

## INTERFACES

RS232

RS485

M-Bus

Current Loop

GSM-R

GSM/GPRS

4 x Discrete IN

USB

IP65



## FEATURES

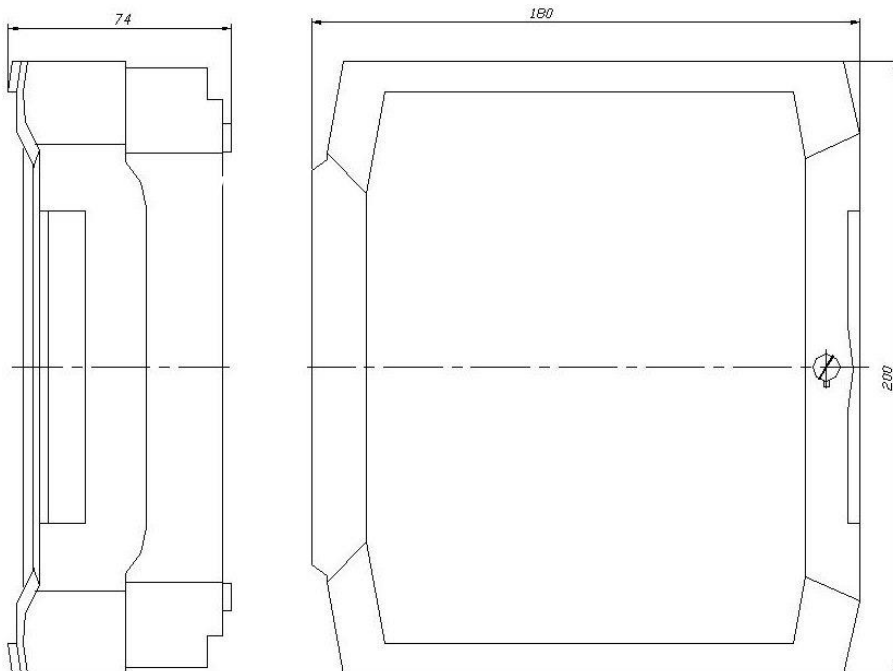
- GSM-R band for the railway network
- Supported interfaces: M-Bus, RS232, RS485, Current Loop, 4 x Discrete Input, GSM/GPRS, GSM-R
- 1 x SIM card slot
- Option: Mounting set for DIN rail
- Extended temperature range -25°C ... +60°C
- Remote communication over GSM/GPRS or GSM-R
- Galvanically isolated interfaces and power supply

Data logger / gateway is designed for the GSM-R band, which is used in the railway sector.

**RAIL-1** data logger / gateway is dedicated for collecting the data via various devices and meters via various interfaces and various protocols and sending of the data via special Railway GSM-R (GSMR) band.

The device is very universal and robust (IP65), and dedicated for railway industry.

RAIL-1 can also communicate with other controllers and sensors. Device has wide range of optional interfaces and protocols and can read any kind of meters, controllers and sensors equipped with standard protocols. Perfect for telemetry/monitoring, control and smart metering in Railway industry.



## TECHNICAL SPECIFICATIONS

<b>Description</b>	<b>data logger</b>
CPU	ARM7
Flash	archive storage up to 8 MB, independent data storage without power about 5 years
<b>Interfaces</b>	
RS232 (4 ports)	distance up to 15 m, speed up to 19,2 Kbit/s
RS485 (2 ports)	distance up to 1,2 km, max 32 transivers, speed up to 19,2 Kbits/s
M-Bus (1 port)	up to 8 M-Bus devices
Current Loop (2 ports)	25-27V, 14-20mA, up to 6 km, speed up to 19,2 Kbit/s
GSM/GPRS	4 band 850/900/1800/1900 MHz
GSM-R	band for the railway network
Discrete Input	4 sink contacts
<b>Protocols</b>	
Modbus RTU, Modbus TCP/IP, IP, ICMP, UDP, TCP, DHCP, PPP, ARP, SNTP, IEC60870-5-104:2000	
<b>General</b>	
One-phase power	50–270V~, 50-60Hz
Three-phase power	50–270V~
Galvanic isolation	>1000V
Capacity	100mA max
Internal battery	3,7V 750mAh
Interface galvanic isolation	500V
<b>Physical characteristics</b>	
Dimensions	180 x 200 x 75 mm
Weight	685 g
Mounting type	on DIN rail
Protection type	IP65
<b>Climate conditions</b>	
Operating temperature	-25 to +60°C
Storage temperature	-40 to +60°C
Humidity range	5 – 95%, non-condensing
<b>Programing and updating</b>	
Remote	GSM/GPRS or GSM-R
Locally	RS232 or RS485
<b>LED indication</b>	
+3,3V – Voltage ON (processor operational)	
IND1 – Status (Status heard beat)	
IND2 – GPRS signal depth	
IND3 – Reserved	
IND4 – Reserved	
MODEM STATUS – GSM/GPRS modem status	
DIN1, DIN2, DIN3, DIN4 – status of discrete input, for each port	
BAT STATUS – battery status (Charging – red, Charged – green, No Power – LED is not on)	
UART2 RX/TX – serial port read/write (RX– green / TX – red)	
UART3 RX/TX – serial port read/write (RX– green / TX – red)	
MODEM RX/TX – GSM/GSM-R modem status (RX – green / TX – red)	
<b>Other features</b>	
Real time clock	+
M-Bus auto setup	+
Warranty period	2 years

## ORDERING CODE

RAIL-1.	A	B	C	D	E.	F.	G.	H
0 – None 1 – GSM-R 2 – RS232 3 – GPRS/GSM								
0 – None 1 – RS485 2 – RS232 4 – M-Bus 5 – Current loop								
0 – None 1 – RS485 2 – RS232 5 – Current loop								
0 – None 2 – RS232								
0 – None 1 – 4 x discrete inputs (if power supply is in the device) 2 – 4 x discrete inputs (if battery is in the device)								
0 – None 1 – Supply current control								
0 – None 1 – Back up battery								
3 – One phase power supply 50-270 V AC 4 – Three phase power supply 50-270 V AC								

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