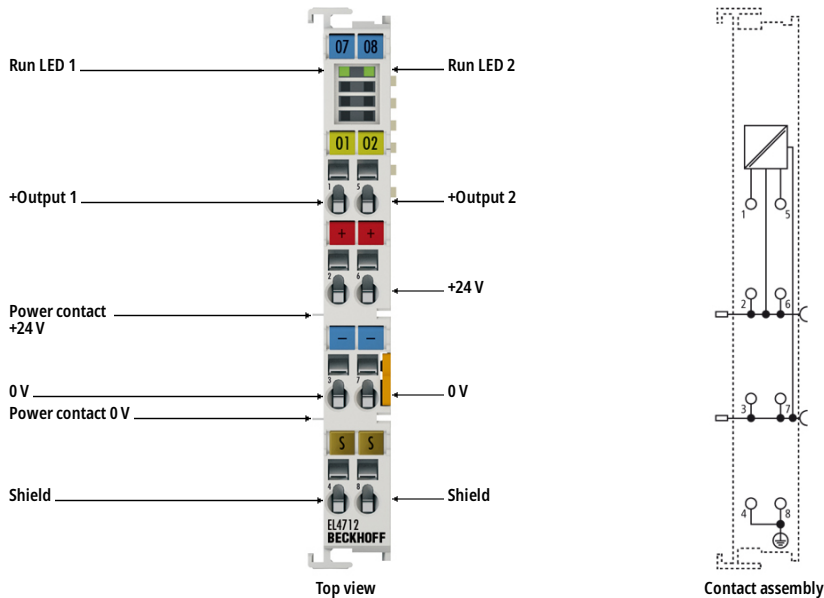
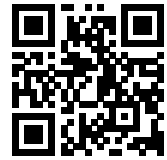


EL4712 | EtherCAT Terminal, 2-channel analog output, current, 0...20 mA, 16 bit, oversampling



i Product status: Regular delivery

The EL4712 analog output terminal generates output signals in the range between 0 and 20 mA. The voltage is supplied to the process level with a resolution of 16 bits and is electrically isolated. The output channels have a common ground potential. The outputs are sampled with an adjustable, integer multiple (oversampling factor: n) of the bus cycle frequency (n microcycles per bus cycle). For each bus cycle, the EtherCAT Terminal receives a process data block that is output consecutively. The time base of the terminal can be synchronized precisely with other EtherCAT devices via distributed clocks. This procedure enables the temporal resolution of the analog output signals to be increased to n times the bus cycle time. In conjunction with the EL37xx (analog input terminal with oversampling), responses with equidistant time intervals, e.g. in the event of a threshold value being exceeded, become possible. The EL4712 device can output a maximum of 100,000 values (100 ksamples/s) per channel and second.

Product information

Technical data

Technical data	EL4712, ES4712
Connection technology	3-wire, single-ended
Number of outputs	2
Power supply	24 V DC via power contacts
Signal current	0...20 mA
Oversampling factor	n = integer multiple of the cycle time, 1...100 selectable
Distributed clocks	yes

Distributed clock precision	<< 1 µs
Load	< 500 Ω (short-circuit proof)
Output error	< 0.1 % (relative to end value)
Resolution	16 bit (incl. sign)
Electrical isolation	500 V (E-bus/signal voltage)
Conversion time	~ 10 µs
Output rate	max. 100 ksamples/s
Current consumption power contacts	typ. 20 mA + load
Current consumption E-bus	typ. 100 mA
Bit width in the process image	output: n x 2 x 16 bit data, max. 8 byte additional information
Special features	oversampling
Weight	approx. 65 g
Operating/storage temperature	0...+55 °C/-25...+85 °C
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Relative humidity	95 %, no condensation
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
Protect. rating/installation pos.	IP20/variable
Pluggable wiring	for all ESxxx 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 ² , st*: 0.08...2.5 mm ² , f*: 0.14...1.5 mm ²	s*: 0.08...1.5 mm ² , st*: 0.08...1.5 mm ² , f*: 0.14...1.5 mm ²
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 _{max} : 10 A	

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

Ordering information

Ordering information	
EL4712	EtherCAT Terminal, 2-channel analog output, current, 0...20 mA, 16 bit, oversampling
ES4712	EtherCAT Terminal, 2-channel analog output, current, 0...20 mA, 16 bit, oversampling, pluggable wiring
