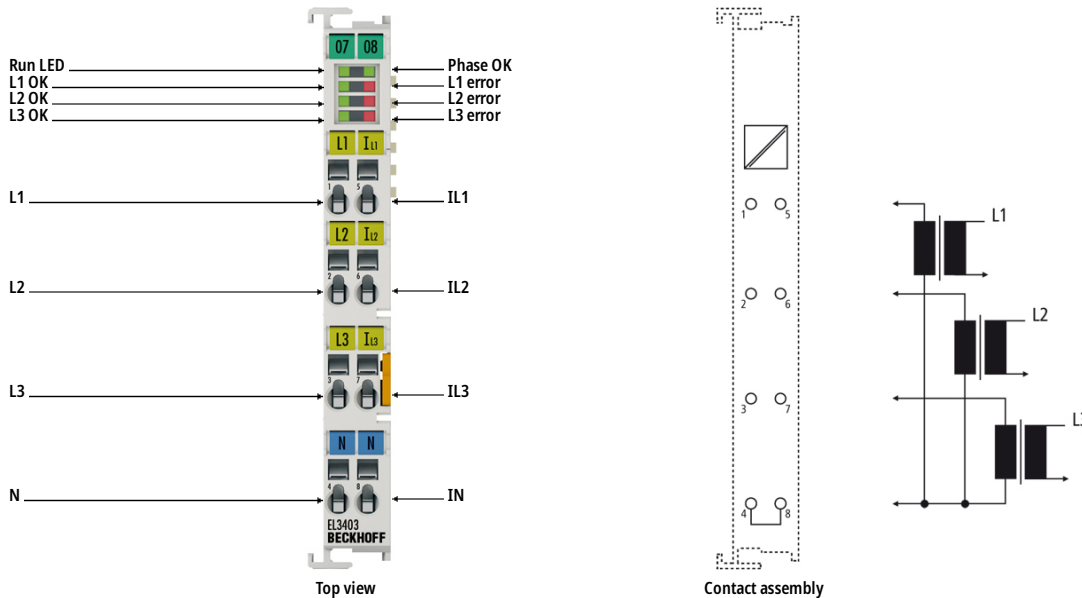
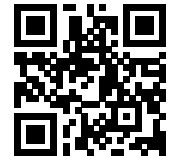


EL3403 | EtherCAT Terminal, 3-channel analog input, power measurement, 500 V AC, 1 A, 16 bit



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

The EL3403 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 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 $\cos \varphi$ can be derived. The EL3403 provides a comprehensive network analysis and an energy management option.

Product information

Technical Data

Technical data	EL3403, ES3403
Number of inputs	3 x current, 3 x voltage
Technology	3-phase power measurement for alternating voltages
Oversampling factor	–
Distributed clocks	–
Resolution	1 μ A, 0.1 mV, 10 mW
Conversion time	mains-synchronous
Measured values	current (I1, I2, I3), voltage, effective power, reactive power, apparent power, energy, $\cos \varphi$, frequency
Measuring voltage	max. 500 V AC 3~ (ULX-N: max. 288 V AC)

Measuring current	max. 1 A (AC), via measuring transformers x A/1 A
Measuring error	0.5 % relative to full scale value (U/I), 1 % calculated value
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
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
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

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	
EL3403	EtherCAT Terminal, 3-channel analog input, power measurement, 500 V AC, 1 A, 16 bit
ES3403	EtherCAT Terminal, 3-channel analog input, power measurement, 500 V AC, 1 A, 16 bit, pluggable wiring
EL3403-0010	EtherCAT Terminal, 3-channel analog input, power measurement, 500 V AC, 5 A, 16 bit
EL3403-0026	EtherCAT Terminal, 3-channel analog input, power measurement, 500 V AC, 1 A, 16 bit, without EMC discharge
EL3403-0100	EtherCAT Terminal, 3-channel analog input, power measurement, 500 V AC, 0.1 A, 16 bit
EL3403-0111	EtherCAT Terminal, 3-channel analog input, power measurement, 500 V AC, 0.01/0.1/1 A, 16 bit
EL3403-0333	EtherCAT Terminal, 3-channel analog input, power measurement, 500 V AC, 333 mV, 16 bit