



The BradCommunications™ Direct-Link™ gateway for PROFIBUS provides a quick and cost effective connection between controller and field devices used on different industrial networks.

## PROFIBUS Gateway

Connect PROFIBUS to Modbus Serial devices

### Features

- PROFIBUS-DP V0 Slave to Modbus Serial protocol conversion
- Modbus Master or Slave RTU/ASCII
- Manages up to 20 Modbus Slaves
- Easy-to-use configuration by GSD file (no configuration tool needed)
- Rotary switches for PROFIBUS Address
- Automatic reconfiguration after replacement by the PROFIBUS Master (Set\_Param command)
- Serial RS232 or RS485 switch selectable
- Full diagnostic through LEDs, dedicated RS232 port and Slave\_Diag information
- Up to 244 Input bytes and 244 Output bytes on PROFIBUS
- Up to 20 Modbus Read and Write commands with Cyclic, Change of State or once triggers
- DIN rail mounting, IP20

### Typical Applications

- Connecting Serial devices to PROFIBUS networks
- Integration of legacy devices such as in the machine tool industry
- Well suited for simple network extensions



### Product Description

The BradCommunications™ Direct-Link™ gateway for PROFIBUS is built to enable the quick and cost effective connection of any Modbus device to a PROFIBUS-DP fieldbus. It is well suited for simple network extensions or the integration of legacy devices such as in the machine tool industry.

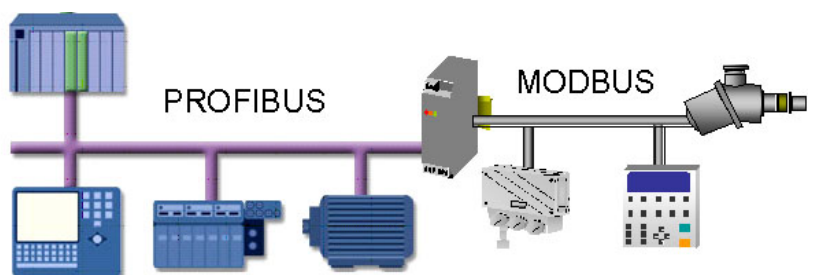
The BradCommunications Direct-Link gateway can act as a PROFIBUS-DP Slave on one side, and a MODBUS Master or Slave on the other side.

The gateway is built into the system without any lines of code. All parameters are set in a very user friendly way, via the usual PROFIBUS configuration tool. All the parameters are sent to the gateway automatically by the PROFIBUS Master at each network initialisation, permitting the replacement of the gateway without any configuration action.

Moreover, the Direct-Link gateway for PROFIBUS can drive up to 20 Modbus Slaves. It can exchange up to 244 bytes of inputs, and 244 bytes of outputs on PROFIBUS .

To complete the pre-defined Modbus commands, a "Pass Frame" mode is implemented to allow the composition of the Modbus commands directly from the PROFIBUS-DP buffer.

A standard Sub-DB9 Female connector provides the PROFIBUS interface and Plug Screw Terminal for Serial interface and Power Supply.



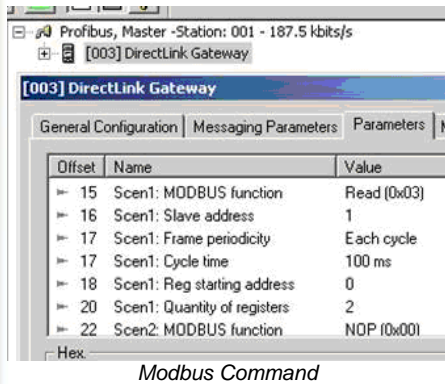
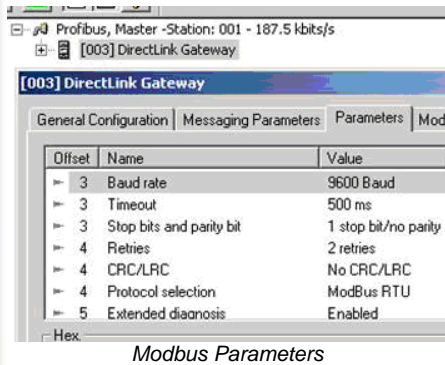
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# PROFIBUS Gateway



## Software Tools

Example of configuration through the configuration tool of the PROFIBUS Master:



## Dimensions



## Hardware and Network Specifications

| Physical Characteristics      |   |
|-------------------------------|---|
| Case                          | Plastic case for rail DIN   |
| Size                          | 120 x 100 x 23 mm   |
| Weight                        | ~ 100g  |
| Temperature                   | <b>Operating:</b> 0°C to +55°C<br><b>Non-operating:</b> -25°C to +70°C                          |
| Humidity                      | Max. 80%  |
| Ingress Protection            | IP20  |
| Power Supply                  | 24V DC (1.5W)   |
| Indicator (6 LEDs)            | 1 - Power ON    4 - RUN<br>2 - Bus failed    5 - TxD Modbus<br>3 - Diagnostic    6 - RxD Modbus |
| Protection Polarity inversion | Yes   |
| Protection Short-circuits     | Yes   |
| CE Compliance                 | Yes   |

| Communication Ports   |  |   |
|-----------------------|--|---|
| PROFIBUS-DP           | Baud rate  | 9.6 kbps to 12 Mbps (auto-detection)  |
|                       | Connector  | Sub-D9 female   |
|                       | Address setting  | 2 hexadecimal rotary switches   |
|                       | Diagnostic   | 27 bytes of extended diagnostic (Slave_Diag)  |
|                       | Input/Output Bytes   | 0-244, maximum of 300   |
|                       | Isolation  | 1 kV  |
|                       | Technology   | ASIC  |
| Modbus Serial         | Others   | Sync, Freeze  |
|                       | Commissioning  | Done from the PROFIBUS configuration tool (via scroll down menus) by using GSD parameters |
|                       | Baud rate  | 0.6 to 57.6 Kbps  |
|                       | Protocol   | RTU and ASCII   |
|                       | Nb of addressable Slaves   | 20  |
|                       | Nb of frames   | 1 to 20 different   |
|                       | Frame trigger  | Cyclic, on change, once   |
|                       | Nb of accessible registers (Maximum of 150)  | 1-122 read registers<br>1-122 write registers   |
|                       | Connector  | Open connector 3 contacts, male   |
|                       | Switching RS232/485  | Configurable by switch  |
|                       | Terminator Resistor  | 120 Ω by switch   |
| Implemented functions | 3 - Multi register Read<br>4 - Multi register Read<br>5 - Single Boolean writing<br>6 - Single register Write<br>7 - Read Status<br>16 - Multi register Write<br>23 - Multi register Read/Write (Slave mode only)<br>Other - Open command through Pass Frame mechanism |   |

## Ordering Information

| Part Number | Description  |
|-------------|--|
| DRL-DPS-SRM | BradCommunications™ Direct-Link™ PROFIBUS to Modbus Serial Gateway |

CR Rom with detailed user documentation in French and English languages and the GSD file are included in delivery.

Contact us: [www.woodhead.com](http://www.woodhead.com)

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