



KL3011, KL3012 | 1-, 2-channel analog input terminals 0...20 mA

The KL3011 and KL3012 analog input terminals handle signals in the range from 0 to 20 mA. The current is digitised to a resolution of 12 bits and is transmitted, in an electrically isolated form, to the higher-level automation device. The input channels of the Bus Terminals have differential inputs and possess a common, internal ground potential. The KL3011 is the single-channel variant and is characterised by its fine granularity and electrical isolation. The KL3012 combines two channels in one housing. An open lead or overload condition are detected, and the terminal status is relayed to the controller via the K-bus. 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.

Technical data	KL3011 KS3011	KL3012 KS3012
Number of inputs	1	2
Power supply	via the K-bus	
Signal current	0...20 mA	
Technology	differential input	
Internal resistance	80 Ω + 0.7 V	
Common-mode voltage U _{CM}	35 V max.	
Resolution	12 bit	
Conversion time	~ 1 ms	~ 2 ms
Measuring error	< ±0.3 % (relative to full scale value)	
Surge voltage resistance	35 V DC	
Electrical isolation	500 V (K-bus/signal voltage)	
Current consumption power contacts	– (no power contacts)	
Current consumpt. K-bus	typ. 60 mA	
Bit width in the process image	input: 1 x 16 bit data (1 x 8 bit control/status optional)	input: 2 x 16 bit data (2 x 8 bit control/status optional)
Weight	approx. 70 g	
Operating/storage temperature	0...+55 °C/-25...+85 °C	-25...+60 °C/-40...+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	
KL3012-0010	Siemens S5 format
KL3012-0011	altered range: 0...21.5 mA, maximum value corresponds to 21.5 mA instead of 20 mA
KL3012-0012	fast µP, scan time approx. 0.5 ms
KL3012-0050	Siemens S7 format