



2-channel gateway without redundancy

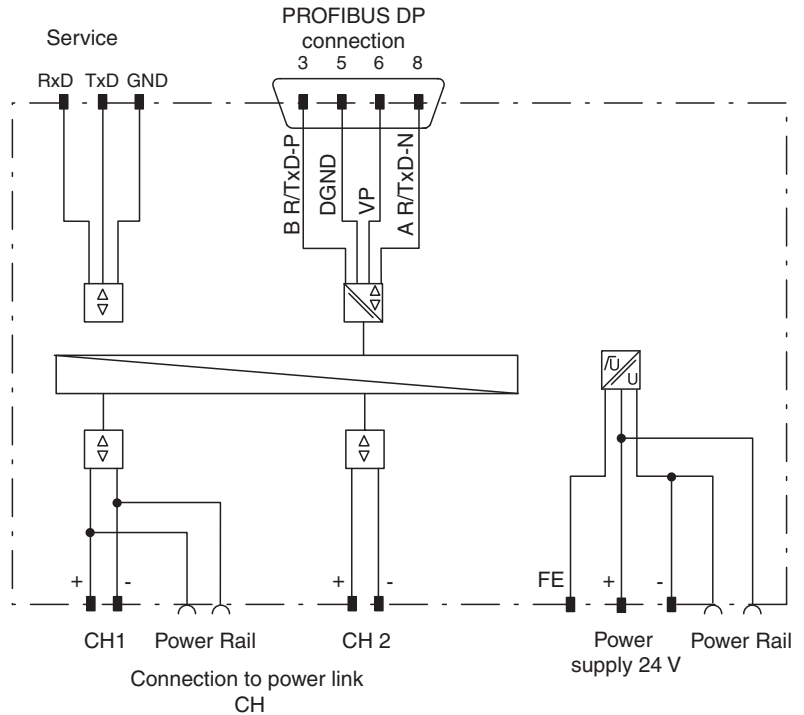
- PROFIBUS DP transmission rate up to 12 MBit/s
- 2 independent channels in the gateway reduce the cycle times considerably
- Transparent, need no PROFIBUS address
- PROFIBUS master independent
- Up to 125 PA devices can be connected
- No configuration necessary
- Supply via Power Rail
- Removable terminals and Power Rail
- EMC acc. to NAMUR NE 21

Function

Together with at least one power link, the gateway provides a segment coupler for the connection of a PROFIBUS PA segment to PROFIBUS DP.

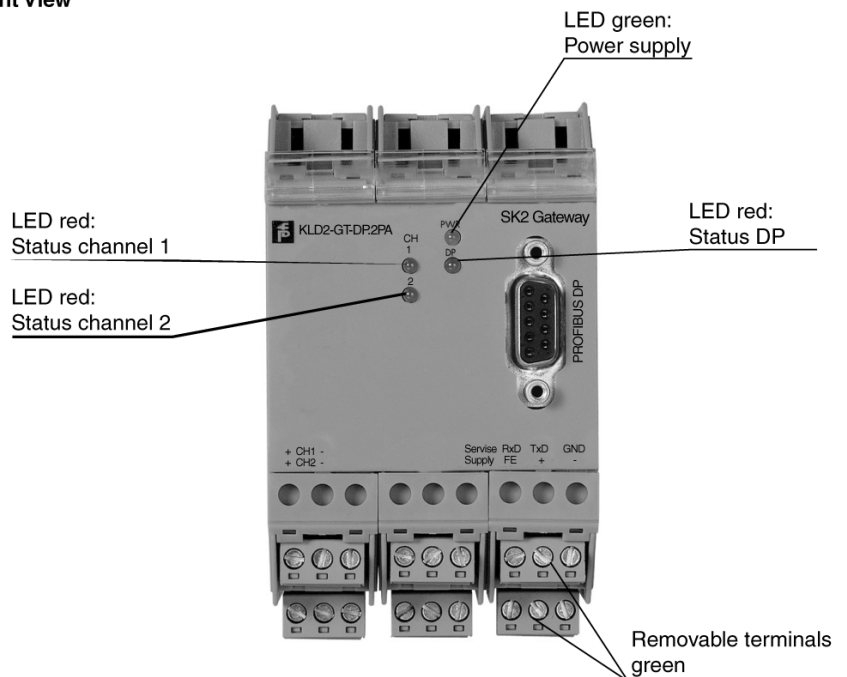
On the PROFIBUS DP side, all transfer rates up to 12 MBit/s are supported in accordance with EN 50170/2.

Connection



Composition

Front View



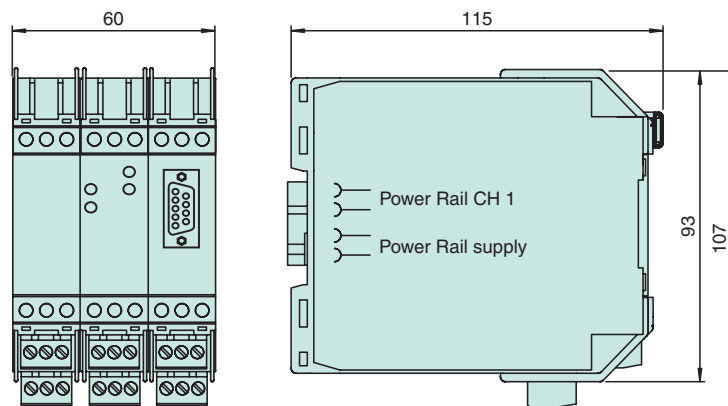
Supply	
Connection	Power Rail or terminals +, -, FE
Rated voltage	20 ... 35 V DC
Ripple	≤ 10 %
Rated current	138 mA ... 84 mA (without load)
Power loss	3 W
Fieldbus interface	
PROFIBUS DP	1 RS 485 interface
Connection	Sub-D socket, 9-pin
Baudrate	45.45 kBit/s ... 12 MBit/s
Protocol	PROFIBUS DP V1
Connection to power link	
Connection	Power Rail or terminals CH1+ or CH2+ at 28+; CH1- or CH2- at 29- of KLD2-PL1.PA Power Rail or terminals CH1+ or CH2+ at 40+; CH1- or CH2- at 41- of KLD2-PL-Ex1.PA
Baudrate	31.25 kBit/s
Electrical isolation	
CH/PROFIBUS DP	function insulation, rated insulation voltage 50 V _{eff}
PROFIBUS DP/Supply	function insulation, rated insulation voltage 50 V _{eff}
All circuits/FE	function insulation, rated insulation voltage 50 V _{eff}
Directive conformity	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326
Standard conformity	
Electrical isolation	EN 50178
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Fieldbus standard	EN 50170/2
Climatic conditions	IEC 60721
Ambient conditions	
Classification	3K3
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Storage temperature	-40 ... 85 °C (233 ... 358 K)
Relative humidity	< 75 %
Degree of soiling	max. 2, according to IEC 60664
Mechanical specifications	
Connection type	terminals
Core cross-section	up to 2.5 mm ²
Housing	60 mm x 115 mm x 107 mm
Protection degree	IP20
Mass	600 g
Mounting	DIN rail mounting
Data for application in conjunction with hazardous areas	
Connection to power link	connection to the data interface CH of KLD2-PL-Ex1.PA (conf. TÜV 00 ATEX 1531 X) connection to the data interface CH of KLD2-PL-1.PA (conf. TÜV 00 ATEX 1788 X)
Statement of conformity	TÜV 02 ATEX 1819 X , observe statement of conformity
Group, category, type of protection, temperature classification	⊕ II 3G EEx nA II T4
Directive conformity	
Directive 94/9 EC	EN 50021

Supplementary information

EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. For information see www.pepperl-fuchs.com.

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Dimensions



Accessories

Pepperl+Fuchs are able to supply the following accessories for PROFIBUS PA applications:

- Power link without intrinsically safe interface KLD2-PL-1.PA
- Power link with intrinsically safe interface KLD2-PL-Ex1.PA
- Segment coupler manual/operating instructions
- Power Rail UPR-05 or PR-05
- Power feed module KFD2-EB.RPI or
- Power supply module for connection to a redundant power supply KFD2-EB.R2A.RPI

Operating principle

Together with at least one power link, the gateway forms a segment coupler for the connection of a PROFIBUS PA segment to PROFIBUS DP. The PROFIBUS is standardised in EN 50170/2. The gateway supports all the transfer rates defined in the standard up to 12 MBit/s.

The gateway can provide one, two or four channels. The channels operate completely independent of each other in terms of time. This means that reaction times can be significantly reduced. Up to 5 power links can be connected on each channel. Each of these forms a unique PROFIBUS PA segment.

Communication between the gateway and the power links takes place via the Power Rail for channel 1 and via the terminals for the other channels.

The communication behaves transparently. Each PA station is directly addressed and is configured as a PROFIBUS DP station. The gateway and the power links are not configured.

The gateway can be installed in zone 2. The power links are likewise approved for such installation.

The KLD2-GT-DPR.*PA version enables operation with a redundant transmission line on the PROFIBUS DP side.

The channels operate directly at 31.25 kBaud (Manchester coded). This means that delay time is additionally saved in the power links.

For additional information, please consult the segment coupler manual/operating instructions.