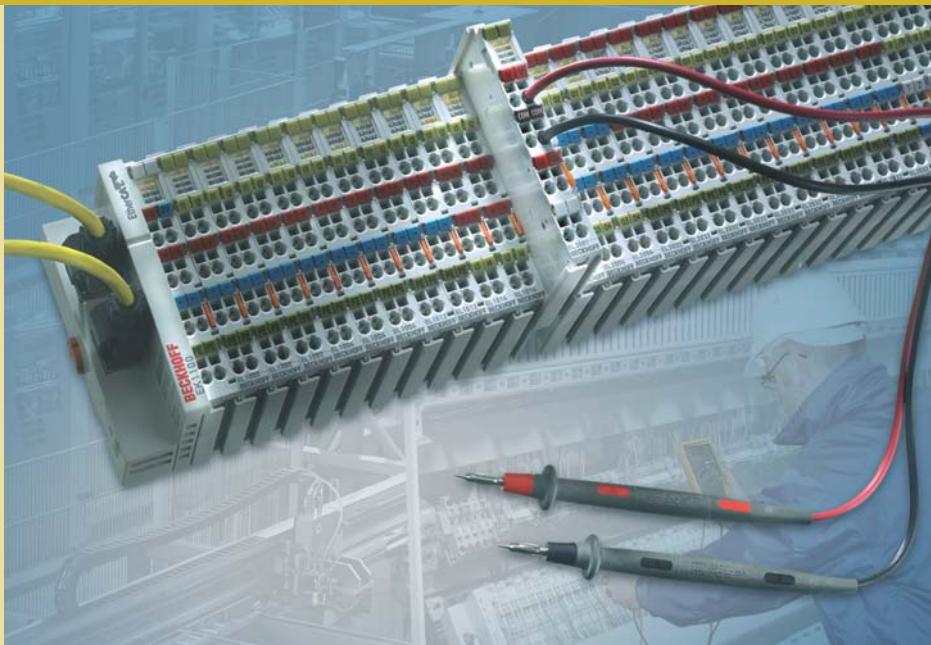


Measurement extended to I/O terminals

## Digital multimeter inside Bus Terminal I/O

→ With its new digital multimeter terminals, Beckhoff has added enhanced measurement technology functions to its leading edge I/O system. Using the digital multimeter with fieldbus interface for measuring current and voltage, measured values can be processed directly in the I/O system or by the master controller. These dynamic measuring terminals will be available for both the Beckhoff Bus Terminal system and for the EtherCAT Terminal system.



Digital multimeter gets a Bus Terminal treatment.

Utilizing a powerful CPU, ultra fast communication (e.g. via EtherCAT), real-time software and an I/O interface to the outside world, Beckhoff PC-based control technology offers the ideal system for high-precision, high-speed measuring equipment. The use of the new Beckhoff KL3681 (Bus Terminal) and EL3681 (EtherCAT Terminal) significantly increases flexibility thanks to the wide input range and automated measuring range selection. High precision and simple, high-resistance measurement from 30 mV to 300 V allows the Bus Terminal to be used like a modernized digital multimeter.

In measuring applications in particular, the expected voltage is often not known during the planning phase. Automatic adjustment of the measurement range simplifies use and reduces stock levels. The digital multimeter terminals measure DC and AC voltages; in the case of AC voltage, the effective (RMS) value is determined.

Very good immunity to interference is achieved via the complete galvanic isolation of the electronic measuring system and a measurement interval of typically 200 ms. The measured result is equivalent to that of a good hand-held multimeter, but the Bus Terminal also has an interface to all common fieldbuses via which it can be read out and parameterized.

### Measurement ranges:

- | Voltage: 30 mV to 300 V DC, 100 mV to 300 V AC
- | Current: 100 mA, 1 A, 10 A AC/DC
- | Resistance: 10  $\Omega$  ... 10 M $\Omega$