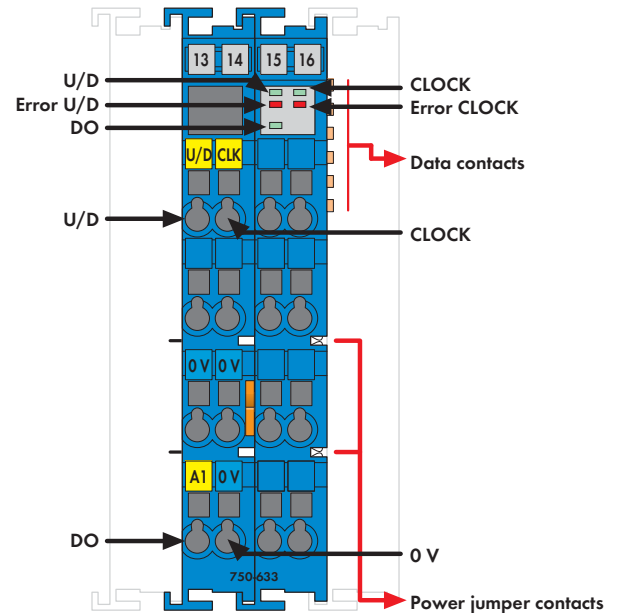


1 Up/Down Counter, Ex i

324



Delivered without miniature WSB markers

The 750-633 Counter records binary pulse signals with NAMUR-compliant levels and transmits the counter state to the fieldbus system. The U/D input allows either Up or Down counting. Counter and digital output (DO) can be set or reset via control byte. The output is short-circuit proof.


LED indicators:

- Green LED (Up/Down + CLK + DO status)
- Red LED (Up/Down + CLK error status)

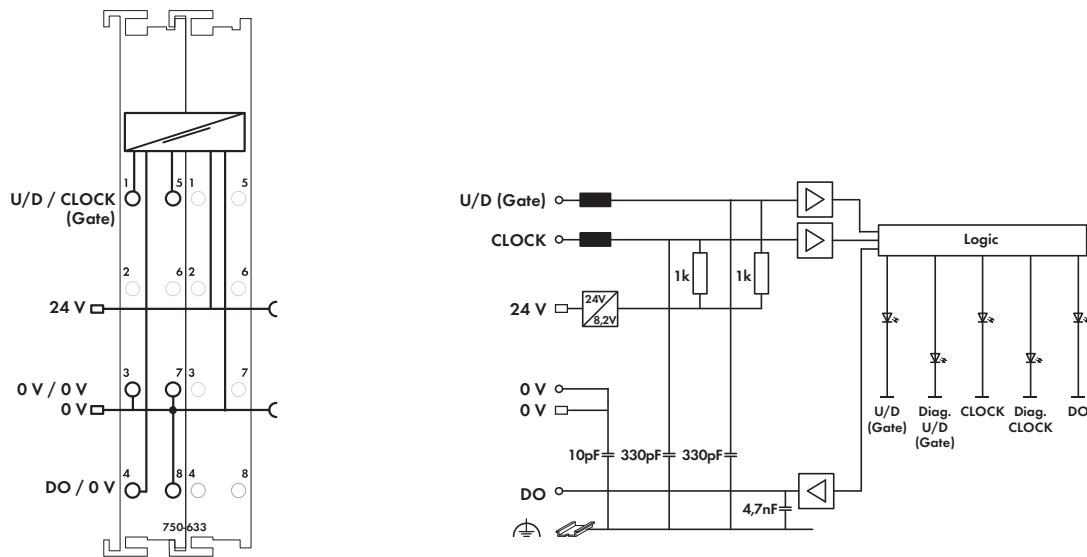
Field and system levels are electrically isolated.

Note: Only use the up/down counter in connection with the 24VDC Ex i supply module (note the power supply instructions on page 23)!

General information (e.g., installation regulations) on explosion protection is available in the WAGO-I/O-SYSTEM 750 manuals!

Description	Item No.	Pack. Unit
Up/Down Counter, Ex i	750-633	1
Accessories		
Miniature WSB Quick marking system		
 plain	248-501	5
with marking	see pages 352 ... 353	

Technical Data	
No. of counters	1
No. of outputs	1
Current consumption typ. (internal)	25 mA
Voltage via power jumper contacts	Supply via 24 V DC Ex i supply module
Counter	
Signal current (0)	≤ 1.2 mA
Signal current (1)	≥ 2.1 mA
Input filter	10 μs
Switching hysteresis	0.2 mA
Input resistance	1 kOhm
Short-circuit current	8,2 mA (+/- 5 %)
Short-circuit monitoring	> 6.4 mA
Line break monitoring	≤ 0.3 mA
Switching frequency	20 kHz - 50 kHz
Counter depth	32 bits
Output	
Output data	24 VDC, Ri = 285 Ω (+/- 5 %)
Open-circuit voltage	24 VDC
Current consumption typ. (field side)	31 mA + sensor load + actuator load
Power consumption P (max.)	2.2 W
	(sensor load: 8.2 mA
	+ actuator load: 45 mA)
Power loss P _v	1.7 W
	(sensor load: 8.2 mA
	+ actuator load: 45 mA)
Isolation (peak value)	375 V system/supply
Bit width	1 x 32-bit data,
	1 x 8-bit status/diagnostics



Technical Data

Wire connection	CAGE CLAMP®
Cross sections	0.08 mm² ... 2.5 mm² / AWG 28 ... 14
Stripped lengths	8 ... 9 mm / 0.33 in
Width	24 mm
Weight	85 g
EMC: CE - immunity to interference	acc. to EN 61000-6-2 (2005)
EMC: CE - emission of interference	acc. to EN 61000-6-4 (2007)
EMC: marine applications	
- immunity to interference	pending
EMC: marine applications	
- emission of interference	pending

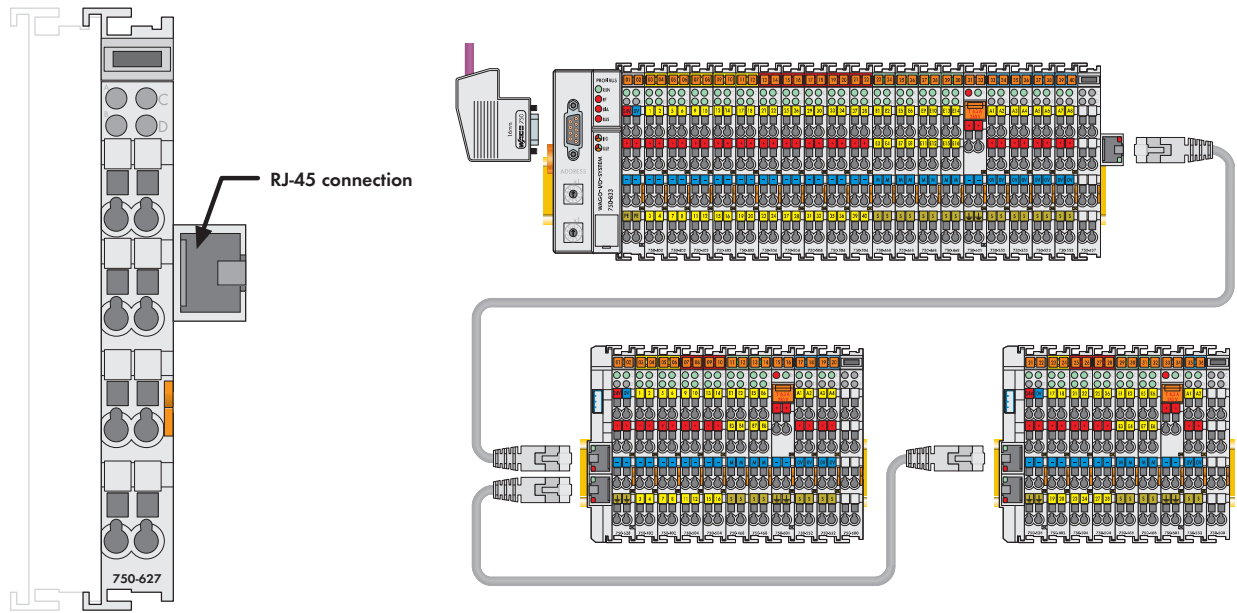
General Specifications

Explosion Protection	
Ex directive	EN 60079-0:2006, EN 60079-11:2007, EN 60079-15:2005, EN 61241-0:2006, EN 61241-1:2004, EN 61241-11:2006
Electric circuit, safety relevant data	$V_0 = 12 \text{ V}$; $I_0 = 13.3 \text{ mA}$; $P_0 = 40 \text{ mW}$; Characteristic: Linear
Intrinsically safe Ex ia IIC	$L_0 = 190 \text{ mH}$; $C_0 = 1.4 \text{ }\mu\text{F}$
Intrinsically safe Ex ia IIB	$L_0 = 600 \text{ mH}$; $C_0 = 9 \text{ }\mu\text{F}$
Intrinsically safe Ex ia I	$L_0 = 1 \text{ H}$; $C_0 = 35 \text{ }\mu\text{F}$
Intrinsically safe	without consideration of the simultaneousness; with consideration of the simultaneousness see manual

Standards, Guidelines and Approvals

EC EMC guideline	2004/108/EG
EC low voltage guideline	2006/95/EG
Conformity marking	CE
Ⓢ TÜV 07 ATEX 554086 X	I (M2) [Ex ia] I II 3 (1) G Ex nA [ia Ga] IIC T4 Gc II 3 (1) D Ex t [ia Da] IIIC T135°C Dc
Ⓢ TUN 09.0001X	[Ex ia] I Ex nA [ia Ga] IIC T4 Gc Ex t [ia Da] IIIC T135°C Dc
Ⓢ ANSI/ISA 12.12.01	pending
Ⓢ UL 508	pending
Shipbuilding	pending

Internal Data Bus Extension End Module



Delivered without miniature WSB markers


The end module for the internal data bus extension 750-627 is attached to the end of the I/O terminal block like the standard end module 750-600. The block is terminated with the module, to which a connecting cable can be attached with an RJ-45 connector.

Power to the internal electronics is supplied via the internal bus. Together with at least one coupler module for the internal data bus extension 750-628 the module forms a functional unit. The fieldbus coupler/controller carries out all diagnosis and commissioning tasks.

Installation note Attention:

To ensure safe, reliable operating states when using the internal data bus extension 750-627/-628 these states must be registered prior to startup with the following couplers or PLCs (refer to manual for supported couplers/PLCs). You must use the "WAGO Extension Setting" software for this (download: www.wago.com).

Please complete the manufacturing number matrix on the right-hand side of the couplers when updating the firmware and internal operating parameters.

Description	Item No.	Pack. Unit
Internal Data Bus Extension End Module	750-627	1
Accessories		
Software „WAGO Extension Setting“	Download: www.wago.com	
Communication cable (used to register or remove the end extension module)	750-920	10
Miniature WSB Quick marking system		
	plain	248-501
	with marking	see pages 352 ... 353
Approvals		
	Also see "Approvals Overview" in Section 1	
Conformity marking	CE	
Shipbuilding	GL	
UL 508		

Technical Data	
Max. no. of coupler modules	up to 10
Max. current consumption (internal)	70 mA
Buscoupler connection	1 x RJ-45 socket
Distance	max. 5 m (end module and coupler module)
Transmission medium	shielded copper wire (ETHERNET patch cable)
	4 x 2 x 0.25 mm ² , twisted pair, double shielding
Isolation	500 V system/supply
Wire connection	CAGE CLAMP®
Cross sections	0.08 mm ² ... 2.5 mm ² / AWG 28 ... 14
Stripped lengths	8 ... 9 mm / 0.33 in
Width	24 mm
Weight	45.5 g
EMC: CE - immunity to interference	acc. to EN 61000-6-2 (2005)
EMC: CE - emission of interference	acc. to EN 61000-6-4 (2007)