

- > Connection of up to four M-Bus slave devices
- > Wide range of AC and DC operating power
- > Safeguards and filters insuring high durability of the entire device against surges and failures
- > Communication speeds from 300bps to 9600bps
- > Designed for use in home automation



Overview

RS232toMBus-4SL communication converter is a durable converter of the M-Bus industrial communication bus to the common serial interface RS232. It is intended for connection of measuring devices with M-Bus interface to control/computer systems for data collection and processing. The converter converts signals from one communication interface to the other directly without any need for setting up the communication parameters or modifications to the transferred messages.

The M-Bus port has a galvanic connection with the power and communication ports. The recommended use of the converter is only in spaces which fulfill conditions for information technologies. Mainly due to protection of devices connected to it. The recommended maximum length of the M-Bus line is in the range of tens of meters.

The M-Bus port has a connection capacity for one to four M-Bus slave devices. The interface has the second highest grade of surge protection and is resilient against failures on the M-Bus bus.

The converter operates at a wide range of direct and alternating current power supply voltages with protection against overvoltage.

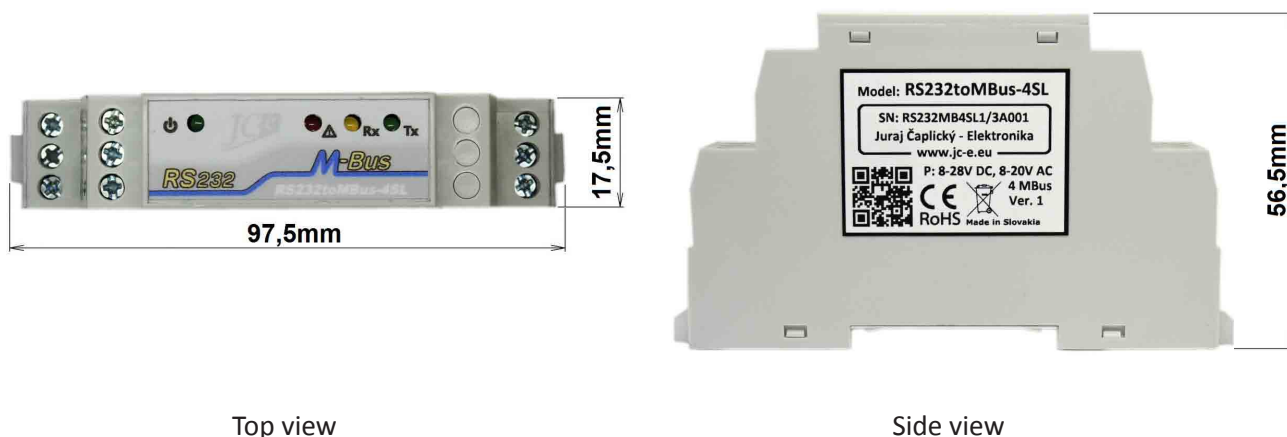
Operational statuses are indicated by four LEDs which makes it easy to determine the actual state of the converter or possible causes of failure. The LEDs indicate the state of the power supply voltage, M-Bus communication and fault conditions of the M-Bus line.

Technical parameters

RS232 communication interface	
Communication signals	RxD, TxD and GND
Protection	protection against 15kV ESD
M-Bus Master communication interface	
Number of devices that can be connected	1 to 4 SLAVE devices, idle current max. 6mA
Baud rate	300-9600 bps
Protection	- overvoltage protection TVS 600W - electronic protection against overloads and short circuit on line
Power supply - recommended range	
DC power	8V to 28V
AC power	8V to 20V
Protection	overvoltage protection TVS 600W
Power consumption	0.3W to 1W. Depends on M-Bus line load, communication and power voltage.
Temperature	
Operating range	0°C to 80°C

Mechanical parameters of the converter

The converter is built in a standard plastic box designed for mounting on a 35 mm DIN rail. The converter has a very small width of just 17.5mm. Weight of the converter is 46g.



EMC compatibility

EMC compatibility of the M-Bus converter has been tested according to the following habitable environment standards in an accredited laboratory.

EMC emission tests

Standard	Test	Level
EN 55022	Power line - CONDUCTED EMISSIONS 10/150 kHz - 30 MHz	Class B
EN 55022	RADIATED EMISSIONS (Electric Field) 30 MHz - 1000 MHz	Class B

EMC immunity tests

Standard	Test	Level
EN 61000-4-2	ELECTROSTATIC DISCHARGE (ESD) - Contact discharge	$\pm 4\text{kV}$
EN 61000-4-2	ELECTROSTATIC DISCHARGE (ESD) - Air discharge	$\pm 8\text{kV}$
EN 61000-4-4	ELECTRICAL FAST TRANSIENT/BURST - Power line	$\pm 4\text{ kV}$
EN 61000-4-4	ELECTRICAL FAST TRANSIENT/BURST - M-Bus line	$\pm 4\text{ kV}$
EN 61000-4-5	SURGE IMMUNITY - Power line. Common/differential mode.	$\pm 1\text{kV} / \pm 0,5\text{kV}$
EN 61000-4-5	SURGE IMMUNITY - M-Bus line. Cable shielding.	$\pm 4\text{ kV}$
EN 61000-4-5	SURGE IMMUNITY - M-Bus line. Common/differential mode.*	$\pm 2\text{kV} / \pm 1\text{kV}$
EN 61000-4-6	CONDUCTED DISTURBANCES, INDUCED BY RADIO-FREQUENCY FIELDS 0,15MHz - 80 MHz. Power line and M-Bus line.	3 V

* Test carried out at the request of the manufacturer. The M-Bus port of the converter achieves the highest level of overvoltage protection according to the EN 61000-4-5 standard. Carrying out this type of test is not required with the use of shield cable. Reaching the highest level of protection on the M-Bus port also guarantees the highest achievable reliability of the converter. The M-Bus interface often poses the greatest risk of overvoltage and the ensuing destruction of the converter.

Manufacturer:

Juraj Čaplický – Elektronika

Adress: Bôrická cesta 103, Žilina 010 01 **Phone:** +421 908 854 675

IČO: 46 144 927 **DIČ:** 1079938233 **IČ DPH:** SK1079938233

WEB: www.prevodniky.sk **E-mail:** service@prevodniky.sk, office@prevodniky.sk

