



Segment coupler for intrinsically safe PROFIBUS PA segment

- PROFIBUS DP, EN 50170/2, RS 485: 93.75 kbit/s
- PROFIBUS PA [EEx ia] IIC; PROFIBUS EN 50170/2; IEC 61158-2: 31.25 kbit/s
- Master independent
- Up to 10 Ex devices can be connected to the PA segment
- Supply via PA bus
- 24 V DC rated operational voltage
- Removable terminals and Power Rail
- EMC acc. to NAMUR NE 21

Function

The segment coupler couples an intrinsically safe PROFIBUS PA segment to a PROFIBUS segment using RS 485 transfer technology in accordance with EN 50170. The Profibus is standardised in EN 50170/2.

The communication behaves transparently. The protocol is transferred unchanged, therefore the segment coupler can operate with each PROFIBUS protocol and is not parameterised.

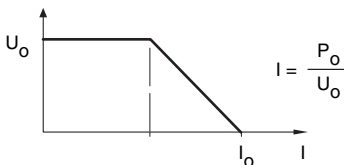
The baudrate of the intrinsically safe PROFIBUS PA segment is 31.25 kbits/s in accordance with IEC 61158-2. The PROFIBUS segment with RS 485 transfer technology has a baudrate of 93.75 kbit/s. This baudrate is particularly suitable for mixed operation with DP and PROFIBUS PA stations.

Devices on the PROFIBUS PA are supplied from the segment coupler via the bus.

Please note!

On the segment coupler no supply voltage or other external voltage must be applied to the PROFIBUS terminals. For additional information see the PNO Manual for PROFIBUS PA

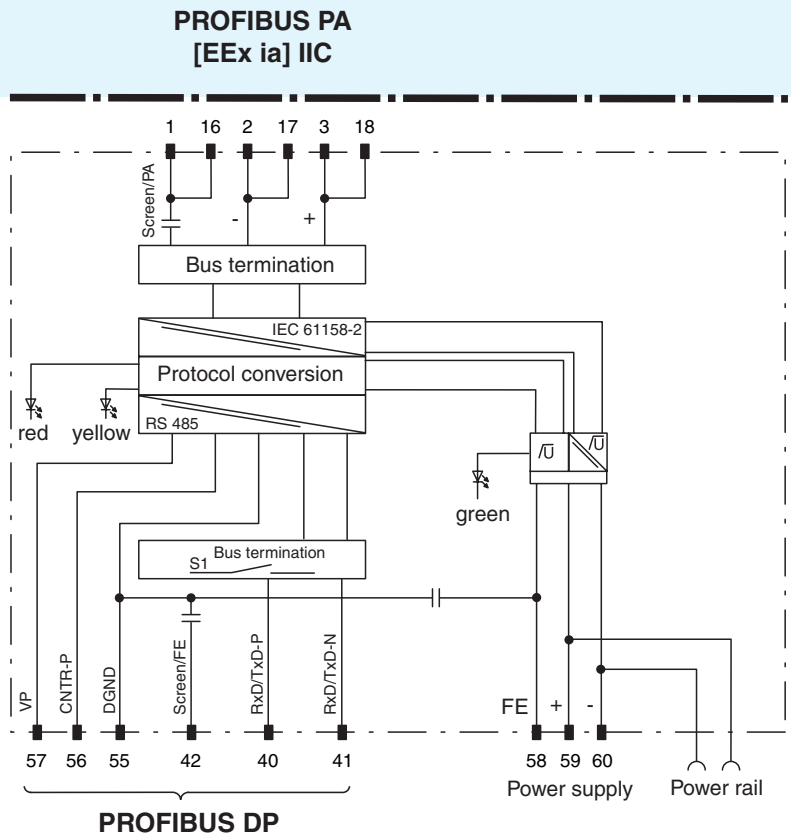
Output characteristic



***) FISCO:**

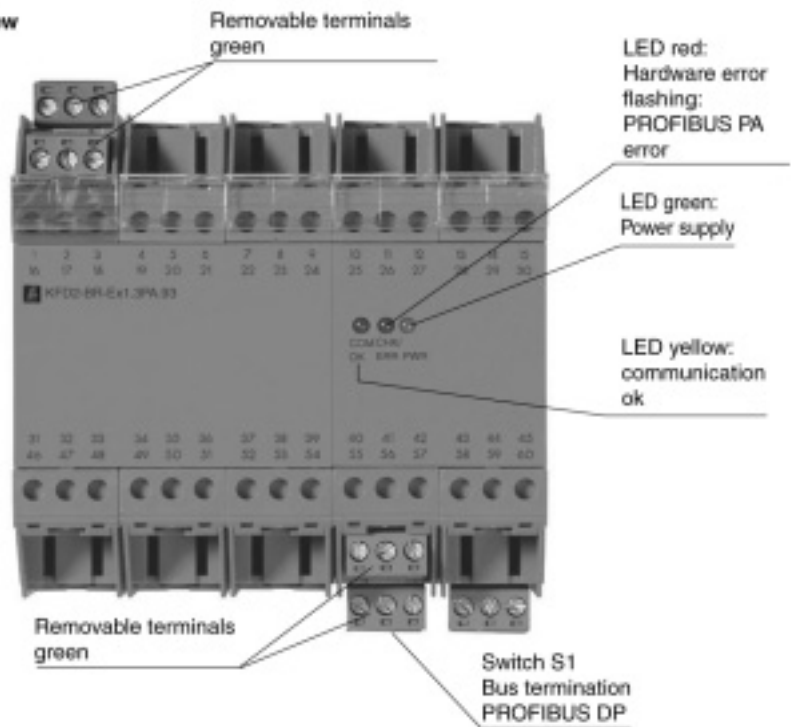
Hazardous area

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	190 mA ... 430 mA

Fieldbus connection

Profibus PA

Connection	terminals 3, 18+; 2, 17-
Rated voltage	12,6 ... 13,4 V
Rated current	≤ 100 mA
Terminating impedance	100 Ω , integrated

Profibus DP PROFIBUS with RS 485 transmission technique

Connection	terminals 40 RxD/TxD-P, 41 RxD/TxD-N, 42 screen/FE, 55 DGND, 56 CNTR-P, 57 VP
Baudrate	93,75 kBit/s
Terminating impedance	with rotary switch (S1) switchable: 1 = on; 0 = off

Electrical isolation

Profibus PA/Profibus RS 485-Segment	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
PROFIBUS DP/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
Electromagnetic compatibility	NAMUR NE 21
Protection degree	IEC/EN 60529
Fieldbus standard	EN 50170/2
Climatic conditions	DIN IEC 721

Directive conformity

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

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 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 [EEx 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	40 V DC
---------------------------------------	---------

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

Directive conformity

Directive 94/9 EU	EN 50014, EN 50020, EN 50021
-------------------	------------------------------

Accessories

Power Rail	UPR02
Power feed module	KFD2-EB2
Terminal resistor	KMD0-FT-Ex
	Fx-FT-Ex1.I.IEC
	Fx-FT-Ex1.D.IEC

Dimensions

