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 Ex ia IIC and Class I, Division 1, Groups A, B, C and D

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 intrinsically 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**: $\square \ II \ (1) \ G \ D$
- **Group, Category, ignition protection method**: $\square \ II \ 3 \ G \ EEx \ n \ A \ II \ T4$
- **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
- **Electromagnetic compatibility**: EC-Directive 89/336/EWG
- **Explosion protection**: EN 61326
- **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.

Output Characteristics

International certificates, declarations of conformity and User Instructions can be retrieved via the search button [P] 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

For more information of FieldIT, contact us at marketing.control-products@de.abb.com
For the latest information on ABB visit us on the World Wide Web at http://www.abb.com/processautomation

Our worldwide staff of professionals is ready to meet your needs for process automation.
For the location nearest you, please contact the appropriate regional office:

Automation Technology Products
Wickliffe, Ohio, USA
www.abb.com/processautomation
e-mail: industrialitsolutions@us.abb.com

Automation Technology Products
Västerås, Sweden
www.abb.com/processautomation
e-mail: processautomation@se.abb.com

Automation Technology Products
Mannheim, Germany
www.abb.de/processautomation
e-mail: marketing.control-products@de.abb.com