Fieldbus Components for Sensors and Actuators

The FLDP-IM16-0001 *busstop®* station provides a direct connection to PROFIBUS-DP. Up to sixteen 3-wire pnp sensors or 2-wire sensors may be connected to the station.

The station features common short-circuit input monitoring (2 groups of 8 inputs). Two red LEDs provide common short-circuit indications for each group of inputs. The signal status is indicated by a green LED. The ON-LINE/OFF-LINE status of the station is signalled by a green/red „Bus" LED.

The station supports transmission rates of up to 12 Mbd and adjusts automatically to the communication rate determined by the master station. The address of the station is set via two rotary switches located under a protective cover. It can be set from 1 to 99.

The robust station is epoxy-encapsulated and equipped throughout with metal connectors. Connection to PROFIBUS-DP is accomplished with M12 connectors. Power is connected via a 5-pole 7/8" connector.
A green „Power" LED indicates that the station is powered.

To facilitate software configuration of this station within a PROFIBUS system, a 3.5" disk is available. GSD disk: PROFIBUS-DRIVERDISC.

Recommended connection products:

Profibus:	Type:	RSSW-RKSW456-2M
Supply:	Type:	RKM50-2XOR-RSM50, WKM50-2XOR
Inputs:	Type:	FSM4-2WAK3-2/2/P00 or WAK4-5-WAS4/P00, BS8141-0 (field-wireable connector)

FLDP-IM 16-0001

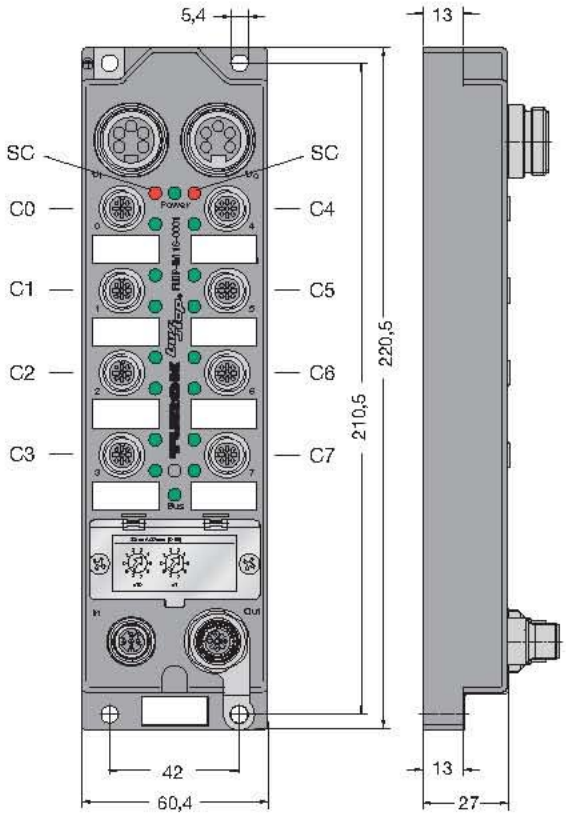
- Robust PROFIBUS-DP station
- 16 inputs
- Compact flat housing

Applications

- For conveyor and other field applications
- For connection of sixteen 2/3-wire sensors or mechanical contacts

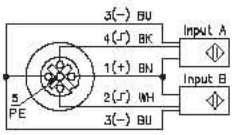
Special features

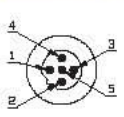
- Common short-circuit monitoring of pnp inputs
- Glass fibre reinforced plastic housings with encapsulated electronics and nickel-plated brass connectors meet protection degree IP67
- Transmission rate up to 12 MBd



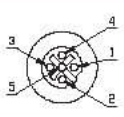
Wiring diagrams

Inputs	Bus line[1]	Operating voltage
3-wire pnp sensor	male / female	male / female



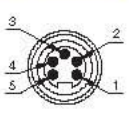


male

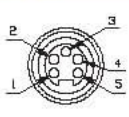


female

1 = 5 VDC[2)]
2 = Bus - A
3 = GND
4 = Bus - B
5 = Shield



male

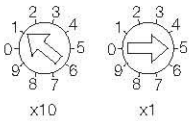


female

1 = GND
2 = GND
3 = PE
4 = U_e
5 = not connected

1) Reverse-keyed according to PNO-guidelines / 2) Female bus connector only

Input module FLDP-IM 16-0001
16 inputs, DC

Type	FLDP-IM 16-0001
Ident-no.	68 253 26
Operating voltage	18...30 VDC
Internal current consumption	< 110 mA (from operating voltage)
Settings	
Address	1...99 (decimal) via 2 rotary switches, located under protective cover
In this example address 15 is set	
Input circuits	(16) pnp 3-wire sensors/2-wire sensors
Input voltage	18...30 VDC (from operating voltage)
Input current	< 500 mA per 4 inputs, short-circuit protection
Switching threshold OFF / ON	2 mA / 4 mA
Input time delay	2.5 ms
Switching frequency	< 250 Hz
Isolation	to bus
LED indications	
Bus	green / red: normal operation / no communication
Voltage supply	green: operating voltage
Input status	(16) green: input ON
Common short-circuit indication	LED SC = (2) red: short-circuit at one input
Connection	
Operating voltage	5-pole 7/8" connector
Bus line	M12 x 1 connector, reverse-keyed
Inputs	M12 x 1 connector

I/O data mapping

Abbreviations:
C1P4 = connector 1, pin 4
0 = OFF, 1 = ON

SC = common short-circuit indication of inputs, I > 500 mA
U_B = operating voltage U_B < 18 VDC

Input data byte 1

Input	Bit	7	6	5	4	3	2	1	0
Data	Meaning	C3P2	C3P4	C2P2	C2P4	C1P2	C1P4	C0P2	C0P4

Input data byte 2

Input	Bit	7	6	5	4	3	2	1	0
Data	Meaning	C7P2	C7P4	C6P2	C6P4	C5P2	C5P4	C4P2	C4P4

Diagnosis data 1 byte

Status	Bit	7	6	5	4	3	2	1	0
Data	Meaning	-	-	-	-	-	U_B	-	SC

Housing	220.5 x 60.4 x 27 mm (l x w x d)
Material	PA6-GF30; nickel-plated brass connectors
Mounting	via 4 through-holes, Ø 5.4 mm
Protection degree (IEC 60529/EN 60529)	IP67 (NEMA 1, 3, 4, 12, 13)
Shock and vibration test	according to DIN EN 60068-2-6/2-27
Temperature range	0° up to +55 °C (32° up to +131 °F)