


**Two-channel, digital input terminals, 24 V<sub>DC</sub>**


The KL1002 and KL1012 digital input terminals acquire the binary control signals from the process level and transmit them, in an electrically isolated form, to the higher-level automation unit. The KL1002 and KL1012 versions have input filters of different speeds. The Bus Terminals contain two channels that indicate their signal state by means of light emitting diodes.

Technical data		KL1002/KS1002	KL1012/KS1012
Connection technology		4-wire	
Number of inputs		2	
Rated voltage		24 V <sub>DC</sub> (-15%/+20%)	
Signal voltage "0"		-3 V ... +5 V	
Signal voltage "1"		+15 V ... +30 V	
Input filter		3 ms	0.2 ms
Input current		typically 5 mA	
Current consumption from K-bus		typically 3 mA	
Electrical isolation		500 V (K-Bus/field potential)	
Bit width in process image		2 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. 50 g	
Permissible ambient temperature range	during operation	-25°C ... +60°C 0°C ... +55°C (according to cULus, for Canada and USA) 0°C ... +55°C (according to ATEX, see special conditions)	
	during storage	-40°C... +85°C	
Relative humidity		5% ... 95%, no condensation	
Vibration / shock resistance		conforms to EN 60068-2-6 / EN 60068-2-27	
EMC resistance/emission		conforms to EN 61000-6-2 / EN 61000-6-4	

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Protection class / Installation position	IP20/ variable	
Approvals	CE, cULus, ATEX, GL	
Pluggable wiring	at all KSxxxx series terminals	

**ATEX - Special conditions**

 <b>WARNING</b>	<p><b>Observe the special conditions for the intended use of Beckhoff fieldbus components in potentially explosive areas (directive 94/9/EU)!</b></p> <ul style="list-style-type: none"> <li>• 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!</li> <li>• 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!</li> <li>• Observe the permissible ambient temperature range of 0 - 55°C for the use of Beckhoff fieldbus components in potentially explosive areas!</li> <li>• Measures must be taken to protect against the rated operating voltage being exceeded by more than 40% due to short-term interference voltages!</li> <li>• 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!</li> <li>• 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!</li> <li>• 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!</li> <li>• 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!</li> </ul>
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 <b>Note</b>	<p><b>Operation of the Bus Terminal System in potentially explosive areas (ATEX)!</b></p> <p>Pay also attention to the continuative documentation</p> <p><i>Notes about operation of the Bus Terminal System in potentially explosive areas (ATEX)</i></p>
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