

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)



The figure shows the standard item

## 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

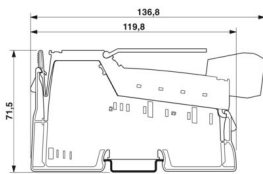
- Protocol: Transparent mode
- Transmission speed of CAN bus: 250 kbps
- Smallest data type: 1 byte
- Maximum data width of 2 x 64 bytes (= 128 bytes = 64 words)
- DIP switches for setting the data width
- Can be used under extreme ambient conditions
- Extended temperature range of -40 °C ... +70 °C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

## Technical data

### Dimensions

Dimensional drawing	
Width	12.2 mm
Height	136.8 mm
Depth	71.5 mm

### Material specifications

Color	green
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### Interfaces

#### Inline local bus

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

#### CAN bus

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

#### S-PORT

Number of interfaces	1 (Interface with plugged in memory stick)
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### System properties

#### Local diagnostics

Error messages via the bus	CAN bus voltage faulty
	Bus stop

#### Programming data (LocalbusSlave)

Length code (hex)	20
ID code (dec.)	191
Length code (dec)	32
Process data channel	64 Byte (Default; configurable)
Input address area	max. 64 Byte
Output address area	max. 64 Byte

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Parameter channel (PCP)	0 Byte
Register length (bus)	max. 64 Byte

#### Fieldbus data telegram

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)
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#### 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
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#### Inline connector

Connection method	Spring-cage connection
Conductor cross-section, rigid	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
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)
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### Mounting

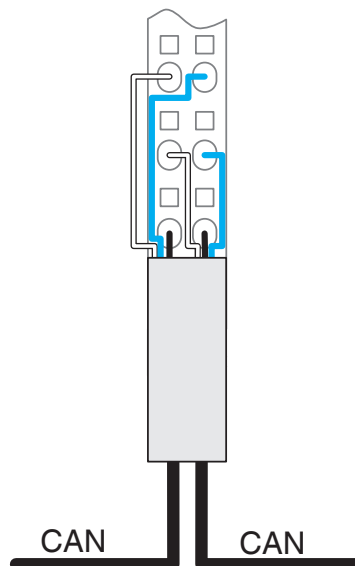
Mounting type	DIN rail mounting
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## Drawings

Dimensional drawing

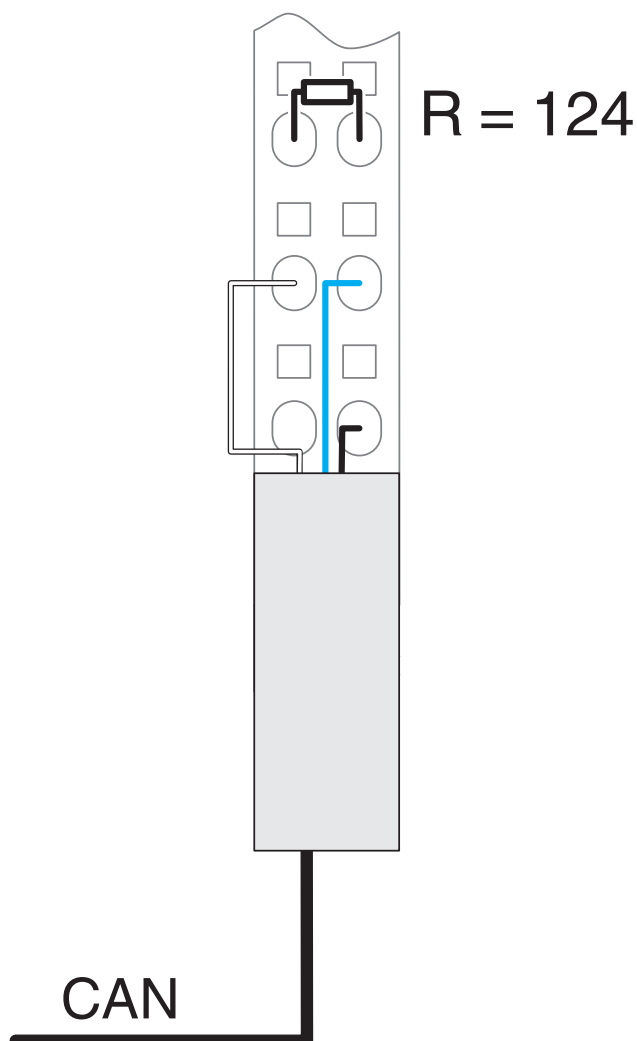


Connection diagram



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

## Connection diagram



CAN master at the end of a CAN bus  
(R = 124 Ω termination resistor)

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



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## Classifications

### 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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