



KL1889 - HD Bus Terminal, 16-channel digital input, 24 V_{DC}, ground switching

The KL1889 digital input terminal acquires the binary control signals from the process level and transmits them, in an electrically isolated form, to the higher-level automation device. The Bus Terminal contains 16 channels, whose signal states are displayed by LEDs. The terminal is 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.

The KL1889 Bus Terminal takes the 24 V power contact as its reference for all inputs. The conductors.

The HD Bus Terminals (High Density) with increased packing density feature 16 connection points in the housing of a 12 mm terminal block.

Technical data	KL1889-0000
Number of inputs / Connection technology	16 / 1-wire
Specification	ground switching
Rated voltage / Operating voltage	24 V _{DC} (-15% / +20%)
"0" signal voltage	18 ... 30 V
"1" signal voltage	0 ... 7 V
Input filter	typ. 3 ms
Input current	typ. 3 mA
Electrical isolation	500 V (K-Bus / field voltage)
Current consumption from K-Bus	typ. 20 mA
Current consumption from power contacts	typ. 4 mA + load
Conductor types	solid wire, stranded wire and ferrule
Conductor connection	solid wire conductors: direct plug-in technique stranded wire conductors and ferrules: spring actuation by screwdriver
Rated cross-section	solid wire: 0.08...1.5 mm ² stranded wire: 0.25...1.5 mm ² ferrule: 0.14...0.75 mm ²
Bit with in the process image	16 Input bits
Configuration	no address or configuration setting

Technical data		KL1889-0000
Weight		app. 55 g
Dimensions (w x h x d)		15 mm x 100 mm x 70 mm (aligned width 12 mm)
Permissible ambient temperature range	at operation	-25°C ... +60°C (extended temperature range)
	for storage	-40°C ... +85°C
Permissible relative humidity		95%, no condensation
Vibration / shock resistance		conforms to EN 60068-2-6 / EN 60068-2-27
EMC immunity / emission		conforms to EN 61000-6-2 / EN 61000-6-4
Protection class		IP20
Installation position		variable
Approvals / markings		CE, cULus, GL, ATEX

Ex marking

Standard	Marking
ATEX	II 3 G Ex nA IIC T4 Gc

ATEX - Special conditions (extended temperature range)

⚠ WARNING

Observe the special conditions for the intended use of Beckhoff fieldbus components with extended temperature range (ET) in potentially explosive areas (directive 2014/34/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 60079-15! The environmental conditions during use are thereby to be taken into account!
- For dust (only the fieldbus components of certificate no. KEMA 10ATEX0075 X Issue 9): The equipment shall be installed in a suitable enclosure providing a degree of protection of IP54 according to EN 60079-31 for group IIIA or IIIB and IP6X for group IIIC, taking into account the environmental conditions under which the equipment is used!
- 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 -25 to 60°C for the use of Beckhoff fieldbus components with extended temperature range (ET) 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/EL92xx 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!

i Continuitive documentation about explosion protection

Pay also attention to the continuative documentation *Ex. Protection for Terminal Systems - Notes on the use of the Beckhoff terminal systems in hazardous areas according to ATEX and IECEx* that is available for download on www.beckhoff.com/KL1889 !