

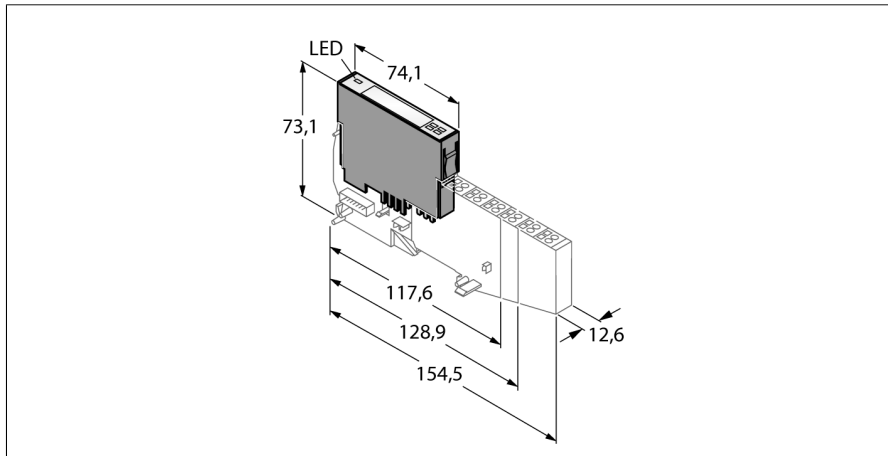
BL20 electronic module

Counter

BL20-1CNT-24VDC

TURCK

Industrial
Automation



- Fieldbus and connection technology independent
- Protection class IP20
- LEDs indicate status and diagnostic
- Electronics galvanically separated from the field level via optocouplers
- Detection of standard counting signals
- 1 digital input, 24 VDC
- 1 digital output, 24 VDC, 2A
- Counting mode: Continuous, single or periodic count
- Measuring mode: Frequency, rotational speed or period duration measurement

Type designation	BL20-1CNT-24VDC
Ident no.	6827031
Rated voltage from the supply terminal	24 VDC
Nominal current from field supply	≤ 50 mA
Nominal current from module bus	≤ 40 mA
Power dissipation, typical	≤ 1.3 W
Electrical isolation	Electronics and field level isolated via optocouplers
Input type	1 x 24 VDC
Low level signal voltage	-30 to 5 VDC
High level signal voltage	11 to 30 VDC
Low level signal current	-8 mA to 1.5 mA
High level signal current	2 mA to 10 mA
Minimum pulse width (maximum count frequency)	
Filter on	> 25 µs (20 kHz)
Filter off	< 2.5 µs (200 kHz)
Input delay	< 0.2 ms
Output connectivity	screw, tension spring
Output type	1 x 24 VDC, 2 A
Output current per channel	2
Output delay	100 ms
Load type	resistive, inductive, lamp load
Switching frequency	≤ 100 Hz
Short-circuit protection	yes
Measuring ranges	
Frequency measurement	0.1 Hz to 200 kHz
Speed measurement	1 r/min to 25000 r/min
Period duration measurement	5 ms to 120 s
Upper count limit	0 to 7FFF FFFF
Lower count limit	8000 0000 to FFFF FFFF
Number of parameter bytes	15
Dimensions (W x L x H)	12.6 x 74.1 x 55.4mm
Approvals	CE, cULus, zone 2, Class I, Div. 2
Operating temperature	0...+55 °C
Storage temperature	-25...+85 °C
Relative humidity	5 to 95% (internal), Level RH-2, no condensation (at 45 °C storage)
Vibration test	acc. to EN 61131
Shock test	acc. to IEC 68-2-27
Drop and topple	acc. to IEC 68-2-31 and free fall to IEC 68-2-32
Electromagnetic compatibility	acc. to EN 50,082-2
Protection class	IP20

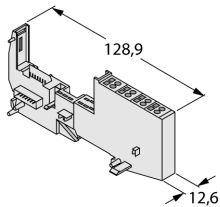
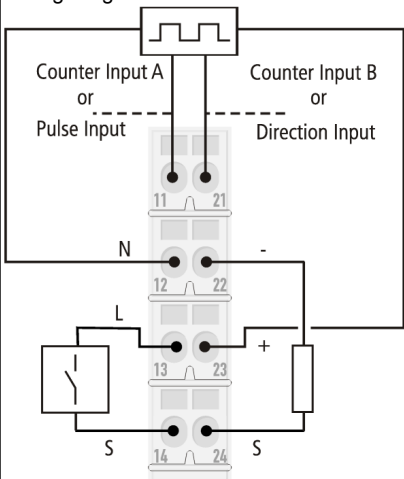
Functional principle

BL20 electronic modules are plugged into the purely passive base modules which are used for connection of field devices. Maintenance is significantly facilitated due to separation of the connection level from the module electronics. Furthermore flexibility is enhanced because the base modules provide a choice of tension spring or screw connection technology. The electronic modules are completely independent of the type of higher level field bus through the use of gateways.

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Compatible base modules

	Type	Pin configuration
	BL20-S4T-SBBS 6827046 tension spring connection	Wiring Diagram 
	BL20-S4S-SBBS 6827047 screw connection	