

IBS RL 24 DI 16/8-T

Order No.: 2836463


The illustration shows version IBS RL 24 DI 16/8-LK



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Digital input device for INTERBUS; twisted pair with 500 kbaud, 16 inputs (24 V DC), sensor connection via 5-pos. M12 female connectors, rugged metal housing, IP67 protection



Commercial data	
GTIN (EAN)	4  017918 185619
sales group	K521
Pack	1 pcs.
Customs tariff	85389091
Catalog page information	Page 285 (AX-2011)

Product notes

WEEE/RoHS-compliant since: 01/14/2008



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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 connectors, 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.

Technical data

General data

Width	179 mm
Height	67 mm
Depth	71 mm
Note on dimensions	With bus connectors and mounting plate
Weight	720 g
Note on weight specifications	Without connector or mounting plate
Mounting type	Wall mounting
Ambient temperature (operation)	0 °C ... 55 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Permissible humidity (operation)	100 %
Permissible humidity (storage/transport)	95 % (no condensation)
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	IP67, when screwed together
Note	Seal unused slots/connections to ensure the degree of protection.

Interface

Fieldbus system	INTERBUS
Name	Remote bus
Connection method	IP67 RL plug connector
Transmission speed	500 kBaud

Transmission physics	Copper
Power supply for module electronics	
Supply voltage	24 V DC
Supply voltage range	18.5 V ... 32 V (including ripple)
Ripple	Max 3.6 V _{pk-pk} within the permissible voltage range
Digital inputs	
Input name	Digital inputs
Connection method	2, 3, 4-wire
Number of inputs	16
Protective circuit	Electronic short-circuit/overload protection for each group
Input voltage range "0" signal	0 V ... 5 V
Input voltage range "1" signal	11 V ... 32 V
Typical input current per channel	50 mA

Certificates / Approvals



Certification CUL, UL

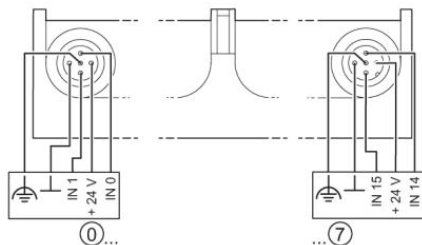
Accessories

Item	Designation	Description
Assembly		
2731128	IBS RL AP	Mounting plate for Ruggedline devices
Cable/conductor		
2820000	IBS PWR/5	Power supply cable, gray, welding-splash-resistant in standard applications, 5 x 1.5 mm ² , sold by the meter
2731775	IBS PWR/5HD/F	Power supply cable, gray, welding-splash-resistant in standard applications, 5 x 1.5 mm ² , highly stranded, sold by the meter
2806286	IBS RBC METER-T	Remote bus cable for permanent installation, sold by the meter
2723123	IBS RBC METER/F-T	Remote bus cable for flexible installation, sold by the meter

2733061	IBS RL CONNECTION-T	Assembled cable jumper as a short connection between two INTERBUS Rugged Line devices with copper bus connectors and power supply, approximately 30 cm
General		
2743705	IBS RL SYS PRO UM	User manual, German, for configuring and installing the Rugged Line product range, only available as a download.
Marking		
2734727	IBS RL MARKER-G-SET	100 large metal marking labels
2734730	IBS RL MARKER-K-SET	100 small metal marking labels
2732729	IBS RL MARKER-SET	Set of 50 small and 50 large metal marking labels
Plug/Adapter		
2780878	IBS CCO-PSF/L	M23 power supply connector, female connector, 6-pos.
2759906	IBS CCO-PSM/L	M23 power supply connector, male connector, 6-pos.
2759883	IBS CCO-R/L	M23 solder connection for bus connector set, male/female connector, 9-pos. (8+1)
2734109	IBS RL 24 ADAP-M23/T	INTERBUS Rugged Line adapter for converting the remote bus connection and the power supply from M23 circular connector to twisted pair
2734112	IBS RL 24 ADAP-T/M23	INTERBUS Rugged Line adapter for converting the remote bus connection and the power supply from twisted pair to M23 circular connector
2731898	IBS RL PLUG-T	Connector for the copper wire bus and for the power supply with screw connection method
2734196	IBS RL PLUG-T-F	Connector for the copper wire bus and for the power supply with spring-cage connection method
1683455	SAC-3P-M12Y/2XM12FS PE	Y-distributor, 3-pos. +PE, straight connector M12 on 2 x straight socket M12

Diagrams/Drawings

Connection diagram



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