

IB IL CAN-MA-XC-PAC - Communication module



2701160

<https://www.phoenixcontact.com/us/products/2701160>

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Inline function terminal, version for extreme conditions, for connecting a CAN bus system, complete with accessories (connector and labeling field)



Product description

The terminal is designed for use within an Inline station. It can be used to integrate a lower-level CAN bus system into the Inline station and therefore into the bus system used. Within the Inline station, the terminal acts as a CAN master for the lower-level CAN system. Thanks to special engineering measures and tests, the terminal can be used under extreme ambient conditions.

Your advantages

- Protocol: Transparent mode
- Transmission speed of CAN bus: 250 kbps
- Smallest data type: 1 byte
- Maximum data width of 2 x 64 bytes (= 128 bytes = 64 words)
- DIP switches for setting the data width
- Can be used under extreme ambient conditions
- Extended temperature range of -40 °C ... +70 °C (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- Coated PCBs

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2701160 |
| Packing unit | 1 pc |
| Sales key | DR01 |
| Product key | DRI153 |
| GTIN | 4046356713856 |
| Weight per piece (including packing) | 108.7 g |
| Weight per piece (excluding packing) | 108.7 g |
| Customs tariff number | 85389091 |
| Country of origin | DE |

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Technical data

Dimensions

| Dimensional drawing | |
|---------------------|----------|
| | |
| Width | 12.2 mm |
| Height | 136.8 mm |
| Depth | 71.5 mm |

Material specifications

| | |
|-------|-------|
| Color | green |
|-------|-------|

Interfaces

| | |
|----------------------|--------------------|
| Number of interfaces | 2 |
| Connection method | Inline data jumper |
| Transmission speed | 500 kbps |

| | |
|----------------------|-------------------------|
| Number of interfaces | 1 |
| Connection method | Inline shield connector |
| Transmission speed | 250 kbps |
| Protocols supported | CAN |

| | |
|----------------------|--|
| Number of interfaces | 1 (Interface with plugged in memory stick) |
|----------------------|--|

System properties

| | |
|----------------------------|------------------------|
| Error messages via the bus | CAN bus voltage faulty |
| | Bus stop |

| | |
|----------------------|--------------|
| ID code (dec.) | 191 |
| ID code (hex) | BF |
| Length code (hex) | 20 |
| Length code (dec.) | 32 |
| Process data channel | 64 Byte |
| Input address area | max. 64 Byte |

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| | |
|-----------------------------|--------------|
| Output address area | max. 64 Byte |
| Register length | 64 Byte |
| Required parameter data | 1 Byte |
| Required configuration data | 5 Byte |

Product properties

| | |
|--------------------|---|
| Product type | I/O component |
| Product family | Inline |
| Type | modular |
| Scope of supply | including Inline connector and labeling field |
| Operating mode | Process data mode with up to 64 words |
| Special properties | Extreme conditions version |

Electrical properties

| | |
|-------------------|--------------------------------|
| Power dissipation | 0.9 W (Module) |
| Potentials | |
| Power consumption | typ. 1.06 W (Module, complete) |
| | max. 1.16 W (Module, complete) |

Potentials: Communications power (U_L)

| | |
|----------------|-------------------------------|
| Supply voltage | 7.5 V DC (via voltage jumper) |
| Current draw | max. 115 mA |
| | typ. 110 mA |

Potentials: Main circuit supply (U_M)

| | |
|----------------|------------------------------|
| Supply voltage | 24 V DC (via voltage jumper) |
| Current draw | max. 12 mA |
| | typ. 10 mA |

Electrical isolation/isolation of the voltage ranges

| | |
|--|------------------------|
| Test voltage: 24 V supply U_M , bus, logic/CAN interface | 500 V AC, 50 Hz, 1 min |
| Test voltage: 24 V supply U_M , bus, logic/functional ground | 500 V AC, 50 Hz, 1 min |
| Test voltage: CAN interface/functional ground | 500 V AC, 50 Hz, 1 min |

Connection data

| | |
|----------------------------------|--|
| Connection technology | |
| Connection name | Inline connector |
| Conductor connection | |
| Connection method | Spring-cage connection |
| Conductor cross-section rigid | 0.08 mm ² ... 1.5 mm ² |
| Conductor cross-section flexible | 0.08 mm ² ... 1.5 mm ² |
| Conductor cross-section AWG | 28 ... 16 |
| Stripping length | 8 mm |

Inline connector

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| | |
|-----------------------------------|--|
| Connection method | Spring-cage connection |
| Conductor cross-section, rigid | 0.08 mm ² ... 1.5 mm ² |
| Conductor cross-section, flexible | 0.08 mm ² ... 1.5 mm ² |
| Conductor cross-section AWG | 28 ... 16 |
| Stripping length | 8 mm |

Environmental and real-life conditions

Ambient conditions

| | |
|--|--|
| Ambient temperature (operation) | -25 °C ... 55 °C (Standard) -40 °C ... 70 °C (Extended, see section "Tested successfully: use under extreme ambient conditions" in the data sheet.) |
| 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) | -25 °C ... 85 °C |
| Permissible humidity (operation) | 10 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 10 % ... 95 % (non-condensing) |

Standards and regulations

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

Mounting

| | |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

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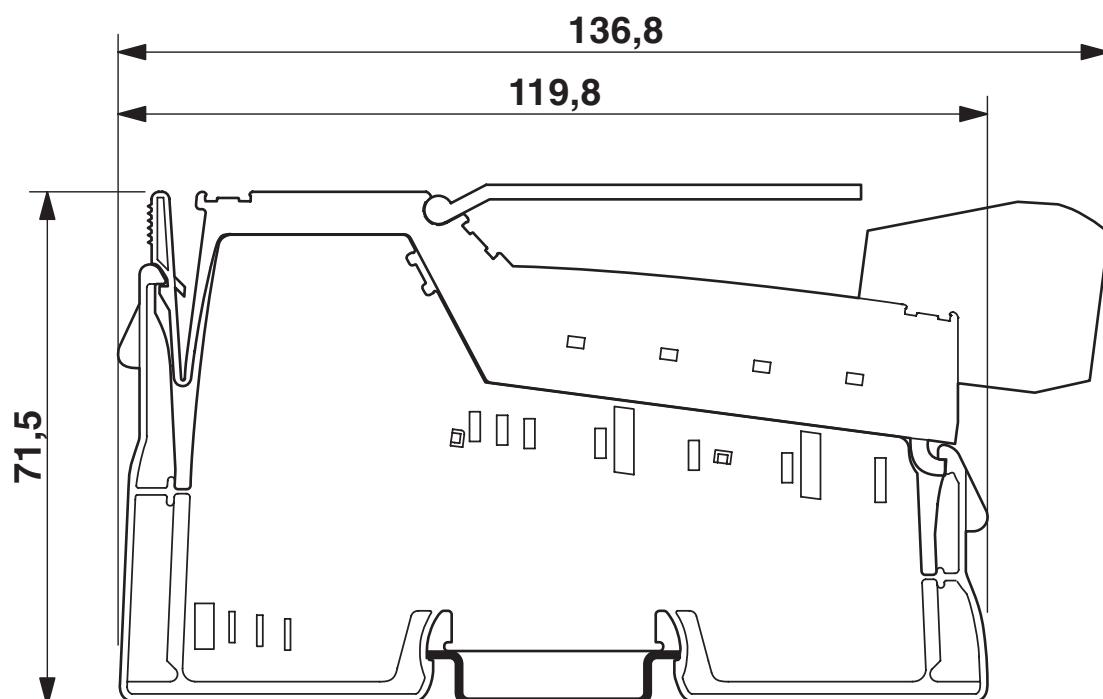


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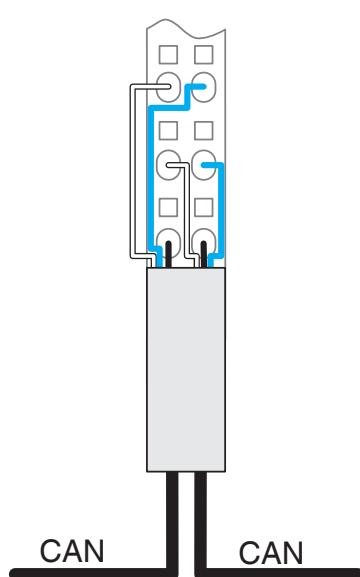
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Drawings

Dimensional drawing



Connection diagram



CAN master in the center of a CAN bus when using the original connector

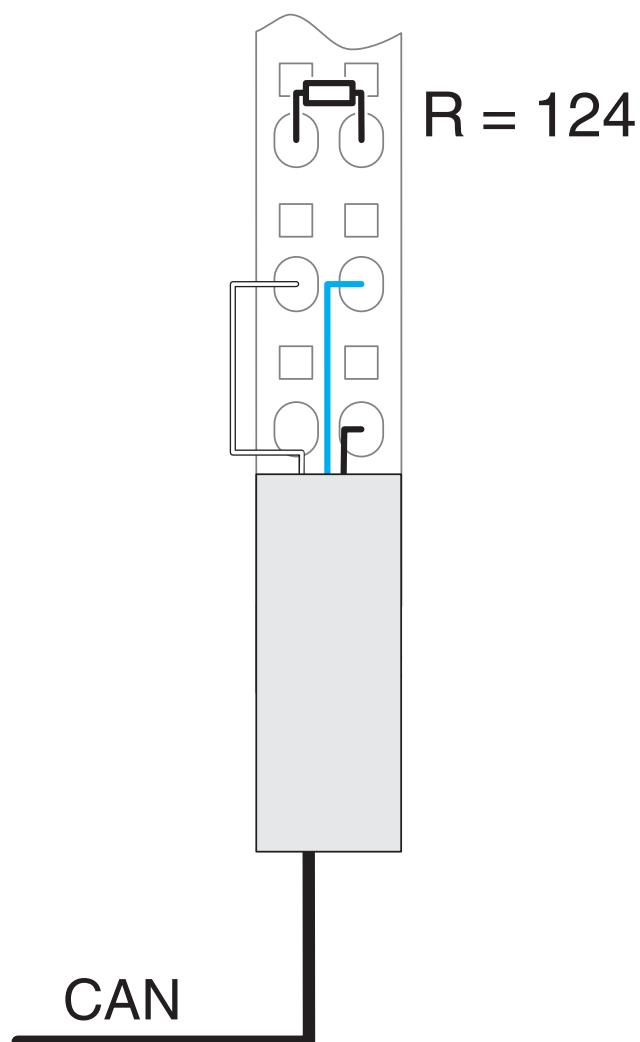
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Connection diagram



CAN master at the end of a CAN bus
($R = 124 \Omega$ termination resistor)

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Classifications

ETIM

ETIM 8.0

EC001601

UNSPSC

UNSPSC 21.0

32151600

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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-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
|-------------------------------------|----------------------|

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