

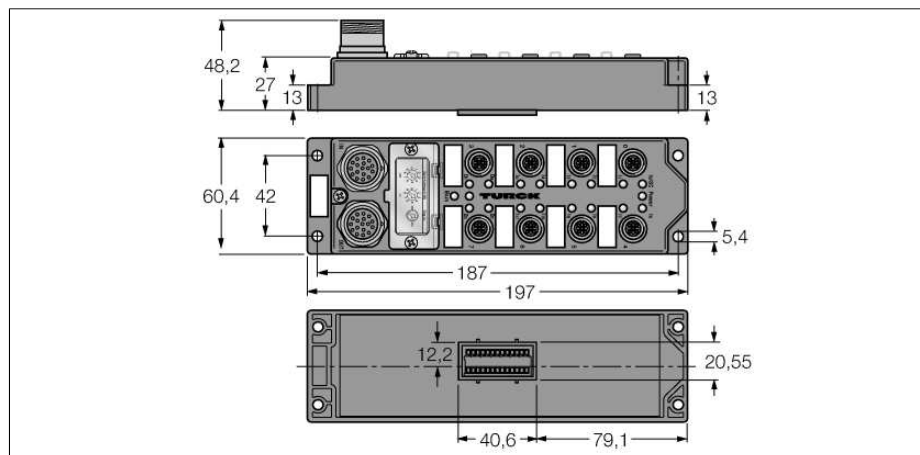
Fieldbus I/O module PROFIBUS-DP

12 digital pnp inputs

4 digital outputs 2 A

FLDP-IOM124-0002

- Two inputs or outputs per connector
- For robot applications
- Robust electromechanics
- High magnetic field immunity
- Intelligent terminating resistor
- Module-related diagnostics
- IP20 terminal connection
- Fibre-glass reinforced housing
- Shock and vibration tested
- Encapsulated module electronics
- Metal connector
- Degree of protection IP67



Type code	FLDP-IOM124-0002
Ident no.	6825348
Operating / load voltage	18...30 VDC
Operating current	< 200 mA
Configuration file	TRCKFF1D.gsd
Fieldbus transmission rate	9.6 kbps ... 12 Mbps
Fieldbus addressing	0 ... 99 (decimal) via two coded rotary switches
Diagnostics	Load voltage diagnostics, switched on/off via rotary switch
Inputs	
Number of channels	(12) 2/3-wire pnp sensors
Input voltage	18...30 VDC via operating voltage
Supply current	120 mA per port, short-circuit proof
Switching threshold	2 mA / 4 mA
Input delay	2.5 ms
Switching frequency	≤ 250 Hz
Max. input current	7 mA
Electrical isolation	galvanic isolation against the bus
Outputs	
Number of channels	(4) DC actuators
Output voltage	18...30 VDC from load voltage
Output current per channel	2.0 A, short-circuit proof
Load type	resistive, inductive, lamp load
Switching frequency	≤ 250 Hz
Simultaneity factor	1
Electrical isolation	galvanic isolation against the bus
Electrical isolation	to operating and load voltage
Dimensions (W x L x H)	60.4x197x27mm
Housing material	fibre-glass reinforced Polyamide (PA6-GF30)
halogen-free	yes
Mounting	4 mounting holes Ø 5,4 mm
Operating temperature	0...+55 °C
Storage temperature	-25 ... +70 °C
Vibration test	as per EN 60068-2-6
Shock test	as per EN 60068-2-27
Electro-magnetic compatibility	according to EN 61000-6-2/EN 61000-6-4
Protection class	IP67
Approvals	CE, cULus
UL conditions	pol. deg.2, env. temp. max. 40 °C, cl.2 ps req.

Functional principle

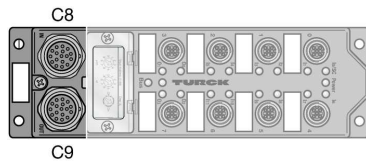
The FLDP-IOM124-0002 is a compact fieldbus I/O module for PROFIBUS-DP and was especially designed for robotic systems resp. automatic tool changers. The module is available in degree of protection IP67 and features 12 digital pnp inputs and 4 digital 2A outputs.

PROFIBUS and power supply are jointly connected via a multibus cable with M23 connection technology which was especially developed for robotic applications. The module also features a 13-pole IP20 terminal on the bottom side. Via this electromechanical link, additional analog signals like those of the current stabilizer are supplied to the multibus cable (quasi-parallel wiring).

Due to the target application, the module also features an intelligent terminating resistor. The terminating resistor is automatically connected if the roboter module is the last slave at the PROFIBUS branch. Once a further PROFIBUS slave is added, the terminating resistor is automatically disconnected. Automatic connection of the internal terminating resistor is always carried out, if pin 15 and 16 of the M23 coupling (OUT) are not short-circuited.

The diagnostic message of the load voltage can be activated or deactivated via GSD parameterization or the integrated coded rotary switch.

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Note

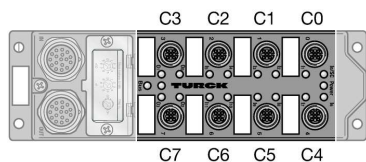
Multibus robot cable (example):
 The robot cables are exclusively sold via Ernst & Engbring GmbH & Co. KG.

Fieldbus M23 x 1

17-pole round connector

IN	OUT
1	1 0 V (GND)
2	2 0 V (GND)
3	3 24 VDC (U _L)
4	4 24 VDC (U _B)
5	5 PE
6	6 BUS-B
7	7
8	8
9	9
10	10
11	11 BUS-A
12	12
13	13
14	14
15	15 reserved
16	16 reserved
17	17

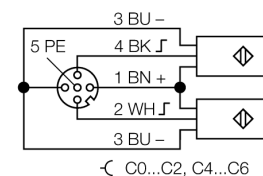
— C8 — C9



Note

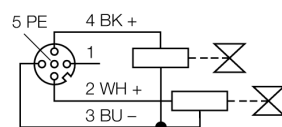
Sensor /Actuator cable (example):
 WAK4.5-5-WAS4.5/S57
 Ident no. 8016989

Input M12 x 1

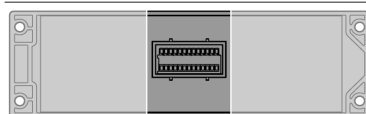


— C0...C2, C4...C6

Output M12 x 1



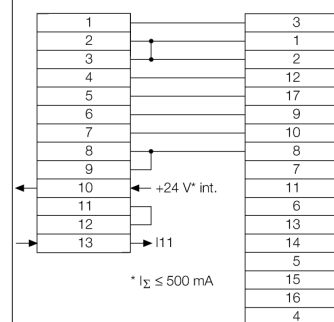
— C3, C7



Note

Electrical connection between the 13-pole IP20 terminal on the module bottom side and the 17-pole M23 round connectors.

Terminal connection



— C11

C8, C9

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TURCK

Industrial
Automation

LED status module

LED	Color	Status	Description
PROFIBUS	red	off	Communication
	green	on	
	red	on	no communication
	green	off	
SC	red	on	Short-circuit group signal, inputs
Power	green	on	Operating and load voltage within the defined tolerances
	red	on	Load voltage below the defined tolerances
		off	Operating voltage below the defined tolerances

LED status IOs

LED	Color	Status	Description
Inputs	green	off	Input undamped (low)
		on	Input damped (high)
Outputs	green	off	Output undamped (low)
		on	Output damped (high)

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TURCK

Industrial
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I/O and diagnostic display

	Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Input	0	C4P2	C4P4	C2P2	C2P4	C1P2	C1P4	C0P2	C0P4
	1	-	-	-	-	C6P2	C6P4	C5P2	C5P4
Output	1	-	-	-	-	C7P2	C7P4	C3P2	C3P4
Diagnose	0	-	-	-	-	-	UB	UL	SC

C2P4 - connector 2 / pin 4

SC - short circuit group signal

UB - operating voltage < 18 VDC

UL - load voltage < 18 VDC