



KL3051 | 1-channel loop-powered input terminal 4...20 mA

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 error LEDs give an indication of the data exchange with the Bus Coupler. The error LEDs indicate an overload condition and a broken wire.

Technical data	KL3051 KS3051
Number of inputs	1
Power supply	24 V DC via power contacts
Signal current	4...20 mA
Technology	single-ended
Internal resistance	80 Ω + 0.7 V
Common-mode voltage U_{CM}	–
Resolution	12 bit
Conversion time	~ 1 ms
Measuring error	< ± 0.3 % (relative to full scale value)
Surge voltage resistance	35 V max.
Electrical isolation	500 V (K-bus/signal voltage)
Current consumption power contacts	only load
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/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
Pluggable wiring	for all KSxxxx Bus Terminals
Approvals	CE, UL, Ex, GL

Special terminals	
KL3051-0050	Siemens S7 format