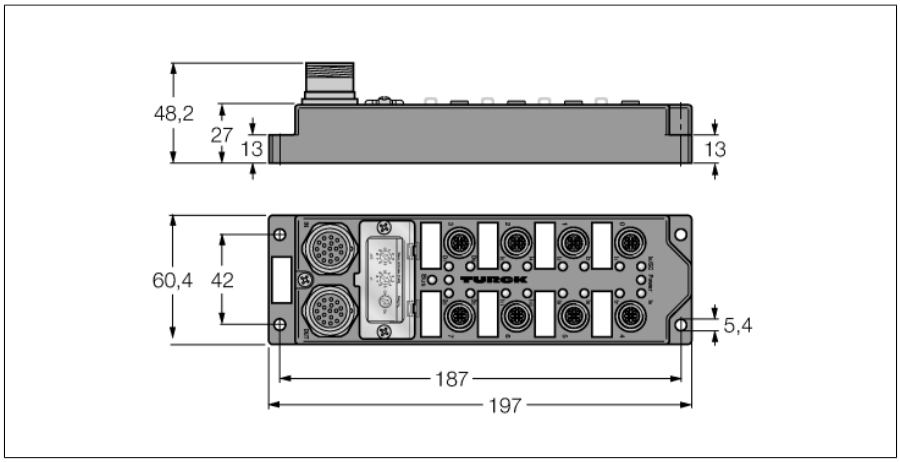
Fieldbus I/O module PROFIBUS-DP
12 digital pnp inputs
4 digital outputs 2 A
FLDP-IOM124-0001



- Two inputs or outputs per connector
- For robot applications
- Robust electromechanics
- High magnetic field immunity
- Intelligent terminating resistor
- Module-related diagnostics
- Fiber-glass reinforced housing
- Vibration and shock-resistant
- Encapsulated module electronics
- Metal connector
- Degree of protection IP67

Type	FLDP-IOM124-0001
ID	6825347
Number of channels	16
Operating / load voltage	18…30 VDC
Operating current	< 200 mA
Configuration file	TRCKFF1D.gsd
Inputs	
Number of channels	(12) 2/3-wire pnp sensors
Input voltage	18…30 VDC from operating voltage UB
Supply current	120 mA per port, short-circuit proof
Switching threshold	EN 61131-3 low max.: 1.5 mA / high min.: 2 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
Fieldbus transmission rate	9.6 kbps …12 Mbps
Fieldbus addressing	0 … 99 (decimal) via two coded rotary switches
Electrical isolation	to operating and load voltage
Diagnostics	Load voltage diagnostics, switched on/off via rotary switch

Functional principle

The FLDP-IOM124-0001 is a compact fieldbus I/O module for PROFIBUS-DP and 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.

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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Dimensions (W x L x H)	60 x 197 x 40 mm
Housing material	fibre-glass reinforced Polyamide (PA6-GF30)
Halogen-free	yes
Mounting	4 mounting holes Ø 5,4 mm
Ambient temperature	0…+55 °C
Storage temperature	-25…+70 °C
Altitude	Max. 5000 m
Vibration test	Acc. to EN 60068-2-6
Shock test	Acc. to EN 60068-2-27
Electromagnetic compatibility	Acc. to EN 61000-6-2/EN 61000-6-4
Protection class	IP67
Approvals	CE, cULus
UL Certificate	pol. deg.2, env. temp. max. 40 °C, cl.2 ps req.

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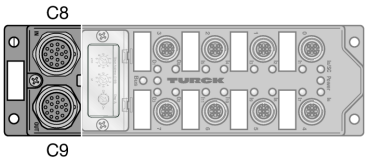


Note

Multibus robot cable (example):

The robot cables are exclusively sold by Ernst & Engbring GmbH & Co. KG.

Field-wireable M23 connector:

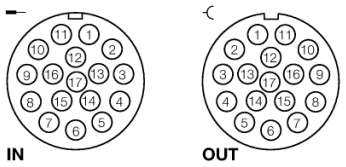
Female connector

6604066 FW-M23KU17O-W-CP-ME-SH-14.5

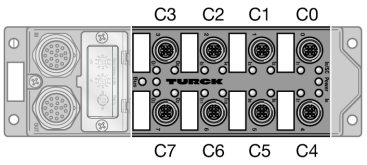
Male connector:

6604067 FW-M23ST17Q-G-CP-ME-SH-14.5

M23 x 1 Fieldbus



M23 round connector, 17-pole		
IN	OUT	
1	1	0 V, U_B
2	2	0 V, U_L
3	3	+24 V, U_L
4	4	+24 V, U_B
5	5	PE
6	6	B-line
7	7	
8	8	
9	9	
10	10	
11	11	A-line
12	12	
13	13	
14	14	
15	15	reserved
16	16	reserved
17	17	



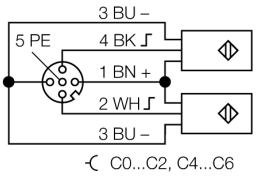
Note

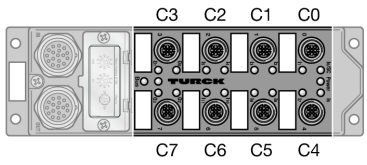
Sensor/actuator cable (example):

WAK4.5-5-WAS4.5/S57

Ident-No. 8016989

M12 x 1 Input





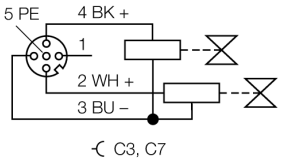
Note

Sensor/actuator cable (example):

WAK4.5-5-WAS4.5/S57

Ident-No. 8016989

M12 x 1 Output



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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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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
Diagnostics	**0**	-	-	-	-	-	UB	UL	SC

C2P4 - male connector 2 / pin 4

SC - short-circuit - group signal

UB - voltage supply < 18 VDC

UL - load voltage < 18 VDC

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