

Distributed I/O device - IBS RL 24 DIO 8/8/8-LK-2MBD - 2731571

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Digital I/O device for INTERBUS; fiber optic technology with 2 Mbaud, 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 illustration shows version IBS RL 24 DIO 8/8/8-LK

Why buy this product

- 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
GTIN	 4 017918 185725
Weight per Piece (excluding packing)	809.7 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

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Technical data

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)
Degree of protection	IP65/67

General

Weight	720 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
Name	INTERBUS remote bus
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 _{SS} within the permissible voltage range
Supply current	typ. 120 mA (plus sensor current)
Current consumption	typ. 120 mA (plus sensor current)

Digital inputs

Input name	Digital inputs
Connection method	2, 3, 4-wire
Number of inputs	8
Protective circuit	Electronic short-circuit/overload protection for each group
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

Digital outputs

Output name	Digital outputs
Connection method	2, 3-wire
Number of outputs	8

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Technical data

Digital outputs

Protective circuit	Electronic short-circuit/overload protection for each channel
Output voltage	24 V
Nominal output voltage	24 V
Maximum output current per channel	500 mA
Maximum output current per group	2 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

Approvals

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UL Recognized / cUL Recognized / INTERBUS CLUB / cULus Recognized

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Approvals

Ex Approvals

Approvals submitted

Approval details

UL Recognized	
Nominal current IN	0.5 A

cUL Recognized	
Nominal current IN	0.5 A

INTERBUS CLUB

cULus Recognized	
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Accessories

Accessories

Adapter cable

Cable set - IBS RL CABLE POF/ - 2819956

Assembled cable sets with fiber optic bus connectors, sold by the meter



Assembly element

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Accessories

Lower mounting part - IBS RL AP - 2731128



Mounting plate for Ruggedline devices

Assembly tool

Fiber cutter - IBS RL FOC - 2725147



Fiber cutter for assembling polymer fiber cables for connecting INTERBUS Ruggedline devices

Assembly tool - PSM-POF-KONFTOOL - 2744131



Polymer fiber DIY case, consisting of: Stripping knife, stripping pliers, polishing wheels for F-SMA and SCRJ quick mounting connectors, polishing pad and emery paper

Bridge

Cable set - IBS RL CONNECTION-LK - 2733029



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

Cable by the meter

Cable - IBS PWR/5HD/F - 2731775



Power supply cable, gray, welding-splash-resistant in standard applications, 5 x 1.5 mm², 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 mm², sold by the meter

Circular connector (cable-side)

Sensor/actuator connector - SACC-M12MS-4QO-0,75 - 1641769



Sensor/actuator connector, 4-position, Plug straight M12, A-coded, Insulation displacement connection, Knurl material: Plastic, External cable diameter 4 mm ... 8 mm

Connector set

Connector set - IBS CCO-R/L - 2759883



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

Data cable by the meter

FO cable - PSM-LWL-RUGGED-980/1000 - 2744322



Polymer fiber cable, duplex, 980 µm/1000 µm, heavy version for permanent indoor installation, sold by the meter without connectors

FO cable - PSM-LWL-RUGGED-FLEX-980/1000 - 2744335



Polymer fiber cable, duplex 980/1000 µm, heavy-weight, highly flexible version for flexible conduit applications, by the meter, without connector

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Accessories

FO cable - PSM-LWL-KDHEAVY-980/1000 - 2744319



Polymer fiber cable, duplex 980/1000 μm , medium-weight version for permanent indoor installation, by the meter, without connector

Labeling panel

Marking label - IBS RL MARKER-SET - 2732729



Set of 50 small and 50 large metal marking labels

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



100 large metal marking labels

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



100 small metal marking labels

Measuring tools

Measuring instrument - PSM-FO-POWERMETER - 2799539



Fiber optic measuring case, consisting of an optical power meter, F-SMA, B-FOC adapters, reference fibers and operating instructions

Media converter

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Accessories

FO converters - IBS OPTOSUB-MA/M/R-LK-OPC - 2732635



INTERBUS fiber optic converter for converting the remote OUT interface to fiber optics, correction of the optical transmission capacity, FO output right

Plug

Bus connector - IBS RL PLUG-LK/POF - 2731076



Connector for the fiber optic bus with polymer fiber cable and for the power supply with QUICKON connection method

Adapter set - IBS RL 24 ADAP-LK/T - 2725040



INTERBUS Rugged Line adapter for converting the fiber optic remote bus to a copper wire remote bus

Adapter set - IBS RL 24 ADAP-T/LK - 2725037



INTERBUS Rugged Line adapter for converting the copper wire remote bus to a fiber optic remote bus

Bus connector - IBS RL PLUG-LK/POF-F - 2734183



Connector for the fiber optic bus with polymer fiber cable and for the power supply with spring-cage connection method

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Accessories

Connector set - IBS CCO-PSF/L - 2780878



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

Connector set - IBS CCO-PSM/L - 2759906



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

Adapter - IBS RL ADAP FO - 2725121



Measuring device adapter for INTERBUS Ruggedline devices

Y-distributor

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



Y-distributor, 3-pos. +PE, straight plug M12 on 2 x straight socket M12

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.

Drawings

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Connection diagram

