R080 Data converter USB–RS485

Summary

R080 is a service USB to RS485 converter. It is used to link RS485-based devices or networks of those devices to a PC. Keep in mind R080 is service tool and it is not for permanent communication with a RS485 network.
R080 is replacement for converter M080.

Application

- **Addressing and setup of Domat I/O modules, room units and room controllers**

Function

After the drivers are installed and the converter is connected to the USB port of the computer, a virtual COM port is created. This port can be used by any PC software to communicate with a RS485 bus in the same way as if the bus devices were connected directly to a native serial port. Converter R080 connects to the PC by USB A-B cable (1.5 m) which is included in scope of delivery.

A very important feature is galvanical separation of the USB port from the RS485 bus. It brings high tolerance to EMC issues even in a harsh industrial environment.

Three LEDs indicate proper communication with the driver, and transmission and reception of data.

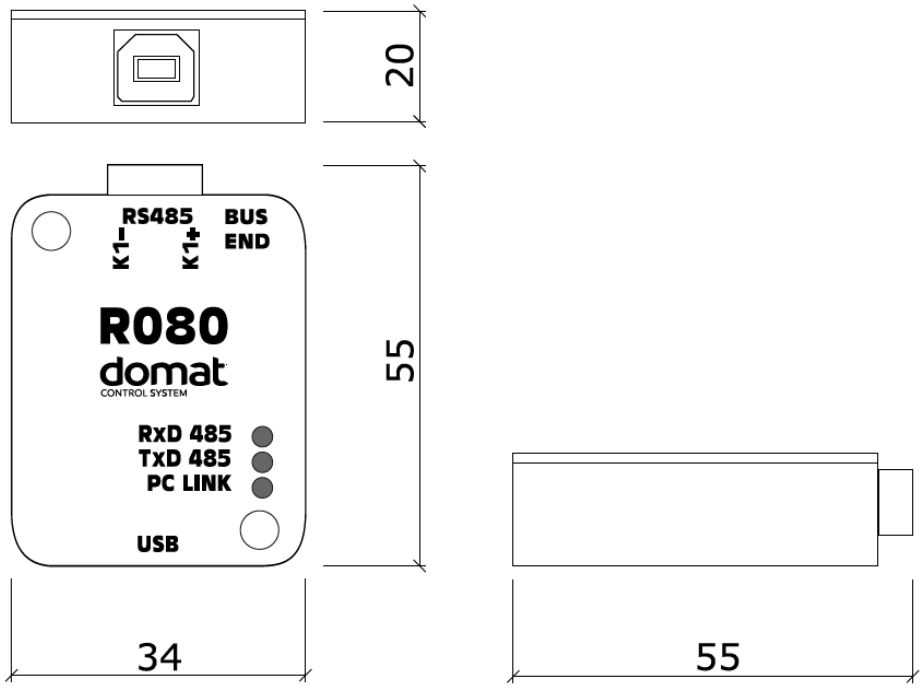
To configure and commission devices connected through controller use **ModComTool**, which is free to download at http://domat-int.com/en/downloads/software.

Technical data

Power	Powered via USB
Galvanic insulation	1 kV
Communication	RS485, Modbus RTU, 300 až 2304200 bit/s
SW	ModComTool (4.2.4.6 and above)
Terminals	Screw terminals M3, recommended wire 0.35…1.5 mm^2
Protection degree	IP20 (EN 60529)

Housing	UL94-V0
Dimensions	55 × 34 × 20 mm
Ambient conditions	external conditions: EN 60721-3-3. climatic class 3K3 (5…40 °C; 5...85 % relative humidity, non-condensing gases and chemically non-agressive conditions). storage: EN 60721-3-1 climatic class 1K2 (5…40 °C; 5…85 % relative humidity, non-condensing gases and chemically non-agressive conditions).
Standards of conformity	EMC EN 61000-6-2 ed.3:2005 + Cor.:2005-09, EN 61000-6-4 ed.2:2007 + A1:2011 (industrial enviroment) electrical safety EN 60950-1 ed.2:2006 + A11:2009 + A12:2011 + A1:2010 + A2:2013 + Corr.1:2011-10 hazardous substances reduction EN 50581:2012

Dimensions



Dimension are in *mm.*

Terminals

Terminals and connectors	
K1+	serial line RS485 +, BMS communication
K1-	serial line RS485 -, BMS communication
USB	Connection to PC, USB type B female

LED indication	
PC LINK	green LED – communication with PC drivers is ok
RxD 485	green LED – RS485 receiving data
TxD 485	red LED – RS485 transmitting data

DIP switches

BUS END RS485 bus termination

Safety note

The device is designed for monitoring and control of heating, ventilation, and air conditioning systems. It must not be used for protection of persons against health risks or death, as a safety element, or in applications where its failure could lead to physical or property damage or environmental damage. All risks related to device operation must be considered together with design, installation, and operation of the entire control system which the device is part of.

Changes in versions	04/2020 – First datasheet version. 08/2021 – Stylistic adjustments, change of logo.