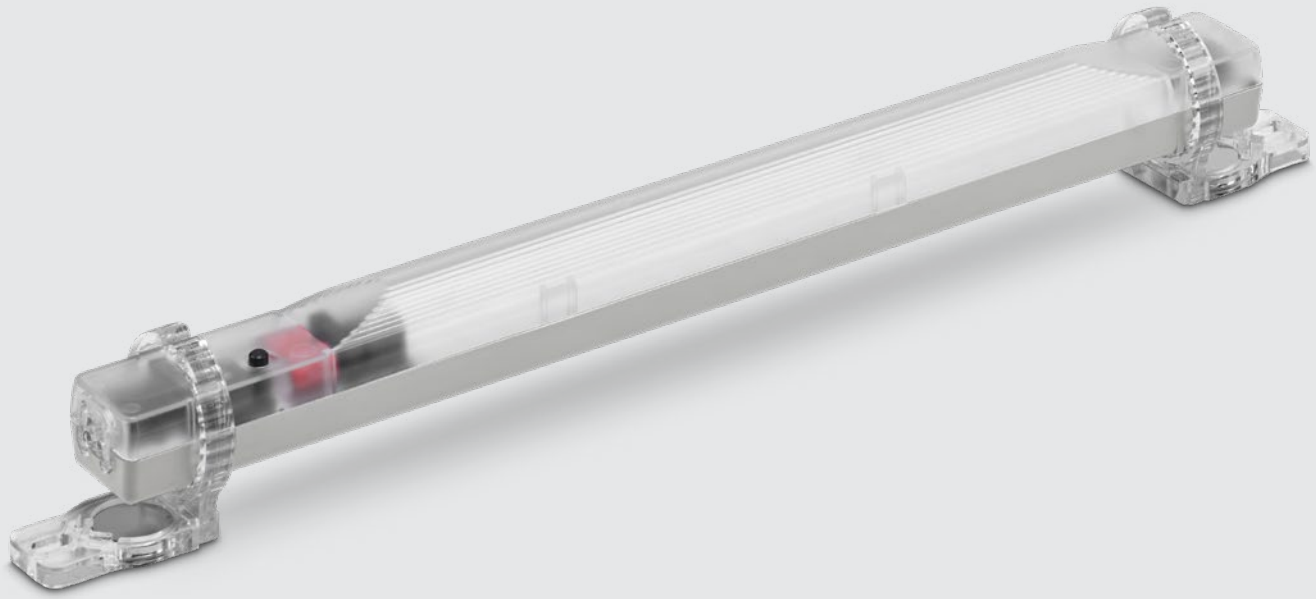
AC lights

Universal and robust. Integrated socket, plug-in connection, and AC wide range input

› More information starting on page 74

Standard lights

The class 409 enclosure lights feature a compact design and flexible power supply. The Push-in connections ensure quick and easy installation. The light is available as a version with or without motion sensor.



Your advantages

- Optimum illumination of the entire control cabinet with high-quality optics that can be swiveled
- Flexible use with the AC/DC wide range input
- UL approval for use on the North American market
- Time savings during cabling with the 409-class Push-in connection
- No maintenance effort or need to change lamps with long LED service life

Product overview – enclosure lights

Cost effective and flexible

The LED light supplies a luminous flux of 700 lm at a color temperature of 5,000 K. Together with the prismatic integrated into the light cover, this ensures optimum illumination of the control cabinet.

You can use magnets or screws to affix the light holder. The light can be swiveled through ±90° in the holder. It also has a supply voltage range of 24 V to 265 V AC/DC with a power consumption of just 6 W.

Connect the supply voltage to the light via Push-in connection. You can connect up to ten lights in series.

A button is used to switch between motion sensor mode (delivery state) and continuous ON mode. A PIR sensor with a detection angle of 100° is installed as the sensor.

Standard light mounted in the control cabinet

Door position switch

The door position switch is used to automatically switch the enclosure lights on and off without an integrated motion sensor when opening and closing the control cabinet door. If the lights are connected in series, you can use the switch at any chosen position upstream of the first light or between two lights.

Main features

- Suitable for serial connections
- Two free ends for quick Push-in connection
- UL approval

The door position switch is available as an accessory

PLD E 409 enclosure lights			
	Description	**Item no.**	**Type**
	LED enclosure light, 24 V AC/DC ... 265 V AC/DC, length: 350 mm, degree of protection: IP20, can be swiveled (±90° swivel range), including mounting accessories	1319569	PLD E 409 W 350
	LED enclosure light, 24 V AC/DC ... 265 V AC/DC, length: 350 mm, degree of protection: IP20, can be swiveled (±90° swivel range), with motion detector, including mounting accessories	1319573	PLD E 409 W 350 MS
Enclosure lights – accessories			
	Door position switch with 3 m cable with open cable end and 0.6 m cable with open cable end, including mounting accessories	1318672	PLD E 400-DS-3,0/0,6
	Replacement magnetic holder (1 pair) for PLD E 409 W 350 and PLD E409 W 350 MS LED enclosure lights	1531603	PLD E 409 CLP/M

AC lights

The class 708 enclosure lights ensure excellent illumination of the interior of control cabinets. These lights can be used worldwide because they have an AC wide range input. Versions with country-specific sockets underline this requirement. Installation and mounting is particularly universal with the plug-in connections and the options of screw, latching, and magnetic fastenings.

Your advantages

- Optimum illumination of the control cabinet with high illuminance
- Robust and modern design for a long service life
- UL approval for use on the North American market
- Universal use with the AC wide range input
- Sockets enable the operation of external devices

Product overview – enclosure lights

Universal and robust

With state-of-the-art LED technology, the 708 mm lights achieve 1,400 lm and therefore an illuminance of 1,480 lx at a distance of 1 m. This ensures optimum visibility in the control cabinet.

The AC supply of 100 V to 240 V AC is supplied in and out via a three-position device connector. Up to four lights can be connected in series.

The light can be mounted in two positions using a screw or snap-in fastening. Mounting with magnets is also possible. You can switch the light on or off permanently or enable automatic mode.

In this mode, the light is switched on and off via an integrated PIR sensor (motion sensor).

The housing material made from PC/ABS is characterized by its high impact strength and thermal stability. The plastic is self-extinguishing and therefore contributes to fire protection.

AC light mounted in the control cabinet.

Supplying external devices made easy

The 708 light is not only used to illuminate your control cabinet – with the integrated socket, it also provides the option of operating external devices such as measuring devices, charging connectors, and notebooks. This increases the functionality and convenience when working in and on the control cabinet

Three versions with sockets for plug types E, F, and B are available. Type E and type F (shock-proof plug) are used in many European countries. Mexico and the North American market are covered by type B.

In the case of the lights, a current consumption from the socket can be up to 16 A or 10 A (type B).

Different sockets for worldwide use.

PLD E 708 enclosure lights			
	Description	**Item no.**	**Type**
	LED enclosure light, AC wide range input, color temperature 5000 K, with motion detector, type F socket (Schuko)	NEW 1694094	PLD E 708 W 400 MS/F
	LED enclosure light, AC wide range input, color temperature 5000 K, with motion detector, type E socket (e.g., for France and Belgium)	NEW 1694093	PLD E 708 W 400 MS/E
	LED enclosure light, AC wide range input, color temperature 5000 K, with motion detector, type B socket (e.g., for USA and Canada)	NEW 1694092	PLD E 708 W 400 MS/B
Enclosure lights – accessories			
	Magnetic holder (1 pair) for the PLD E 708 W MS/... LED enclosure lights	1694090	PLD E 708 MAG
	Connecting cable, 3-position, cable length: 1.6 m	1816079	PLD E 708-CA-MS/1,6/FS AM
	Connecting cable, 3-position, cable length: 3 m	1816143	PLD E 708-CA-3,0/FS AM

Shield clamps

6

Interference caused by electronic components occurs in automated industrial applications in particular. This electromagnetic interference can lead to malfunctions or even to failure of entire systems. Shield clamps provide a solution to this serious problem. With a professional shielding concept, you can ensure the EMC protection of your systems, machines, and electronic components.

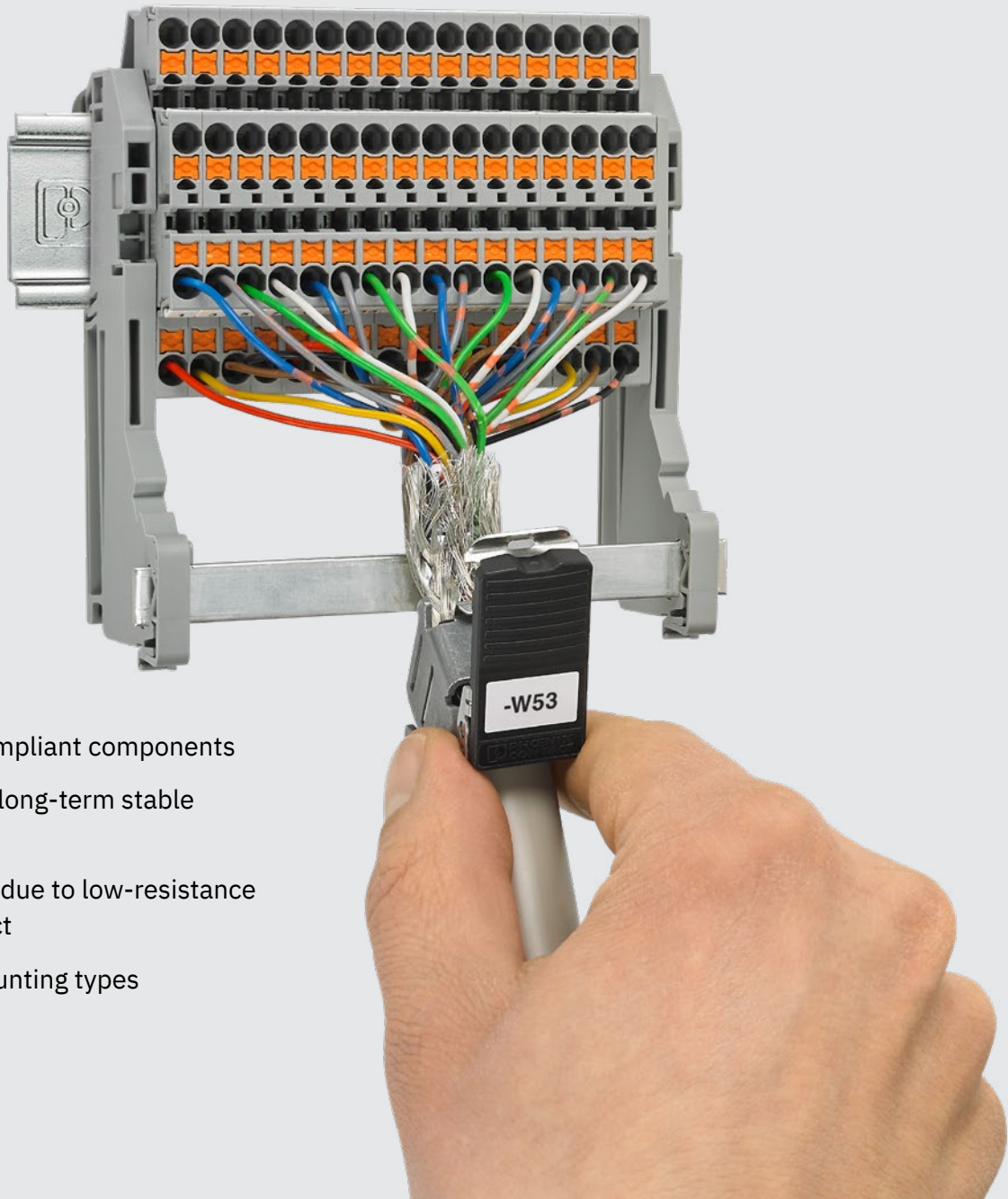
Shielding

Shield clamps are used both in the control cabinet and in systems to ensure the EMC-compliant wiring of signals, power supplies, and data cables. To ensure safe and EMC-compliant operation in the electromagnetic interference fields, the appropriate shielding must be provided. The protection provided by shield clamps prevents both incoming and outgoing interference radiation.

The main sources of interference include motor and frequency converters, strong magnetic alternating fields, radio waves, and both the capacitive and inductive couplings of other cables. Manufacturing companies and operators of machines and systems must comply with various legal and normative regulations regarding electromagnetic compatibility. These regulations are also part of CE marking.

Terminal blocks for special fields of application

Shield clamps enable EMC-compliant control cabinet wiring. To make this wiring as flexible as possible, both screw and spring-cage terminal blocks are part of the portfolio. The SCC shield clamps in particular are also very flexible when it comes to mounting. In addition to mounting on the neutral busbar, there are also versions for direct mounting and for DIN rail mounting.



Your advantages

- Safety with standard-compliant components
- Highly reproducible and long-term stable contact quality
- Low transfer impedance due to low-resistance and large-surface contact
- Up to three different mounting types

Information on shield clamps

SCC shield clamps with spring connection

The shield clamps enable tool-free, single-handed installation. The convenient clamping bracket and the non-pressurized contact spring enable a simple and low-fatigue shield connection to be made. At the same time, the design of the contact spring guarantees a reproducible and long-term stable contact quality and compensates any conductor settling effects.

The shield connection is flexible, with clamps available for direct mounting, neutral busbar mounting, and DIN rail mounting. For neutral busbar mounting, simply swivel the shield clamps onto the neutral busbar rail and close the lever to secure both the terminal block and the conductor to be connected. For a clearer overview and assignment of the individual shield clamps, the clamps feature large marking areas on the clamping bracket. This simplifies cable assignment in accordance with the circuit diagram.

SCC 15 shield clamp

Shield clamps with screw connection

The SK shield clamps clamp the conductors using a knurled screw. To ensure optimum shielding, the clamps feature a spring-loaded and large-surface pressure plate. Shield clamps are available for direct mounting and busbar mounting for mounting in the control cabinet.

SK 14 shield clamp

SKS shield clamps with spring connection

The SKS spring-cage shield clamps are available in two mounting types. Choose between mounting on DIN rails or directly on conductive mounting panels. The SKS spring-cage shield clamps are suitable for cable and conductor diameters from 3 to 20 mm.

SKS 14 shield clamp

Product overview of shield clamps

SCC shield clamps with spring connection				Connection method versions		
				Mounting type	Type	Item no.
	Type	Item no.	SCC 5 1019420	Mounting panel NS 35/7,5	SCC 5-F SCC 5-NS35	1019425 1019436
	Connection technology		Spring-cage connection			
	Cable diameter		2 mm … 5 mm			
	Mounting type		Neutral busbar			
	Type	Item no.	SCC 10 1019421	Mounting panel NS 35/7,5	SCC 10-F SCC 10-NS35	1019426 1019440
	Connection technology		Spring-cage connection			
	Cable diameter		3 mm … 10 mm			
	Mounting type		Neutral busbar			
	Type	Item no.	SCC 15 1019422	Mounting panel NS 35/7,5	SCC 15-F SCC 15-NS35	1019427 1019443
	Connection technology		Spring-cage connection			
	Cable diameter		8 mm … 15 mm			
	Mounting type		Neutral busbar			
	Type	Item no.	SCC 20 1019423	Mounting panel NS 35/7,5	SCC 20-F SCC 20-NS35	1019428 1019446
	Connection technology		Spring-cage connection			
	Cable diameter		10 mm … 20 mm			
	Mounting type		Neutral busbar			

SK shield clamps with screw connection				Connection method versions		
				Mounting type	Type	Item no.
	Type	Item no.	SK 5 3025338	Direct screw mounting	SK 5-D	3025406
	Connection technology		Screw connection			
	Cable diameter		2 mm … 5 mm			
	Mounting type		Neutral busbar			
	Type	Item no.	SK 8 3025163	Direct screw mounting	SK 8-D	3026861
	Connection technology		Screw connection			
	Cable diameter		3 mm … 8 mm			
	Mounting type		Neutral busbar			
	Type	Item no.	SK 14 3025176	Direct screw mounting	SK 14-D	3026874
	Connection technology		Screw connection			
	Cable diameter		3 mm … 14 mm			
	Mounting type		Neutral busbar			

Product overview of shield clamps

SK shield clamps with screw connection			Connection method versions		
			Mounting type	Type	Item no.
	Type Item no.	SK 20 3025189	Direct screw mounting	SK 20-D	3026887
	Connection technology	Screw connection			
	Cable diameter	5 mm … 20 mm			
	Mounting type	Neutral busbar			
	Type Item no.	SK 28 3026997	Direct screw mounting	SK 28-D	3027006
	Connection technology	Screw connection			
	Cable diameter	5 mm … 28 mm			
	Mounting type	Neutral busbar			
	Type Item no.	SK 35 3026463	Direct screw mounting	SK 35-D	3026890
	Connection technology	Screw connection			
	Cable diameter	20 mm … 35 mm			
	Mounting type	Neutral busbar			

SKS shield clamps with spring connection			Connection method versions		
			Mounting type	Type	Item no.
	Type Item no.	SKS 8 3240210	Direct screw mounting	SKS 8-D	3240213
	Connection technology	Spring-cage connection			
	Cable diameter	3 mm … 8 mm			
	Mounting type	Neutral busbar			
	Type Item no.	SKS 14 3240211	Direct screw mounting	SKS 14-D	3240214
	Connection technology	Spring-cage connection			
	Cable diameter	3 mm … 14 mm			
	Mounting type	Neutral busbar			
	Type Item no.	SKS 20 3240212	Direct screw mounting	SKS 20-D	3240215
	Connection technology	Spring-cage connection			
	Cable diameter	5 mm … 20 mm			
	Mounting type	Neutral busbar			

Important note

The technical data in the product tables relates to the specified reference item.
It may differ slightly for connection versions in some cases.

You will find the exact and complete data for the individual items in our online shop.
There is also a list of corresponding accessories provided for each item.

Worldwide service and support

We are there for you

At Phoenix Contact, the focus is always on you, the customer. With over 50 subsidiaries and more than 30 agencies around the world, we are always close by.

As a result, you receive expert, first-hand advice and benefit from fast and timely delivery of a complete package consisting of high-quality, optimally coordinated components. Our expertise and the high levels of vertical integration also allow customized solutions tailored to you. With our comprehensive after-sales service, we are also there for you after the purchase.

Your advantages in detail:

Fast terminal strip production

Our terminal strip production service provides help in managing order peaks flexibly and allows terminal strips to be delivered just in time for series production. The fully assembled and marked terminal strips, already equipped with accessories, just need to be installed and connected.

Individual set solutions

To reduce the effort of materials and stock management, you can order pre-picked material sets under a single item number.

Customized solutions

Can’t find what you’re looking for in our range? No problem: From minor adaptations to completely new product developments, we focus on your specific requirements.

Global approvals and certificates

Our numerous certificates are proof that you can put your full trust in our products, because quality is essential. We strive to satisfy this claim in every respect. For this reason, our systems, processes, and products are tested and certified several times over.

Comprehensive after-sales services

We are there for you – not just before your purchase, but also after with our comprehensive after-sales services.

This includes our repair service, exchange service, and replacement parts service.

Comprehensive training program

From the basics to specialist expertise: we provide you with the skills you need in line with your specific requirements.

Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing forward-thinking products and solutions for the comprehensive electrification, networking, and automation of all sectors of the economy and infrastructure. With a global network, we maintain close relationships with our customers, something we believe is essential for our common success.

You can find your local partner at

phoenixcontact.com

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