



KL3142 | 2-channel analog input terminal 0...20 mA (accuracy 0.05 %)

The KL3142 analog input terminal handles signals in the range between 0 and 20 mA. The current is digitised to a resolution of 16 bits, and is transmitted, in an electrically isolated form, to the higher-level automation device. The input channels of the Bus Terminal have differential inputs and a common, internal ground potential. With its high measurement accuracy of $\pm 0.05\%$ (relative to full scale value), the terminal is optimised for high-precision control processes, such as dosing, filling, or quality assurance. The KL3142 combines two channels in a single 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 indicate data exchange with the Bus Coupler, the error LEDs indicate overload.

Technical data	KL3142 KS3142
Number of inputs	2
Power supply	via the K-bus
Signal current	0...20 mA
Technology	differential input
Internal resistance	100 Ω typ. shunt
Common-mode voltage U_{CM}	± 10 V max.
Resolution	16 bit
Conversion time	140 ms, configurable
Filter	50 Hz, configurable
Measuring error	$< \pm 0.05\%$ (relative to full scale value)
Surge voltage resistance	35 V DC
Electrical isolation	500 V (K-bus/signal voltage)
Current consumption power contacts	–
Current consumption K-bus	typ. 85 mA
Bit width in the process image	input: 2 x 16 bit data (2 x 8 bit control/status optional)
Special features	increased measuring accuracy
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

Special terminals	
KL3142-0050	Siemens S7 format



Product announcement

KL3142, KL3142-0050: available
KS3142: estimated market release on request