



EL3201-0020 | 1-channel input terminals PT100 (RTD) for 4-wire connection, high-precision, with calibration certificate

The analog input terminal EL3201-0020 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 EL3201-0020 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.

The calibration certificate for the respective serial number can be downloaded from www.beckhoff.com/certificates.

| Technical data | EL3201-0020 |
|------------------------------------|---|
| Number of inputs | 1 |
| 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. 24 ms default setting, 4...500 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 | 1 x 32 bit RTD input |
| Special features | integrated digital filter, limit value monitoring, variable connection technology, with calibration certificate |
| Weight | approx. 60 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. class/installation pos. | IP 20/variable |
| Approvals | CE, UL, Ex |

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

| Services and further information | |
|----------------------------------|---|
| ZS9001-EL3201-0020 | recalibration service for EL3201-0020: check, compensation, recalibration |
| ZS9001 | recalibration of I/O components with calibration certificate, includes check, compensation, recalibration, package price depending on terminal series |
| ELxxxx-0020 | EtherCAT Terminals with calibration certificate |