

# IBS RL 24 DIO 8/8/8-T - Distributed I/O device



2836476

<https://www.phoenixcontact.com/us/products/2836476>

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Digital I/O device for INTERBUS; twisted pair with 500 kbaud, eight inputs (24 V DC), eight outputs (24 V DC, 0.5 A), sensor/actuator connection via 5-pos. M12 female connectors, rugged metal housing, IP67 protection



The figure shows version IBS RL 24 DIO 8/8/8-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). This means they can even be mounted in the immediate vicinity of welding tongs, for example. Each Ruggedline module consists of a mounting panel and electronics module. The electronics module is snapped onto the mounting panel and fastened with two screws, if necessary. Peripheral faults can be clearly localized using the extended diagnostics. Short circuits in the sensor supply are signaled in groups of four inputs each, for example. And, in the case of a short circuit at an output, the respective output is even displayed directly. This information is made available to the controller as well as displayed on the module. For the modules with a fiber-optic connection, the diagnostic capability goes one step further. D

## 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

## Commercial data

Item number	2836476
Packing unit	1 pc
Sales key	DR03
Product key	DRI513
GTIN	4017918185602
Weight per piece (including packing)	830.1 g
Weight per piece (excluding packing)	830.1 g
Customs tariff number	85176200
Country of origin	DE

## Technical data

### Dimensions

Width	179 mm
Height	67 mm
Depth	71 mm
Note on dimensions	with bus connection plugs and mounting panel

### Interfaces

#### INTERBUS

Connection method	IP67 RL connector
Designation connection point	Copper cable
Transmission speed	500 kbps
Transmission physics	Copper

### Input data

#### Digital:

Input name	Digital inputs
Number of inputs	8
Connection technology	2-, 3-, 4-conductor
Input voltage range "0" signal	0 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Typical input current per channel	3 mA
Delay at signal change from 0 to 1	3 ms
Delay at signal change from 1 to 0	3 ms
Protective circuit	Electronic short-circuit/overload protection for each group

### Output data

#### Digital:

Output name	Digital outputs
Connection technology	2-, 3-conductor
Number of outputs	8
Protective circuit	Electronic short-circuit/overload protection for each channel
Output voltage	24 V DC
Maximum output current per group	2 A
Maximum output current per channel	500 mA
Nominal output voltage	24 V
Output voltage when switched off	max. 1 V
Output current when switched off	max. 100 µA
Nominal load, inductive	12 VA (1.2 H, 48 Ω)
Nominal load, lamp	12 W
Nominal load, ohmic	12 W

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Maximum operating frequency with ohmic nominal load	max. 300 Hz
Behavior with overload	Auto restart
Behavior with inductive overload	Output can be destroyed
Overcurrent shut-down	min. 0.7 A
Output current with ground connection interrupt when switched off	max. 25 mA

## Product properties

Product type	I/O component
Product family	Ruggedline
Type	Block design
No. of channels	16

## Electrical properties

### Supply: Module electronics

Supply voltage	24 V DC
Supply voltage range	18.5 V DC ... 32 V DC (including ripple)
Supply current	typ. 120 mA (plus sensor current)
Ripple	Max 3.6 V <sub>SS</sub> within the permissible voltage range

### Electrical isolation/isolation of the voltage ranges

Test voltage: Between bus logic and I/O	500 V AC, 50 Hz, 1 min
Test voltage: Between bus logic and outputs	500 V AC, 50 Hz, 1 min

## Connection data

Connection method	M12 connector
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## Environmental and real-life conditions

### Ambient conditions

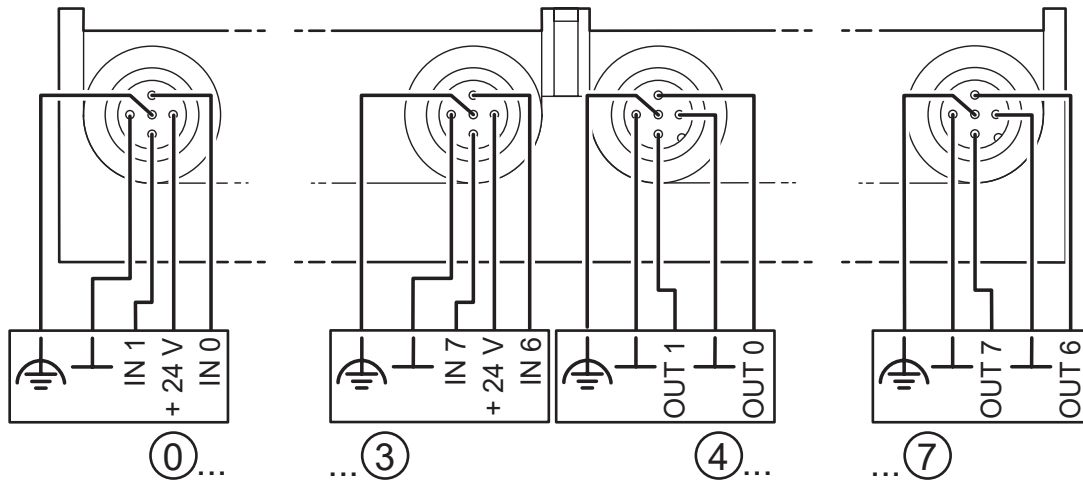
Ambient temperature (operation)	0 °C ... 55 °C
Degree of protection	IP65/IP67
Note	Seal unused slots/connections to ensure the degree of protection.
Air pressure (operation)	860 hPa ... 1080 hPa (up to 1500 m above sea level)
Air pressure (storage/transport)	660 hPa ... 1080 hPa (up to 3500 m above sea level)
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Permissible humidity (operation)	100 %
Permissible humidity (storage/transport)	95 % (non-condensing)

## Mounting

Mounting type	Panel mounting
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Drawings

Connection diagram



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## Classifications

### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(a), 6(a)-I, 7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
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