ILC 2050 BI-L - Controller

2404671

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Modular Inline controller for automation applications in the fields of building technology, infrastructure, and energy technology. Equipped with two logically separated IP address interfaces each with 2 integrated Fast Ethernet ports. Configurable assignment of the Ethernet ports for the use of the Spanning Tree Protocol, daisy chain and redundant ring structures for optimum availability. 4 LAN, 2 USB, and 2 RS-485 interfaces are integrated. It enables the direct connection of LonMark TP/FT-10 networks. The data point connections can be extended with up to 63 Inline I/O modules.

Product description

The ILC 2050 BI-L is the central controller for the automation of buildings, infrastructure, and energy. The industrial design guarantees a high level of reliability and therefore also makes the ILC 2050 BI-L suitable for business-critical applications. It is equipped with four LAN, two USB, and two RS-485 interfaces. It enables the direct connection of LonMark TP/FT-10 networks. The controller can be extended with a wide range of Inline modules for digital and analog I/Os and for all widely used bus systems. The corresponding drivers ensure uniform interfaces, thus greatly simplifying system integration.

Your advantages

- Time-optimized engineering using the Niagara 4 framework
- Support for all the main communication protocols used in building infrastructure automation
- Direct connection of LonMark TP/FT-10 networks (in accordance with the CEA-709 standard)
- Planning, engineering, and visualization in the Java-based Niagara 4 framework
- Easy extension of the Niagara 4 framework with self-programmed functions

Commercial data

Item number	2404671
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DRHAAA
Product key	DRHAAA
GTIN	4055626933030
Weight per piece (including packing)	340 g
Weight per piece (excluding packing)	243 g
Customs tariff number	85371091
Country of origin	DE

Technical data

Notes

Note on application

Note on application	Only for industrial use

Product properties

Product type	Controller
Product family	Inline-Controller
Installation location	indoor use

System properties

Processor	Arm®Cortex®-A8 1 GHz
Retentive data storage	2 GByte (eMMC)
RAM	1024 Mbyte DDR3 SDRAM

IEC 61131 runtime system

Data storage system	2 GByte (eMMC)

Functionality

Programming languages supported	Niagara Framework®

System requirements

Engineering tool	Emalytics

Electrical properties

Supply

Supply voltage (DC)	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC
Max. current consumption	≤ 1.5 A
Typical current consumption	≤ 170 mA (at nominal voltage without local bus device)

Real-time clock

Realtime clock	Yes

Potentials

Supply voltage	24 V DC -15 % / +20 % (in accordance with EN 61131-2)
Supply voltage range	19.2 V DC ... 30 V DC

Connection data

Inline connector

Connection method	Spring-cage connection
Conductor cross section, rigid	0.08 mm² ... 1.5 mm²
Conductor cross section, flexible	0.08 mm² ... 1.5 mm²
Conductor cross section AWG	28 ... 16

Stripping length	8 mm

Interfaces

Supported protocols	BACnet/IP
	BACnet MS/TP (only at COM1 and COM2)
	Modbus/TCP
	Modbus/RTU
	KNX IP
	DALI
	DALI-2
	LON IP
	EnOcean
	SMI
	MP-Bus
	SNMP
	M-Bus
	MQTT
	OPC UA
	Simple OpenADR
	LDAP
	SMS
	CSV
	oBIX
	Milestone Video Framework Interface
	LonMark TP/FT

Ethernet

Bus system	RJ45
Number of interfaces	4
Connection method	RJ45 jack
Transmission speed	10/100 Mbps
No. of channels	2
Bus system	RS-485
Number of interfaces	2

USB

Bus system	USB type A
Number of interfaces	1
Connection method	USB type A, socket

USB

Bus system	Mini-USB
Number of interfaces	1

microSD

Bus system	microSD
Number of interfaces	1 (Top)
Connection method	microSD slot

Dimensions

Width	80 mm
Height	119.8 mm
Depth	71.5 mm

Material specifications

Color	green (RAL 6021)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	0 % ... 75 % (according to DIN EN 61131-2)
Permissible humidity (storage/transport)	0 % ... 75 % (according to DIN EN 61131-2)
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 hPa ... 106 kPa (up to 3000 m above sea level)
GRP_Temperature class	T4
Resistance to gases that may endanger the functions, in acc. with DIN 40046-36, DIN 40046-37	Sulfur dioxide (SO_2) 10 ±0.3 ppm (test duration: 10 days), hydrogen sulfide (H_2S) 1 ±0.3 ppm (test duration: 4 days), both at 25°C and with 75% humidity

Mounting

Mounting type	DIN rail mounting
Mounting position	horizontal
	Alternative mounting positions are possible, but can lead to a reduction in thermal performance.

Classifications

ECLASS

ECLASS-13.0	27242207
ECLASS-15.0	27242207

ETIM

ETIM 9.0	EC000236

UNSPSC

UNSPSC 21.0	32151700

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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