


**Two-channel, digital output terminal, 24 V<sub>DC</sub>**


The KL2012, KL2022 and KL2032 digital output terminals connect the binary control signals from the automation unit on to the actuators at the process level with electrical isolation. The KL2012 and KL2022 versions handle different load currents, and their outputs are protected against overload (only KL2012) and short circuit. The KL2032 is protected against reverse polarity connection. The Bus Terminals contain two channels that indicate their signal state by means of light emitting diodes.

Technical data	KL2012/KS2012	KL2022/KS2022	KL2032/KS2032
Connection technology	4-wire		
Number of outputs	2		
Rated voltage	24 VDC (-15% / +20%)		
Load type	ohmic, inductive, lamp load		
Output current max. (per channel)	0.5 A (short-circuit proof)	2.0 A (short-circuit proof)	0.5 A (short-circuit proof)
Max. short-circuit current	< 2 A	< 70 A	< 2 A
Breaking energy	< 150 mJ/channel	< 1.7 J/channel	< 150 mJ/channel
Reverse voltage protection	no	yes	yes
Electrical isolation	500 V (K-Bus/field potential)		
Current consumption from K-bus	typ. 5 mA		
Current consumption from the load voltage	typ. 15 mA	typ. 20 mA	typ. 20 mA
Bit width in process image	2 output 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	-0°C... +55 °C in operation		-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)
	-25°C... +85 °C during storage		-40°C... +85 °C during storage

Technical data	KL2012/KS2012	KL2022/KS2022	KL2032/KS2032
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		
Protection class / Installation pos.	IP20 / variable		
Approvals	CE, cULus, ATEX	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> <p>that is available in the <a href="#">download area</a> of the Beckhoff homepage <a href="http://www.beckhoff.com">http://www.beckhoff.com</a>!</p>
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