

## Distributed I/O device - IBS RL 24 DO 16/8-R-LK-2MBD - 2734507

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Digital input device for INTERBUS; fiber optic technology with 2 Mbaud, 16 inputs that can be read (24 V DC), sensor connection via 5-pos. M12 female connectors, rugged metal housing, IP67 protection



The illustration shows version IBS RL 24 DO 16/8-R-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.

### Product Features

- 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
Weight per Piece (excluding packing)	850.7 GRM
Custom tariff number	85176200

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Country of origin	Germany
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### 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)	-20 °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)	800 hPa ... 1060 hPa (up to 2000 m above sea level)
Air pressure (storage/transport)	700 hPa ... 1060 hPa (up to 3000 m above sea level)
Degree of protection	IP65/IP67

#### General

Weight	810 g
Note on weight specifications	Without plug or mounting plate
Mounting type	Wall mounting
Note	Seal unused slots/connections to ensure the degree of protection.
Test section	Between bus logic and outputs 500 V AC 50 Hz 1 min

#### Interfaces

Fieldbus system	INTERBUS
Designation	INTERBUS
Connection method	Optic fiber (polymer fiber 980/1000 µm)
Transmission speed	2 MBit/s
Transmission physics	FO

#### 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
Supply current	typ. 120 mA
Current consumption	120 mA

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### Technical data

#### Digital outputs

Output name	Digital outputs
Connection method	2, 3-wire
Number of outputs	16
Protective circuit	Electronic short-circuit/overload protection for each channel
Output voltage	24 V DC
Nominal output voltage	24 V DC
Maximum output current per channel	500 mA
Maximum output current per module	4 A
Nominal load, inductive	12 VA (1.2 H; 48 Ω)
Nominal load, lamp	12 W
Nominal load, ohmic	12 W

### Classifications

#### eCl@ss

eCl@ss 4.0	27250302
eCl@ss 4.1	27250302
eCl@ss 5.0	27250302
eCl@ss 5.1	27242604
eCl@ss 6.0	27242604
eCl@ss 7.0	27242604
eCl@ss 8.0	27242604

#### ETIM

ETIM 2.0	EC001430
ETIM 3.0	EC001599
ETIM 4.0	EC001599
ETIM 5.0	EC001599

#### UNSPSC

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

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## Approvals

### Approvals

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#### Approvals

UL Recognized / cUL Recognized / INTERBUS CLUB / null / UL Recognized / null / null / null / null / null / null / null / null / cULus Recognized

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#### Ex Approvals

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#### Approvals submitted

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### Approval details

UL Recognized 

cUL Recognized 

INTERBUS CLUB

UL Recognized







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- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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