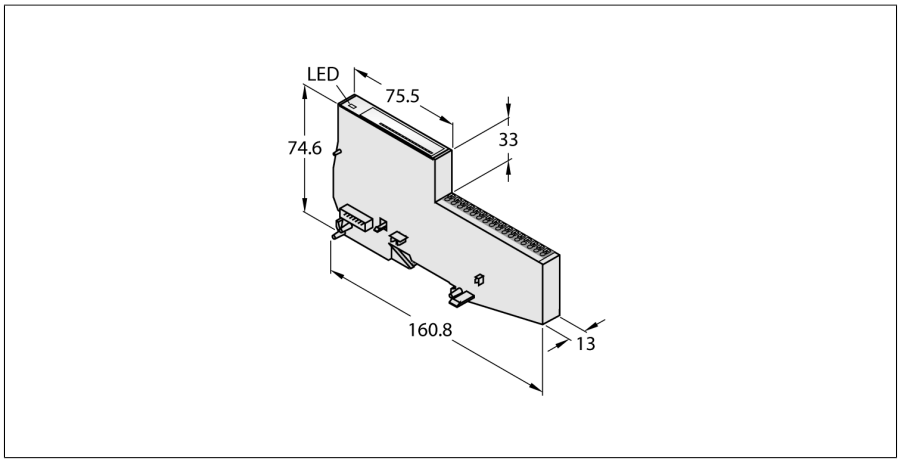
BL20 Economy Module
8 Analog Inputs U/I resp. 4 PT/NI Inputs With Extended Temperature Range
BL20-E-8AI-U/I-4PT/NI/ET



- Fieldbus-independent
- Electronics and connection technology in one housing
- Tension spring connection
- Protection class IP20
- LEDs indicate status and diagnostic
- Electronics galvanically separated from the field level via optocouplers
- 8 analog inputs U/I, 2-wire
- Passive inputs – external power supply
- 0…20mA, 4…20mA,-10…+10VDC or 0…+10VDC, selectable per channel, resp.
- 4PT/NI inputs (always 2 analog inputs are combined to a PT/Ni 2/3-wire input)
- Extended temperature range: -25 °C…+60 °C
- Circuit boards with conformal coating

Type	BL20-E-8AI-U/I-4PT/NI/ET
ID	6827340

Number of channels	8
Rated voltage from the supply terminal	24 VDC
Admissible range	18…30 VDC
Nominal current from field supply	≤ 35 mA
Nominal current from module bus	≤ 35 mA
Power dissipation, typical	≤ 1 W

Inputs	
Input type	0/4…20 mA, -10/0…10 VDC or PT/NI
Input resistance	< 62 Ω (current) resp. > 98.5 kΩ (voltage)
Max. input current	Current mode: 50 mA
Max. input voltage	Voltage: -20 VDC < U < 20 VDC (externally supplied)
Electrical isolation	electronics for the field level
Output connectivity	Push-in

Basic fault limit at 23 °C	< 0.2 %
Temperature coefficient	< 200 ppm/°C of full scale
Resolution	16 Bit
Measured-value display	16 bit signed integer
	12 bit full range left justified
Conversion time	< (44 × [number of channels being activated during parameterization]) ms

Number of diagnostics bytes	8
Number of parameter bytes	8

Functional principle

Electronics and connection technology are integrated in the housing. A base module is not needed. Economy modules and modules with separate electronics and connection technology can be fitted into a station, provided the base modules feature tension spring connections.

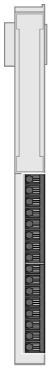
The use of gateways makes economy modules completely independent from the higher level fieldbus.

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Dimensions (W x L x H)	13 x 160.8 x 74.6 mm
Approvals	CE
Ambient temperature	-25…+60 °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	229 years acc. to SN 29500 (Ed. 99) 20 °C

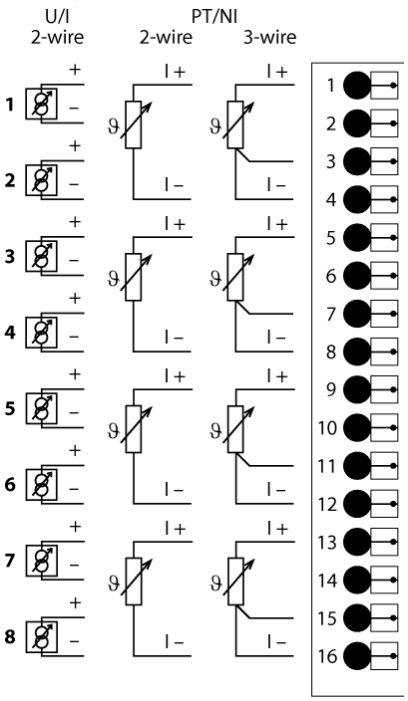
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Terminal assignment



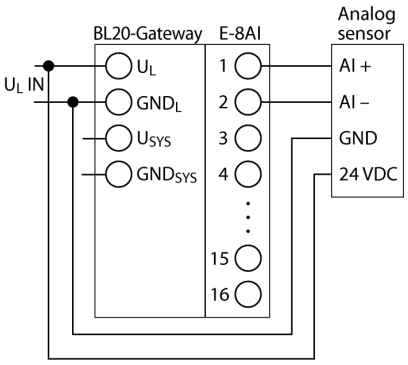
Analog Inputs
The pin assignment is dependent on the sensor type. Examples of the most common 2- and 4-wire sensors with electric current or voltage signal are listed below.
Note: Open inputs and/or unused channels should not be programmed in the Pt/Ni or resistance (R) mode, because this may lead to minor measurement errors at adjacent channels. However, if this is necessary, the affected channels must be terminated with a resistance. Thereby the resistance value must be in the programmed measuring range.

Pin Assignment



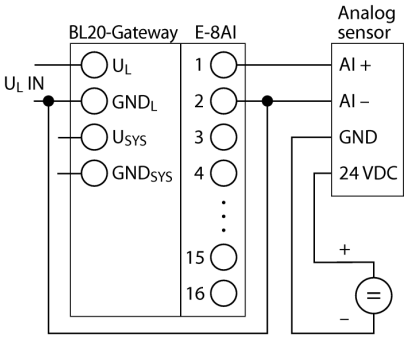
4-wire sensor (U/I)
The sensor and the BL20 U_L fuse are fed from a common source. The sensor and the BL20 U_L fuse are automatically on the same GND potential.

Pin Assignment



4-wire sensor (U/I)
The sensor and the BL20 U_L are fed from different sources. U_L of the BL20 system and AI of the sensor must be on the same GND-potential. For this, U_L and AI must be bridged.

Pin Assignment

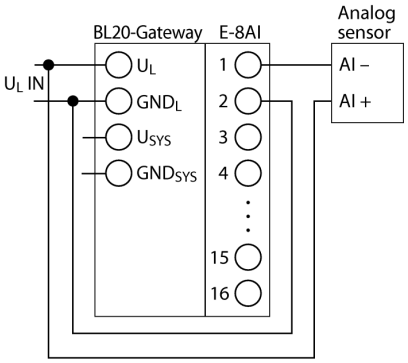


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2-wire sensor (U/I)

The sensor and the BL20 U_L fuse are fed from a common source. The sensor and the BL20 U_L fuse are automatically on the same GND potential.

Pin Assignment



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