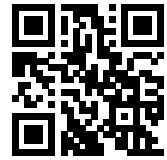


ELM9410 | Power supply terminal for refreshing the E-bus, with diagnostics



i Product status: Regular delivery

The ELM9410 power supply terminal is used to increase the E-bus current. The exchange of data between EtherCAT Couplers and the connected EtherCAT Terminals takes place over the E-bus. Each EtherCAT Terminal requires a certain amount of current from the E-bus (see technical data at the respective terminal: "Current consumption E-bus"). This current is fed into the E-bus by the power supply unit of the respective EtherCAT Coupler. In configurations with a large number of EtherCAT Terminals, the ELM9410 can be used to increase the current supply to the E-bus by 2 A.

On account of three significant properties, the ELM9410 and the functionally identical EKM1101 EtherCAT Coupler are designed to meet the needs of high-precision analog measurement technology, e.g. with ELM3xxx terminals:

- To reduce interference in the connected terminal, both the E-bus supply U_S and the 24 V power contact supply U_P are electrically isolated and filtered in the coupler. The power contact supply can carry a maximum load of 2 A.
- The extensive voltage and temperature monitoring provides assistance with commissioning and operation; results are displayed by LED and in the process image.
- The built-in three-axis position and vibration sensor allows a constant view of the mechanical situation in the control cabinet.

As a result, the ELM9410 can be used in special measuring situations instead of the conventional EL9410 supply. Mixed operation with EK1100/EL9410 is possible, however, not ensuring electrical isolation in this configuration.

Product information

Technical data

Technical data

ELM9410

Technology	power supply terminal
Short-circuit proof	yes
Input voltage	24 V DC
Input current	typ. 70 mA + (E-bus/4)
Power supply	24 V DC (-15 %/+20 %)
Output voltage	5 V for E-bus supply
Output current	2 A
Current consumption from U_S	50 mA + (Σ E-bus current/4)
Current consumption from U_P	50 mA + load
Current supply E-bus	2000 mA
Insulation voltage input/output	500 V (E-bus/ U_S / U_P)
Power contacts	max. 24 V DC/max. 2 A
Diagnostics in the process image	yes
Special features	electrically isolated output voltages, reverse polarity protection, diagnostics of supply and output voltages
Weight	approx. 450 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
Electrical isolation	500 V (E-bus/field potential)
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Protect. rating/installation pos.	IP20/variable
Approvals/markings	CE

Housing data	ELM-30-xpin
Design form	metal housing with signal LEDs
Material	zinc die-cast
Dimensions (W x H x D)	30 mm x 100 mm x 95 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	–
Wiring	solid conductors (e): direct plug-in technique; fine-stranded conductors (f) and ferrule (a): spring actuation by screwdriver
Connection cross-section	s*: 0.2...1.5 mm ² , st*: 0.2...1.5 mm ² , f*: 0.25...0.75 mm ²
Connection cross-section AWG	s*: AWG 24...14, st*: AWG 24...14, f*: AWG 24...14

Stripping length	8...9 mm
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*s: solid wire; st: stranded wire; f: with ferrule