



Power-Link for an intrinsically safe PROFIBUS PA segment

- PROFIBUS PA according to EN 50170/2 and IEC 61158-2; 31,25 kbit/s
- Up to 10 Ex devices can be connected to the PA segment
- Supply via Power Rail
- 24 V DC rated operational voltage
- Removable terminals and Power Rail
- EMC acc. to NAMUR NE 21
- Field circuit in the hazardous area EEx ia IIC and Class I, Division 1, Groups A, B, C and D

Function

Together with the KLD2-GT-DP(R).xPA Gateway, the Power-Link forms an SK2 Segment Coupler and can only be operated in association with it. The KLD2-PL-Ex1.PA can be installed in Zone 2. The Power-Link thus provides the intrinsically safe interface. The PROFIBUS PA stations are supplied from the Power-Link via the bus.

Data exchange between the Power-Link and channel 1 of the KLD2-GT-DP(R).xPA gateway takes place via the power rail. If the Power-Link is operated with channel 2, 3 or 4 of the gateway, a wire connection for the data exchange must be provided between the Power-Link and the gateway, via the removable terminals.

The communication of the SK2 segment coupler behaves transparently. The Power-Link does not have to be configured. The baud rate of the intrinsically safe PROFIBUS PA segment is 31.25 kbit/s, in accordance with IEC61158-2.

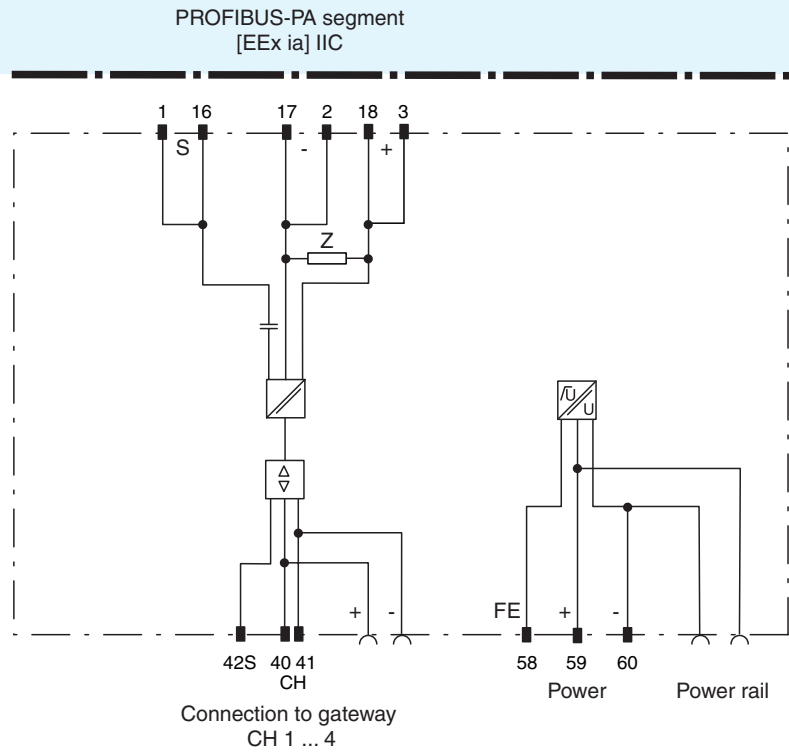
Please note!

Information on the commissioning of the Profibus PA can be obtained from the guidance documentation of the PROFIBUS User Organisation.

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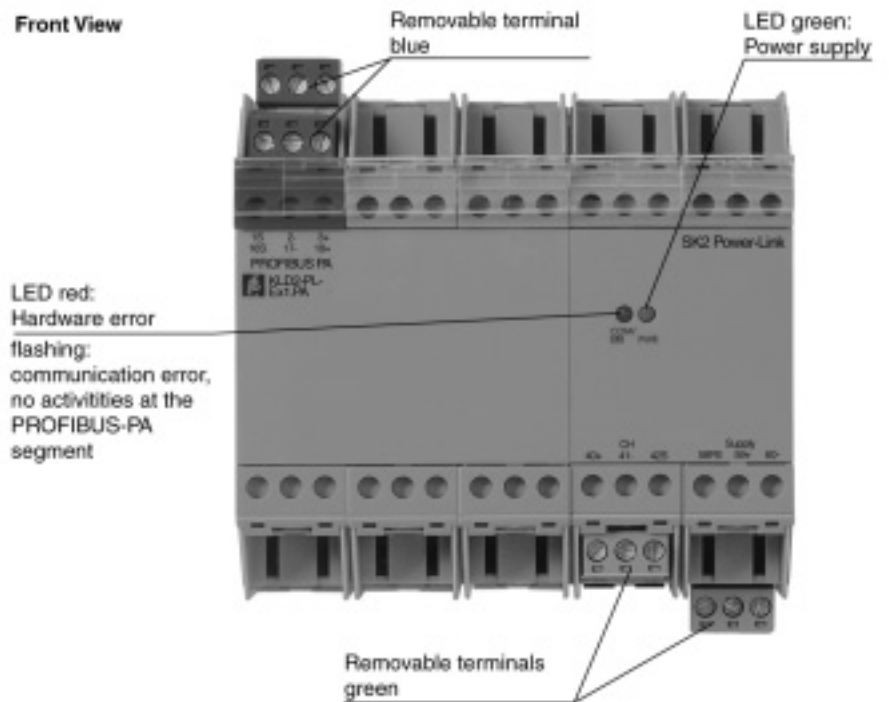
Hazardous area

Safe area



Composition

Front View



Supply

Connection	Power Rail or terminals 59+, 60-, 58 FE
Rated voltage	20 ... 35 V DC
Ripple	≤ 10 %
Rated current	430 mA ... 190 mA

Fieldbus connection

Profibus PA

Connection	terminals 3, 18+; 2, 17-; 1, 16 screen
Rated voltage	12,8 ... 13,4 V
Rated current	≤ 100 mA
Protocol	PROFIBUS DP V1
Terminating impedance	100 Ω , integrated

Connection to gateway

Connection	Power Rail or terminals 40+, 41-, 42S to CH1 ... CH4 of the KLD2-GT-DP(R)-xPA
Baudrate	31,25 kBit/s

Electrical isolation

Connection to gateway/PROFIBUS PA	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Connection to gateway/supply	function insulation acc. to DIN EN 50178, rated insulation voltage 50 V _{eff}
PROFIBUS PA/Supply	safe electrical isolation acc. to EN 50020, voltage peak value 375 V

Standard conformity

Electrical isolation	EN 50178, EN 50020
Electromagnetic compatibility	NAMUR NE 21
Protection degree	IEC/EN 60529
Fieldbus standard	IEC 61158-2, ISA S 50.02 Part 2
Climatic conditions	DIN IEC 721

Directive conformity

Electromagnetic compatibility	standards
Directive 89/336/EG	EN 61326, EN 50081-2

Ambient conditions

Classification	3K3
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Relative humidity	< 75 %
Degree of soiling	max. 2, according to IEC 664

Mechanical specifications

Connection type	terminals
Core cross-section	up to 2.5 mm ²
Housing	100 mm x 115 mm x 107 mm
Protection degree	IP20
Mass	650 g
Mounting	DIN rail mounting

Data for application in conjunction with hazardous areas

EC-Type Examination Certificate	PTB 99 ATEX 2142
Group, category, type of protection, Temperature classification	⊕ II (1) G D [Ex ia] IIC
Statement of conformity	TÜV 00 ATEX 1531X
Group, category, type of protection, Temperature classification	⊕ II 3 G EEx nA IIC T4

Supply

Safety maximum voltage U _m	253 V AC / 125 V DC (Attention! U _m is no rated voltage.)
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Profibus PA

Voltage U _o	15 V
Current I _o	207,2 mA
Power P _o	1,93 W
Safety maximum voltage U _m	60 V

Connection to gateway

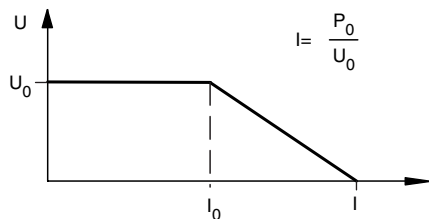
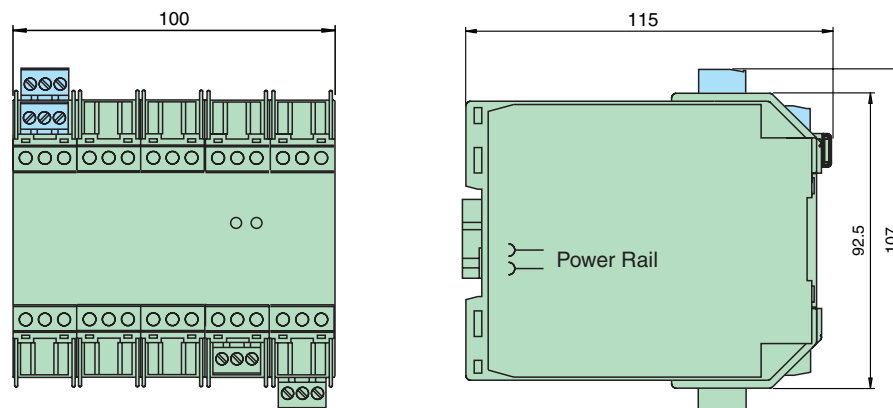
	Connection to the data interface CH1 ... CH4 of KLD2-GT-DP(R)-xPA (Konf. TÜV 02 ATEX 1819X)
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Safety maximum voltage U _m	60 V (Attention! The rated voltage can be lower)
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Directive conformity

Directive 94/9 EU	standards EN 50014, EN 50020, EN 50021
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output characteristic**Dimensions****Accessories**

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

- Gateways KLD2-GT-DP(R)-xPA
- Manual/instructions segment coupler PART. NR. 105085
- Power Rail UPR05 or PR05
- Power feed module KFD2-EB.RPI or
- Power supply module for connection to a redundant KFD2-EB.R2A.RPI power supply.

Station number, current consumption of the station:

The maximum overall current consumption of the connected bus stations must be less than the nominal current I_S of the segment coupler. The modulation current, with which a bus station sends data, is not taken into account.