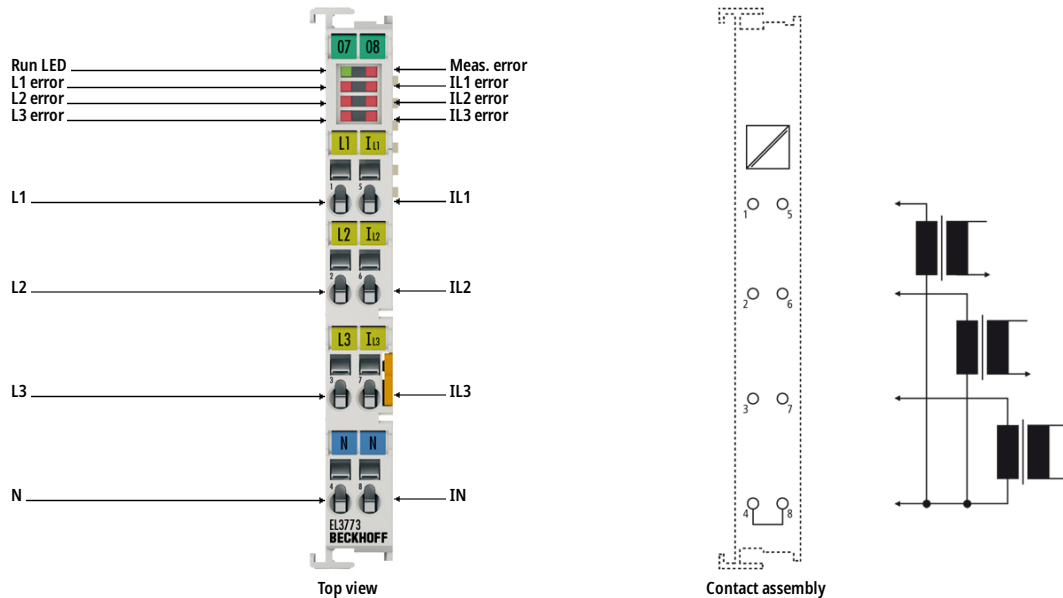
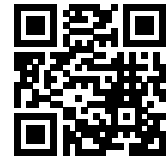


EL3773 | EtherCAT Terminal, 3-channel analog input, multi-function, 500 V AC/DC, 1 A, 16 bit, 10 ksps, oversampling



i Product status: Regular delivery

The EL3773 and EL3783 power monitoring terminals are designed for state monitoring of 3-phase AC voltage systems. For each phase voltages and currents are sampled as instantaneous values with a resolution of 16 bits:

- for the EL3773 up to 288 V_{rms}/410 V DC and up to 1 A_{rms}/1.5 A DC
- for the EL3783 up to 400/690 V AC and up to 5 A AC, each with "ExtendedRange"

The six channels are measured simultaneously based on the EtherCAT oversampling principle with a temporal resolution of up to 100 μs (EL3773) or up to 50 μs (EL3783) and passed on to the control system. The control system has sufficient computing power for true RMS or performance calculation and complex custom algorithms for evaluating the measured voltages and currents. Through the oversampling, the terminal is able to measure at significantly shorter intervals than the cycle time of the control system. AC and DC parameters must be connected and measured with a common reference potential. Both of the terminals support distributed clocks and can therefore measure synchronously with other EtherCAT devices. However, they can also be operated without distributed clocks.

The EL3783 offers the "ExtendedRange" feature enabling the use of the full technical measuring range, which equals 130 % of the specified nominal measuring range.

Product information

Technical Data

Technical data	EL3773
Number of inputs	3 x current, 3 x voltage

Technology	3-phase power monitoring for alternating/direct voltages
Signal type	single-ended
Oversampling factor	n = 1...100 selectable
Distributed clocks	yes
Conversion time	min. 100 µs, all channels simultaneously
Measured values	current (I1, I2, I3), voltage as instantaneous values (oversampling)
Measuring voltage	max. 500 V AC 3~ (ULX-N: max. 288 V AC), max. 410 V DC
Measuring current	max. 1 A (AC)/1.5 A (DC), via measuring transformers x A AC/1 A AC
Measuring range, technical	generally 100 % of the nominal measuring range, see documentation
Resolution	16 bit (incl. sign)
Measuring error	0.5 % relative to full scale value
Electrical isolation	2500 V
Current consumption power contacts	–
Current consumption E-bus	200 mA
Special features	oversampling, AC/DC measurement, optional single-phase operation, adjustable hardware filters
Weight	approx. 75 g
Operating/storage temperature	0...+55 °C/-25...+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