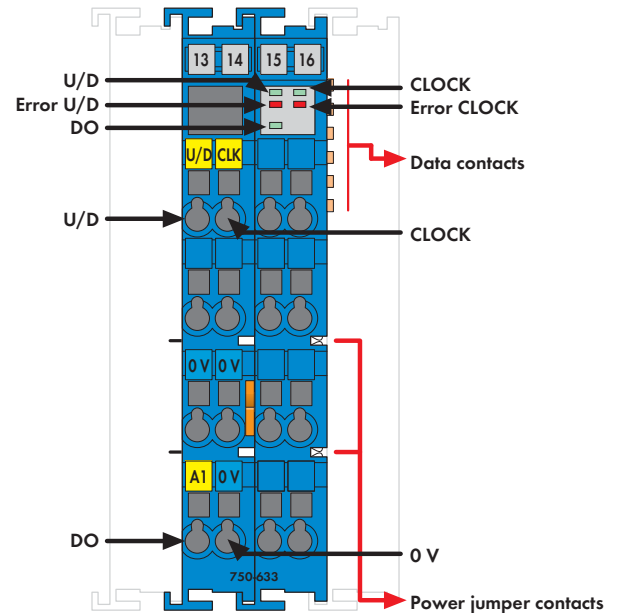


1 Up/Down Counter, Ex i

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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)

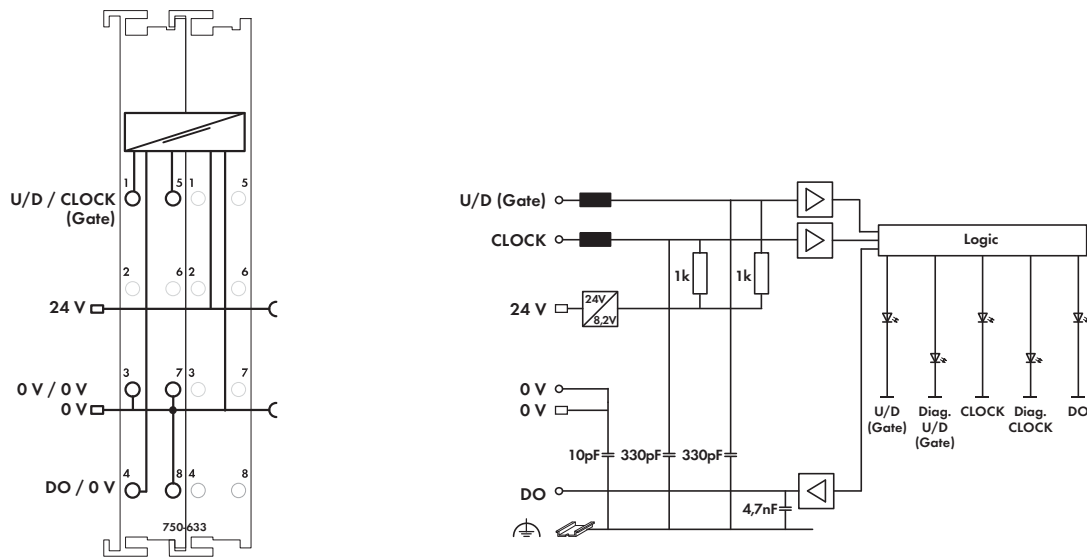
Field and system levels are electrically isolated.

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 mm ² ... 2.5 mm ² / 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

Field Side Connection Module

0 ... 230 V AC/DC

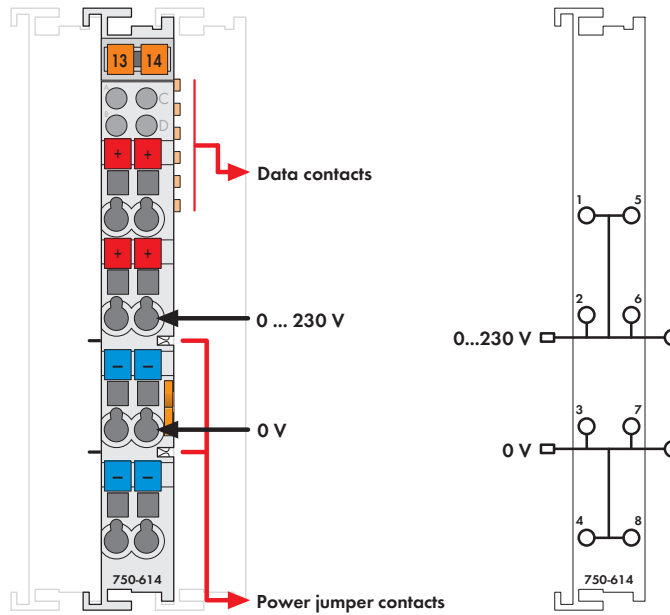













Fig. 750 Series/Technical data see page 24/Delivered without miniature WSB markers
750/753 Series marking see pages 10 ... 11 / 12 ... 13

Field side connection module for multiple tapping of the supply voltage.

This eliminates the need for additional terminal blocks.

Description	Item No.	Pack. Unit
Field Side Connection	750-614	10 ¹⁾
Field Side Connection (without connector)	753-614	10 ¹⁾
¹⁾ Also available individually		
Accessories	Item No.	Pack. Unit
 753 Series Connectors	753-110	25
 Coding elements	753-150	100
Miniature WSB Quick marking system		
 plain	248-501	5
 with marking	see pages 352 ... 353	
Approvals	Also see "Approvals Overview" in Section 1	
Conformity marking	CE	
Shipbuilding	ABS, BV, DNV, GL, KR, LR*, NKK*, PRS*, RINA* *753 Series, pending	
 UL 508		
 ANSI/ISA 12.12.01	Class I, Div. 2, Grp. ABCD, T4	
 EN 60079-0, -15	I M2 / II 3 GD Ex nA IIC T4	753-614
 EN 61241-0, -1		
 EN 60079-0, -11, -15	I M2 Ex d I	750-614*
 EN 61241-0, -1, -11	II 3 G Ex nA IIC T4	750-614*
 EN 61241-0, -1, -11	II 3 D Ex tD A22 IP6X T135°C	750-614*
* Permissible operating temperature: 0°C ...		

Technical Data	
Voltage via power jumper contacts (max.)	0 V ... 230 V AC/DC
Current via power jumper contacts (max.)	10 A DC
Wire connection	CAGE CLAMP®
Cross sections	0.08 mm ² ... 2.5 mm ² / AWG 28 ... 14
Stripped lengths, 750/753 Series	8 ... 9 mm / 0.33 in 9 ... 10 mm / 0.37 in
Width	12 mm
Weight	45.5 g
EMC: CE - immunity to interference	acc. to EN 50082-2 (1996)
EMC: CE - emission of interference	acc. to EN 50081-1 (1993)
EMC: marine applications	
- immunity to interference	acc. to Germanischer Lloyd (2003)
EMC: marine applications	
- emission of interference	acc. to Germanischer Lloyd (2003)