

# FLS IB M12 DIO 4/4 M12-2A - Distributed I/O device



2736026

<https://www.phoenixcontact.com/us/products/2736026>

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The stand-alone device for INTERBUS has 4 digital inputs and 4 digital outputs each with a load capacity of 2 A. The M12 connection is established using fast connection technology. The 24 V DC supply is protected against short circuit and overload.

## Product description

This device is used for digital signal acquisition and output.

## Your advantages

- Consistent connection via M12 connectors
- SPEEDCON fast locking system
- Diagnostic and status indicators
- Short-circuit and overload protection
- Flexible power supply concept

## Commercial data

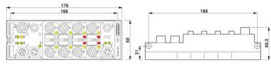
Item number	2736026
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DR03
Product key	DRI4A1
GTIN	4017918899646
Weight per piece (including packing)	382.3 g
Weight per piece (excluding packing)	340 g
Customs tariff number	85176200
Country of origin	DE

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## Technical data

### Dimensions

Dimensional drawing	
Width	60 mm
Height	178 mm
Depth	49.3 mm
Drill hole spacing	168 mm

### Interfaces

#### INTERBUS

Connection method	2x M12 connectors, B-coded
Designation connection point	Copper cable
Number of positions	5
Transmission speed	500 kbps

### System properties

#### System limits

Number of local bus devices that can be connected	0
Number of devices with parameter channel	0

#### Programming data

Length code (hex)	41
ID code (dec.)	3
Length code (dec)	65
Process data channel	4 bit
Input address area	4 bit
Output address area	4 bit
Parameter channel (PCP)	0 bit
Register length (bus)	4 bit

### Input data

#### Digital:

Input name	Digital inputs
Description of the input	IEC 61131-2 type 1
Number of inputs	4
Connection method	M12 connector
Connection technology	2-, 3-, 4-conductor
Input voltage	24 V DC
Input voltage range "0" signal	-30 V DC ... 5 V DC

Input voltage range "1" signal	13 V DC ... 30 V DC
Nominal input voltage $U_{IN}$	24 V DC
Nominal input current at $U_{IN}$	5 mA
Current flow	Linear in the range of $1\text{ V} < U_{IN} < 30\text{ V}$
Filter time	3 ms
Protective circuit	Reverse polarity protection

## Output data

### Digital:

Output name	Digital outputs
Connection method	M12 connector
Connection technology	2-, 3-conductor
Number of outputs	4
Protective circuit	Short-circuit protection
Output voltage	24 V DC
Maximum output current per channel	2 A
Output current when switched off	max. 20 $\mu\text{A}$
Nominal load, inductive	48 VA (1,2 H, 12 $\Omega$ )
Nominal load, lamp	48 W
Nominal load, ohmic	48 W
Maximum operating frequency with ohmic nominal load	max. 500 Hz
Behavior with overload	Auto restart
Behavior with inductive overload	Output can be destroyed
Behavior at voltage switch-off	The output follows the power supply without delay
Overcurrent shut-down	min. 2.6 A
Output current with ground connection interrupt when switched off	max. 5 mA

## Product properties

Product type	I/O component
Product family	Fieldline
Type	Block design
No. of channels	8

## Electrical properties

### Potentials

Voltage supply $U_L$	24 V DC
Power supply at $U_L$	max. 4 A
Current consumption from $U_L$	typ. 60 mA
	max. 100 mA
Voltage supply $U_S$	24 V DC
Power supply at $U_S$	max. 4 A
Current consumption from $U_S$	typ. 10 mA (plus sensor current)
	max. 500 mA

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Voltage supply $U_{A11}$	24 V DC
Power supply at $U_{A11}$	max. 4 A
Current consumption at $U_{A11}$	typ. 6 mA (plus actuator current)
	max. 4 A
Voltage supply $U_{A12}$	24 V DC
Power supply at $U_{A12}$	max. 4 A
Current consumption at $U_{A12}$	typ. 6 mA (plus actuator current)
	max. 4 A

## Supply: Module electronics

Connection method	M12 connector, A-coded
Designation	$U_L$
Supply voltage	24 V DC
Supply voltage range	18 V DC ... 30 V DC (including ripple)

## Electrical isolation/isolation of the voltage ranges

Test voltage: 24 V supply (bus logics) / FE	500 V AC, 50 Hz, 1 s
Test voltage: 24 V supply (bus logics) / Digital inputs (sensor supply / I/O)	500 V AC, 50 Hz, 1 s
Test voltage: 24 V supply (bus logics) / Digital outputs (actuator supply)	500 V AC, 50 Hz, 1 s
Test voltage: 24 V supply (bus logics) / Incoming remote bus	500 V AC, 50 Hz, 1 s
Test voltage: 24 V supply (bus logics) / Outgoing remote bus	500 V AC, 50 Hz, 1 s
Test voltage: Digital inputs (sensor supply / I/O) / FE	500 V AC, 50 Hz, 1 s
Test voltage: Digital inputs (sensor supply) / Digital outputs (actuator supply)	500 V AC, 50 Hz, 1 s
Test voltage: Digital inputs (sensor supply / I/O) / Incoming remote bus	500 V AC, 50 Hz, 1 s
Test voltage: Digital inputs (sensor supply / I/O) / Outgoing remote bus	500 V AC, 50 Hz, 1 s
Test voltage: Digital outputs (actuator supply) / FE	500 V AC, 50 Hz, 1 s
Test voltage: Digital outputs (actuator supply) / Incoming remote bus	500 V AC, 50 Hz, 1 s
Test voltage: Incoming remote bus / FE	500 V AC, 50 Hz, 1 s
Test voltage: Incoming remote bus / Outgoing remote bus	500 V AC, 50 Hz, 1 s
Test voltage: Outgoing remote bus / FE	500 V AC, 50 Hz, 1 s

## Connection data

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

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Degree of protection	IP65/IP67
Air pressure (operation)	80 kPa ... 106 kPa (up to 2000 m above sea level)

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Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (storage/transport)	95 %

## Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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## Mounting

Mounting type	Panel mounting
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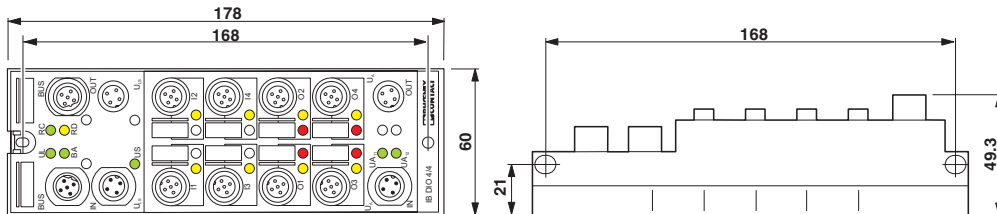


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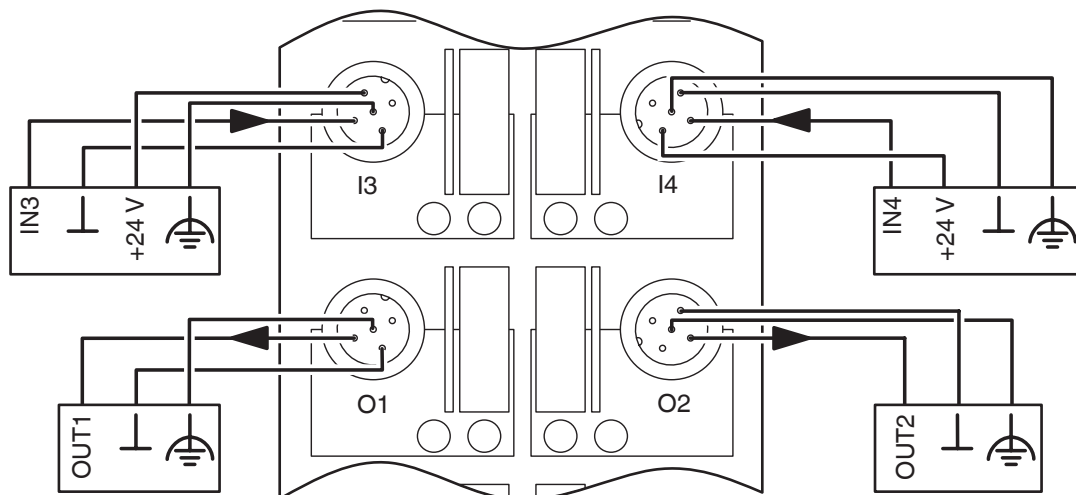
## Drawings

Dimensional drawing

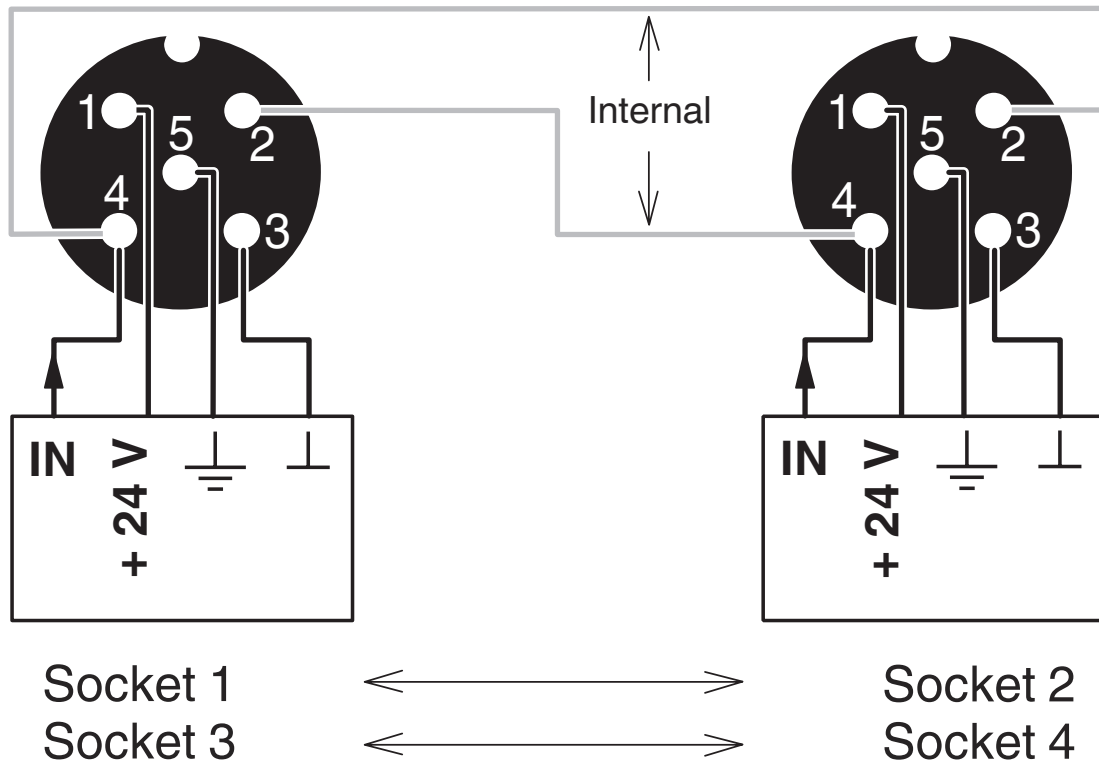


Dimensions of the module

Connection diagram



Connection diagram

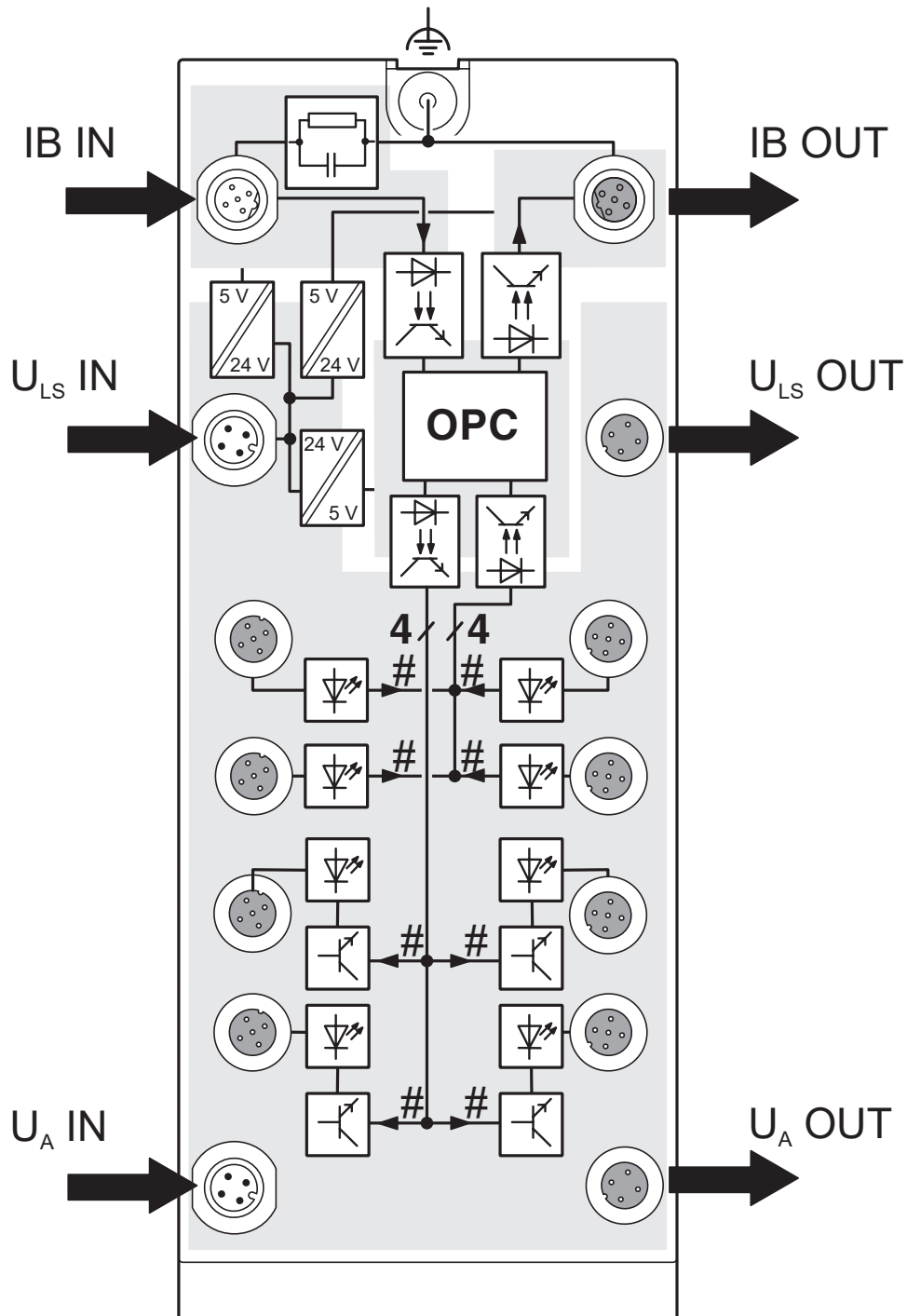


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Block diagram



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## Classifications

### UNSPSC

UNSPSC 21.0	32151602
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 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.)	No substance above 0.1 wt%
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