PROFIBUS DP/FMS
Fieldbus Coupler; EN 50170; 1.5 MBaud; digital and analog signals

WAGO®
INNOVATIVE CONNECTIONS

PROFIBUS
- ○ RUN
- ● BF
- ● DIA
- ●

01 02

24V 0V

○ I/O RUN
● I/O ERR

WAGO-I/O-SYSTEM
750-301

+ +

− −

ADDRESS

x1

x10

Fieldbus connection D-Sub

Address

Address

Configuration interface

Status voltage supply
-Power jumper contacts
-System

Data contacts

Supply
24 V
0 V

Supply via power jumper contacts
24 V

0 V

Power jumper contacts
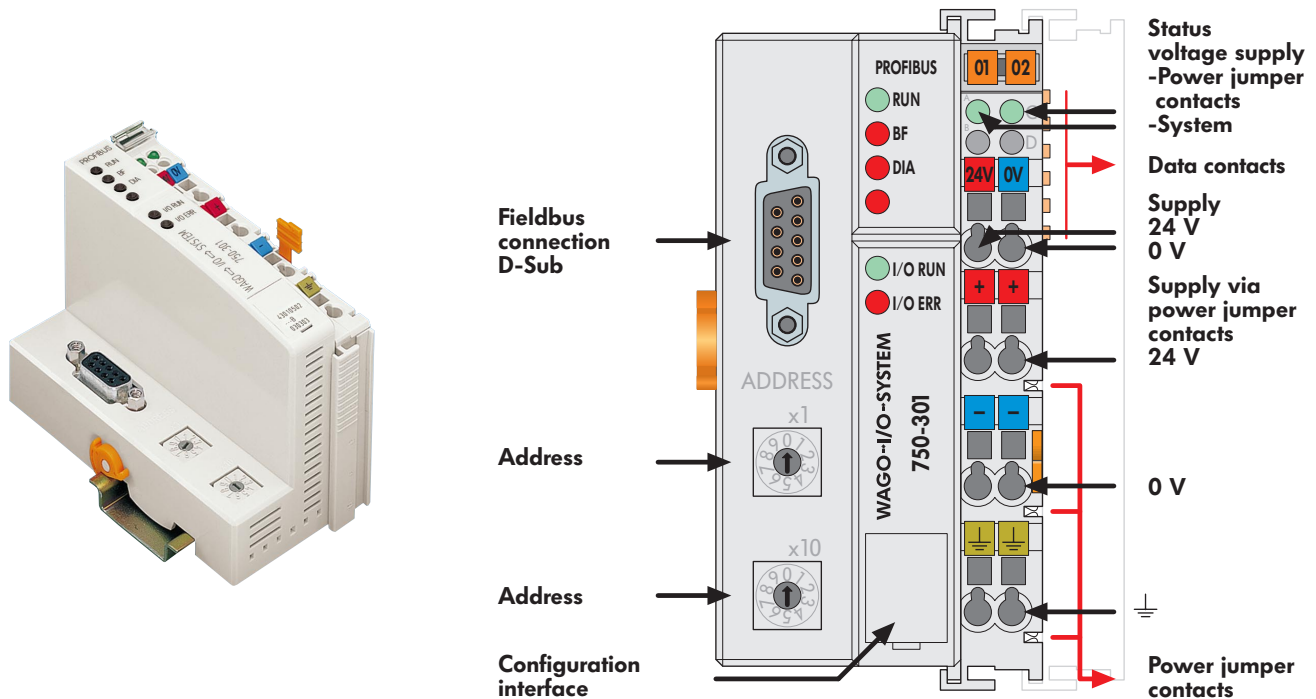
This buscoupler allows connection of the WAGO ➟ I/O ➟ SYSTEM as a slave to the PROFIBUS fieldbus.

The buscoupler is capable of supporting all I/O modules. The buscoupler automatically configures, creating a local process image which may include analog, digital or specialty modules. Analog and specialty module data is sent via words and/or bytes, digital data is sent bit by bit.

PROFIBUS allows the storing of the process image in the corresponding Master control (PLC, PC or NC).

The local process image is divided into two data zones containing the data received and the data to be sent.
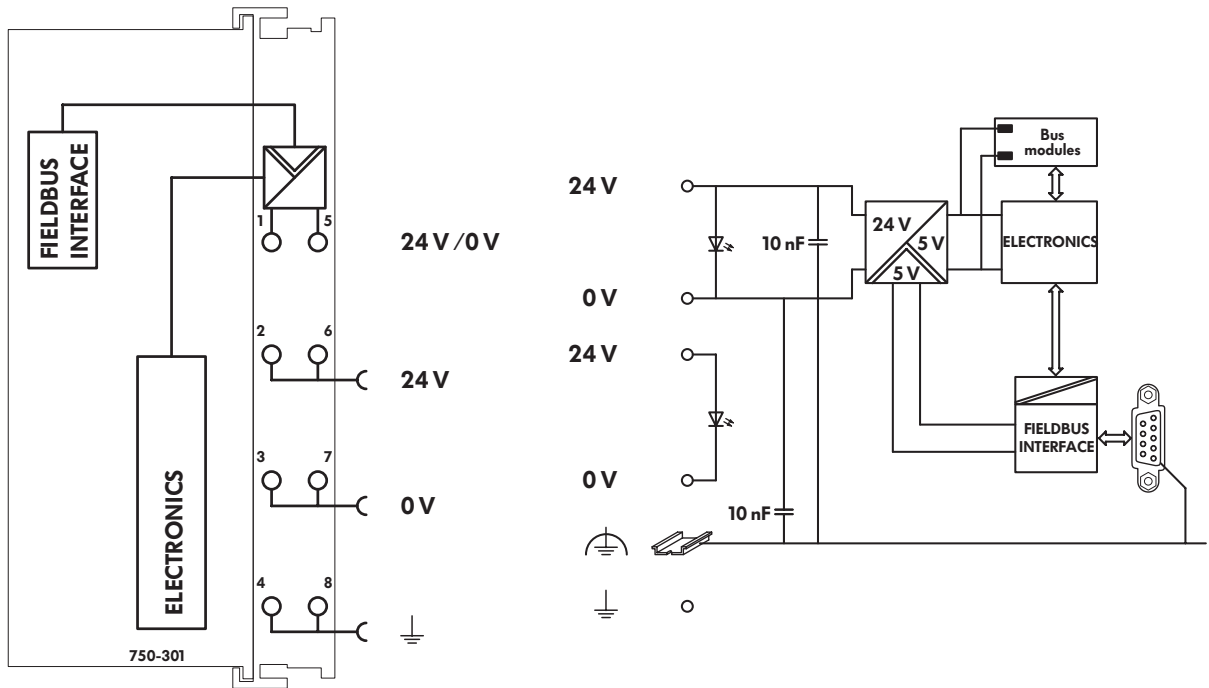The process data can be sent via the PROFIBUS fieldbus to the PLC, PC or NC for further processing, and received from the field via PROFIBUS.

The data of the analog modules is stored in the process image which is created automatically according to the order in which the modules are connected to the buscoupler. The bits of the digital modules are sent byte by byte and added to the analog data. If the amount of digital information exceeds 8 bits, the buscoupler automatically starts with a new byte.

When implementing new installations with PROFIBUS DP, please consider fieldbus coupler 750-333 with extended functions (page 1.020).

Note: GSD files required

Description	Item-No.	Pack.-unit pcs	System Data	
PROFIBUS DP/FMS 1,5 MBd	**750-301**	1	Max. no. of nodes	96 with repeater
			Max. no. of I/O points	ca. 6000 (depends on master)
			Transmission medium	Cu cable acc. to EN 50170
			Max. length of fieldbus segment	200 m … 1200 m
				(depends on the baud rate/on the cable)
			Baud rate	9.6 kBaud … 1.5 MBaud
			Transmission time	typ. 2.7 ms (10 nodes; 32 Is, 32 Os per node;
				with 1.5 MBaud and digital signals)
				max. 17.9 ms
			Buscoupler connection	1 x D-Sub 9; socket

Technical Data		**General specifications**	
Max. no. of I/O modules	64	Operating temperature	0 °C … +55 °C
Fieldbus		Wire connection CAGE CLAMP®	0.08 mm² … 2.5 mm²; AWG 28 … 14
-Input process image	max. 244 bytes		8 … 9 mm / 0.33 in stripped length
-Output process image	max. 244 bytes	Dimensions (mm) W x H x L	51 x 65* x 100
Configuration	via PC or PLC		* from upper edge of DIN 35 rail
Voltage supply	DC 24 V (-15 % … +20 %)	Weight	ca 195 g
Input current max.	500 mA at 24 V	Storage temperature	-25 °C … +85 °C
Efficiency of the power supply	87 %	Relative air humidity	95 % no condensation
Internal current consumption	350 mA at 5 V	Vibration and	acc. to IEC 60068-2-6
Total current for I/O modules	1650 mA at 5 V	shock resistance	acc. to IEC 60068-2-27
Isolation	500 V system / supply	Degree of protection	IP 20
Voltage via power jumper contacts	DC 24 V (-15 % … +20 %)	EMC CE -Immunity to interference	acc. to EN 50082-2 (1996)
Current via power jumper contacts max.	DC 10 A	EMC CE -Emission of interference	acc. to EN 50081-2 (1994)

Standards and Approvals

Standard	EN 50170
Certification	PNO
c UL us	see pages 1.10 … 1.13
Ex	II 3 G EEx nA II T4, Class I Div2 ABCD T4A
Conformity marking	CE

Accessories

	Item-No.	Pack.-unit pcs
GSD files	Download: www.wago.com	
Miniature WSB quick marking system		
plain	**248-501**	5
with marking	see pages 1.174 … 1.175	

Subject to design changes