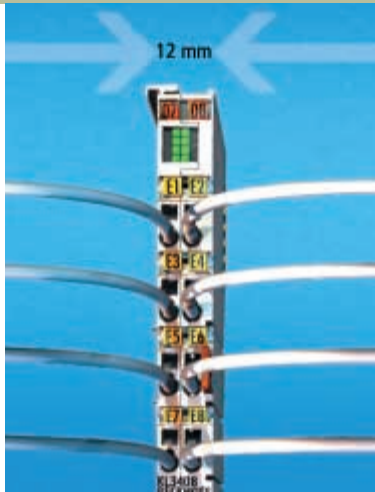


Ultra-compact: 12 mm wide 8-channel analog I/O modules

More compact, more powerful and less expensive - these are the aims of the new extensions for the Bus Terminal system. The Beckhoff I/O system now supports more than 150 Bus Terminals and is the most comprehensive and proven I/O system on the market. The most recent highlight is the 8-channel analog Bus Terminals. Analog inputs or outputs are compacted into a 12 mm wide Bus Terminal housing.



Beckhoff has expanded the analog type of bus terminals by 24, not to mention the other signals which have been added. Optimizing cost and increasing the channel density was the Beckhoff development focus. The standard analog signals of ± 10 V, $0 \dots 10$ V, $0 \dots 20$ mA and $4 \dots 20$ mA are available as 1-, 2-, 4-, and 8 channel variants within a standard size housing. Customers can configure their analog I/O right down to the exact number of I/O needed. Gone also is the need for added spares since additional I/O is easily added.

The KL30x1 and KL40x1 single-channel analog terminals mean you get only one channel when you need only one channel. A further advantage is offered for applications where electrical isolation is required between the channels. In the new KL34x4 and KL44x4 4 channel bus terminals, the four inputs are 2-wire versions and

have a common ground potential. The KL3454 is a special version, enabling direct connection – without auxiliary voltage – of $4 \dots 20$ mA sensors, which are supplied via the sensor current. The KL34x8 and KL44x8 variants combine 8 channels in one housing and are particularly suitable for space saving installation in control cabinets. The use of single wire connection technology enables the connection of multi-channel sensor technology with minimum space requirements.

New relay and power supply unit terminal

Remember we said Beckhoff has developed other terminals besides the 24 new analog terminals? Now there is the KL2641 Relay Terminal, which is optimally tailored to the requirements of building automation through optional manual operation. Now the Bus Terminal system using the KL2641, rated for 440 V AC and 16 A, can directly turn devices on and off without additional costly contactors.

The Bus Terminal system was also expanded in terms of power supply unit terminals. Auxiliary voltages can be generated directly in the bus terminal station. In addition to the new KL9512 for 12 V DC, power supply unit terminals for the following voltages are available: 5 V DC, 8 V DC, 10 V DC and 15 V DC.

Product announcement

Estimated market release for the 4/8 channel analog terminals 3rd quarter 2003. The 1 channel Bus Terminals and the KL2641/KL9512 are already available. We reserve the right to make technical changes.

Uncoupled AS-Interface networks

The KL9520 AS-i potential feed terminal represents an optimum extension of the AS-Interface product range. The KL9520 complements the existing KL6201 AS-i master terminal and the KL9528 power supply terminal, enabling space saving and cost-effective integration of AS-i networks.

The AS Interface master terminal enables the direct connection of AS-i slaves. The AS-i compliant interface supports digital and analog slaves, versions 2.0 and 2.1. The KL9528 power supply terminal generates the required voltage from the 24 V DC control voltage via high-frequency decoupling.

The new potential feed terminal with KL9520 filter closes a further gap towards smaller and more price-sensitive applications. Instead of a power supply unit, this terminal includes a filter and the switch component for generating the required signal voltage. The AS-i network is fed directly from the 24 V supply. This voltage level is adequate for a large number of applications and offers a significant price benefit.

A further application for the KL9520 is uncoupling of AS-i networks, for example for supplying a "large" AS-i power supply unit with an output current of up to 8 A. Using a KL9520 filter terminal and a KL62x1 AS-i master terminal, a further AS-i network can be configured and supplied from a power supply unit.

Overview of the new analog input/output terminals

Signal	Analog Input			Analog Output		
	1 channel	4 channel	8 channel	1 channel	4 channel	8 channel
± 10 V	KL3001	KL3404	KL3408	KL4031	KL4434	KL4438
$0 \dots 10$ V	KL3061	KL3464	KL3468	KL4001	KL4404	KL4408
$0 \dots 20$ mA	KL3011	KL3444	KL3448	KL4011	KL4414	KL4418
$4 \dots 20$ mA	KL3021	KL3454	KL3458	KL4021	KL4424	KL4428

Product announcement

Estimated market release for the potential feed terminal KL9520 3rd quarter 2003.