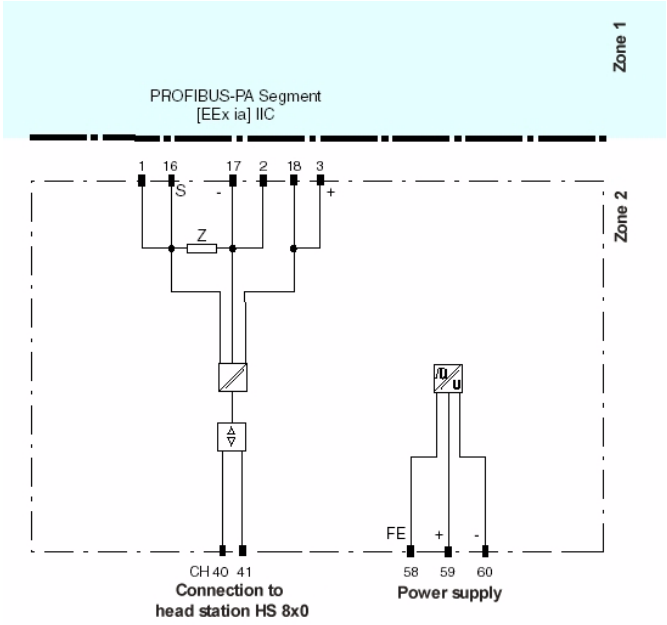
Data Sheet

Field^{IT}
PL 890 Power Link Module for LD 800P

Benefits

- Power Link Module for an intrinsically safe PROFIBUS PA segment
- PROFIBUS PA output in accordance with EN 50170/2 and IEC 61158-2; 31.25 kbit/s
- Up to 10 PROFIBUS PA devices can be connected to a PA segment
- 24 V DC nominal supply voltage
- No configuration necessary
- Removable terminals
- EMC in accordance with NAMUR NE 21
- Hazardous area field circuit EEx ia IIC and Class I, Division 1, Groups A, B, C and D

Power Link Module PL 890 for PROFIBUS DP/PA Linking Device LD 800P



Function

The Power Link Module and the head station HS 8x0 form a Linking Device LD 800P. The Power Link Module can only be operated with the head station HS 810, HS 820 or HS 840. The Power Link Module can be mounted within zone 2. PL 890 provides an inrinsically safe interface per IEC 61158-2.

The Power Link Module supplies PROFIBUS PA devices powered by the bus.For the data transmission between Power Link Module and head station a wire link has to be made between Power Link Module terminals and head station terminals

The communication is seamless. The Power Link Module does not have to be programmed. The PROFIBUS PA segment has a baud rate of 31.25 kbit/s in accordance with IEC 61158-2.

Technical Data

Power	
Nominal voltage	20 ... 35 V DC
Nominal current	430 mA ... 190 mA
Safety relevant maximum voltage U_m	253 V AC/ 125 V DC (Note! U_m is not a rated nominal voltage)
Ripples	$\leq$ 10 %
Galvanic separation	
CH/PROFIBUS DP	safe galvanic isolation in accordance with EN 50020, voltage peak value is 375 V
PROFIBUS PA/Power	safe galvanic isolation in accordance with EN 50020, voltage peak value is 375 V
CH/Power	Function isolation, rated isolation voltage 50 V_{eff}
Field bus connection	
Connection	Terminals 3, 15+; 2, 14-
Profibus PA	in accordance with IEC 61158-2
Nominal voltage	12,8 ... 13,4 V
Nominal current	$\leq$ 100 mA
Terminator impedance	100 Ohm integrated
Protocol	PROFIBUS DP V1
Connection to head station	
Connection	Terminals 40+, 41-
Baud rate	31.25 kBit/s
Entity parameter	
Approval for zone 2	TÜV 02 ATEX 1887 X
Group, Category per EG 94/9	Ⓔx II (1) G D
Group, Category, ignition protection method	Ⓔx II 3 G EEx n A II T4
Ignition Protection method, Temperature class	[EEx ia] IIC
Voltage U_0	15 V
Current I_0	207,2 mA
Power P_0	1,93 W
Standards	
Field bus standard	EN 50170/2
Galvanic separation	EN 50178
Electromagnetic compatibility	NAMUR NE 21
PROFIBUS DP V1	EN 50170/2
Protection type	IEC/EN 60529
Conformity to Directives	
Elektromagnetic compatibility	
EC-Directive	89/336/EWG
Standard	EN 61326
Explosion protection	
EG-Directive	EG94/9
Standard	EN 50014, EN 50020, EN 50021
Environmental conditions	
Classification	3K3, according to DIN IEC 721
Degree of soiling	max. 2, according to IEC 664
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Relative humidity	< 75 %
Mechanical data	
Connection type	Terminals
Conductor cross section	up to 2,5 mm²
Housing	100 mm x 115 mm x 107 mm
Mass	430 g
Protection class	IP20

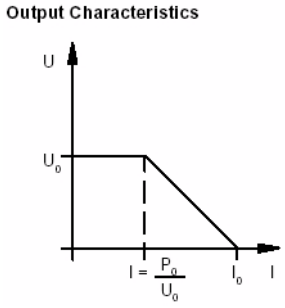
Notes

Note:

Informationen on installation of PROFIBUS PA can be taken from PNO PROFIBUS user organization guidelines.

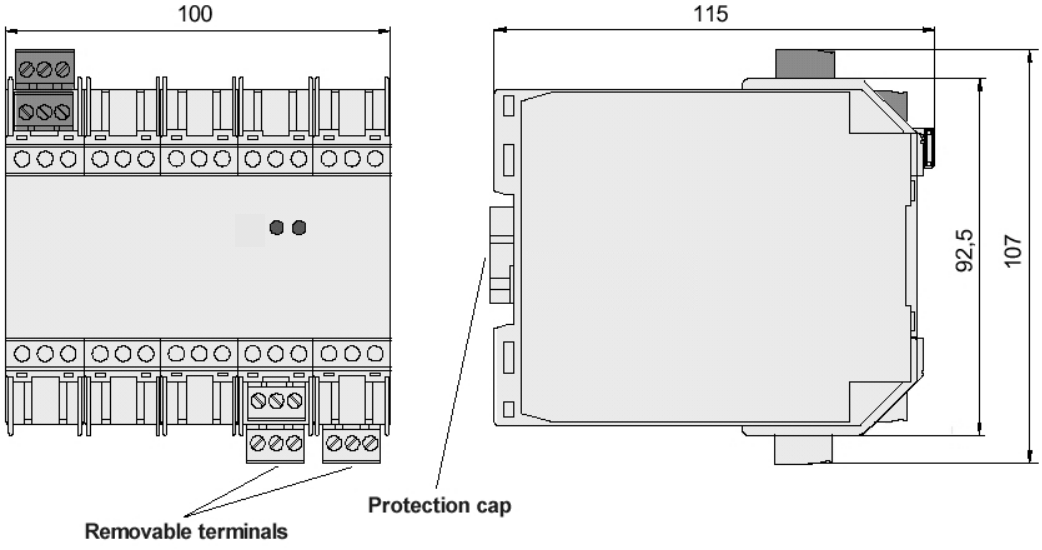
Number of PA devices, current consumption of the participants:

The maximum combined current consumption of the connected PROFIBUS PA devices must be lower than the nominal current of the Linking Device. The modulation current used by the PROFIBUS PA devices to transmit data does not have to be considered.



International certificates, declarations of conformity and User Instructions can be retrieved via the search button under http://www.abb.com.

Dimensions

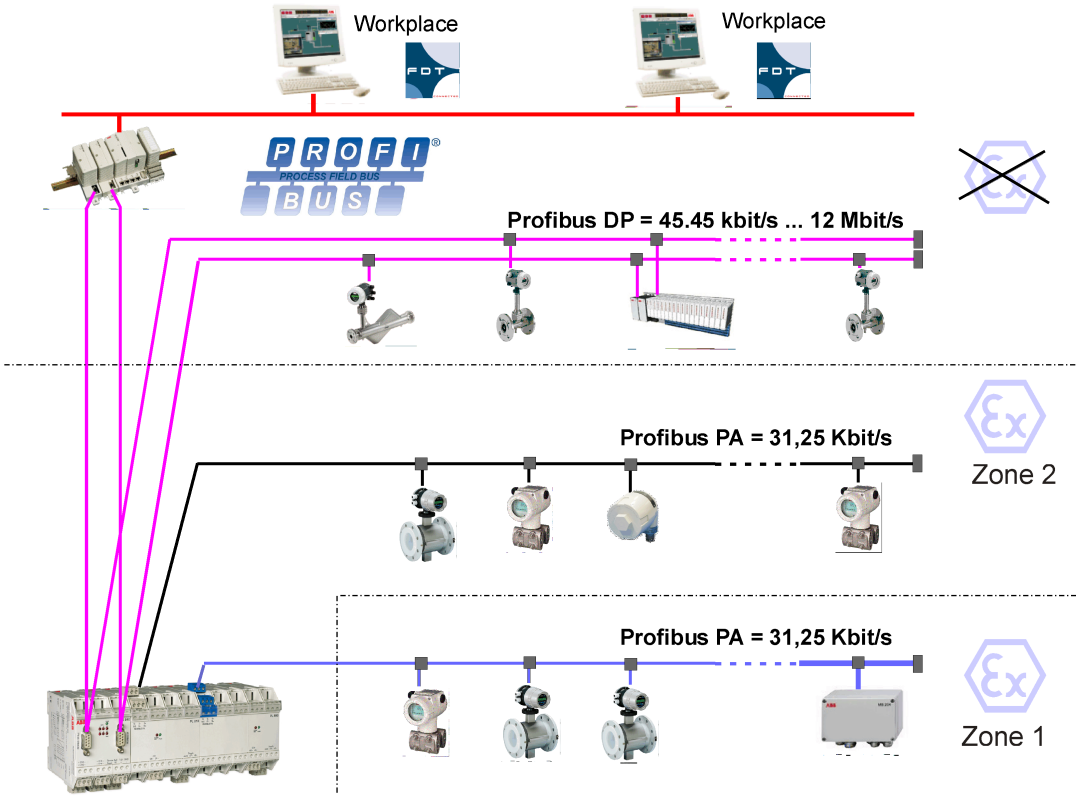


Accessories

For PROFIBUS PA applications ABB Automation Products offers the following accessories:

- Head station HS 810 (1 channel)
- Head station HS 820 (2 channel)
- Head station HS 840 (4 channel with PROFIBUS DP media redundancy)
- User Instructions Linking Device LD 800P (3BDD011704R0101)

Application example



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For the latest information on ABB visit us on the World Wide Web at http://www.abb.com/processautomation

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