



KL3681 | Digital multimeter terminal

The KL3681 Bus Terminal enables measurement of currents and voltages in a wide input range. The measuring ranges are switched automatically, as usual in advanced digital multimeters. For current measurements, two current paths are available, one of which is a high-current path for up to 10 A. The current and the voltage measurement facility can be used for DC and AC. The alternating parameters are output as true RMS values. The measurement readings can be read and processed with commercially available fieldbuses. At the same time, the KL3681 enables the measuring type and range to be set via the bus.

Excellent interference immunity is achieved through the fully electrically isolated design of the electronic measuring system and the dual-slope conversion system. High precision and simple, high-impedance measurement from 300 mV to 300 V allow the Bus Terminal to be used like a modern digital multimeter.

In measuring applications in particular, the voltage to be expected is often not yet known during the planning phase. Automatic adjustment of the measurement range simplifies use and reduces stock levels. The selected measuring type and overload are indicated by LEDs.

| Technical data | KL3681 KS3681 |
|------------------------------------|---|
| Number of inputs | 1 voltage or 1 current (10 A/1 A) |
| Technology | digital multimeter with automatic range selection |
| Internal resistance | 3 m Ω /0.2 Ω /12.5 M Ω |
| Measured values | current, voltage |
| Measuring voltage | 300 mV, 3 V, 30 V, 300 V |
| Measuring current | 100 mA, 1 A and 10 A via high-current path |
| Resolution | 18 bit + sign in each measurement range |
| Measuring error | 0.01 % DC voltage measurement at 25 °C |
| Measuring procedure | DC with arithmetic averaging, AC with true RMS value calculation |
| Update time | 0.5 s, 1 s for measuring range selection |
| Electrical isolation | 1,500 V (K-bus/field potential) |
| Current consumption power contacts | – (no power contacts) |
| Current consumpt. K-bus | typ. 100 mA |
| Bit width in the process image | 32 bit data, 8 bit control/status |
| Special features | automatic or manual range selection, 1.25 A fuse installed + spare fuse, filter deactivatable |
| 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 |

| Accessories | |
|-------------|-------------------------------|
| ZB8000-0001 | spare fuse, 1.25 A, 10 pieces |

Related products

EL3681

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