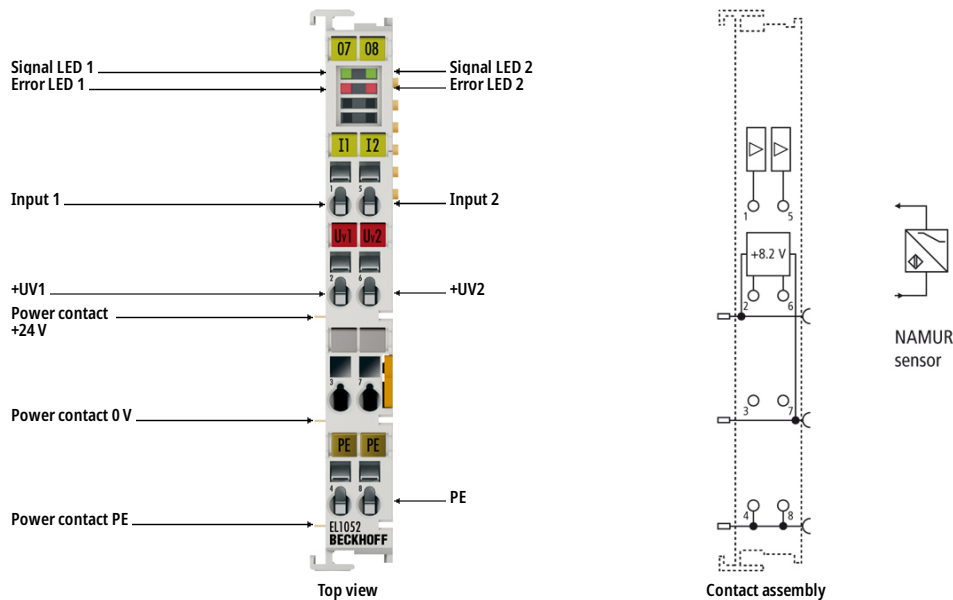


EL1052 | EtherCAT Terminal, 2-channel digital input, NAMUR



i Product status: Regular delivery

The EL1052 digital input terminal acquires signals from NAMUR sensors according to IEC 60947-5-6. The sensors are supplied with a voltage of 8.2 V and return a diagnosable current signal. In this way, a wire breakage or short-circuit can be detected in addition to the switching state. The LEDs indicate signal or any error states, channel by channel.

The most widely used NAMUR sensors are proximity switches, which are used, for example, as limit switches in control valves. In principle, both normally open (NO) and normally closed (NC) contacts can be operated with the EL105x. Any inversion of the status bits must be taken into account.

Product information

Technical Data

Technical data	EL1052, ES1052
Technology	NAMUR
Specification	NAMUR DC switching amplifier (IEC 60947-5-6)
Signal type	binary, current input for NAMUR sensors
Number of inputs	2
Connection technology	2-wire
Open circuit voltage	typ. 8.2 V DC
"0" signal current	$\leq 1.2 \text{ mA}$
"1" signal current	$\geq 2.1 \text{ mA}$

Switching hysteresis	typ. 350 µA
Short-circuit current	typ. 7.8 mA
Fault detection	$I \leq 200 \mu\text{A}$ (cable break), $I \geq 7.0 \text{ mA}$ (short circuit)
Max. switching frequency	5 kHz (duty factor 50 %)
Internal resistance	according to I/V curve IEC 60947-5-6
Distributed clocks	–
Supply voltage electronics	24 V DC (via power contacts)
Current consumption E-bus	typ. 40 mA
Current consumption power contacts	typ. 20 mA + load
Electrical isolation	500 V (E-bus/field potential)
Special features	integrated reverse polarity protection
Weight	approx. 60 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
Pluggable wiring	for all ESxxx terminals
Approvals/markings	CE, UL, ATEX, IECEx, cFMus
Ex marking	<p>ATEX: II 3 G Ex nA IIC T4 Gc</p> <p>IECEx: Ex nA IIC T4 Gc Ex tc IIIC T135 °C Dc</p> <p>cFMus: Class I, Division 2, Groups A, B, C, D Class I, Zone 2, AEx ec IIC T4 Gc</p>

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	<p>s*: 0.08...2.5 mm²,</p> <p>st*: 0.08...2.5 mm²,</p> <p>f*: 0.14...1.5 mm²</p>	<p>s*: 0.08...1.5 mm²,</p> <p>st*: 0.08...1.5 mm²,</p> <p>f*: 0.14...1.5 mm²</p>

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	
EL1052	EtherCAT Terminal, 2-channel digital input, NAMUR
ES1052	EtherCAT Terminal, 2-channel digital input, NAMUR, pluggable wiring