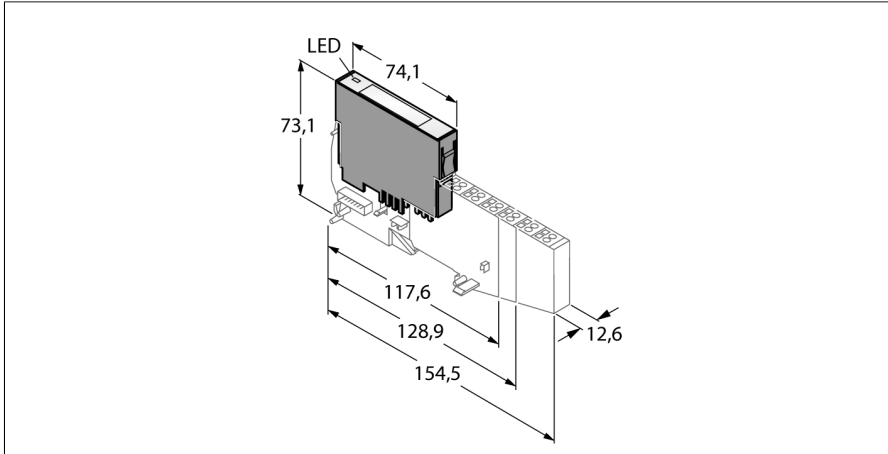


BL20 electronic module

2 Analog Thermocouple Inputs

BL20-2AI-THERMO-PI



- Fieldbus and connection technology independent
- Protection class IP20
- LEDs indicate status and diagnostic
- Electronics galvanically separated from the field level via optocouplers
- 2 analog inputs for connection of thermocouples, types B, E, J, K, N, R, S and T
- Base module with internal cold compensation

Functional principle

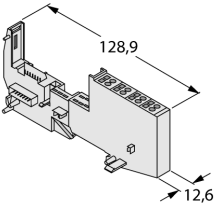
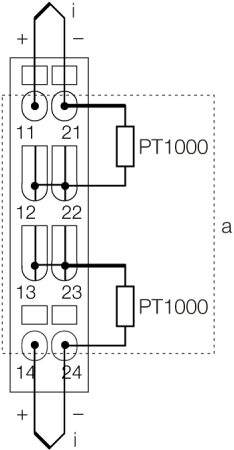
BL20 electronic modules are plugged into the purely passive base modules which are used for connection of field devices. Maintenance is significantly facilitated due to separation of the connection level from the module electronics. Furthermore flexibility is enhanced because the base modules provide a choice of tension spring or screw connection technology.

The electronic modules are completely independent of the type of higher level field bus through the use of gateways.

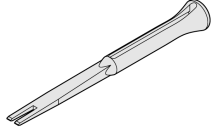
| | |
|--|--|
| Type | BL20-2AI-THERMO-PI |
| ID | 6827020 |
| Number of channels | 2 |
| Rated voltage from the supply terminal | 24 VDC |
| Nominal current from field supply | ≤ 30 mA |
| Nominal current from module bus | ≤ 45 mA |
| Power dissipation, typical | ≤ 1 W |
| Inputs | |
| Input type | Types B, E, J, K, N, R, S, T |
| Electrical isolation | electronics for the field level |
| Output connectivity | Screw, tension spring |
| Voltage resolution | ± 50 mV: < 2 μV ± 100 mV: < 4 μV ± 500 mV: < 20 μV ± 1000 mV: < 50 μV |
| Maximum limiting frequency analog | 2 Hz |
| Linearity | ≤ 0.1 % |
| Basic fault limit at 23 °C | < 0.2 % |
| Repeatability | 0.05 % |
| Temperature coefficient | < 300 ppm/°C of full scale |
| Resolution | 16 Bit |
| Measured-value display | 16 bit signed integer 12 bit full range left-justified |
| Cycle time | ≤ 300 ms |
| Number of diagnostics bytes | 2 |
| Number of parameter bytes | 2 |

| | |
|-------------------------------|---|
| Dimensions (W x L x H) | 12.6 x 74.1 x 55.4 mm |
| Approvals | CE, cULus, zone 2, Class I, Div. 2 |
| Ambient temperature | 0...+55 °C |
| Storage temperature | -25...+85 °C |
| Relative humidity | 15...95 %, no condensation allowed |
| Vibration test | Acc. to EN 61131 |
| Shock test | Acc. to IEC 60068-2-27 |
| Drop and topple | Acc. to IEC 60068-2-31 |
| Electromagnetic compatibility | Acc. to EN 61131-2 |
| Protection class | IP20 |
| MTTF | 422 years acc. to SN 29500 (Ed. 99) 20 °C |

Compatible base modules

| Dimension drawing | Type | Pin configuration |
|---|--|---|
|  | <p>BL20-S4T-SBBS-CJ 6827048 Tension spring connection, a: Internal cold junction compensation in the base module</p> <p>BL20-S4S-SBBS-CJ 6827049 Screw connection, a: Internal cold junction compensation in the base module</p> | <p>Wiring Diagram</p>  |

Accessories

| Type code | Ident-No. | | Dimension drawing |
|---------------------|-----------|---------------------|---|
| ZBW5-2BETÄTIGUNGSWE | 6827106 | Tension spring tool |  |