Top view   Contact assembly

EL3202-0010 | 2-channel input terminals PT100 (RTD) for 4-wire connection, high-precision

The analog input terminal EL3202-0010 enables direct connection of resistance sensors. A microprocessor handles linearisation across the whole temperature range, which is freely selectable. The EtherCAT Terminal's standard settings are: resolution 0.01 °C in the temperature range of PT100 sensors in 4-wire connection. The EtherCAT Terminal indicates its signal state by means of light emitting diodes. Sensor malfunctions such as broken wires are indicated by error LEDs. The EL3202-0010 has a precision of 0.1 °C at 40 °C ambient temperature. The terminal can also be operated with 2- or 3-wire connection and with other sensors than PT100. The maximum accuracy is achieved in 4-wire operation with PT100 sensors.

Technical data	EL3202-0010
Number of inputs	2
Power supply	via the E-bus
Technology	4-wire
Distributed clocks	–
Input filter limit frequency	typ. 1 kHz
Sensor types	PT100, PT200, PT500, PT1000, Ni100, Ni120, Ni1000 resistance measurement (e.g. potentiometer, 10 Ω…1.2/4 kΩ), KTY sensors (types see documentation)
Connection method	4-wire
Measuring range	-200…+850 °C (PT sensors); -60…+250 °C (Ni sensors); -200…+320 °C (high-precision)
Resolution	0.01 °C per digit
Conversion time	approx. 85 ms default setting, 2…800 ms configurable
Temperature range	-200…+320 °C (PT sensors)
Measuring current	< 0.5 mA (load-dependent)
Measuring error	< ±0.1 °C at 40 °C ambient temperature, 4-wire connection, PT100 sensors (measuring range: -200…+320 °C) and 50 Hz filter
Electrical isolation	500 V (E-bus/signal voltage)
Current consumption power contacts	–
Current consumption E-bus	typ. 190 mA
Bit width in the process image	2 x 32 bit RTD input
Special features	integrated digital filter, limit value monitoring, variable connection technology
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. class/installation pos.	IP 20/variable
Approvals	CE, UL, Ex

Related products	
EL3202-0020	2-channel analog input terminal, PT100 (RTD), 16 bit, high-precision, with calibration certificate
EL3201-0010	1-channel analog input terminal, PT100 (RTD), 16 bit, high-precision
EL3201-0020	1-channel analog input terminal, PT100 (RTD), 16 bit, high-precision, with calibration certificate