



PROFIBUS GATEWAY FOR LT2000 FAMILY OF LASER DISTANCE METERS



- **External Profibus DP Gateway connection**
- **Profibus Slave**
- **Profibus IN: 8 Bit error counter, 8 Bit error code, 16 Bit counter, 32 Bit time stamp, 32 Bit distance value, 8 Bit internal temperature**
- **Profibus OUT: 8 Bit control byte**
- **Transmission rates up to 12 MBaud**
- **For use with the LT2000 Family of Laser Distance Meters**

Product Description

The Profibus Gateway enables the connection of any LT2000 Family of Laser Distance Meters to a Profibus-DP Master. The Profibus Gateway supports transmission rates up to 12 MBaud (Auto detect). The slave-address must be set with the switch "Profibus-ID". The termination resistor can be switched to On or Off (last device on Profibus must be terminated, e.g. "Termination" On). Connection is via a standard 9 Pin D-SUB connector. The changing of the LT2000 command parameters is only possible via the serial interface and a PC with a terminal emulation program or the LDM Tool PC Software. The only exception to this is by use of the Profibus OUT Control Byte the command parameters DT, DW, DF, DX, TP and DM can be used to command the LT2000.

Profibus Parameter

The Profibus Gateway must be configured as a standard Profibus-Slave. By the first parameter setting of the master the gateway knows its operation mode. The standard operation mode is binary transfer mode. The ASCII mode transmits the original ASCII characters from the LT2000 Laser Distance Meter. It is very important that the command parameters of the LT2000 Laser Distance Meter are configured correctly. The parameter Baudrate (BR9600) String Format (SDH) and Auto start (ASDT) must be set via the RS 232 interface with a PC terminal emulation program or the LDM Tool PC Software before you can connect the sensor to the Profibus Gateway.

MODULOC Technology - The Total Laser Solution

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Housing Specifications

Housing: Open Construction, Plastic, for DIN Rail Mounting
Housing Rating: IEC IP24
Weight: 0.24 Kg

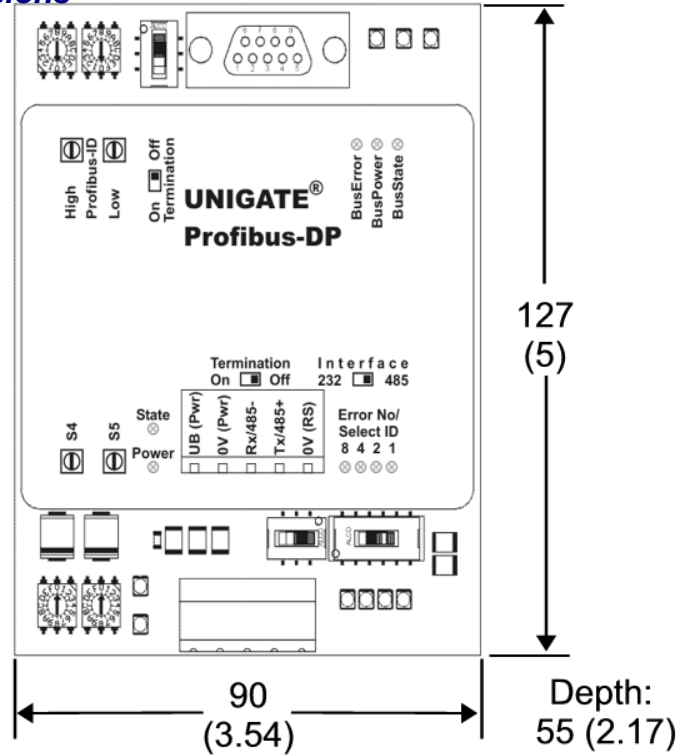
Connection to LT2000 via RS232 serial interface

Connection via 5 Pin Screw Plug Connector
LT2000 RxD Pin 2 (yellow): Gateway Tx, Pin 4
LT2000 TxD Pin 3 (green): Gateway Rx, Pin 3
LT2000 GND Pin 4 (grey): Gateway 0V, Pin 5
 Gateway switch "Termination" on Off
 Gateway switch "Interface" on RS232
 Gateway switch "S4" and "S5" on 0

Connection to Profibus-DP Master

Connection via 9-Pin Sub-D
LT2000 RxD Pin 2 (yellow): Gateway Tx, Pin 4
LT2000 TxD Pin 3 (green): Gateway Rx, Pin 3
LT2000 GND Pin 4 (grey): Gateway 0V, Pin 5
 Profibus switch "Termination" on Off (set to On if last device on Profibus)
 Profibus ID set via High & Low rotary switches

Dimensions



Dimensions are in mm (inches)

General Specifications

| | | | |
|--------------------------------------|--|----------------------------|--|
| Transmission Method | Profibus-Slave | Communication Method | RS232 (to LT2000) |
| Transmission Mode | Symmetrical Asynchronous Serial Half-Duplex | Transmission Mode | Asymmetrical Asynchronous Serial Full Duplex |
| Bus Topology | Line | Bus Topology | Point-to-Point |
| Data Rate | Max. 12mbaud (auto detect) | Data Rate | 9600 Baud |
| Bus Cable Length ¹⁾ | Max. 1200M @ 93.75kbaud | Communication Cable Length | Max. 15M |
| Connection | 9-Pin Sub-D, Socket | Connection | Screw Plug Connector, 5 Pin |
| Profibus-DP ID | Via Rotary Switches | LT2000 Parameters | BR9600, ASDT, SDh, SA1, ST0, SF1, OF0 |
| I.D. No. | 0x2079 (8313) | Supply Voltage | 10.8 to 30 VDC |
| Profibus Mode | Standard | Power Consumption | Typ. 120mA, Max. 150mA |
| Profibus IN | 8 Bit error counter, 8 Bit error code, 16 Bit counter, 32 Bit time stamp, 32 Bit distance ²⁾ , 8 Bit temperature ³⁾ | Operating Temperature | -20°C - +55°C |
| Profibus Configuration ⁴⁾ | 13 Byte IN, 1 Byte OUT | Storage Temperature | -40°C - +70°C |
| Profibus Configuration Bytes | 156 32 0 (0x9 0x20 0) | Over Load Protection | Poly-Switch Thermal Fuse |
| LED Indication | bus error, bus state, power, RS232 state | Under Voltage Detection | ≤ 9 VDC |
| Service Life | 10 years | Reverse Voltage Protection | Yes |
| | | Short Circuit Protection | Yes |

1) = Profibus Cable Length is Baud Rate Dependent, 100M max at 12mbaud

2) = Scaling is dependent on the LT2000 SF command parameter

3) = shows the internal temperature in °C, if TP mode is set, actualization with the HIGH/LOW flank of Bit 6

4) = Profibus OUT control byte allows DT, DW, DF, DX, TP, DM mode but only with Gateway switch set to RS232

Version Information

Unigate Hardware Rev. 1 or later; Gateway Firmware 1.1 or later;

GSD-File LDM4xP1.gsd Revision 2.0

Version 2.6 last update 2006-10-04

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We reserve the right to alter specifications without prior notice. Specifications without tolerances are typical values.

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