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Bus coupler with remote bus branch for INTERBUS; twisted pair with 500 kbaud, rugged metal housing with IP67 protection, tool-free mounting on a separate mounting plate, can be used directly on welding robots



The illustration shows version IBS RL 24 BK RB-LK-LK

Product description

INTERBUS Ruggedline modules are provided for harsh ambient conditions or in the case of high requirements regarding system diagnostics. To ensure maximum availability, these modules are equipped with a zinc die-cast housing (IP67). Therefore, they can be installed in the direct vicinity of welding tongs.

Each Ruggedline module consists of a mounting plate and and electronics module. The electronics module is snapped onto the mounting plate and fixed with two screws if necessary.

I/O errors can be clearly localized by means of extended diagnostics. Short-circuits of the power supply of the sensors, for example, are reported in groups of 4 inputs. And, in the case of a short-circuit at an output, the respective output is even reported directly. This information will be made available to the controller and displayed at the module.

In the case of modules with fiber optic connection, the diagnostics capability even goes one step further. By using the latest fiber optic technology, the quality of the transmission path is permanently ascertained and optimally adjusted. This information is available to the controller and at the module. Due to these additional features, slow deterioration of the transmission path can be detected before errors occur during transmission or transmission is interrupted.

In the case of Ruggedline modules, the bus medium can be selected. Apart from versions with fiber optic connection (polymer fiber), there are modules which are used with twisted pair cables. The bus medium can be changed from FO installation to a copper medium at any time using the corresponding pluo-in adapters

The bus is connected by means of IP67 plug-in plugs, which transport both the bus signal and the power supply to the modules. For easy preparation, the power supply cable is connected to the plug using the QUICKON fast connection method, and connection of the fiber optic cable is made using a simple cutting and assembly tool; additional polishing is not necessary.

If a fiber optic bus cable is assembled by the user, e.g. the bridge between 2 modules, it must be at least one meter long. For shorter cable bridges, please use only cable bridges from Phoenix Contact.

Product Features

- Rugged metal housing
- Comprehensive diagnostic functions
- M12 connector for I/O devices
- Rugged Line connector for INTERBUS, either with fiber optic or twisted pair, and supply voltage





Key commercial data

| Packing unit | 1 pc |
|----------------|------|
| 1 doming drine | . 50 |



| Weight per Piece (excluding packing) | 798.6 GRM |
|--------------------------------------|-----------|
| Custom tariff number | 85389091 |
| Country of origin | Germany |

Technical data

Note

| | EMC: class A product, see manufacturer's declaration in the download |
|-------------------------|--|
| Utilization restriction | area |

Dimensions

| Width | 179 mm |
|--------------------|--|
| Height | 67 mm |
| Depth | 71 mm |
| Note on dimensions | With bus connectors and mounting plate |

Ambient conditions

| Ambient temperature (operation) | 0 °C 55 °C |
|--|--|
| Ambient temperature (storage/transport) | -25 °C 70 °C |
| Permissible humidity (operation) | 100 % |
| Permissible humidity (storage/transport) | 95 % (non-condensing) |
| Air pressure (operation) | 860 hPa 1080 hPa (up to 1500 m above mean sea level) |
| Air pressure (storage/transport) | 660 hPa 1080 hPa (up to 3500 m above mean sea level) |
| Degree of protection | IP65/IP67 |

General

| Weight | 610 g |
|----------------------------|--------------------------------------|
| Mounting type | Wall mounting |
| Protection class | III, IEC 61140, EN 61140, VDE 0140-1 |
| Air and creepage distances | According to EN 50178: 1998 |

Interfaces

| Fieldbus system | INTERBUS |
|--------------------|-------------------------------|
| Designation | INTERBUS |
| Connection method | Copper via IP67 RL connectors |
| Transmission speed | 500 kBit/s |

Power supply for module electronics

| Supply voltage | 24 V DC |
|----------------------|--|
| Supply voltage range | 18.5 V DC 32 V DC (including ripple) |
| Ripple | Max 3.6 V _{ss} within the permissible voltage range |
| Current consumption | typ. 120 mA |



Classifications

eCl@ss

| eCl@ss 4.0 | 27250203 |
|------------|----------|
| eCl@ss 4.1 | 27250203 |
| eCl@ss 5.0 | 27250203 |
| eCl@ss 5.1 | 27242608 |
| eCl@ss 6.0 | 27242608 |
| eCl@ss 7.0 | 27242608 |
| eCl@ss 8.0 | 27242608 |

ETIM

| ETIM 2.0 | EC001434 |
|----------|----------|
| ETIM 3.0 | EC001604 |
| ETIM 4.0 | EC001604 |
| ETIM 5.0 | EC001604 |

UNSPSC

| UNSPSC 6.01 | 43172015 |
|---------------|----------|
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11 | 43172015 |
| UNSPSC 12.01 | 43201404 |
| UNSPSC 13.2 | 43201404 |

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / INTERBUS CLUB / cULus Recognized

Ex Approvals

Approvals submitted

Approval details



Approvals

| UL Recognized 5 | |
|------------------------|--------|
| | |
| Nominal current IN | 0.12 A |
| Nominal voltage UN | 24 V |

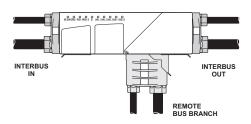
| cUL Recognized | |
|--------------------|--------|
| | |
| Nominal current IN | 0.12 A |
| Nominal voltage UN | 24 V |

INTERBUS CLUB

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Drawings

Connection diagram



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