## **Remote Monitoring of Heat Meters**

## Smart Radio Modules



**Smart heat modules,** designed by AIUT, ensure flawless data transmission from most heat meters available in the market. The modules read current data with the configurable frequency and send the received information via unidirectional local radio or cable communication. Their state of the art engineering design guarantees 5 years battery life time with daily data transmission. The modules can be easily retrofitted inside an already operating heat meters without interfering their regular work and internal systems. The installed modules do not affect tightness or any other environmental parameters of the heat meters.

Each module has its own unique identification number for clear assignment to the heat meter in the system and simultaneous installation of many modules within their radio range.

aiut

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#### Smart Radio Modules



AKAM 1	KAMSTRUP	
Supported heat meters	<ul><li>Multical 403</li><li>Multical 603</li></ul>	
Dimensions	• 34mm x 90mm	



AKAM 16x5			KAMSTRUP
Supported heat meters	1	Multical 601 Multical 601+ Mulitcal 602	
Dimensions	•	47mm x 93mm	



AKAM 1	5x5	5	KAMSTRUP
Supported heat meters	ł	Multical 402	
Dimensions	2	43mm x 68 mm	

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AKAM 1	<b>0</b> x5	5	KAMSTRUP
Supported heat meters	÷	Multical 66-CDE	
Dimensions		47mm x 93mm	



ALAND 1	SIEMENS		
Supported heat meters	;	2WR4 2WR5	
Dimensions	•	53mm x 92mm	



ALAND	LANDIS&GYR		
Supported heat meters	÷	Ultraheat 50 (UH50)	
Dimensions	•	30mm x 84mm	



ACTAR 1	ACTAR 12x5		
Supported heat meters	1	CF ECHO II CF 51 CF 55	
Dimensions	•	62mm x 92mm	

### AKAM/ALAND/ACTAR 1vw5 y\*z\*

- v supported heat meter
- w type of radio interface
- **6** radio 868/915 MHz FSK
- 7 radio 868/915 MHz FSK + cable transmitter

#### y - power supply

**0** - battery powered

#### z - hardware modifications

- **0** no modifications
- **2** one pulse counter (of heat module)
- **3** two pulse counters (of heat meter)
- 6 two pulse counters (of heat module)

**Heat metering system by AIUT** comprises of on-site devices, such as battery powered or mains powered OKO/ AMPLI data gateways and heat and water smart modules. The meter data is transferred remotely using wireless radio transmission (868 MHz) or transmitted by wire (IMR BUS, MBUS) to the gateway that sends it over IoT network to the server.

Optionally, up to two additional water meters can be cable connected to the smart heat module. Their readouts are transferred to the gateway within the radio frame from the module.



**The installation procedure** is very intuitive, can be performed in a couple of minutes and does not require on-site configuration. Simply press the diagnostic button for 5-7s (read the details on the product packaging) to wake up the module from seal-run mode [1] and connect it to the heat meter [2]. Optionally, cable connect the module to OKO/AMPLI data gateway [3].



Press the button for 5-7s



Open the cover of the heat meter and connect the module



Cable connect the OKO/AMPLI data gateway

#### Data structures

- Device status
- Battery level
- Time of the last readout
- Current energy and energy from the last month
- Current volume and volume from the last month.
- Supply and return temperatures
- Current power and maximum power from the last month.
- Current flow and maximum flow from the last month.
- Working time
- Working time with error\*
- Error code
- Read volume of the 1st and 2nd additional water meter

#### **Cable interface**

- Connection with external radio module
- Range: ~100m

#### **Environmental specification**

- Operating temperature: -25°C to +60°C
- Usage environment: indoor

#### **User** interface

Status LED & push button

#### **Radio interface**

- Frequency: 868 MHz, <10mW</li>
- Range: up to 150m

#### **Power supply**

- Type of battery: replaceable , 3,6V DC 2,75 Ah SAFT Lithium LS 14500C
- Battery lifetime: 5 years

#### \*Except versions AKAM 10x5, AKAM 13x5, AKAM 15x5

SHM\_HeatModules\_EN\_

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