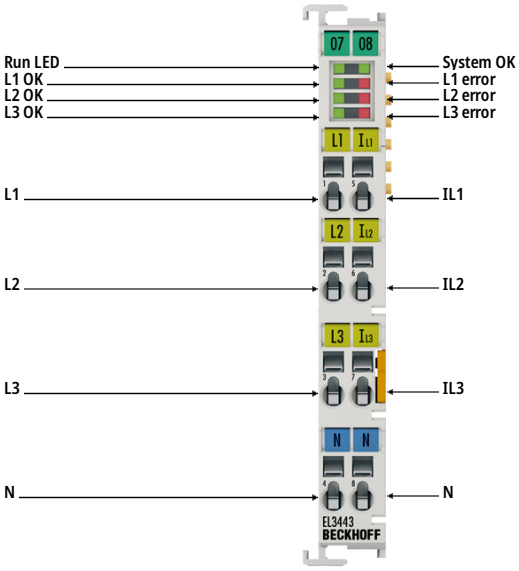
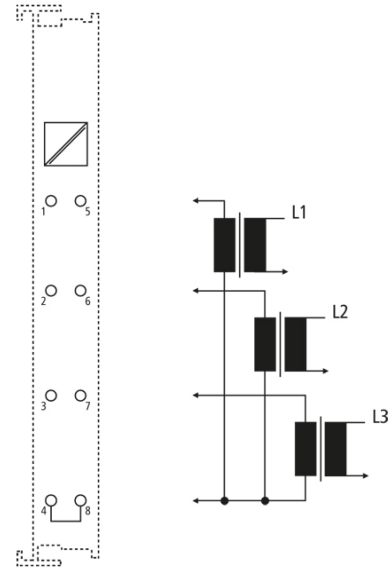
EL3443 | EtherCAT Terminal, 3-channel analog input, power measurement, 480 V AC/DC, 1 A, 24 bit



Top view



Contact assembly

Product status: Regular delivery

The EL3443 EtherCAT Terminal enables the measurement of all relevant electrical data of the supply network and carries out simple pre-evaluation. The voltage is measured via 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 EL3443 terminal, the effective power and energy consumption for each phase are calculated. The RMS values of voltage U and current I as well as the active power P, apparent power S, reactive power Q, frequency f, phase shift angle cos φ and harmonic are available. The EL3443 offers extended functionality for mains analysis and energy management.

In addition, the EL3443 comes with the option of transmitting the time of the last voltage zero crossing to the controller via XFC technology. This can be used, for example, to carry out switching operations to suit the application.

The EL3443 can be ordered for other current ranges, such as 5 A, 100 mA or 333 mV. An overview of the different versions can be found under Related products.

Product information

Technical Data

Technical data	EL3443
Number of inputs	3 x current, 3 x voltage
Technology	3-phase power measurement
Oversampling factor	–
Distributed clocks	optional

Update interval	one mains period (20 ms at 50 Hz)
Update time	net-synchronous
Measured values	current, voltage, effective, reactive and apparent power, active, reactive and apparent energy, cos φ, frequency, THD, harmonic (up to 40th harmonic)
Measuring voltage	max. 480 V AC 3~ (ULX-N: max. 277 V AC/240 V DC)
Measuring current	max. 1 A (AC/DC), via measuring transformers x A/1 A
Measuring error	0.3 % relative to full scale value (U/I), 0.6 % calculated value (see documentation)
Monitoring function	phase order, phase failure, phase asymmetry, undervoltage/overvoltage (adjustable)
Electrical isolation	2500 V
Current consumption power contacts	–
Current consumption E-bus	typ. 120 mA
Special features	mains monitoring, precise detection of zero voltage crossing, 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
Approvals/markings	CE

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