

## Bus coupler - IBS RL 24 BK RB-LK-LK - 2725024

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



### 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 an 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 plug-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.

### Your advantages

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



### Key Commercial Data

|              |      |
|--------------|------|
| Packing unit | 1 pc |
|--------------|------|

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|                                      |   |
|--------------------------------------|---|
| GTIN                                 | <br>4 017918 185435 |
| GTIN                                 | 4017918185435   |
| Weight per Piece (excluding packing) | 778.600 g   |
| Custom tariff number                 | 85176200  |
| Country of origin                    | Germany   |

### Technical data

#### Note

|                         |   |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download 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 sea level) |
| Air pressure (storage/transport)         | 660 hPa ... 1080 hPa (up to 3500 m above sea level) |
| Degree of protection                     | IP65/IP67   |

#### General

|               |                   |
|---------------|-------------------|
| Mounting type | Wall mounting     |
| Net weight    | 782.8 g           |
| Mounting type | on mounting plate |

#### Interfaces

|                    |                                     |
|--------------------|-------------------------------------|
| Designation        | INTERBUS                            |
| Connection method  | Fiber optics via IP67 RL connectors |
| Transmission speed | 500 kbps                            |

#### 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 <sub>SS</sub> within the permissible voltage range |

#### Standards and Regulations

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## Technical data

### Standards and Regulations

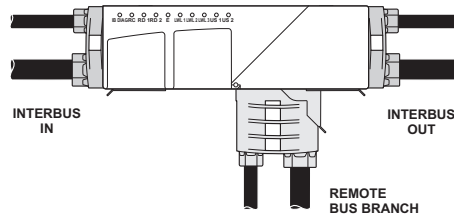
|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Air clearances and creepage distances | according to EN 50178: 1998           |
| Connection in acc. with standard      | CUL                                   |
| Protection class                      | III (IEC 61140, EN 61140, VDE 0140-1) |

### Environmental Product Compliance

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

## Drawings

Connection diagram



## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27242608 |
| eCl@ss 11.0   | 27242608 |
| eCl@ss 4.0    | 27250200 |
| eCl@ss 4.1    | 27250200 |
| eCl@ss 5.0    | 27250200 |
| eCl@ss 5.1    | 27242600 |
| eCl@ss 6.0    | 27242600 |
| eCl@ss 7.0    | 27242608 |
| eCl@ss 9.0    | 27242608 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001434 |
| ETIM 3.0 | EC001604 |
| ETIM 4.0 | EC001604 |
| ETIM 6.0 | EC001604 |
| ETIM 7.0 | EC001604 |

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## Classifications

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 43172015 |
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11     | 43172015 |
| UNSPSC 12.01  | 43201404 |
| UNSPSC 13.2   | 32151602 |
| UNSPSC 18.0   | 32151602 |
| UNSPSC 19.0   | 32151602 |
| UNSPSC 20.0   | 32151602 |
| UNSPSC 21.0   | 32151602 |

## Approvals


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UL Recognized / cUL Recognized / INTERBUS CLUB / cULus Recognized

#### Ex Approvals

### Approval details

|                    |   |   |               |
|--------------------|---|---|---------------|
| UL Recognized      |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324 |
| Nominal voltage UN |   | 24 V  |               |
| Nominal current IN |   | 0.12 A  |               |

|                    |   |   |               |
|--------------------|---|---|---------------|
| cUL Recognized     |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324 |
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|               |              |
|---------------|--------------|
| INTERBUS CLUB | 365/23.11.01 |
|---------------|--------------|

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### Approvals

cULus Recognized

