

Applications

- Automotive CAN bus systems
- Automation CAN bus systems
- General purpose CAN bus interfaces
- CANopen, CAN FD
- MilCAN
- Industrial field networks

Product Features

- Regenerates and extends CAN Bus signal line
- Complies with ISO 11898 standards
- Communication baud rate up to 1Mbps
- Compatible with OBDII and SAE J1939
- Power input: 9-36VDC, 55mA max, 2W max
- Power and CAN 1 – CAN 2 activity LEDs
- 120 Ohm termination resistors with dip-switches
- EMI noise suppression up to 30 dB
- ESD protection up to 30 kV according to IEC 61000-4-2 and ISO 10605
- ESD protection is 4A with the condition of 8/20 μ s according to IEC 61000-4-5
- Extended operating temperature: -40 ~ +85 °C
- Extended storage temperature: -40 ~ +105 °C
- Latest technology, highly durable components
- Designed for working under hard conditions and suitable for military standards
- IP62. Optional IP65, please contact us
- Various mounting options: M4 screw, DIN rail
- Various connector options: Screw connector, push-in spring connector, DB9 male, DB9 female

General Description

The PreoTech CAN Bus Repeater rebuilds the CAN communication and extends the communication distance of the CAN Bus line. System can run at high speeds up to 1 Mbps bidirectionally and fully compatible with ISO 11898 standard.

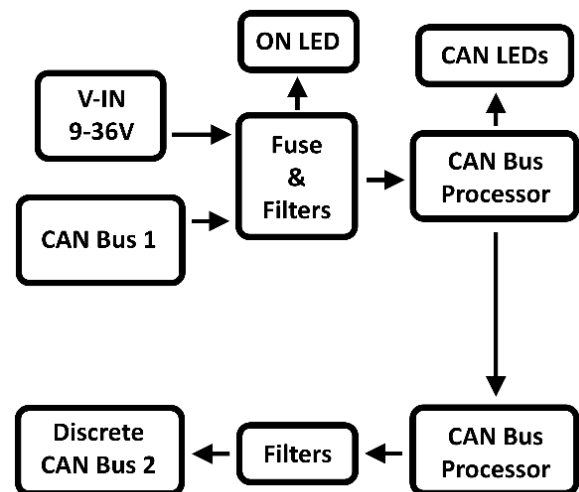
Provides EMI suppression up to 30 dB and ESD protection according to IEC 61000-4-2, IEC 61000-4-5 in data and power line.



The Preotech CAN Bus Repeater should be used in places where long and noisy CAN bus lines.

Options are available regarding mounting and connector type.

Functional Diagram



The PreoTech CAN Bus Repeater works with 9-36VDC and 55mA maximum current. The maximum power consumption is 2W.

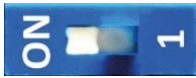
"V-IN 9-36V", "CAN Bus 1" and "Discrete CAN Bus 2" have common ground.

The CAN line to be extended must be connected to the "Discrete CAN Bus 2" connector.

CAN Bus communication activities can be monitored with C1 (CAN Bus 1) and C2 (Discrete CAN Bus 2) LEDs.

Dip-switches are used for the CAN Bus 120R terminating resistors for each channel. The terminations can be changed easily.

If the switch is "DIP-ON", the 120R termination resistor is included in the CAN Bus line. If the switch is "DIP-OFF", the 120R termination resistor is not included in the CAN Bus line.



DIP-ON



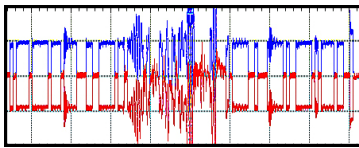
DIP-OFF

Effect On Signal

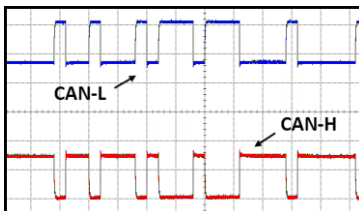
The PreoTech CAN Bus Repeater rebuilds the CAN communication and extends the communication distance of the CAN Bus line.

In the pictures below, the CAN bus line is seen under the oscilloscope. If do not use filters, it is inevitable to experience data loss on the CAN Bus.

Signal Without CAN Bus Repeater (includes filter):

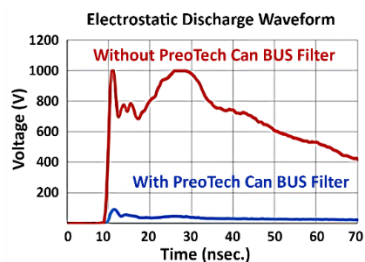


After PreoTech CAN Bus Repeater (includes filter):



Electrostatic discharge is also a serious problem for CAN bus lines.

Under ESD Condition (includes filter):



If the repeater is not used, the voltage on the lines can rise to thousands of volts and can give damage to the CAN devices.

Pin Configuration

Connector Options:

- Screw Connector
 - Board side P/N: Wurth 691322310002
 - Board side P/N: Wurth 691322310004
 - Cable side P/N: Wurth 691361300002
 - Cable side P/N: Wurth 691361300004
- Push-In Spring Connector
 - Board side P/N: Wurth 691322310002
 - Board side P/N: Wurth 691322310004
 - Cable side P/N: Wurth 691368300002B
 - Cable side P/N: Wurth 691368300004B
- DB9 Male Connector
 - Board side P/N: Wurth 618009231221
- DB9 Female Connector
 - Board side P/N: Wurth 618009231121



Pin 1: - (GND)
Pin 2: + (Positive)



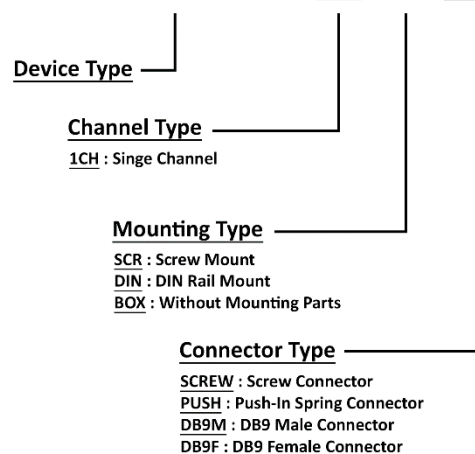
Pin 3: CAN-L Pin 2: CAN-GND
Pin 4: CAN-H Pin 1: CAN-SHLD



Pin 2: CAN-L Pin 3: CAN-GND
Pin 7: CAN-H Pin 5: CAN-SHLD

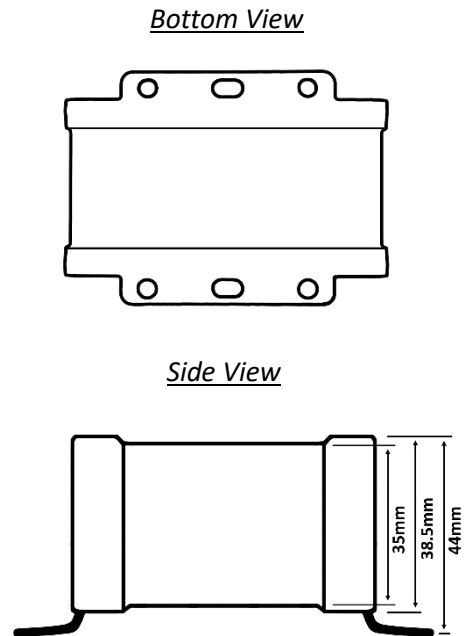
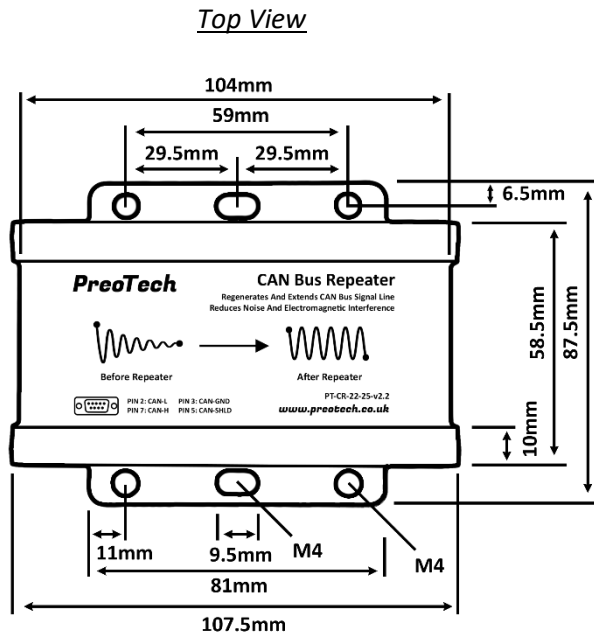
Ordering Information

PT-CR-22-25-v2.2-1CH-SCR-PUSH



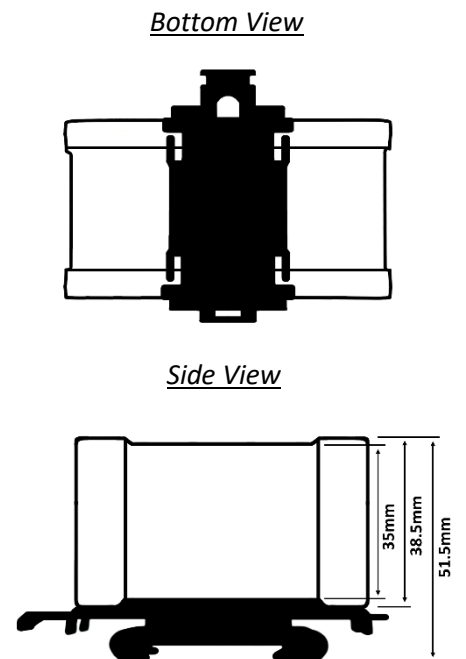
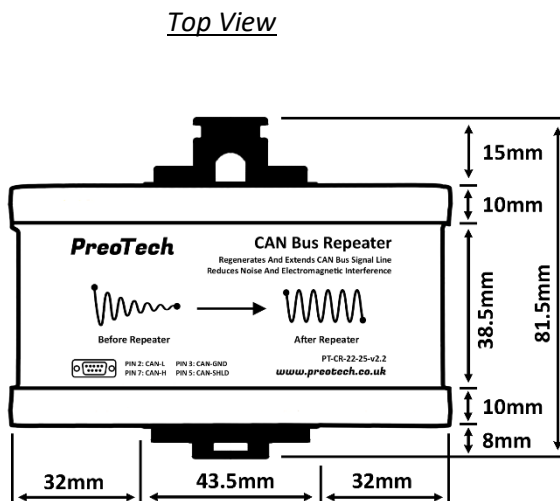
Mechanical Information

With Screw Mount: (SCR)



Dimensions are in millimeters.

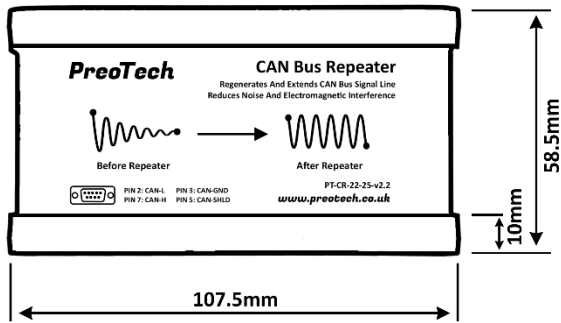
With DIN Rail Mount: (DIN)



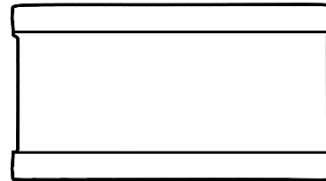
Dimensions are in millimeters.

Without Mounting Parts: (BOX)

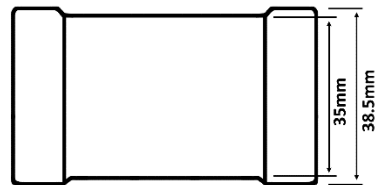
Top View



Bottom View



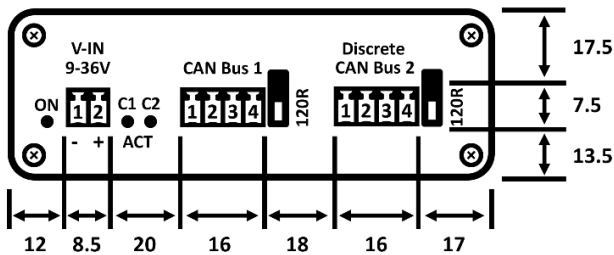
Side View



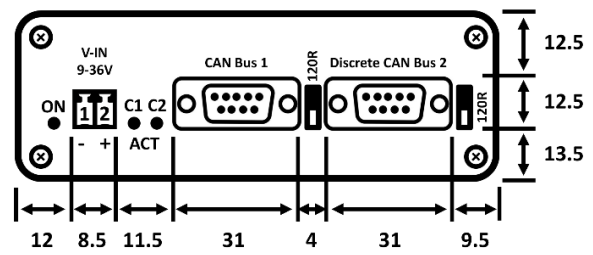
Dimensions are in millimeters.

Connector Type:

Screw and Push-In Spring Connectors



DB9 Male and DB9 Female Connectors



Dimensions are in millimeters.

Contact Information

For the latest specifications, additional product information, worldwide sales, distribution locations, and information about PreoTech:

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