CXL211/261

Electronic display counters

- Simple up/down counter through counting direction input or differential inputs
- Battery-powered (lithium battery)
- Optional backlight display
- Reset key lockable
- Screw terminal connection in 5 mm grid
- Suitable for counting pulses 10…260 VAC/DC

		CXL211						CXL261	
Mounting	Flush mounting	•	•	•	•	•	•	•	•
Input type	One-channel counting method with counting direction input			•	•	•	•	•	•
	One adding and subtracting counting input each (difference mode)	•	•	•	•	•	•		
	Phase discriminator for incremental shaft encoder with single analysis								
	Phase discriminator for incremental shaft encoder with double analysis								
Display	Standard LCD display		•		•		•		•
	Display backlight	•		•		•		•	
Counting inputs	NPN			•	•				
	PNP					•	•		
	Control for 10…260 VAC/DC	•	•					•	•
Order no.		CXL211VGL	CXL211VGN	CXL211VHL	CXL211VHN	CXL211VJL	CXL211VJN	CXL261VGL	CXL261VGN

Applications

- Simple quantity counting through voltage pulses or potential-free contacts
- High-volt versions as replacement for electromechanical counters (counting of relays, activation cycles of engines)
- Simple position display

Settings

Reset key, lockable

Technical data

Power supply	Internal lithium battery: approx. 8 years at 20 °C
Display backlight*	External power supply 24 VDC +/–20 %, 50 mA
Display	LCD, 8-digit, 8 mm high
Operating modes	Adding and subtracting (selectable), differential counting
Counting display	-9 99 99 99…99 99 99 99, overflow is displayed
Reset	Manual, electrical or lockable
Standards	IEC 55011 class B, IEC 61 000-6-2
	IEC 61 010 part 1 (for AC versions only)
Housing	Dark grey RAL 7021
Ambient temperature	-10 °C to +55 °C, no condensation
Storage temperature	–20 °C to +70 °C
Protection type	IP 65 front
Dimensions	Front dimensions and switchboard section see dimension diagram

* only for VGL, VHL and VJL types

Counting inputs

Counting inputs of the DC devices (max. 30 VDC)

Slowest counting input	Max. 30 Hz (NPN)
Fast counting input	Max. 12 kHz (PNP), 7 kHz (NPN)
Switching level	NPN: Low 0…0.7 VDC, High 3…30 VDC
	PNP: Low 0…0.7 VDC, High 4…30 VDC

Counting inputs of the low-volt devices (10…260 VDC/AC)

Counter input	Optocoupler input, max. 30 Hz
	Minimum pulse time: 16 ms
Switching level	Low 0…2 VDC/AC, High 10…260 VDC/AC

Operating mode change-over (for DC devices only)

Operating mode	see table, counting direction and difference Difference
Contact input	Open collector (NPN switching after 0 V)
Switching level	NPN: Low 0…0.7 VDC, High 3…5 VDC

Reset input (for DC and low voltage)

Minimum pulse time	DC: 50 ms, high volt version 16 ms
DC contact input	NPN: Low 0…0.7 VDC, High 3…30 VDC

Electrical locking of the reset key (for DC and AC)

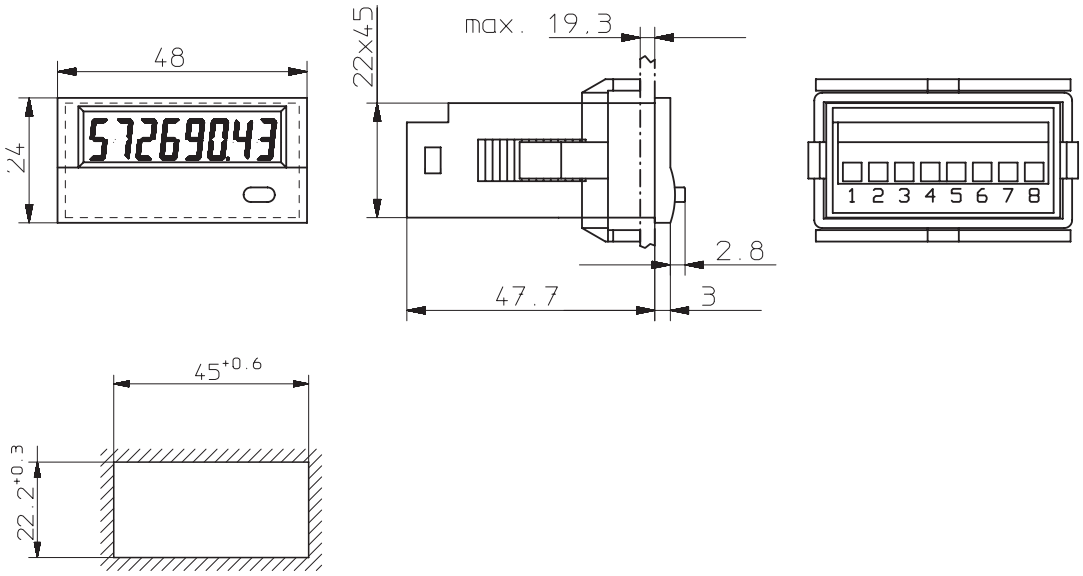
Contact input	Open collector NPN (switching after 0 V)
Switching level	NPN: Low 0…0.7 VDC, High 3…5 VDC

Type	Input type	Counting inputs							
CXL211…		INP A				INP B			
…VHN, …VHL	Counting direction/ difference	0…0.7 VDC	counting	NPN	7 kHz	0…0.7 VDC	counting/ direction	NPN	7 kHz
…VJN, …VJL	Counting direction/ difference	4…30 VDC	counting	PNP	12 kHz	4…30 VDC	counting/ direction	PNP	12 kHz
…VGN, …VGL	Difference	10…260 VAC/DC	counting	AC/DC	30 Hz	10…260 VAC/DC	counting	AC/DC	30 Hz

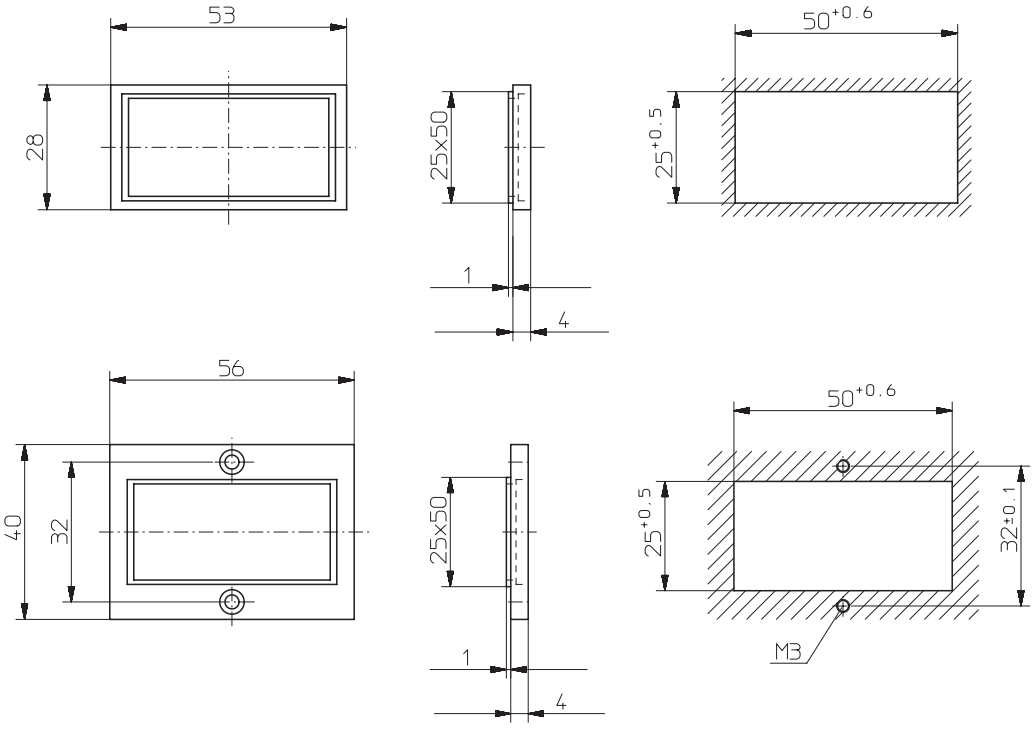
Type	Input type	Counting inputs							
CXL261…		INP A				INP B			
…VGN, …VGL	Counting direction	10…260 VAC/DC	direction	AC/DC	30 Hz	10…260 VAC/DC	counting	AC/DC	30 Hz

Dimension diagrams

Dimensions



Dimensions for mounting frames (included in scope of delivery)



Scope of delivery

- Counters
- Clamping springs
- Front frames for screw mounting (56 × 40 mm) or panel cut-out (50 × 25 mm)
- Sealing
- Instruction manual

Pin assignment

Input specification, pin assignment and adjustable operating modes (DC versions).
A control input (screw terminal 5) allows adjusting the operating mode.

Screw terminal	Nr. 1		Nr. 2		Nr. 3	Nr. 4	Nr. 5		Nr. 6	Nr. 7	Nr. 8
Designation	INP A		INP B		Reset	Reset Enable	Control inputs for operating mode (Mode)		GND	BL –	BL +
CXL211VHX	07 kHz	NPN	07 kHz	NPN	NPN reset input	NPN reset key locking input, Contact with GND, key free..	not active = Cnt.Dr Mode	contact with GND = Up.Dn Mode	GND = 0 V DC	Backlighting (–)	Backlighting (+)
CXL211VJX	12 kHz	PNP	12 kHz	PNP							

Input specification and pin assignment (AC-version)

Screw terminal	Nr. 1	Nr. 2	Nr. 3	Nr. 4	Nr. 5	Nr. 6	Nr. 7	Nr. 8
Designation	INP A AC/DC	Common AC/DC	INP B AC/DC	Reset Enable	Reset	GND	BL –	BL +
CXL211VGX	subtracting	Common connection for INP A and INP B	adding	NPN reset key locking input, Contact with GND. key free.	not connected	GND = 0 V DC	Backlighting (–)	Backlighting (+)
CXL261VGX	counting direction		counting		NPN reset input			