



## Anybus ProfiHub B2+

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The ProfiHub B2+ is equipped with two galvanically isolated transparent repeaters (offering three segments). Each segment can handle 31 devices and a cable length equal to the main bus. To save costs on plugs and to offer flexibility, the repeater contains screw terminals as well as DB9 connectors. Termination for each segment is on-board and switchable.

If bus redundancy is enabled, two segments will form a redundant pair which is completely compatible with the ABB RLM01. An alarm contact is linked to events based on the status of the power supply and the bus redundancy status.



### Distinctive features

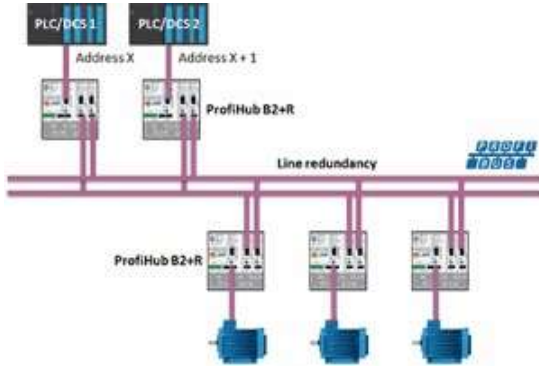
- 2 Isolated repeater channels (3 segments)
- Connection speed: 9.6 Kbps .. 12 Mbps (auto detection)
- 1200 m segment length (depends on baudrate)
- 31 devices per channel
- Bus redundancy option
- Transparent for all PROFIBUS DP protocols
- Suitable for PROFI-safe and MPI
- High integrity telegram checking
- Screw terminals and DB9 connectors
- Configurable grounding system
- Integrated termination facilities
- Alarm contact

### Your benefits

- Option to create a redundant path to Hubs or ComBricks
- Hot slave insertion and removal during operation
- Short circuit protection on each channel
- Compact and robust construction
- Status and error display (per channel)
- Suitable for all DP cables
- Easy extendable installations
- Cost Savings

### Application examples:

- Large star/tree structured networks
- Removable drives and motors
- Pull/Plug motor control centers
- Roof mounted devices in tank farms
- Barrier for non-galvanic isolated equipment



### Dimensions and weight

L x H x D:	109 x 113 x 35 mm (excluding DIN-rail and plug-able screw connectors).
Weight:	328 g (excluding plug-able screw connectors, cable brackets and packing material).
Mounting DIN-rail type	35mm x 7,5mm (EN 50022, BS 5584, DIN 46277-3)

### Ambient conditions

Operating temperature range	-25 to +70o Celsius -13 to +158o Fahrenheit
Isolation class	IP 20 (IEC/EN 60529, DIN 40050)

### Protocol specification

Supported Protocols	DP-V0, DP- V1, DP-V2, FDL, MPI, FMS, PROFIsafe, PROFIdrive and any other FDL based protocol.				
Transmission speed	9.6 kbps to 12 Mbps (including 45.45 kbps)				
Transmission speed detection	Auto detect				
Transmission speed detection time	< 10 s detection and 50 s baudrate switchover time.				
Transmission speed switch	Rotary switch	Auto detect	Robust repeating	Redundancy	Diagnostic slave
	0	•			
	1	•	•		
	2	•	•	•	
	3	•			•
	4	•	•		•
	5	•	•	•	•
Other	•				
For older ProfiHubs refer to paragraph 2.10.1					
Data delay time	At baudrate	Normal mode	Robust mode		
	9.6 - 500 kbps	2.8 Tbit	13.8 Tbit		
	1.5 Mbps	3.2 Tbit	14.2 Tbit		
	3 Mbps	3.9 Tbit	14.5 Tbit		
	6 Mbps	4.6 Tbit	15.6 Tbit		
	12 Mbps	6.4 Tbit	17.4 Tbit		
Deviation	2 bit times (over the complete message) for received messages is allowed and is corrected to nominal speed when transmitted.				

**PROFIBUS Diagnostics Device specifications**

Supported Protocol	DP-V0
Ident Number	6971
GSD filename	PROC6971.gsd
Bus address	0-126 (software address only, set by software, default 126)
Transmission speed	9.6 kbps to 12 Mbps (including 45.45 kbps)
Transmission speed detection	Auto Detect
Maximum transferrable data	85 bytes input and 5 bytes output

**PROFIBUS cable specifications**

Cable lengths	1200 m at 9.6 kbps to 93.75 kbps 1000 m at 187.5 kbps 400 m at 500 kbps 200 m at 1.5 Mbps 100 m at 3 Mbps to 12 Mbps																																	
Cable thickness	10 mm (when the ground rail is used)																																	
Wire diameter (for the screw terminals)	< 2.5 mm <sup>2</sup>																																	
Wire type	Stranded or solid core																																	
Number of devices	Maximum 31 per Channel (including ProfiHubs, OLMs, Laptops/PCs, etc.)																																	
Termination	Integrated and switchable. Powered according to IEC 61158 (390/220/390 Ohms) - All Channels (default on) - Main-Channel (default off)																																	
Redundancy	Yes (Channel 1 and 2)																																	
Cascading depth	No limit (only limited by busparameter of the master)																																	
Cascading units	With standard busparameters: <table border="1"> <thead> <tr> <th>At baudrate</th> <th>Normal mode[units]</th> <th>Robust mode[units]</th> </tr> </thead> <tbody> <tr> <td>9.6 kbps 6</td> <td>6</td> <td>1</td> </tr> <tr> <td>19.2 kbps 6</td> <td>6</td> <td>1</td> </tr> <tr> <td>45.45 kbps 39</td> <td>39</td> <td>8</td> </tr> <tr> <td>93.75 kbps 6</td> <td>6</td> <td>1</td> </tr> <tr> <td>187.5 kbps 6</td> <td>6</td> <td>1</td> </tr> <tr> <td>500 kbps 16</td> <td>16</td> <td>3</td> </tr> <tr> <td>1.5 Mbps 20</td> <td>20</td> <td>5</td> </tr> <tr> <td>3 Mbps 17</td> <td>17</td> <td>5</td> </tr> <tr> <td>6 Mbps 13</td> <td>13</td> <td>4</td> </tr> <tr> <td>12 Mbps 13</td> <td>13</td> <td>5</td> </tr> </tbody> </table>	At baudrate	Normal mode[units]	Robust mode[units]	9.6 kbps 6	6	1	19.2 kbps 6	6	1	45.45 kbps 39	39	8	93.75 kbps 6	6	1	187.5 kbps 6	6	1	500 kbps 16	16	3	1.5 Mbps 20	20	5	3 Mbps 17	17	5	6 Mbps 13	13	4	12 Mbps 13	13	5
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**Power supply specifications**

Power supply operating voltage	12 to 24 VDC
Power supply absolute max rated voltage	9 to 31 VDC
Redundant power supply	Yes
Current consumption	125 mA at 24 V power supply (all Channels fully loaded)
Power dissipation	Max. 3.3 W

Reverse polarity protection	Yes
Cable thickness	10 mm (when the ground rail is used)
Wire diameter	< 2.5 mm <sup>2</sup>

#### Alarm contact

Voltage	Max. 24 VDC
Current	Max. 0.5 A

#### Connector Lay-out

2x Power supply POW 1 and POW 2	Plug-able screw connector, pitch 5,08 mm Pin + : 12 to 24 VDC Pin - : 0 V Screw: Shield
Alarm Contact	Plug-able screw connector, pitch 5,08 mm Pin 1: relay contact (potential-free) Pin 2: relay contact (potential-free)
PROFIBUS screw terminals Main Channel and Channel 1 to 2	Plug-able screw terminal, pitch 3,81 mm Pin A: PROFIBUS A (green wire) Pin B: PROFIBUS B (red wire) Pin I : Indirect shield
PROFIBUS DB9 Main Channel	D Sub connector, 9 contacts (PROFIBUS specification) Pin 1: N.C. Pin 2: N.C. Pin 3: PROFIBUS - B Pin 4: PROFIBUS - RTS Pin 5: GND Pin 6: VPP Pin 7: N.C. Pin 8: PROFIBUS - A Pin 9: N.C. Housing: Shield Shield is connected internally to the DIN-rail Pin I is connected internally with 10nF/1MΩ to shield.

#### Standard and approvals

CE	EMC Directive 2014/30/EU, class B Digital Device RoHS Directive 2011/65/EU
FCC	47 CFR 15, Unintentional Radiator, class B Digital Device.
UL	Report reference: E365044-A1-UL Standards for safety: UL 60950-1, Information Technology Equipment - Safety - Part 1 General Requirements CAN/CSA C22.2 No. 60950-1-07, Information Technology Equipment - Safety - Part 1: General Requirements

File	Version	Size	Read online
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#### Ordering Information

<b>Order Codes</b>	17210R
<b>Included Components</b>	Anybus ProfiHub B2+
<b>Warranty</b>	1 year

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