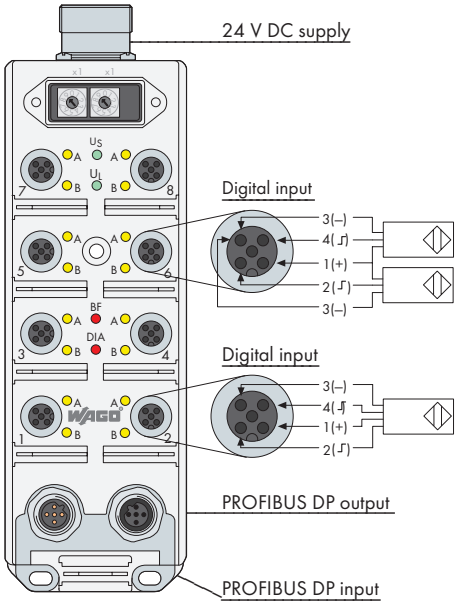
Profibus DP Slave

16 digital inputs



These items are PROFIBUS DP slaves.

Up to 16 digital inputs (see also item nos. 755-881/755-888) can be used to connect standard 3-conductor PNP sensors. The inputs are connected via M12 circular connectors. As an alternative, up to 8 digital inputs can be used to connect standard 4-conductor PNP sensors. A short circuit is indicated by a collective LED. The status of the inputs is also indicated by LEDs for each channel.

Note: GSD files required

The fieldbus is connected via M12 circular connectors. The status of the fieldbus is indicated by a LED.

The supply voltage is supplied to the module by a M23 circular connector. Various LEDs indicate the channel status.

The power supply of the fieldbus, of the module electronics, and of the sensors are electrically isolated from each other.

Description	Item No.	Pack. Unit
PROFIBUS DP Slave 16DI 24V DC with address switch	**755-104**	1
PROFIBUS DP Slave 16DI 24V + 24V DC (without illustration)	**755-101**	1

Accessories	Item No.
Addressing device	Page 468
Bus cable, power supply cable	Page 469
Sensor/actuator cable	See section 5, pages 494 ... 507
Other accessories	Page 472
GSD files	Download: www.wago.com

Standards and Approvals	
Standard	EN 50170
Certification	PNO
Conformity marking	CE

System Data	
Total length	depends on baud rate and use of repeater ; example: 400 m for 500 kbaud; 100 m for 12 Mbaud
Topology	Line structure
No. of couplers connected to Master	32 without repeater
Addressing	Address switch (755-104); Addressing device (item no. 755-201); Configuration software
Baud rate	9.6 kbaud ... 12 Mbaud
Communication	Master-slave procedure with cyclical polling
User hierarchy	Master-slave level
Cycle time	depends on number of devices and baud rate
Transmission medium	certified Cu cable
Terminating resistor	yes

Digital input

M 12

Pin	Function
1	+24 V
2	Signal B
3	0 V
4	Signal A
5	Earth

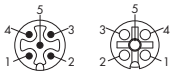
24 VDC supply

M 23

Pin	Function
1	Earth
2	n.c.
3	n.c.
4	+24 V (module supply + sensors)
5	0 V (module supply + sensors)
6	n.c.

PROFIBUS DP

Input **Output**



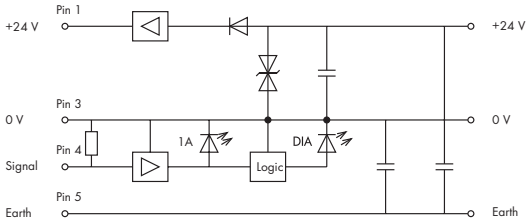
M 12 B-coded

Pin	Function
1	+5 V*
2	Line A
3	GND*
4	Line B
5	Earth

* Internal signals

Basic wiring diagram of an input

Digital input **Supply**



Technical Data

Bus system	
Address range	1...126 dec, default 99 (755-104)
	1...126 dec, default 126 (755-101)
ID	B755 hex
Power supply - electronics	
Nominal voltage	24 V DC
Voltage range	19 V ... 28.8 V DC
Current consumption	max. 60 mA
Reverse voltage protection	yes
Operating indicator (U_L)	LED green
Power supply - sensors	
Nominal voltage (Vs)	24 V DC
Voltage range	19 V ... 28.8 V DC
Total current of all sensors	max. 800 mA
Short circuit protection	yes
Sensor short circuit indication (DIA)	LED red
Sensor supply indication (U_S)	LED green
Inputs	
Nominal input voltage	24 V DC
Input	high-side switching
Number of digital channels	16
Status indication for each channel	LED yellow

Technical Data

General specifications	
Degree of protection	IEC IP 67 (NEMA Type 4-6 P)
Ambient operating temperature	0 °C ... +60 °C
Weight	679 g (755-104)
	540 g (755-101)
Dimensions (mm) W x H x L	755-104: 60 x 51 x 197*
	* including flange sockets
	755-101: 60 x 51 x 170*
	* including flange sockets
Diagnostic indication	
LED 1 ... 8 A/B	Indicator yellow: channel active
LED U_S	Indicator green: sensor supply active
LED U_L	Indicator green: module supply active
LED BF	Indicator red: bus error /
	no data exchange
LED DIA	Indicator red: module diagnosis (e.g.
	sensor short circuit)
Bit assignment	
Byte 0	Bit 0 ... 7 / Sensor 1A ... 8A
Byte 1	Bit 0 ... 7 / Sensor 1B ... 8B
Byte 7 (diagnostic message)	Bit 4 / diagnosis: sensor overload