

# ProfiHub

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## ProfiHub A5

Collection of Multichannel PROFIBUS DP  
Network Components



Does your PROFIBUS DP installation require several long branches between various devices and backbone structures with star/tree segments? The ProfiHub A5 is a robust network component for PROFIBUS DP installations and enables it in IP 65 applications. With this component you ensure that your complex network in a potentially dusty or moist environment operates well with minimum downtime. Why choose the ProfiHub A5?

- Can handle up to 31 devices
- Meet the requirements for PROFIBUS DP installations
- With this product, you can create reliable, flexible and object-oriented DP installations

### About the ProfiHub A5

The ProfiHub A5 is the ideal economic solution for creating reliable star networks in RS 485 DP networks. PROFIBUS DP is a high-speed communication bus that has to comply with strict rules concerning spur lines and star networks.

The ProfiHub A5 has the functionality of 5 galvanic isolated transparent repeaters. This allows network structures with extended spur lines that individually can handle a maximum of 31 devices and to which the same rules apply as the main channel. The ProfiHub A5 has the same functionality as the ProfiHub B5.

The ProfiHub A5 is essential for better control during maintenance and upgrading of the network.

### Application areas

- Dynamic spur lines to actuators, flow meters and pH analyzers
- Star, tree and bus structured networks

- Removable drives and motors
- Outdoor applications with device and cable stress
- Roof-mounted devices in tank farms
- Dirty and humid environments
- Barrier for non-galvanic isolated equipment

### Your benefits

- Hot slave insertion/removal during operation
- Short circuit protection on each channel
- Compact and robust construction
- On-board DB9 female connector for maintenance activities
- Suitable for all DP cables
- Conveniently arranged networks
- Extendable installations
- Save costs

### Product features

- 5 Isolated repeater channels (6 segments)
- Transparent for all PROFIBUS DP protocols
- Suitable for PROFI-safe and MPI networks
- 31 devices per channel
- 9.6 Kbps - 12 Mbps
- Max. 1200 m segment length (depends on baud rate)
- Integrated termination facilities
- Configurable grounding system
- Glands or optional M12 connectors (16012)
- IP 65 classification

### Optional

- Ground Rail (ordercode 16011)
- M12 flange connectors factory installed (ordercode 16012)

## ProfiHub B1

Collection of Multichannel PROFIBUS DP  
Network Components



The PROFIBUS DP B1 Repeater tackles the technical limitations of existing PROFIBUS repeaters. It does not have the frustrating short-circuit bug and the data is constantly monitored for glitches which are digitally filtered out. It has the following unique features:

- Guarantees conveniently arranged networks
- Compact design
- Cost-saving

### About the compact PROFIBUS repeater

The advanced 12 Mbps core of the B1 is comparable to the ProfiHub: it can be cascaded without limitations and has increased RS 485 strength. Furthermore, every channel has on-board switchable termination and is able to drive 31 devices. The removable screw terminals of the PROFIBUS interface are pinned-out in a way that reversed mounting of the repeater does not impact existing wiring. A DB9 connector is provided to connect diagnostic tools. The redundant power supply increases the reliability of the application.

This compact and easy to use network component complies with the requirements of the demanding modern industry to increase the PROFIBUS cable length and amount of connected devices.

### More benefits

- Extendable installations
- Recovery of corrupted data bits

### Features

- Suitable for all DP cables
- Low power consumption
- Redundant power supply
- No address required
- No limit in cascading
- Short circuit protection on each segment
- Integrated termination (switches)
- Removable screw terminals and a DB9 connector
- Monitoring port on outgoing segment
- IP20
- UL listed
- CE declared
- FCC verified

## Technical specifications

### General

- Dimensions: 106 x 55 x 37 mm (L x W x H, excluding plug-able connectors)
- Weight: 126 grams (excluding plug-able connectors)

### Electrical

- Operating voltage: 24 VDC
- Absolute max. rated voltage: 19 ... 28 VDC
- Nominal power use: 1 W
- Input current(24VDC): 43 mA

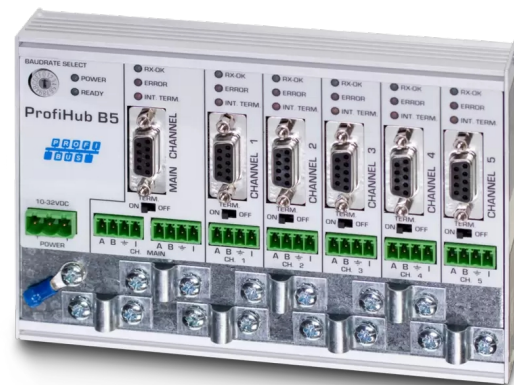
### Protocol

- Transparent for all PROFIBUS DP protocols
- Suitable for PROFI-safe and MPI
- 9.6 kbps ... 12 Mbps (automatic detection)
- No address required



## ProfiHub B5+R

Collection of Multichannel PROFIBUS DP  
Network Components



Due to the demands for high-speed networks, PROFIBUS DP must comply with strict guidelines concerning spur lines. The ProfiHub B5+R is the perfect cost-efficient solution to bridge users requirements and create reliable star networks. It is an essential component to obtain better control during maintenance and upgrading of the network. Note: B5+R replaces the standard PROCENTEC B5 unit, providing additional functionality with no physical design changes. The ProfiHub B5+R has the following unique features:

- DB9 connector as well as a screw connector
- Switchable termination on each segment
- Backbone repeater

### Multi-Channel Repeater 'ProfiHub B5+R'

As an economic solution, the B5+R saves costs through the reduction of traditional PROFIBUS repeaters. This product is equipped with 5 galvanically isolated transparent repeaters on a single unit (offering 6 segments). Each segment can handle 31 devices and a cable length equal to the main bus. To save costs on plugs and offer flexibility, it contains screw terminals as well as DB9 connectors. The DB9 connectors are also perfect measurement points for ProfiTrace to quickly measure all segments. Termination for each segment is on-board and switchable.

For PROFIBUS network designs, the ProfiHub B5+R offers a reliable and robust backbone solution with robust message checking and selectable redundancy on communication and power supply. The extensive monitoring of messages in combination with redundancy on the communication and voltage makes the ProfiHub the perfect access port for network components. An alarm contact is linked to events based on the status of the power supply and the bus redundancy if this is enabled. Unlimited cascading of repeaters is possible with 1200 meter spur lines.

The ProfiHub B5+R is a powerful package to ensure reduced installation complexity, increased

time utilization and better deployment of project resources. The ProfiHub B5+R is used in several application areas worldwide.

## Features

- 5 galvanically isolated channels (6 segments)
- Configurable grounding system
- Redundant power supply
- Bus redundancy option
- Star, tree and bus structured networks
- Alarm contact
- Monitoring port per channel
- IP20
- Certifications: UL Listed, DNV, FCC, CE

## Your Benefits

- Hot slave insertion/removal during operation
- Short circuit protection on each channel
- Compact and robust construction
- Screw terminals and DB9 connectors can be mixed
- Conveniently arranged networks
- Extendable installations
- Cost-saving

## Technical specifications

### General specifications

- Dimensions L x W x H: 167 x 113 x 35 mm
- Weight: 484 grams
- Material: Aluminium
- Fixation: Din rail mounted
- Appropriate: DB9 and screw connectors

### Ambient conditions

- Operating temperature: -25° ... +70° Celsius
- Storage temperature: -25° ... +70° Celsius
- Relative air humidity: 95%
- Ingress Protection: IP 20 (IEC/EN 60529)

### Electrical specification

- Operating voltage: 12 ... 24 VDC
- Absolute max. rated voltage: 9 ... 31 VDC
- Nominal power use: 1.75 W
- Input current(24VDC): 73 mA
- Alarm contact: Max. 24 VDC/0.5 A

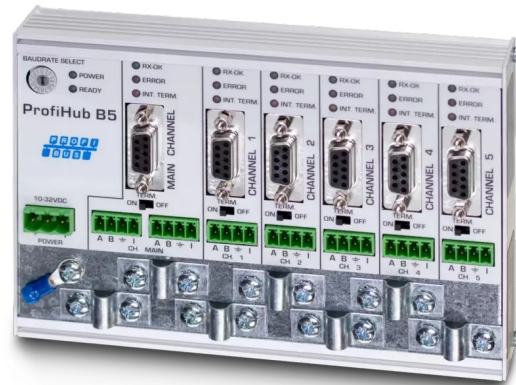
### Standards and approvals

- Conformity Marking: CE, FCC
- DNV: Certificate number: A-13659
- DNV: Temperature D
- DNV: Humidity B
- DNV: Vibration A
- DNV: EMC B
- DNV: Enclosure IP20
- UL: ITE E365044
- EMC immunity of interference acc. to EN 55024 (2010)
- EMC emission of interference acc. to: EN 55022 (2010) + C1 (2011)



## ProfiHub B5+RD

Collection of Multichannel PROFIBUS DP  
Network Components



The ProfiHub B5+RD is identical to the regular ProfiHub B5 family. However, it is equipped with an additional integrated micro ProfiTrace diagnostic unit. The ProfiHub offers a PROFIBUS DP slave device to transfer bus statistics and device event information to the PLC/DCS system. This allows you to reduce unexpected downtime to a minimum. This solution has the following unique features:

- 6 segments
- Diagnostic information easy to view via the software
- Built-in PROFIBUS DP slave for transferring diagnostic data

### About the ProfiHub B5+RD

This innovative network component is an essential element for maintaining PROFIBUS DP systems when the host system is required. The application software was previously unable to identify bus diagnostic information and act accordingly. With the ProfiHub B5+RD this information is fully available. Even the location of certain devices behind the channels of the ProfiHub is useful for identifying the topology from a host system point-of-view.

The user provides the ProfiHub with a software bus address (set slave address function). By means of the GSD file the user can configure the data that is required from the ProfiHub. The cyclical data can contain simple statistics up to complex structures identifying channel problems.

The ProfiHub B5 is a solid network component providing reliable solutions for spur lines and star-shaped structures in PROFIBUS DP networks. Furthermore, it is the first ProfiHub that has been provided with a built-in PROFIBUS DP slave for transferring diagnostic data to a host system.

## Technical Specifications

### PROFIBUS

- Transparent for all PROFIBUS DP protocols
- Suitable for PROFIsafe and MPI
- 9.6 kbps .. 12 Mbps (auto-detection)
- 1200 m segment length (depends on baud rate)
- 31 devices per channel
- Bus redundancy option

### DP slave features

- DP-V0 (certification number: Z01885)
- Ident Number: 6970
- Software addressing (0 - 126)
- 32 Bytes diagnostic data
- Maximum 85 bytes input / Maximum 5 bytes output (90 bytes total)

### Diagnostic information

- Live List
- Statistics
- Power status
- Redundant status
- Termination status

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