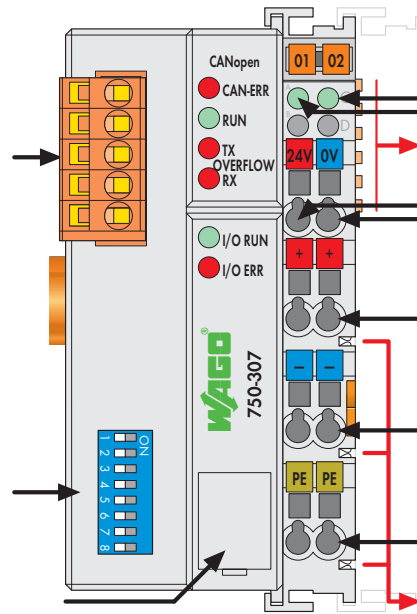# CANopen Fieldbus Coupler

10 Kbaud ... 1 Mbaud; digital and analog signals

WAGO®

Fieldbus
connection
231 Series (MCS)

DIP switch
for node ID
and baud rate

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 connects the WAGO-I/O-SYSTEM as a slave to the CANopen fieldbus. The module data is transmitted using PDOs and SDOs.

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.

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 CANopen fieldbus to the PLC, PC or NC for further processing, and received from the field via CANopen.

The data of the analog modules is stored in the PDOs 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 also mapped in the PDOs. If the amount of digital information exceeds 8 bits, the buscoupler automatically starts with a new byte.
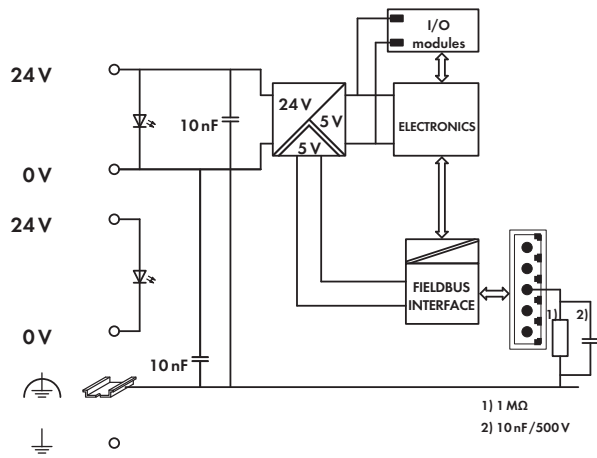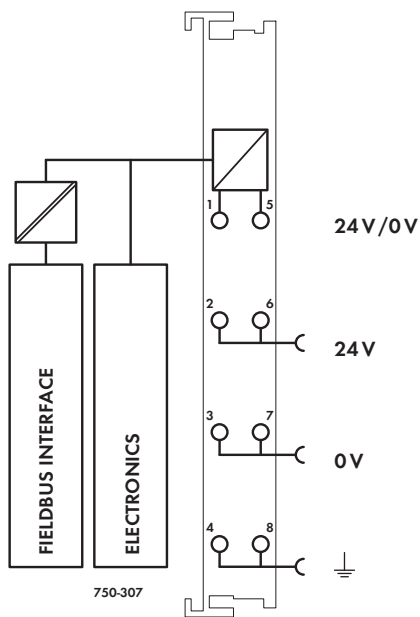
All entries of the object dictionary can be mapped - as the user likes - in the 5 Rx PDOs and 5 Tx PDOs.

The complete input and output process image can be transmitted using SDOs.

When implementing new installations, please consider 750-337 fieldbus coupler with extended functions. Notice: EDS files required!

Description	Item No.	Pack. Unit
CANopen	**750-307**	1

Accessories	Item No.	Pack. Unit
EDS files	Download: www.wago.com	
Miniature WSB Quick marking system		
plain	**248-501**	5
with marking	see Section 11	

Approvals

Conformity marking	C€	
Korea Certification	🄺🄲	
ⓊL 508		
Ⓤ ANSI/ISA 12.12.01	Class I, Div. 2, Grp. ABCD, T4	
ⓔ TÜV 07 ATEX 554086 X	I M2 Ex d I Mb,	
	II 3 G Ex nA IIC T4 Gc,	
	II 3 D Ex tc IIIC T135°C Dc	
IECEx TUN 09.0001 X	Ex d I Mb,	
	Ex nA IIC T4 Gc,	
	Ex tc IIIC T135°C Dc	

System Data	
No. of couplers connected to Master	110
Transmission medium	Shielded Cu cable 3 x 0.25 mm²
Max. length of bus line	30 m ... 1000 m
	(depends on baud rate/cable)
Baud rate	10 Kbaud ... 1 Mbaud
Buscoupler connection	5-pole male connector, 231 Series (MCS),
	female connector 231-305/ 010-000
	(included)

750-307

24 V / 0 V	1	5
24 V	2	6
0 V	3	7
⊥	4	8

24 V
0 V
24 V
0 V

10 nF
24 V / 5 V
5 V
ELECTRONICS
I/O modules
FIELDBUS INTERFACE
10 nF
1) 1 MΩ
2) 10 nF / 500 V

Technical Data

Number of I/O modules	64
Max. input process image	512 bytes
Max. output process image	512 bytes
Configuration	via PC or PLC
No. of PDOs	5 Tx / 5 Rx
No. of SDOs	2 server SDOs
Communication profile	DS-301 V3.0
Device profile	DS-401 V1.4
COB ID distribution	SDO, standard
Node ID distribution	DIP switches
Other CANopen features	NMT slave
	Minimum boot-up
	Variable PDO mapping
	Emergency message
	Life guarding
Power supply	24 V DC (-15 % ... +20 %)
Max. input current (24 V)	500 mA
Power supply efficiency	87 %
Internal current consumption (5 V)	350 mA
Total current for I/O modules (5 V)	1650 mA
Isolation	500 V system/supply
Voltage via power jumper contacts	24 V DC (-15 % ... +20 %)
Current via power jumper contacts (max.)	10 A DC

General Specifications

Operating temperature	0 °C ... +55 °C
Wire connection	CAGE CLAMP®
Cross sections	0.08 mm² ... 2.5 mm² / AWG 28 ... 14
Strip lengths	8 ... 9 mm / 0.33 in
Dimensions (mm) W x H x L	51 x 65 x 100
	Height from upper-edge of DIN 35 rail
Weight	200 g
Storage temperature	-25 °C ... +85 °C
Relative air humidity (no condensation)	95 %
Vibration resistance	acc. to IEC 60068-2-6
Shock resistance	acc. to IEC 60068-2-27
Degree of protection	IP20
EMC immunity of interference	acc. to EN 61000-6-2
EMC emission of interference	acc. to EN 61000-6-4