



## 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 consumpt. 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   |