



KL5111 | Incremental encoder interface

The KL5111 Bus Terminal is an interface for the direct connection of 24 V incremental encoders. A 16 bit counter with a quadrature decoder and a 16 bit latch for the zero pulse can be read, set or enabled. The state of the counter is transmitted quickly and securely to the PC, PLC or CNC over the fieldbus. Interval measurement with a resolution of 200 ns is possible. Up to 64 incremental encoders can be connected to a Bus Coupler.

Technical data	KL5111 KS5111
Technology	incremental encoder interface 24 V DC, EN 61131-2, type 1, "0": < 5 V DC, "1": > 15 V DC, typ. 5 mA
Number of channels	1 incremental encoder
Encoder connection	A, B, C, 24 V
Encoder operating voltage	24 V DC
Encoder output current	–
Counter	16 bit, binary
Limit frequency	1 million increments/s (with 4-fold evaluation)
Quadrature decoder	4-fold evaluation
Zero-pulse latch	16 bit
Commands	read, set, enable
Power supply	24 V DC (-15 %/+20 %)
Supply voltage	24 V DC (-15 %/+20 %)
Current consumption power contacts	–
Current consumption K-bus	typ. 40 mA
Bit width in the process image	input/output: 2 x 16 bit data, 2 x 8 bit control/status
Weight	approx. 60 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	
KL5111-0010	A, B, C signals: 5 V inputs
KL5111-0011	special function: latch input sets counter to zero
KL5111-0012	latches on both edges, A, B, C inputs 24 V
KL5111-0013	latches on both edges, A, B, C inputs 5 V
KL5111-0015	frequency measurement over a selectable time window; 24 V inputs
KL5111-0016	frequency measurement over a selectable time window; 5 V inputs
KL5111-0020	12 V input circuit