IL EC BK-PAC - Bus coupler

2702507

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CRA-READY



Inline, Bus coupler, EtherCAT®, RJ45 jack, transmission speed in the local bus: 500 kbps / 2 Mbps, degree of protection: IP20, including Inline connector and labeling field; The product is being prepared for compliance with the Cyber Resilience Act (CRA).

Product description

The bus coupler is intended for use within an EtherCAT® network and represents the link to the Inline I/O system. Up to 63 Inline devices can be connected to the bus coupler. EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany. A corresponding ESI file is available for integrating the Inline station into the programming system. This file can be downloaded at: www.phoenixcontact.net/product/2702507

Your advantages

- 2 RJ45 connections
- Automatic addressing
- Station mapped as a modular EtherCAT® device using a modular device profile (MDP)
- Acyclic data communication (mailbox protocols)
- SafetyBridge V3 supported
- Firmware can be updated

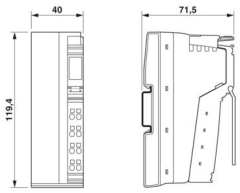
ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	2702507
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI11E
GTIN	4055626258683
Weight per piece (including packing)	156.3 g
Weight per piece (excluding packing)	133 g
Customs tariff number	85176200
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	40 mm
Height	119.4 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

Notes

Note on application

Note on application	Only for industrial use
Note on application	As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA.

Mounting

Mounting type	DIN rail mounting
Mounting position	any

Material specifications

Color (Housing)	green (RAL 6021)

Interfaces

EtherCAT®

Number of interfaces	2
Connection method	RJ45 jack
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	100 Mbps (Full duplex)
Transmission physics	Ethernet in RJ45 twisted pair

Inline local bus

Number of interfaces	1
Connection method	Inline data jumper
Transmission speed	500 kbps / 2 Mbps (automatic detection, no combined system)

EtherCAT®

System-specific protocols	Mailbox protocols CAN application protocol over EtherCAT®

	Mailbox protocols File access over EtherCAT®
Specification	ETG.1000 V1.02

System properties

System limits

Number of supported devices	max. 63 (per station)
Number of local bus devices that can be connected	max. 63
Number of devices with parameter channel	max. 16
Number of supported branch terminals with remote bus branch	0

Programming data

Register length (master)	512 Byte

Product properties

Product type	I/O component
Product family	Inline
Type	modular
Mounting position	any
Scope of supply	including Inline connector and labeling field
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)
Diagnostics messages	Messages via object $10F3_{hex}$ Diagnosis history

Insulation characteristics

Overvoltage category	II (IEC 60664-1, EN 60664-1)
Pollution degree	2 (IEC 60664-1, EN 60664-1)

Electrical properties

Maximum power dissipation for nominal condition	3.6 W

Potentials: Bus coupler supply U_{BK}; Communications power U_L (7.5 V) and the analog supply U_{ANA} (24 V) are generated from the bus coupler supply.

Supply voltage	24 V DC (via Inline connector)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 0.9 A (with max. number of connected I/O terminal blocks)
	typ. 50 mA (no local bus devices connected, as of HW 04)
	typ. 70.6 mA (no local bus devices connected, up to HW 03)

Potentials: Communications power (U_L)

Supply voltage	7.5 V DC
Power supply	max. 0.8 A

Potentials: Supply of analog modules (U_{ANA})

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply	max. 0.5 A DC

Potentials: Main circuit supply (U_M)

Supply voltage	24 V DC (via Inline connector)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply	max. 8 A DC (sum of U_M + U_S)

Potentials: Segment circuit supply (U_S)

Supply voltage	24 V DC (via Inline connector)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply	max. 8 A DC (sum of U_M + U_S)

Electrical isolation/isolation of the voltage ranges

Test voltage: Ethernet interface 1 / Ethernet interface 2	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 1 / logic (U_{BK}, U_L, U_{ANA})	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 1 / I/O (U_M, U_S)	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 1 / functional ground	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 2 / logic (U_{BK}, U_L, U_{ANA})	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 2 / I/O (U_M, U_S)	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 2 / functional ground	1500 V AC, 50 Hz, 1 min
Test voltage: Communications power (U_{BK}, U_L, U_{ANA}) / I/O (U_M, U_S)	500 V AC, 50 Hz, 1 min
Test voltage: Communications power (U_{BK}, U_L, U_{ANA}) / functional ground	500 V AC, 50 Hz, 1 min
Test voltage: I/O (U_M, U_S) / functional ground	500 V AC, 50 Hz, 1 min

Connection data

Connection technology

Connection name	Inline connector

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

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)

Mechanical test

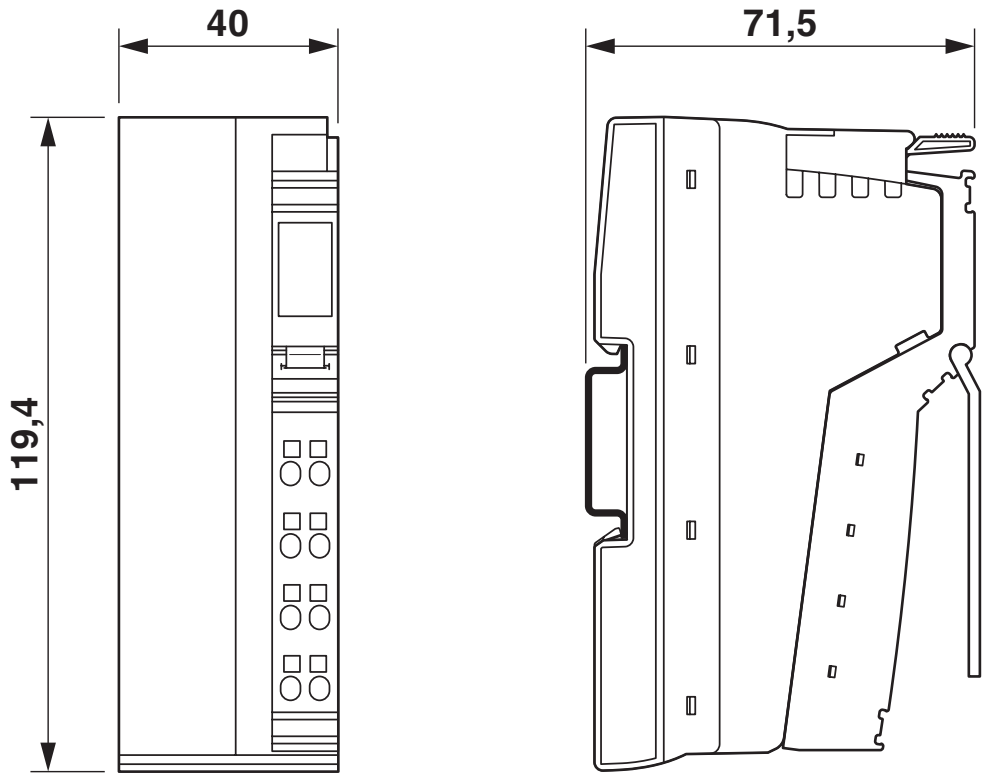
Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	25g

Standards and regulations

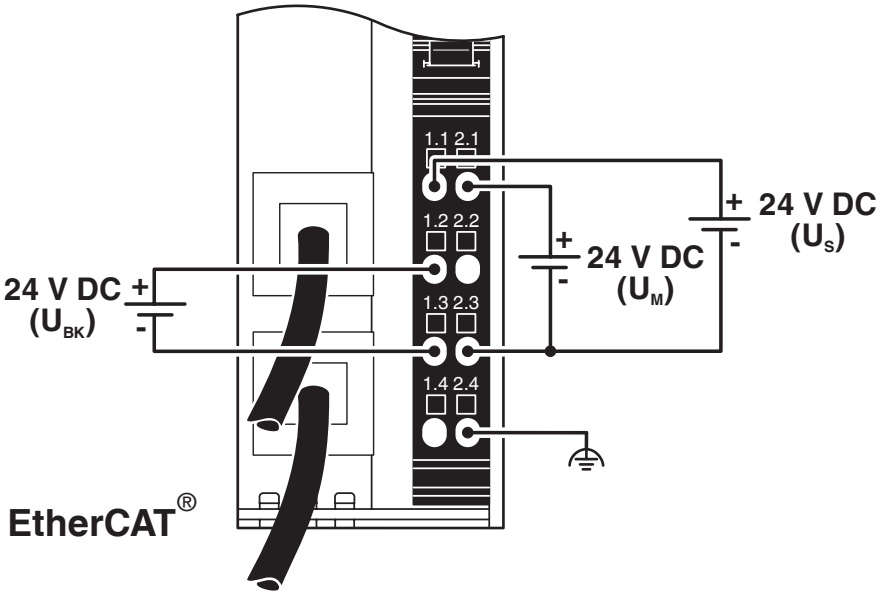
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Drawings

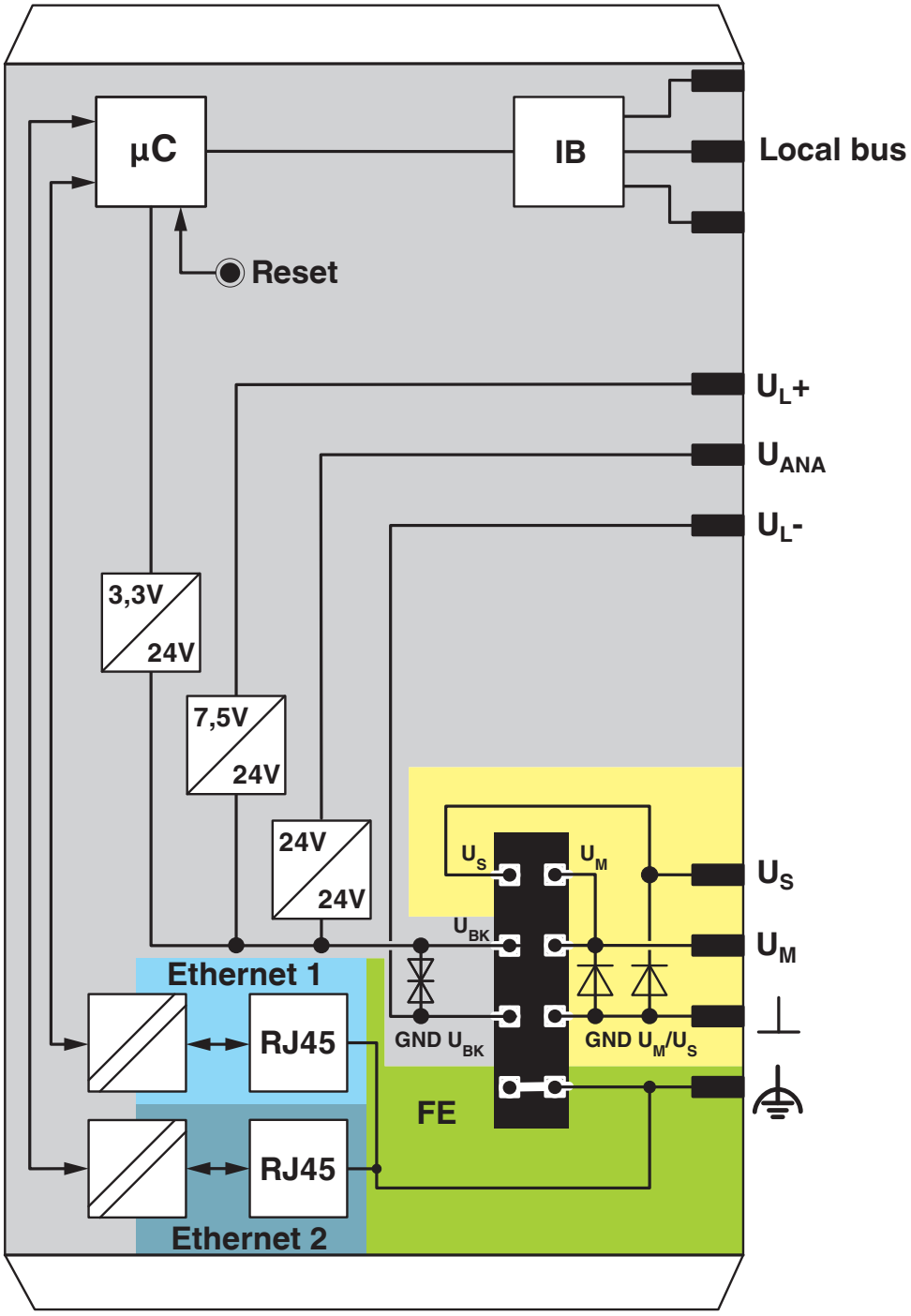
Dimensional drawing



Connection diagram



Block diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2702507

cULus Listed
Approval ID: E238705

Classifications

ECLASS

ECLASS-13.0	27242608
ECLASS-15.0	27242608

ETIM

ETIM 10.0	EC001604

UNSPSC

UNSPSC 21.0	32151600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	9cba4bf3-dfdd-471d-b3b7-e112abf1e545

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