

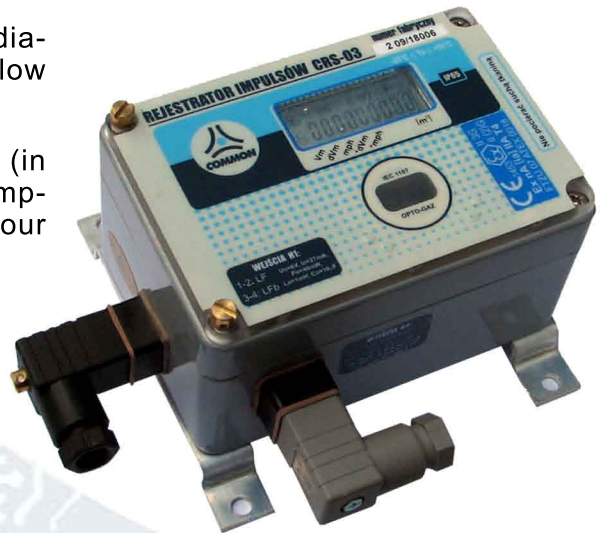


# CRS-03 DATA LOGGER

The CRS-03 Data Logger is dedicated to work with diaphragm, turbine, and rotary gas meters equipped with low frequency reed contact pulse transmitter.

Its main task is to record the uncorrected volume of gas (in real/actual conditions) and to determine the “peak consumption per hour”, i.e. highest gas consumption during 1 hour and the moment of its occurrence.

A build-in display is permanently active what gives the user an easy access to important data. The data from CRS-03 can be transmitted by SMS messages (using internal GSM module), or can be transmitted by OPTO-GAZ link. CRS-03 device configuration can be set either remotely or locally.



## FEATURES

- User-friendly; flexible communication between user and the CRS-03 Data Logger assured by:
  - LCD with clear & sharp display in the whole range of ambient temperatures,
  - Possibility of local configuration and data readout by direct access via OPTO-GAZ optical interface,
  - Database software which enables to read out automatically the device
- Two inputs:
  - LF low frequency reed contact pulse transmitter connected with Vm (V1) counter ( $f < 10\text{Hz}$ ),
  - LFB control switch, change of the input state may cause immediate alarm via SMS (Short Text Message). Used with anti-fraud contact on the gas meter, for signalling a broken pulse conduit, or in case of manipulation detection,
- Minimum 5 years of operation without necessity of battery replacement (for standard working conditions),
- Recorded data (every 1 hour) stored for at least 280 days,
- Changeable reporting period and the time of sending, possibility of sending detailed data “on request”.

## COMMUNICATION

- Via SMS messages – built-in 900/1800 GSM module assures duplex communication via SMS messages between server and the CRS-03 Data Logger as well as configuration of the CRS-03 Data Logger. Standard message consists of Vm (V1) counter state, increase of reporting period, “peak consumption per hour” in reporting period, date and time when “peak consumption per hour” occurred, date and time of sending the report, battery status, average temperature in reporting period, actual GSM signal level, volume increase above nominal power, hourly volume increase. On request, detailed hourly data are sent.
- Via OPTO-GAZ which enables to read out the recorded data locally and to configure the device.

## RECEIVING SERVER

Receiving server, working continuously, consists of:

- GSM modem, or direct connection to SMS box on the GSM operator’s server,
- Computer with software which allows data readout, data storage, and device configuration. Software provided by Common S.A. allows: device configuration, automatic handling of all corresponding devices (i.e. sending orders to all/chosen group of devices), and making user defined reports in requested period of time.

# TECHNICAL DATA

## DISPLAY

9-digit LCD display with symbols (battery status, OPTO-GAS, Rx, Tx, GSM signal etc.), clear & sharp picture in the whole range of ambient temperatures.

## DIMENSIONS

110x75x60 mm without connectors

## ANTENNA

Internal or external (option)

## CLOCK

Internal clock synchronized with GSM network

## INTRINSIC SAFETY DESIGNATION

**II 3G(2)G Ex nA[ia] IIA T4** – guarantees the possibility of connecting data logger's LF circuits to danger zone 1 or 2 and mounting the CRS-03 Data Logger in the direct vicinity of the gas meter (inside container, case, etc.)

## WORKING CONDITIONS

Ambient temperature range: **-25°C to +55°C**  
Temperature range of the GSM module: **-20°C to +55°C**  
IP protection: **IP65**

## SUPPLY

Internal lithium battery guarantees 5 years of operation without the necessity of replacement for standard working conditions

## OUTPUTS (OPTION)

**OUT** - pulse signalling output which informs about exceeding the contractual power (configured by OPTO-GAZ) and LED (light-emitting diode) which informs about the state of the output (excess)

**OUT-LF (OUT-LF2)** - pulse output mapping LF internal signal (i.e. for further process in automation devices)

## MEMORY OF RECORDED DATA

Data about alarms/events **256 logs**  
Registered data logs **Minimum 9 months (recorded every hour)**  
Daily data logs **128 days**  
Monthly data logs **32 months**

## COMMUNICATION PROTOCOLS

GAZ-MODEM 1  
GAZ-SERWIS  
SMS (own format of sending data)



Sample screenshots of the display

## COMMON S.A.

ul. Aleksandrowska 67/93  
91-205 Łódź, Poland  
tel. +48 42 253 66 00  
fax. +48 42 253 66 99

email: [common@common.pl](mailto:common@common.pl)  
website: <http://www.common.pl>

