

# IBS RL 400 MLR R DIO6/1 LK2MBD

Order No.: 2731830




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Electromechanical reversing load motor starter for INTERBUS; fiber optic technology with 2 Mbaud, inputs (24 V DC), integrated motor protection relay (220 V AC to 440 V AC; 8 A, maximum), sensor connection via 5-pos. M12 female connectors, rugged metal housing, IP67 protection



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## Commercial data

GTIN (EAN)	 4 017918 901820
sales group	K525
Pack	1 pcs.
Customs tariff	85389091
Catalog page information	Page 289 (AX-2011)

## Technical data

### Interface

Fieldbus system	INTERBUS
Name	Remote bus
Connection method	Fiber optics
Transmission speed	2 MBaud

### Power supply for module electronics

Supply voltage	24 V DC
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Supply voltage range	18.5 V DC ... 32 V DC (including ripple)
Ripple	3.6 V <sub>pp</sub>
Current consumption	Typ. 90 mA (plus power supply for sensors)

#### Mains connection

Name	Mains connection
Connection method	POWER-COMBICON with silver contacts
Designation connection point	Terminal strip; X11 and X12
Number of positions	4
Permissible conductor cross section	2.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Operating voltage	200 V AC ... 440 V AC (conductor voltage)
Max. current carrying capacity	20 A

#### Motor starter, output

Connection method	POWER-COMBICON
Number	1
Designation connection point	X10
Number of positions	8
Pg screw connection	Pg16
Operating voltage	200 V AC ... 440 V AC
Frequency range	50 Hz ... 60 kHz
Nominal current range	0.2 A ... 8 A (parameterizable, observe derating)
Utilization category	On the basis of AC 3
Switching rate	5 cycles per minute, maximum
Motor startup time	1 s

#### Motor monitoring

Parameterization	Via INTERBUS
Overspeed tripping	≥ 40 A (after 1 second at I <sub>nom</sub> > 3.6 A)

#### Motor starter, brake

Continuous load current	max. 1 A
Type of contact	Mechanical relay contact
Connection method	POWER-COMBICON terminal strips
Connection voltage	12 V AC/DC ... 440 V AC/DC

#### Digital inputs

Input name	Digital inputs
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Number of inputs	6
Connection method	M12 male connector
	3, 4-wire
Number of positions	5
Input voltage	24 V DC (DIN EN 61131-2)
Input voltage range "0" signal	0 V ... 5 V
Input voltage range "1" signal	11 V ... 30 V
Typical input current per channel	5 mA (for $U_{S1} = 24$ V)
Filter time	3 ms
Power supply for sensors	$U_{INI} = U_{S1}$ minus 1 V 50 mA Protected against inductive reverse voltages, electronically protected against short-circuiting

#### Digital outputs

Number of outputs	1
Connection method	M12 male connector
Number of positions	5
Output current	0.5 A
Minimum output voltage with nominal current	$U_{S1}$ minus 2 V
Type of protection	Electronic short-circuit/overload protection

#### General data

Width	185.1 mm
Height	193 mm
Depth	138 mm
Weight	3.8 kg
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
Protection class	I, IEC 61140, EN 61140, VDE 0140-1
Air and creepage distances	According to EN 50178: 1998

Diagnosics messages	Mains failure, phase failure, blown fuse Error message in diagnostic code (bus) and display by means of the E LED on the motor starter
	Motor connector not plugged in, motor temperature exceeded, thermistor line short-circuited Error message in diagnostic code (bus) and display by means of the E LED on the motor starter
	Sensor supply failure Error message in diagnostic code (bus) and display by means of the E LED on the motor starter
	Failure of the actuator supply Error message in diagnostic code (bus) and display by means of the E LED on the motor starter
	Motor overcurrent Error message in diagnostic code (bus) and display by means of the E LED on the motor starter
	Output stage cannot be controlled Error message in diagnostic code (bus) and display by means of the E LED on the motor starter
	Module error during self test Message to the master

### Certificates / Approvals



Certification VDE-PZI

### Accessories

Item	Designation	Description
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#### Assembly

2731128	IBS RL AP	Mounting plate for Ruggedline devices
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#### Cable/conductor

2820000	IBS PWR/5	Power supply cable, gray, welding-splash-resistant in standard applications, 5 x 1.5 mm <sup>2</sup> , sold by the meter
2731775	IBS PWR/5HD/F	Power supply cable, gray, welding-splash-resistant in standard applications, 5 x 1.5 mm <sup>2</sup> , highly stranded, sold by the meter
2733029	IBS RL CONNECTION-LK	Assembled cable jumper as a short connection between two INTERBUS Rugged Line devices with fiber optic bus connectors and power supply, approximately 30 cm
2744319	PSM-LWL-KDHEAVY-980/1000	Polymer fiber cable, duplex 980/1000 µm, medium-weight version for permanent indoor installation, by the meter, without connector

2744322	PSM-LWL-RUGGED-980/1000	Polymer fiber cable, duplex, 980 µm/1000 µm, heavy version for permanent indoor installation, sold by the meter without connectors
2744335	PSM-LWL-RUGGED-FLEX-980/1000	Polymer fiber cable, duplex 980/1000 µm, heavy-weight, highly flexible version for flexible conduit applications, by the meter, without connector

#### General

2740504	IBS RL MLR PLSET R-8A	Accessory set comprising: connectors and PG screw connections
2743705	IBS RL SYS PRO UM	User manual, German, for configuring and installing the Rugged Line product range, only available as a download.

#### Handheld operator panel

2837006	IBS HVO/M12	Handheld operator panel, for INTERBUS motor starters and INTERBUS variable frequency drives in IP54 protection
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#### Marking

2732729	IBS RL MARKER-SET	Set of 50 small and 50 large metal marking labels
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#### Plug/Adapter

2725040	IBS RL 24 ADAP-LK/T	INTERBUS Rugged Line adapter for converting the fiber optic remote bus to a copper wire remote bus
2725037	IBS RL 24 ADAP-T/LK	INTERBUS Rugged Line adapter for converting the copper wire remote bus to a fiber optic remote bus
2731076	IBS RL PLUG-LK/POF	Connector for the fiber optic bus with polymer fiber cable and for the power supply with screw connection method

**Address**

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