



KL3403 | 3-phase power measurement terminal

The KL3403 Bus Terminal enables the measurement of all relevant electrical data of the supply network. The voltage is measured via the direct connection of L1, L2, L3 and N. The current of the three phases L1, L2 and L3 is fed via simple current transformers. All measured currents and voltages are available as root-mean-square values. In the KL3403 version, the effective power and the energy consumption for each phase are calculated. Through the relationship of the root-mean-square values of voltage U * current I and the effective power P , all other information such as the apparent power S or the phase shift angle \cos can be derived. For each fieldbus, KL3403 provides a comprehensive network analysis and an energy management option.

| Technical data | KL3403 KS3403 |
|------------------------------------|---|
| Number of inputs | 3 phases + N |
| Technology | 3-phase connection technique |
| Measured values | current, voltage, effective power, energy, \cos , peak values U , I and P , frequency |
| Measuring voltage | max. 500 V AC 3~ (ULx-N: max. 288 V AC) |
| Resolution | 16 bit (21 bit, internal) |
| Measuring current | max. 1 A, via measuring transformers x A/1 A |
| Measuring error | 0.5 % relative to full scale value (U , I), 1 % calculated value |
| Measuring procedure | true RMS with 64,000 samples/s |
| Update time | 50 ms per measured value preset, free configurable |
| Electrical isolation | 1,500 V (K-bus/field potential) |
| Current consumption power contacts | – (no power contacts) |
| Current consumpt. K-bus | typ. 115 mA |
| Bit width in the process image | input/output: 3 x 16 bit data, 3 x 8 bit control/status |
| Special features | energy meter, power measurement, True RMS |
| Weight | approx. 75 g |
| Operating/storage temperature | -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 |

| Special terminals | |
|-------------------|---|
| KL3403-0010 | 3-phase power measurement terminal, current path designed for 5 A transducer (1 % measuring accuracy I), operating/storage temperature: -25...+60 °C/-40...+85 °C |
| KL3403-0020 | 3-phase power measurement terminal, current path designed for 20 mA, optimised for electronic current transformer, operating/storage temperature: 0...+55 °C/-25...+85 °C |
| KL3403-0022 | 3-phase power measurement terminal, current path and voltage input designed for 20 mA, operating/storage temperature: 0...+55 °C/-25...+85 °C |
| KL3403-0333 | 3-phase power measurement terminal, 500 V AC, 333 mV AC, operating/storage temperature: 0...+55 °C/-25...+85 °C |