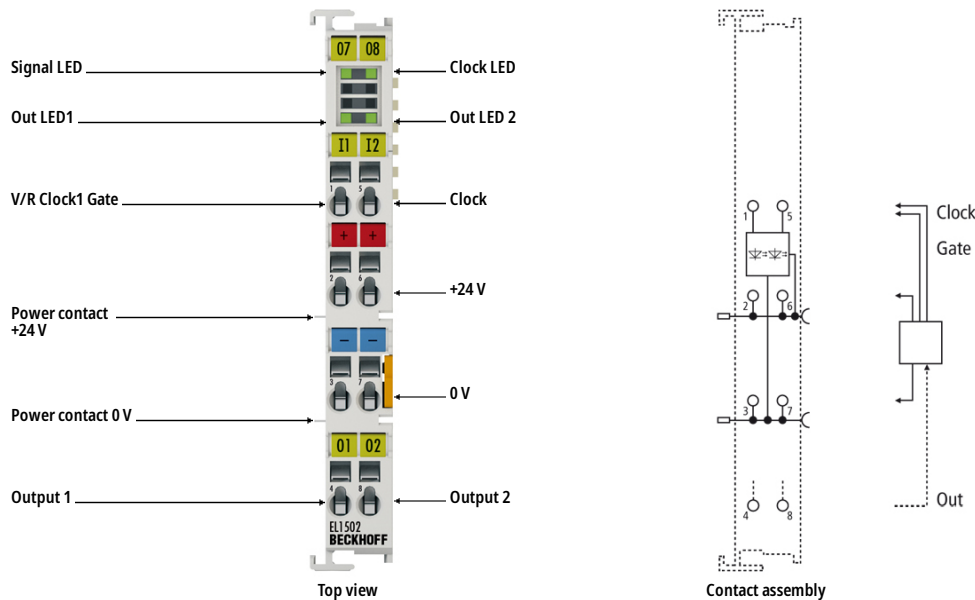




# EL1502 | EtherCAT Terminal, 2-channel digital input, counter, 24 V DC, 100 kHz



**i Product status:** Regular delivery

The EL1502 EtherCAT Terminal is an up/down counter and transmits the counter value in an electrically isolated form to the higher-level automation device. When used as a single-channel up/down counter (32-bit), the pulse is set via the clock input; the counting direction is specified via the U/D input. Furthermore, the input can also be used as a gate input for triggering the counter. In 2-counter mode, two separate counters are available (Clock and Clock1 inputs), which can be parameterized as up or down counters. The signal state of the inputs and outputs is indicated by light emitting diodes. Both outputs are switched according to the counter state, so that they can be used as fast control signals for field devices. The EL1502 device supports the distributed clocks function. This means the counter can be read at constant intervals (DC accuracy  $\ll 1 \mu\text{s}$ ).

Special features:

- suitable for fast counting tasks with counting frequencies up to 100 kHz
- one up and down counter or two separate up or down counters
- synchronized operation through distributed clocks XFC technology possible

## Product information

### Technical Data

Technical data	EL1502, ES1502
Connection technology	1 x up/down counter, 2 x up or down counter
Specification	EN 61131-2, type 1, "0": $< 5 \text{ V DC}$ , "1": $> 15 \text{ V DC}$ , typ. 5 mA
Number of counters	1 or 2
Nominal voltage	24 V DC (-15 %/+20 %)

"0" signal voltage	-3...+5 V (EN 61131-2, type 1)
"1" signal voltage	15...30 V (EN 61131-2, type 1)
Input current	typ. 5 mA (EN 61131-2, type 1)
Counting frequency	max. 100 kHz
Distributed clocks	yes
Max. output current	24 V/0.5 A (short-circuit proof) per channel
Current consumption power contacts	typ. 14 mA + load
Current consumption E-bus	typ. 130 mA
Counter depth	32 bit
Electrical isolation	500 V (E-bus/field potential)
Configuration	no address setting, configuration via the EtherCAT master
Special features	set counters, switch outputs
Weight	approx. 50 g
Operating/storage temperature	-25...+60 °C/-40...+85 °C
Relative humidity	95 %, no condensation
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Protect. rating/installation pos.	IP20/variable
Pluggable wiring	for all ESxxxx terminals
Approvals/markings	CE, UL, ATEX
Ex marking	II 3 G Ex nA IIC T4 Gc

Housing data	EL-12-8pin	ES-12-8pin
Design form	compact terminal housing with signal LEDs	terminal housing with pluggable wiring level
Material	polycarbonate	
Dimensions (W x H x D)	12 mm x 100 mm x 68 mm	
Installation	on 35 mm DIN rail, conforming to EN 60715 with lock	
Side by side mounting by means of	double slot and key connection	
Marking	labeling of the BZxxx series	
Wiring	solid conductor (e), flexible conductor (f) and ferrule (a): spring actuation by screwdriver	
Connection cross-section	s*: 0.08...2.5 mm <sup>2</sup> , st*: 0.08...2.5 mm <sup>2</sup> , f*: 0.14...1.5 mm <sup>2</sup>	s*: 0.08...1.5 mm <sup>2</sup> , st*: 0.08...1.5 mm <sup>2</sup> , f*: 0.14...1.5 mm <sup>2</sup>
Connection cross-section AWG	s*: AWG 28...14, st*: AWG 28...14, f*: AWG 26...16	s*: AWG 28...16, st*: AWG 28...16, f*: AWG 26...16
Stripping length	8...9 mm	9...10 mm
Current load power contacts	I <sub>max</sub> : 10 A	

\*s: solid wire; st: stranded wire; f: with ferrule

## Ordering Information

Ordering information	
EL1502	EtherCAT Terminal, 2-channel digital input, counter, 24 V DC, 100 kHz
ES1502	EtherCAT Terminal, 2-channel digital input, counter, 24 V DC, 100 kHz, pluggable wiring