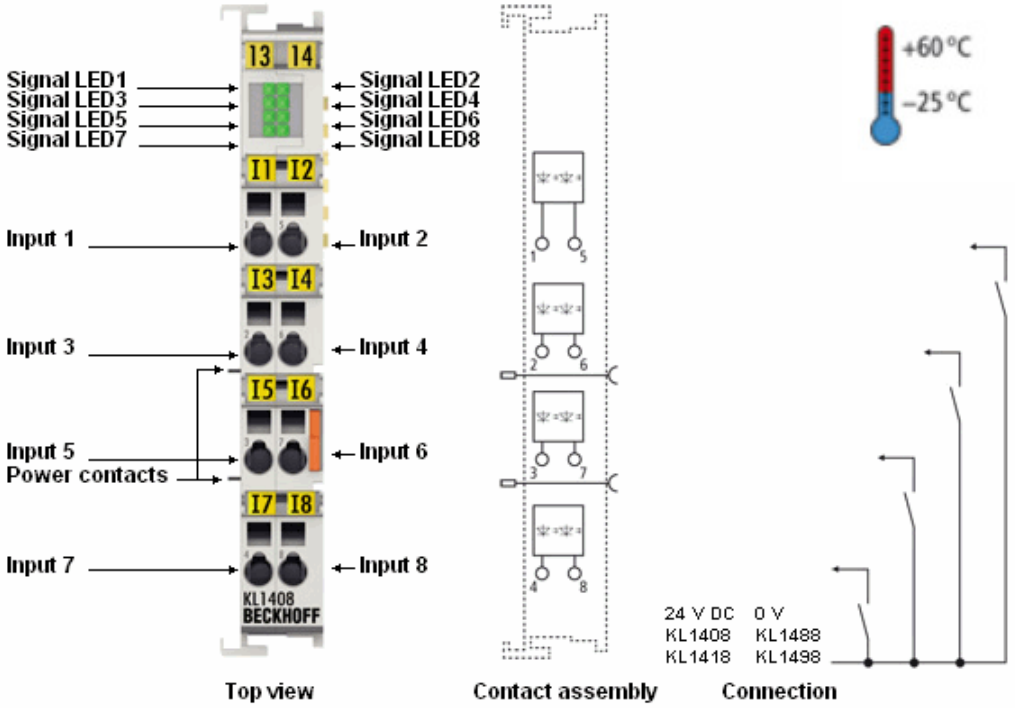

Eight-channel, digital input terminals, 24 V_{DC}

The digital input terminals KL1408 and KL1418 (positive switching) and KL1488 and KL1498 (negative switching) acquire the binary control signals from the process level and transmit them, in an electrically isolated form, to the higher-level automation unit. The Bus Terminals each contain eight channels, whose signal states are displayed by LEDs. They are particularly suitable for space-saving use in control cabinets. By using the single-conductor connection technique a multi-channel sensor can be connected in the smallest space with a minimum amount of wiring. The power contacts are looped through. For the KL1408 and KL1418 Bus Terminals, the reference ground for all inputs is the 0 V power contact. For the KL1488 and KL1498 Bus Terminals, the reference point for all inputs is the 24 V power contact. These versions have input filters with different speeds.

Technical data	KL1408/KS1408	KL1418/KS1418	KL1488/KS1488	KL1498/KS1498
Number of inputs / rated voltage	8 / 24 V_{DC} (-15% / +20%)			
Signal voltage “0”	-3 V … +5 V (IEC 61131-2, type 1/3)		18 V ... 30 V	
Signal voltage “1”	15 V … 30 V (IEC 61131-2, type 3)		0 V ... 7 V	
Signal current “0”	0 … 1.5 mA	0 … 1.5 mA	-	-
Signal current “1”	2.0 … 2.5 mA	2.0 … 2.5 mA	typ. 3 mA	typ. 3 mA
Input filter	3 ms	0.2 ms	3 ms	0.2 ms
Current consumption from K-bus	typ. 5 mA			
Electrical isolation	500 V (K-Bus/field potential)			
Bit width in process image	8 input bits			
Configuration	no address-or configuration settings required			
Dimensions (W x H x D)	15mm x 100mm x 70mm (connected width: 12mm)			
Weight	approx. 55 g			
Permissible ambient temperature range	-25°C ... +60°C in operation 0°C ... +55°C (according to cULus for Canada and USA) 0°C ... +55°C (according to ATEX, see special conditions)		-0°C... +55 °C in operation	
	-40°C... +85 °C during storage		-25°C... +85 °C during storage	
Relative humidity	5% ... 95%, no condensation			
Vibration / shock resistance	conforms to EN 60068-2-6 / EN 60068-2-27			

Technical data	KL1408/KS1408	KL1418/KS1418	KL1488/KS1488	KL1498/KS1498
EMC resistance/emission	conforms to EN 61000-6-2 / EN 61000-6-4			
Mounting position / protection class	any / IP20			
Approvals	CE, cULus, ATEX, GL		CE, cULus, ATEX	
Pluggable wiring	at all KSxxxx series terminals			

ATEX - Special conditions

WARNING	**Observe the special conditions for the intended use of Beckhoff fieldbus components in potentially explosive areas (directive 94/9/EU)!** • The certified components are to be installed in a suitable housing that guarantees a protection class of at least IP54 in accordance with EN 60529! The environmental conditions during use are thereby to be taken into account! • If the temperatures during rated operation are higher than 70°C at the feed-in points of cables, lines or pipes, or higher than 80°C at the wire branching points, then cables must be selected whose temperature data correspond to the actual measured temperature values! • Observe the permissible ambient temperature range of 0 - 55°C for the use of Beckhoff fieldbus components in potentially explosive areas! • Measures must be taken to protect against the rated operating voltage being exceeded by more than 40% due to short-term interference voltages! • The individual terminals may only be unplugged or removed from the Bus Terminal system if the supply voltage has been switched off or if a non-explosive atmosphere is ensured! • The connections of the certified components may only be connected or disconnected if the supply voltage has been switched off or if a non-explosive atmosphere is ensured! • The fuses of the KL92xx power feed terminals may only be exchanged if the supply voltage has been switched off or if a non-explosive atmosphere is ensured! • Address selectors and ID switches may only be adjusted if the supply voltage has been switched off or if a non-explosive atmosphere is ensured!

Note	**Operation of the Bus Terminal System in potentially explosive areas (ATEX)!** Pay also attention to the continuative documentation *Notes about operation of the Bus Terminal System in potentially explosive areas (ATEX)* that is available in the download area of the Beckhoff homepage http://www.beckhoff.com!