MOVICOM
ELECTRIC

BMS Repeater 1.x

CONNECTION MANUAL

Revision 1 (05-August-2021)

Contents

1 General information

The BMS Repeater 1.x (see Figure 1) is a device for relaying RS-485 signals from one subnetwork to another and vice versa.

Figure 1. BMS Repeater 1.x

The device provides galvanic isolation up to 3500 V RMS.

Specifications

Parameter	Value
Supply voltage, V	5.0±0.5
Current consumption @5 V, mA (no load; max)	40
RS-485 baud rate, bps (max)	115200
Output voltage, V	5.0±0.5
Output current, mA (max)	400
Dimensions (length × width × height), mm	64 × 30 × 16
Weight, g	13±2
Operating conditions	
Operating temperature range, ° C	-40÷75
Degree of protection from external influences	IP00

2 Connection procedure

The BMS Repeater 1.x has a header to connect the BMS Main (X1) and a header to connect BMS Logic (X2). It also has jumpers to connect bias resistors to the RS-485 bus subnetworks.

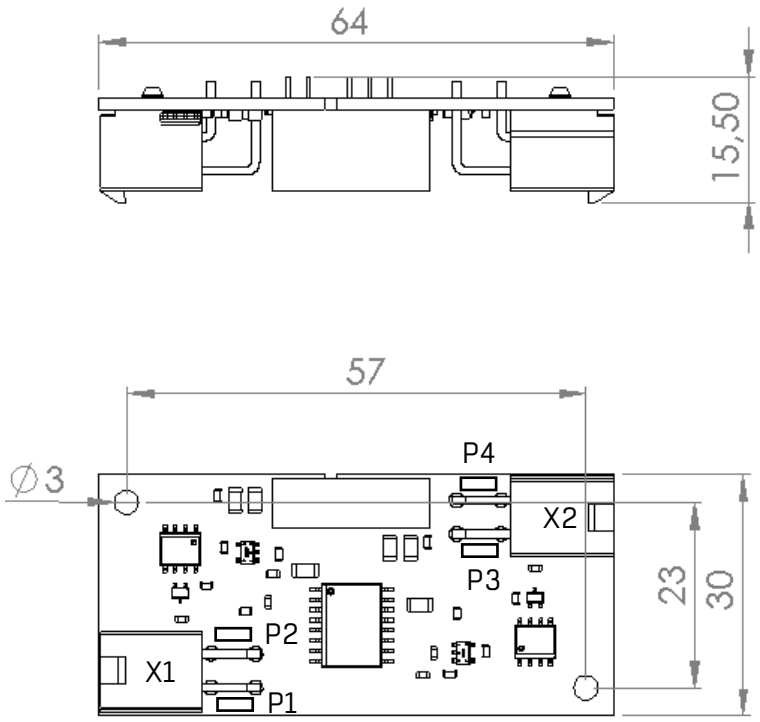
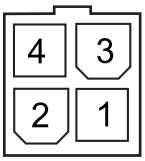


Figure 2. Dimensions of the BMS Repeater 1.x

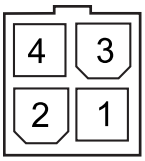
Parameter	Value
Overall dimensions (length × width × height), mm	64 × 30 × 16
Mounting dimensions (length × width), mm	57 × 23
Mounting holes	M3
Header types	Molex series Mini-Fit

2.1 X1 – header for communication with BMS Main



Pin	Name	Description
1	RS485_A1	RS-485 line A for communication with the BMS Main
2	RS485_B1	RS-485 line B for communication with the BMS Main
3	+5V	Supply voltage 5V
4	GND1	Ground

2.2 X2 – header for communication with BMS Logic



Pin	Name	Description
1	RS485_A2	RS-485 line A for communication with BMS Logic
2	RS485_B2	RS-485 line B for communication with BMS Logic
3	OUT_5V	Output voltage 5V, max 400 mA
4	GND2	Ground

2.3 P1, P2 – jumpers for bias resistors of subnetwork 1

To connect the bias resistors setting proper RS-485 bus levels on the BMS Main subnetwork install the P1 and P2 jumpers. **Do not connect the second pair of bias resistors to the same RS-485 subnetwork.**

2.4 P3, P4 – jumpers for bias resistors of subnetwork 2

To connect the bias resistors setting proper RS-485 bus levels on the BMS Logic subnetwork install the P3 and P4 jumpers. **Do not connect the second pair of bias resistors to the same RS-485 subnetwork.**

3 Contacts

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4 Revision history

Rev. number	Rev. date	Changes
1	05-August-2021	First revision

5 Notes