

KL3051 | Bus Terminal, 1-channel analog input, current, 4...20 mA, 12 bit, single-ended

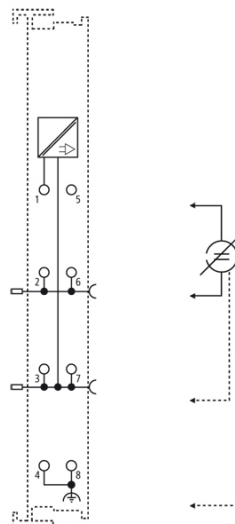
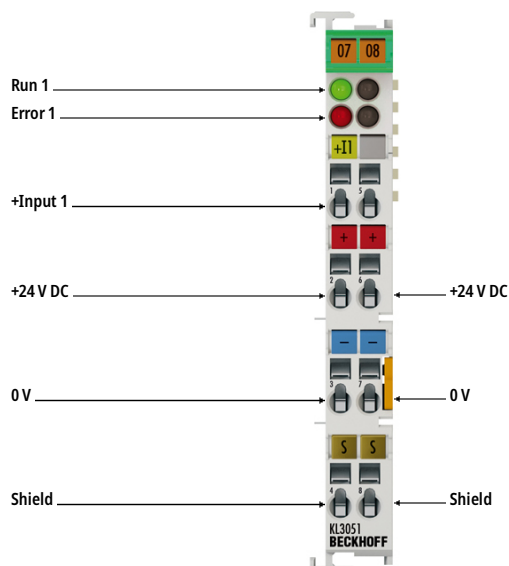
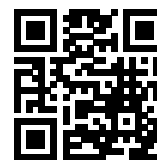


Image similar, may contain optional accessories

i **Product status:** regular delivery

The job of the KL3051 analog input terminal is to supply power to measuring transducers located in the field and to transmit analog measurement signals with electrical isolation to the automation device. The voltage for the sensors is supplied to the terminal via the power contacts. The power contacts can optionally be supplied with operating voltage in the standard way or via a power feed terminal (KL9xxx) with electrical isolation. The input electronics is independent of the supply voltage of the power contacts. The 0 V rail is the reference potential for the inputs. The run LEDs give an indication of the data exchange with the Bus Coupler. The error LEDs indicate an overload condition and a broken wire.

Product information

Technical data

Technical data	KL3051
Number of inputs	1
Power supply	24 V DC via power contacts
Signal current	4...20 mA
Technology	single-ended
Internal resistance	80 Ω + diode voltage 0.7 V
Common mode voltage U_{CM}	–

Conversion time	~ 1 ms
Resolution	12 bit
Measurement error/uncertainty	< ±0.3% (relative to full scale value)
Surge voltage resistance	max. 35 V
Electrical isolation	500 V (K-bus/signal voltage)
Current consumption power contacts	load only
Current consumption K-bus	typ. 65 mA
Bit width in the process image	input: 1 x 16 bit data (1 x 8 bit control/status optional)
Configuration	no address or configuration setting
Special features	with sensor supply
Weight	approx. 70 g
Operating temperature	0...55°C
Storage temperature	-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. rating/installation pos.	IP20/variable
Approvals/markings	CE, CCC, UL, ATEX, IECEX, DNV
Plug-in wiring level	for all KSxxxx Bus Terminals
Ex marking	ATEX: II 3 G Ex ec IIC T4 Gc IECEX: Ex ec IIC T4 Gc

Housing data	KL-12-8pin	KS-12-8pin
Design form	compact terminal housing with signal LEDs	terminal housing with pluggable wiring level
Material	polycarbonate	
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	labeling of the BZxxxx series	
Wiring	solid conductor (s), flexible conductor (st) and ferrule (f): spring actuation by screwdriver	
Connection cross-section	s*: 0.08...2.5 mm ² , st*: 0.08...2.5 mm ² , f*: 0.14...1.5 mm ²	s*: 0.08...1.5 mm ² , st*: 0.08...1.5 mm ² , f*: 0.14...1.5 mm ²

Connection cross-section AWG	s*: AWG28...14, st*: AWG28...14, f*: AWG26...16	s*: AWG28...16, st*: AWG28...16, f*: AWG26...16
Stripping length	8...9 mm	9...10 mm
Current load power contacts	I _{max} : 10 A	
Dimensions (W x H x D)	12 mm x 100 mm x 68 mm	

*s: solid wire; st: stranded wire; f: with ferrule

Ordering information

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KL3051	Bus Terminal, 1-channel analog input, current, 4...20 mA, 12 bit, single-ended
KS3051	Bus Terminal, 1-channel analog input, current, 4...20 mA, 12 bit, single-ended, pluggable wiring level