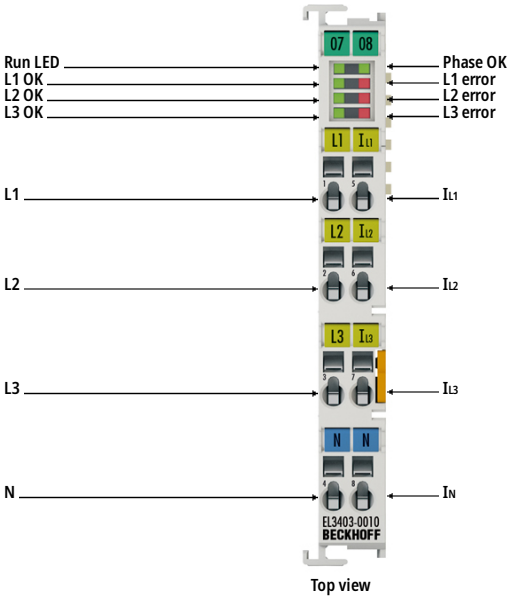
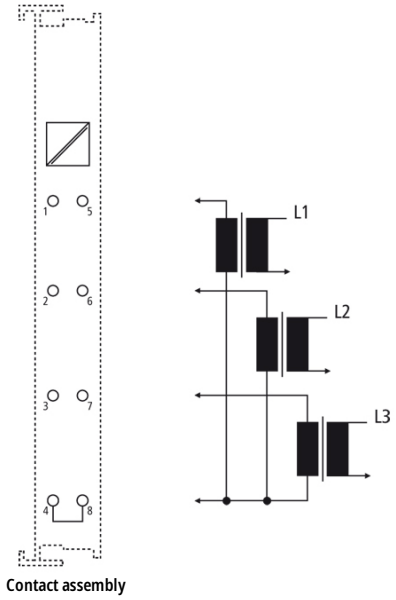
EL3403-0010 | EtherCAT Terminal, 3-channel analog input, power measurement, 500 V AC, 5 A, 16 bit



Top view



Contact assembly

Product status: regular delivery (not recommended for new projects) | recommended alternative: EL3443

The EL3403-0010 EtherCAT Terminal enables the measurement of all relevant electrical data of the supply network. The voltage is measured via the direct connection of L1, L2, L3 and N. The current of the three phases L1, L2 and L3 is fed via simple current transformers. All measured currents and voltages are available as root-mean-square values. In the EL3403-0010 version, the effective power and the energy consumption for each phase are calculated. The root-mean-square value of voltage U, current I and the effective power P, apparent power S, reactive power Q, frequency F and phase shift angle cos φ can be derived. The EL3403-0010 provides a comprehensive network analysis and an energy management option.

Product information

Technical data

Technical data	EL3403-0010
Number of inputs	3 x current, 3 x voltage
Technology	3-phase power measurement for alternating voltages
Oversampling factor	–
Distributed clocks	–
Conversion time	mains-synchronous
Measured values	current (I1, I2, I3), voltage, effective power, reactive power, apparent power, energy, cos φ, frequency

Measuring current	max. 5 A (AC), via measuring transformers x A/5 A
Resolution	5 µA, 0.1 mV, 50 mW
Measurement error/ uncertainty	1 % relative to full scale value (U), 1.5 % calculated value (I/P)
Measuring procedure	true RMS
Update time	net-synchronous
Electrical isolation	1500 V
Current consumption power contacts	–
Current consumption E-bus	typ. 120 mA
Bit width in the process image	62 byte PM input, 3 byte PM output
Special features	true RMS value calculation, optional single-phase operation
Weight	approx. 75 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
Approvals/markings	CE, UL

Housing data	**EL-12-8pin**
Design form	compact terminal housing with signal LEDs
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
Connection cross-section AWG	s*: AWG 28...14, st*: AWG 28...14, f*: AWG 26...16
Stripping length	8...9 mm
Current load power contacts	I_{max}: 10 A

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