

## Bus coupler - IBS RL 24 BK RB-T-T - 2731063

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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 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.

### 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
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## Bus coupler - IBS RL 24 BK RB-T-T - 2731063

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

### Technical data

#### Note

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

Mounting type	Wall mounting
Net weight	610 g
Mounting type	On mounting plate

#### 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 <sub>SS</sub> within the permissible voltage range
Current consumption	typ. 120 mA

#### Standards and Regulations

Air clearances and creepage distances	According to EN 50178: 1998
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## Technical data

### Standards and Regulations

Connection in acc. with standard	CUL
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

## 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

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#### Approvals

UL Recognized / cUL Recognized / INTERBUS CLUB / cULus Recognized

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#### Ex Approvals

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# Bus coupler - IBS RL 24 BK RB-T-T - 2731063

## Approvals

Approvals submitted

### Approval details

UL Recognized	
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

cULus Recognized	
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## Accessories

### Accessories

#### Adapter

Adapter set - IBS RL 24 ADAP-M23/T - 2734109



INTERBUS Rugged Line adapter for converting the remote bus connection and the power supply from M23 circular connector to twisted pair

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### Accessories

Adapter set - IBS RL 24 ADAP-T/M23 - 2734112



INTERBUS Rugged Line adapter for converting the remote bus connection and the power supply from twisted pair to M23 circular connector

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### Assembly element

Lower mounting part - IBS RL AP - 2731128



Mounting plate for Ruggedline devices

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### Bridge

Cable set - IBS RL CONNECTION-T - 2733061



Assembled cable jumper as a short connection between two INTERBUS Rugged Line devices with copper bus connectors and power supply, approximately 30 cm

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### Cable by the meter

Cable - IBS PWR/5HD/F - 2731775



Power supply cable, gray, welding-splash-resistant in standard applications, 5 x 1.5 mm<sup>2</sup>, highly flexible, sold by the meter

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### Accessories

Cable - IBS PWR/5 - 2820000



Power supply cable, gray, welding-splash-resistant in standard applications, 5 x 1.5 mm<sup>2</sup>, sold by the meter

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### Connector set

Connector set - IBS CCO-R/L - 2759883



M23 solder connection for bus connector set, male/female connector, 9-pos. (8+1)

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### Labeling panel

Marking label - IBS RL MARKER-SET - 2732729



Set of 50 small and 50 large metal marking labels

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Marking label - IBS RL MARKER-G-SET - 2734727



100 large metal marking labels

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Marking label - IBS RL MARKER-K-SET - 2734730



100 small metal marking labels

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### Accessories

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#### Plug

Bus connector - IBS RL PLUG-T - 2731898



Connector for the copper wire bus and for the power supply with QUICKON connection method

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Bus connector - IBS RL PLUG-T-F - 2734196



Connector for the copper wire bus and for the power supply with spring-cage connection method

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Connector set - IBS CCO-PSF/L - 2780878



M23 power supply connector, female connector, 6-pos.

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Connector set - IBS CCO-PSM/L - 2759906



M23 power supply connector, male connector, 6-pos.

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#### Remote bus cable

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### Accessories

Remote bus cable - IBS RBC METER-T - 2806286



Remote bus cable for fixed installation, sold by the meter

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Remote bus cable - IBS RBC METER/F-T - 2723123



Remote bus cable for flexible installation, sold by the meter

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### Y-distributor

Y distributor - SAC-3P-M12Y/2XM12FS PE - 1683455



Y distributor, 4-position, Plug straight M12, A-coded, on Socket straight M12, A-coded and Socket straight M12, A-coded

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User manual - IBS RL SYS PRO UM - 2743705



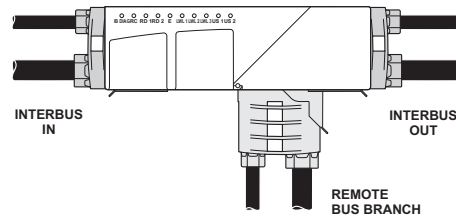
User manual, German, for configuring and installing the Rugged Line product range, only available as a download.

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### Drawings

## Bus coupler - IBS RL 24 BK RB-T-T - 2731063

Connection diagram



# Mouser Electronics

Authorized Distributor

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