

Fieldbus Power Repeater

KLD2-PR-Ex1.IEC1

- Power supply of fieldbus segments according to IEC 61158-2
- Signal repeater for fieldbus topologies in accordance to FISCO
- 100 mA supply of the field side
- Improves the fieldbus signal
- Extension of the transmission distance by means of opening a new fieldbus segment
- Integrated bus terminations
- Removable terminals and Power Rail connection for simple installation
- Supply via Power Rail

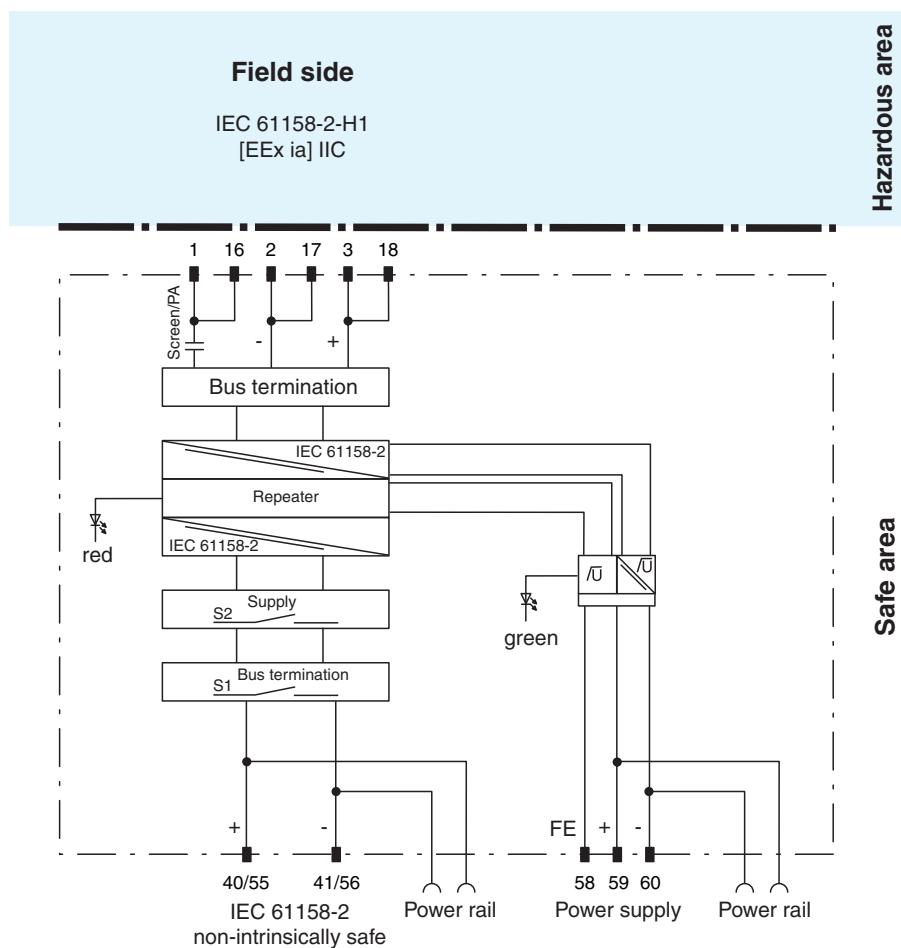


Function

The KLD2-PR-Ex1.IEC1 improves digital communication signals within a fieldbus system. This fieldbus repeater separates an intrinsically safe field bus segment based on the FISCO model * and a non-intrinsically safe field bus segment from each other galvanically; IEC 61158-2/ISA-S50.02 (i. e. FOUNDATION Fieldbus, PROFIBUS-PA). It delivers a constant voltage for supplying connected intrinsically safe devices that are intrinsically safe and comply with the FISCO model regardless of the load. The repeater refreshes the signal course and the level of incoming digital communication signals. Up to 31 repeaters can be operated on the host. At the maximum output current, the repeater is able to extend the bus segment by at least 860 m with the use of an FF cable of type A, AWG 18 (0.8 mm²). The repeater has a permanently integrated bus terminator on the field side. The bus terminator can be switched into the circuit on the host side. The power rail connections eliminate the need to loop through power supply and fieldbus lines.

* **FISCO:** Fieldbus Intrinsically Safe Concept

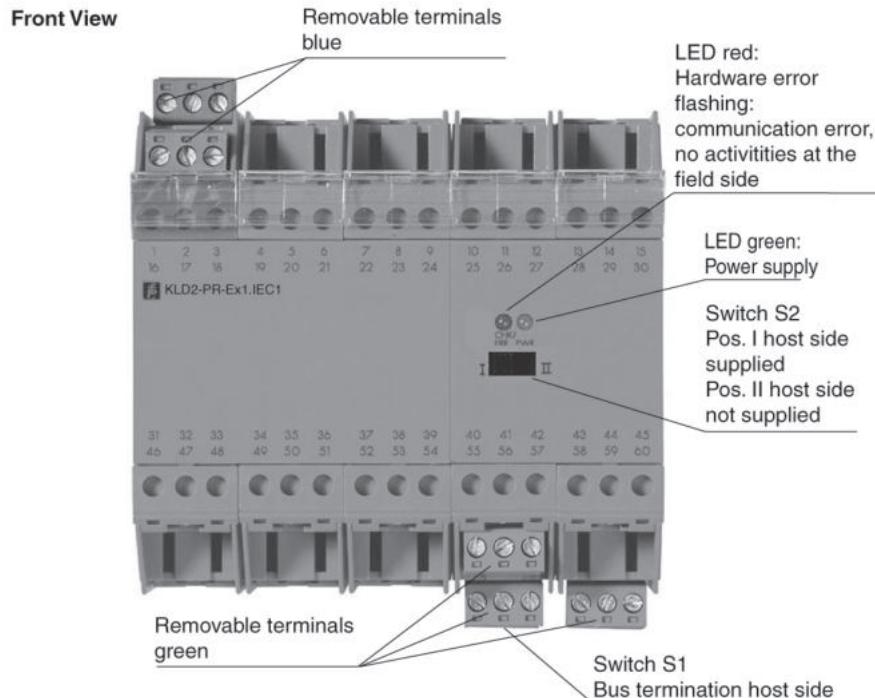
Connection



Technical Data

Electromagnetic compatibility		
Directive 2014/30/EU	EN 61326-1:2013	
Standard conformity		
Galvanic isolation	EN 50178, EN 50020	
Electromagnetic compatibility	NAMUR NE 21	
Degree of protection	IEC/EN 60529	
Fieldbus standard	IEC 61158-2, ISA S 50.02 part 2	
Climatic conditions	DIN IEC 721	
Ambient conditions		
Classification	3K3	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)	
Storage temperature	-20 ... 85 °C (-4 ... 185 °F)	
Relative humidity	< 75 %	
Pollution degree	max. 2, according to IEC 60664	
Mechanical specifications		
Connection type	Terminals	
Core cross-section	up to 2.5 mm ²	
Housing	100 mm x 115 mm x 107 mm	
Degree of protection	IP20	
Mass	approx. 600 g	
Mounting	DIN rail mounting	
Data for application in connection with hazardous areas		
EU-type examination certificate	PTB 99 ATEX 2142	
Marking	Ex II (1) G [Ex ia] IIC Ga Ex II (1) D [Ex ia] IIIC Da	
Supply		
Maximum safe voltage	U _m	253 V AC / 125 V DC (Attention! U _m is no rated voltage.)
Field-side		
Voltage U _o	15 V	
Current I _o	207.2 mA	
Power P _o	1.93 W	
Maximum safe voltage U _m	60 V (Attention! The rated voltage can be lower.)	
Certificate	PF 15 CERT 3527 X	
Marking	Ex II 3G Ex ec IIC T4 Gc	
Directive conformity		
Directive 2014/34/EU	EN 60079-0:2012, EN 60079-7:2015, EN 60079-11:2012	
International approvals		
FM approval	CoC 3008872	
Control drawing	No. 116-0190	
Approved for	Class I, Division 2, Groups A, B, C, D / Class I, Zone 2, Group IIC T4	
General information		
Supplementary information	Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .	

Assembly

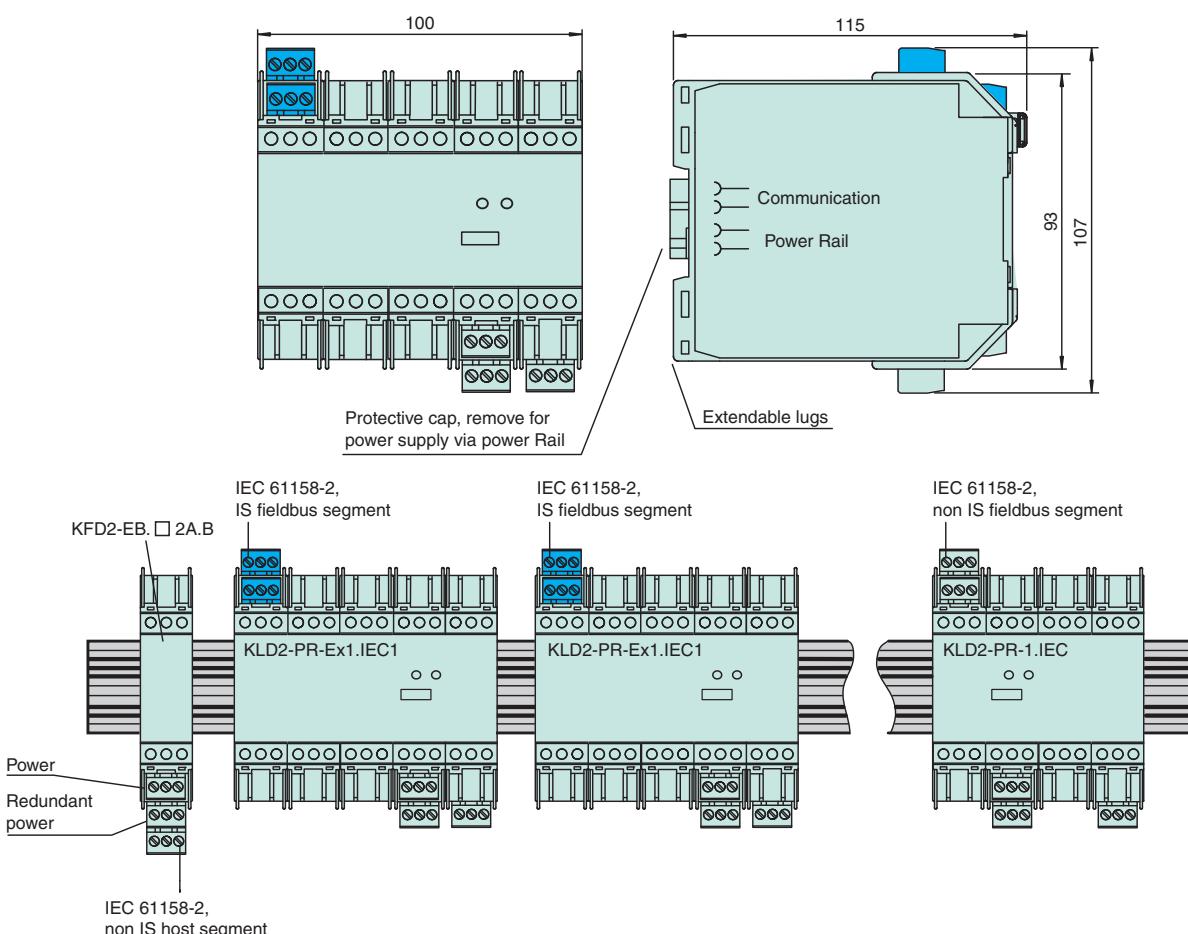


Additional Information

Accessories

Type	Model number	Description
Power rail	PR 03	Insert component for DIN mounting rail in accordance with DIN EN 50022, standard length 500 mm
Power rail	UPR03	Insert component with no snap lock for the DIN rail in accordance with DIN EN 50022, standard length 2 m
Power supply	KFD2-EB.D2A.B	Supplies power to the power rail redundantly with 24 V DC at a maximum current of 2 A, with pick-up
	KFD2-EB.R2A.B	Supplies power to the power rail with 24 V DC at a maximum current of 2 A, with pick-up. To set up a redundant system, a second device can be used.
	KFD2-EB2.B	Supplies power to the power rail with 24 V DC at a maximum current of 4 A, with pick-up and error message signal on the power rail.
Fieldbus termination	KMD0-FT-Ex	Termination of the IEC line. The fieldbus terminating resistor is connection to the last IEC bus station.
Fieldbus repeater (Entity)	KLD2-PR-Ex1.IEC	Isolator module and intrinsically safe power supply with repeater functionality for devices in accordance with the FISCO/ Entity model.
Fieldbus repeater (non-intr. safe)	KLD2-PR-1.IEC	Non-intrinsically safe power supply with repeater function.
Fieldbus repeater (non-incendive)	KLD2-PR-NI1.IEC	Isolating power supply with repeater function for 'non incendive' design for field circuits.
Fieldbus power pack (non-intr. safe)	KLD2-STR-1.24.400.IEC	Isolating power supply, non-intrinsically safe.
Fieldbus power pack (non-incendive)	KLD2-STR-NI1.13.225.IEC	Isolating power supply for non-incendive design of field circuits.

Dimensions



Characteristic Curve

Output characteristic