

# Apartment meter module

Vane wheel, cold and warm tap water  
Residia Jet

AT 7275RES

## Internet variants

### Range of application

Remote reading module for meter. Mounted on the apartment meter type AT 7080 and 7085.

### Quality assurance

#### CE-marked

The product has performed the requirements for electromagnetic compatibility in accordance with EEC Directive 98/34, European Standard EN61000-6-1

### Function and design

The module inductively reads the number of rotations on the metal indicator located under the glass on the water meter's display board. The relation between the number rotations and the read pointer is equal to  $D$ .  $D$ =number of liters per pulse and found in different pulse numbers, e.g 1, 10 and 100.

The AT 7275RES has a built-in lithium battery for more than 10 years of operation. Measurement value and settings are maintained in case of power failure (e.g M-bus loop failure). In case of power failure, the data bus (M-bus and Mini-bus) will continue to register the values.

- M-bus module (Residia-M), for systems conforming to EN 13757-3 (IEC 870/EN 1434-3). The telegram displays the meter index and manufacturing number. The resolution of the meter index is 1 liter. Reading can be done via primary or secondary addresses.
- Pulse module (Residia-P), for digital pulses to e.g counter. The pulse output takes into account the flow direction of the meter(possibly reversed flows). Reversed flows must be compensated with identical advances before any more pulse signals are given. This means that no pulse signals are given during this time, even if the meter recalculates. The module can be delivered with pulse weight 1, 10, 100 or 1000 liters per pulse. You can not change the pulse weight. The pulse is of the type open collector and is potentially dependent.
- Radio module (Armatec), fully compatible with "Armatec radio system".



AT 7275RES

### Accessories and options

	Ordering number
- <i>M-bus module</i> (Residia-M), can be parameterized as desired, For example, primary dressing is indicated when ordering	
- M-bus module, mounted on the meter and parametric	AT 7080A-15VVM, 7080A-15KVM, AT 7085A-15VVM, 7085A-15KVM
- <i>Radio module</i> (Armatec radio)	AT 7275ARES-R

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## Technical data

### M-bus/Mini-bus module, Residia-M, AT 7275RES-M

<b>M-bus interface Protocol</b>	Automatic speed recognition (300/2400 Baud) acc. EN13757-3 equiv. IEC 870/EN1434-3
<b>Data</b>	Manufacturing number, date/time stamp, manufacturer, Media, Model/Version, Accumulated volume (1 liters resolution). Volume flow Accumulated negative volume, measurement site-ID, logged values
<b>Addressing</b>	Primary address (=000 By default, can be programmed before or after delivery) Secondary address (sensor manufacturer's number)
<b>M-Buslast</b>	1 unit load (1,5 mA)
<b>Cable length</b>	1,5 m can be extended in accordance with the M-Bus standard.
<b>Battery</b>	3 V Lithium, > 10 year's Life span With unbroken cable, life expectancy increases > 15 år. In case of cable failure, the battery supplies the storage function and meter registration.
<b>Ambient temperature</b>	
- For transport and storage	-20...+65° C
- In operation	-10...+65° C
<b>Protection</b>	IP 65 (mounted), IP 54 (unassembled)
<b>Weight</b>	30 g

## Technical data, pulse module

### Pulse module, Residia-P, AT 7275RES-PD..

<b>Type</b>	Open collector ISO/TC30 (polarity)*
<b>Vmax / Imax / Pmax / fmax</b>	30V / 20mA / 0,48VA / 5 Hz
<b>Max volt vid stängt relä</b>	0,7V+I*47Ω
<b>Pulse length</b>	124 ms
<b>Cable length</b>	1,5 m
<b>Battery</b>	3 V Lithium, > 10 year's life span
<b>Ambient temperature</b>	
- For transport and storage	-20...+65° C
- In operation	-10...+65° C
<b>Protection</b>	IP 65 (mounted), IP 54 (unassembled)
<b>Weight</b>	30 g

\*To get a potential-free pulse, the AT 7281-2PCD must be mounted after the pulse sensor.

## Technical data, Armatec radiomodul

### Armatec radiomodul, AT 7275ARES-R

<b>Power supply</b>	3,6 V/1,6 Ah, lihtium-battery
<b>Battery life span</b>	5 år
<b>Radio frequency</b>	868 to 868,6 MHz
<b>Transmission power</b>	5mW
<b>Ambient temperature</b>	
- For transport and storage	-20 to 50°C
- In operation	-20 to 50°C
<b>Protection</b>	IP 32
<b>Weight</b>	

Rätten till ändringar utan föregående meddelande förbehålls.  
Armatec ansvarar inte för eventuella tryckfel eller misstänksänd.  
Dokumentet får kopieras endast i sin helhet.

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AT 7275RES

## Technical data, wireless M-bus module

Wireless M-Bus module, AT 7275RES-WM	
Power supply	3,6 V/1,6 Ah lithium-battery
Battery life span	5 years
Radio frequency	868,7 to 869,2 MHz
Transmission power	5mW
Ambient temperature	
- For transport and storage	-20 to 50°C
- In operation	-20 to 50°C
Protection	IP 32

## Installation

When installing the remote reading modules, the sealed cover is removed and replaced with the remote reading module. Protective film on the underside of the module must be removed before assembly. The supplied sealing tape is attached over the joint between the meter housing and the remote reading module to detect engagement or manipulation.

### Remote reading module:

The primary M-bus address is preset to 000, the secondary address corresponds to the M-bus module manufacturing number. Addressing as well as the meter's starting value can be set according to the M-bus standard, service software MiniCom 3 is available for downloading on Armatec's website.

### Signal cables according to:

M-bus module: Green=Data cable, Brown=Earth

Pulse module: White=Pulse (+), Brown=Earth

## Maintenance and spare parts

The battery is not replaceable. After battery life, the entire module is replaced.

## Marking

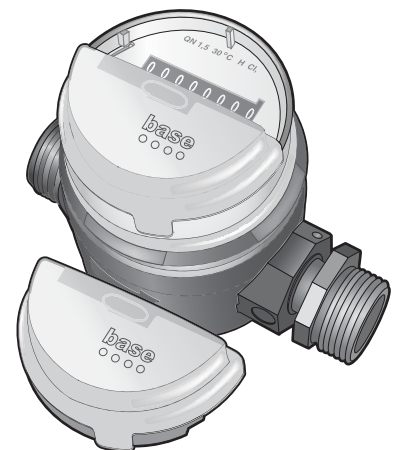
The remote reading modules are marked as follows:

- Residia-P : Pulse module with pulse value D=1, 10 etc.
- Residia-M : M-bus module
- Residia-R : Radio module

Every remote reading module has an 8-digit manufacturing number. For the M-bus module, this corresponds to the secondary suit.

## How to order

	Ordering number	RSK-number
- M-bus module for apartment meter AT 7080/7085	AT 7275RES-M	518 20 49
- Pulse module with pulse number 1 pulse/liter	AT 7275RES-PD1	518 20 50
	AT 7275RES-	
- Puls module with pulse number 1 pulse/10 liters	PD10	518 20 50
	AT 7275RES-	
- Puls module for pulse number 1 pulse/100 liters	PD100	
- Radio module for Armatec Radio	AT 7275ARES-R	



AT 7085