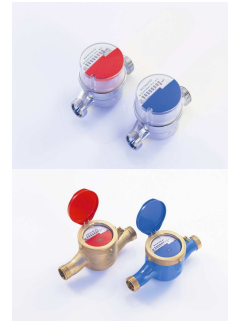# Supercom 581

Radio Module for Wehrle Modularis water counter

Application

The retrofittable radio module **Supercom 581**, suitable for the large range of water meters of E. Wehrle GmbH

- Modularis single-jet and multi-jet dry-rotor meters
- Modularis cylindrical piston meters
- and various versions of EAS-Modular measuring capsules,

can be retrofitted at any time without impairing the calibration. The bidirectional Sontex radio system Supercom allows the readout of the consumption data via a mobile radio modem or directly from the office of the billing service over the radio central installed outside the flat.

For the Wehrle capsule water counters MTK and MTW, various housings for all types of pipe connections for flush or surface mounting and for valve connection are available. The compatible connection threads for third-party products allow a cost-effective change-over to the retrofittable Modular-EAS-technology at all metering points.

Function

The battery-operated radio module **Supercom 581** scans the volume pulses of the water meter, accumulates them and stores the consumption data.

The scan guarantees a precise and correct detection of the backward and forward modulation indicator motion. The radio module is equipped with a manipulation protection. If the housing of the radio module is removed and/or opened, the electronic manipulation protection triggers an error message.

Stored Data

The consumption data stored in the radio module **Supercom 581** can be read out with a mobile radio modem or with a permanently installed radio central.
The following data are stored:
- Identification number (serial number water meter)
- Medium: cold or warm water
- Serial number (radio module)
- Current time and date
- Accumulated volume
- 15 monthly values
- Operating hours of battery
- Manipulation protection: storing of the duration of the last manipulation with date and the accumulated duration of all manipulations in minutes
- Magnetic contact detection: with date of the last magnetic contact detection and the accumulated duration of all manipulations.
- Pulse value
- Number of counter resets

Delivery Mode

Ex factory, the radio module is in delivery mode and the function for date and time (winter time) is activated. All further functions are deactivated until commissioning. Ex factory, the serial number is also parameterised as identification number. The serial number is always identical with the radio address.
- In delivery mode, no readout over radio is possible.

Commissioning

The radio module **Supercom 581** is mounted onto the water meter in accordance with the installation instruction. The radio module is equipped with an automatic manipulation detection.
- As soon as the radio module is mounted onto the water meter, the contact of the manipulation detection is closed.
- Thereafter, it changes automatically from delivery mode to installation mode.
- In installation mode, all functions are activated and the radio module can be read out at any time.

Installation mode up to serial number 0931xxxx (radio address)
- As soon as the radio module recorded at least 3 consecutive volume pulses, it will change automatically from installation mode to operating mode after midnight.
  !If, during this period, the required volume pulses are not recorded, i.e. no water flow, *the radio module switches over to delivery mode again*. The radio module has to be dismounted and then mounted again in order to reach the installation mode again!

Installation mode as from serial number 0932xxxx (radio address)
- As soon as the radio module recorded at least 3 consecutive volume pulses, it will change automatically from installation mode to operating mode after midnight.
  ! If, during this period, the required volume pulses are not recorded, i.e. no water flow, *the radio module remains in installation mode*. The radio module has to record 3 consecutive volume pulses within one day to switch over to operating mode!

- In operating mode, the radio module can be readout from 06.00 to 20.00 on all 7 days of the week.

With the radio readout and parameterisation software Sontex 912, the following parameters can be programmed for commissioning:
- Identification number (serial number water meter)
- Date and time
- Medium: cold or warm water
- Pulse value
- Initialisation of initial value (also for monthly value)
- Reset to delivery mode
- Set to standard mode

To check the correct installation and commissioning, it is necessary to test the readout over radio.
When resetting the radio module to delivery mode, the volume and the 15 monthly values are automatically set to zero.

Technical Data

General
Versions	Qn 1.5 - 3.5m^3/h or
	Qn 6 - 15m^3/h
Pulse value	1 l/Imp
Operating temperature	5° to 55°C
Storage temperature	-20 to 70°C

Housing
Protection class	IP52 or IP68

Radio
CE **Conformity acc. to R&TTE 1999/5/CE**

Method	FSK, bidirectional
Frequency	433.82 MHz
Protocol	Radian, EN60870-5 (M-Bus)
Baud rate	2'400 Baud
Range	approx. 30 m*

* Values depend on building-specific peculiarities and have to be examined if necessary. Due to physical conditions, the transmission and reception ranges can vary in buildings or be completely impossible.

Data Memory
EEPROM	daily storing

Electronic Data
Current supply	3V long duration lithium battery
Service life	
Qn 1.5 - 3.5m^3/h	10 years
Qn 6 - 15m^3/h	10 years

Optical Interface
Protocol	EN60870-5 (M-Bus)
Baud rate	2'400 Baud

Dimensional Drawing
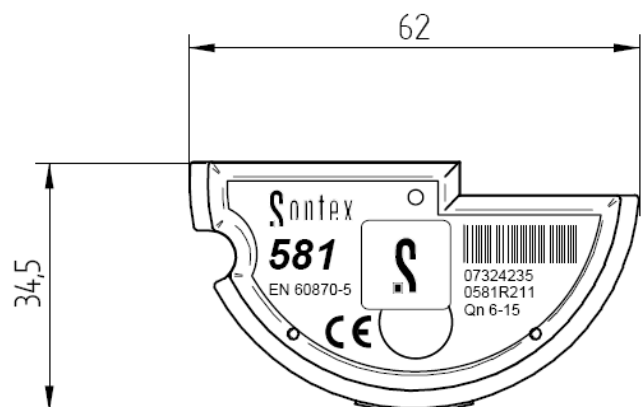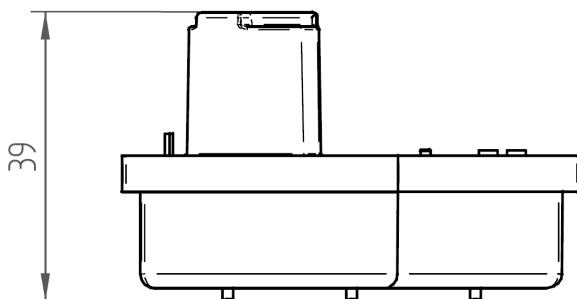
Installation

Please note:

After installation, the radio module has to be protected with user seals to avoid unauthorized access.

Sontex expressly points out that the data transmission via mobile radio depends on the radio-technical propagation conditions at the place of installation and that under certain atmospheric or geographic conditions (especially within closed locations or in so-called radio shadows), radio communication cannot be established at any time and at any place. It is exclusively up to the user to check the radio-technical propagation conditions at the intended place of installation.

Operation and Maintenance

Attention:

The lithium battery is not rechargeable. It is mandatory to dispose of the battery environmental friendly or to return it after use to the manufacturer for appropriate disposal! The opening or damaging of the housing of the radio module voids all warranty claims. The user seals may only be removed by authorized personnel for service purposes and have to be renewed afterwards.

Technical Support

For technical support, please contact your local Sontex agent or Sontex SA directly.

Hotline Sontex:
sontex@sontex.ch
+41 32 488 30 04

CE **Declaration of conformity acc. to R&TTE 1999/5/CE**

The detailed declaration of conformity can be found on our homepage: www.sontex.ch

Technical modifications subject to change without notice
Data Sheet Supercom 581 EN 070709

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