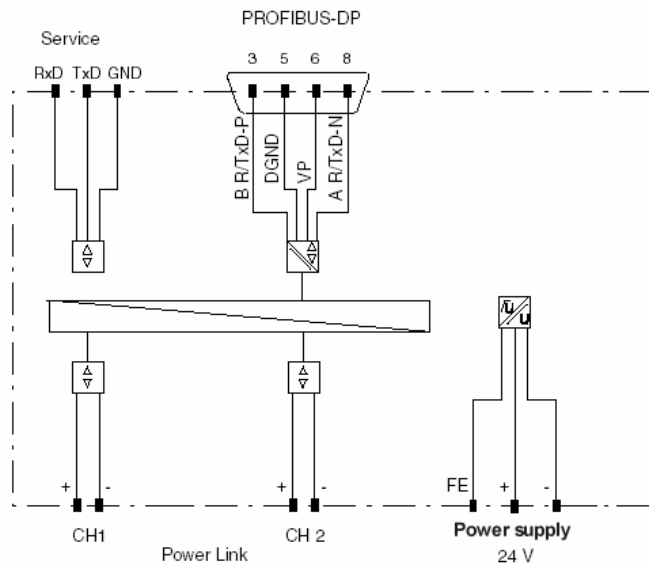


Benefits

- 2 channel headstation with redundancy
- PROFIBUS DP transfer rate up to 12 MBit/s
- Significant cycle time reduction by 2 independent head station channels
- Transparent, occupies no PROFIBUS address
- Automatical Baud rate detection on PROFIBUS DP
- PROFIBUS master independent
- Up to 125 PA-devices connectable
- No configuration necessary
- Removable terminal blocks
- EMC acc. to NAMUR NE 21

Head station HS 820 for PROFIBUS DP/PA Linking Device LD 800P



Function

The Linking Device LD 800P consists of one head station and at least one Power Link Module. It is designed for the connection of PROFIBUS PA segments to PROFIBUS DP.

On PROFIBUS DP side all transfer rates from 45.45 kBit/s up to 12 MBit/s acc. to EN 50170/2 are supported.

Tecnicl Data

Power

Nominal voltage	20 ... 35 V DC
Nominal current	138 mA ... 84mA
Safety relevant maximum voltage U_m	253 V AC/ 125 V DC (Note! U_m is not a nominal voltage)
Ripples	≤ 10 %
Power dissipation	3 W

Galvanic separation

CH/PROFIBUS DP	Function isolation, designed isolation voltage 50 V_{eff}
PROFIBUS DP/Power	Function isolation, designed isolation voltage 50 V_{eff}
All circuits/FE	Function isolation, designed isolation voltage 50 V_{eff}

Field bus connection

Connection	9-pol. Sub-D-socket
Profibus DP	1 RS485-Interface
Protocol	PROFIBUS DP V1
Baud rate	45.45 kBit/s ... 12 MBit/s

Connection to Power Link Modulen

Connection to	Terminals CH 28+, 29- of PL 810 Terminals CH 40+, 41- of PL 890
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Entity parameter

Approval for zone 2	TÜV 02 ATEX 1888 X
Group, Category, ignition protection method	⊕ II 3 G EEx n A II T4

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 50021

Environmental conditions

Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Relative humidity	< 75 %

Mechanical data

Connection type	Removable terminal blocks
Conductor cross section	up to 2,5 mm ²
Housing	60 mm x 115 mm x 107 mm
Mass	600 g
Protection class	IP20

Hinweise

International certificates, declarations of conformity and User Instructions can be retrieved under <http://www.abb.com>.

Functional Description

A Linking Device consists of one head station and at least one power link module for establishing the connection of PROFIBUS PA Segments to PROFIBUS DP. PROFIBUS is standardized according to EN 50170/2. The head station supports all there defined transfer rates from 45.45 kBit/s up to 12 MBit/s.

The head station provides one or two channels. PROFIBUS PA masters of each channel work independently of each other. The result of this is that reaction times can be reduced drastically. Up to 5 power link modules can be connected to each channel. Each power link module creates a new segment.

The communication between the head station and the Power Link Modules is realized via removable terminal blocks.

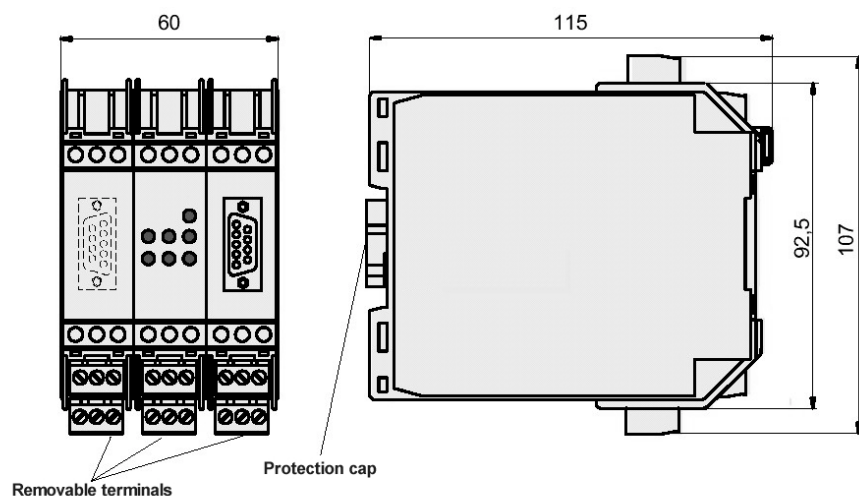
The communication is transparent. Each PA-subscriber is planned like a PROFIBUS DP subscriber and each PA device is directly addressed like a DP slave device. The head station and the power link modules don't need to be planned.

It is allowed to mount the head station, and the power link modules within zone 2.

The channels are working with 31.25 kBaud (Manchester coded). This saves from additional time delay within the Power Link Modules.

For detailed information please refer to the *User Instructions Linking Device LD 800P* (3BDD011704R0101).

Dimensions

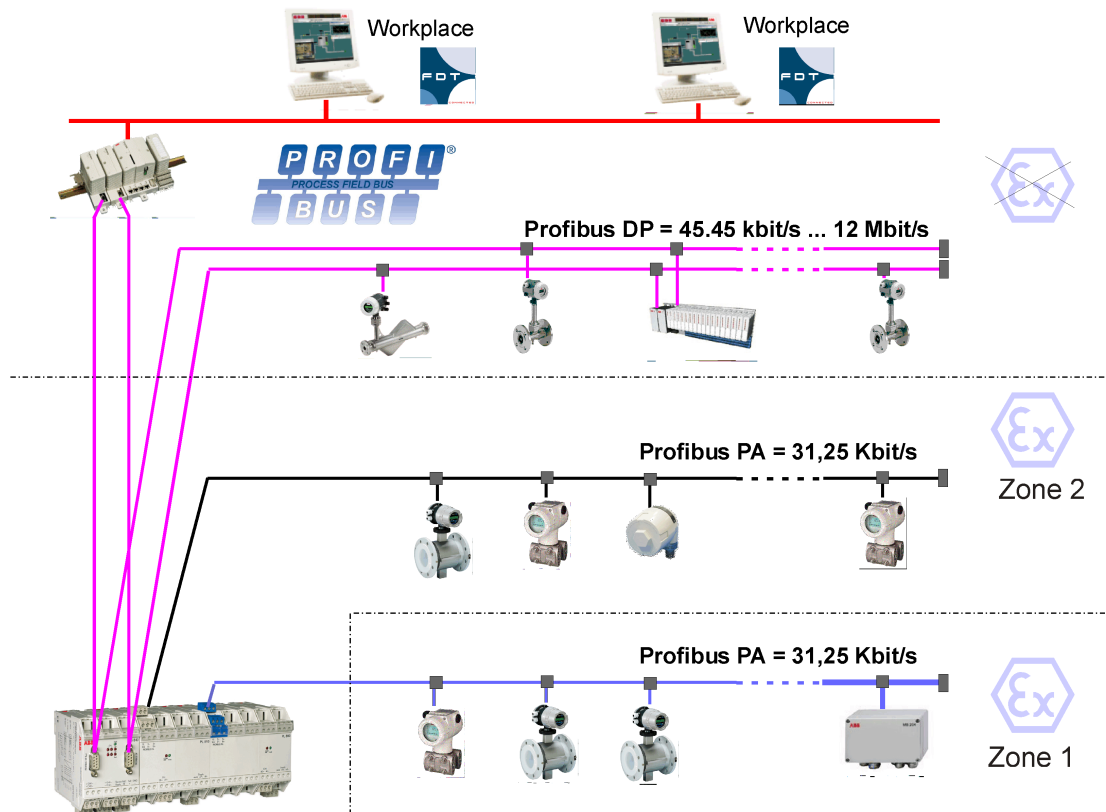


Accessories

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

- Power Link Module PL 810 without intrinsically safe interface
- Power Link Module PL 890 with intrinsically safe interface
- User Instructions Linking Device LD 800P (3BDD011704R0101)

Application example



For more information of Field^T, contact us at fieldbus@de.abb.com

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

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