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Switch2 Energy Solutions Limited  
High Mill, Cullingworth, Bradford, West Yorkshire BD13 5HA, UK



## 2WR6 Ultrasonic Compact and versatile heat meter



Reliable, long life  
Wear-free ultrasonic technology  
Low running costs

### Enter a whole new world

Meters that are not only accurate and permit easy billing but that are also absolutely reliable, long-life, and low cost are in demand in building services technology.

2WR6 Ultrasonic offers you all that – completely without mechanically moving parts, which are not required for ultrasonic measurement. The measuring tube has an all-metal design.

**Highest measurement accuracy**  
2WR6 Ultrasonic measures flow rate by the ultrasonic dragging principle. Two transducers alternately transmit ultrasonic signals in and against the direction of flow. The flow rate can be precisely measured from the difference between the measured propagation times.

### Completely non-wear

Ultrasonic measurement requires no mechanically moving parts. The measuring tube itself has a robust all-metal design. The benefit for you is a long service life and simple, low-cost inspection and recalibration.

### Reliable operation

2WR6 Ultrasonic features enormous measurement dynamics. That is the reason the volume measuring units can be loaded up to twice the nominal load qp. The response limit remains at a constant low level during the entire calibration period.

### Variable mounting orientation

2WR6 Ultrasonic does not require a straight pipe section and can be installed any way round. The mounting orientation does not affect the measurement accuracy or the measuring dynamics. And

the principle has other advantages: 2WR6 Ultrasonic is insensitive to small particles in the hot water and operates silently.

### Stored meter readings

Both the consumer and the measuring service benefit from the stored meter readings on a freely selectable annual set day or at the end of the month. The readings for the last 15 months for heat, volume, and missing time are shown on a practically configured display.

### Generously sized display

The displays on the generously sized display are clearly structured and easy-to-understand, divided into an easily accessible customer area and a service area. Not only instantaneous values but also set day values and monthly values can be shown. Display of all consumption values facilitates traceability and heat billing.



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**Tried and tested**

Ultrasonic meters have been successful in tough district heating applications for two decades. Numerous German and other random sample tests have proven its high measuring accuracy. This positive result is confirmed by verification tests according to the K20 Guideline of the PTB (German Federal Institute of Physics and Metrology).

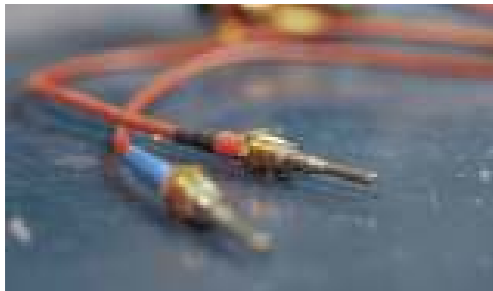


**Future-oriented**

Ultrasound technology is a sensible and future-oriented basis for heat measurement – in both economic and ecological terms. The advantages are obvious: technical superiority and no wearing parts. It is the excellent reliability that counts.

**Standardized lengths**

To ensure simple exchangeability, the mounting lengths correspond to the standard dimensions of vane-type meters. The nominal sizes  $q_p$  0.6/1.0/1.5, and 2.5 are available.



**Tailored selection – the temperature sensor**

ULTRAHEAT XS works with permanently connected Pt 500 temperature sensors. We can supply not only the standard sensor DS M10 x 27.5 mm for direct installation but also 5.2 x 45 mm sensors for pockets – with cable lengths of 1.5 m or 5 m. Installation accessories are available for the flow sensor whereas the return sensor is already mounted in the volume measuring unit.

**Big features in a small space – the calculator**

With its compact calculator, the 2WR6 Ultrasonic heat meter easily fits into a mounting box. For optimum readability, it can be rotated on the measuring tube in 90° steps and can also be mounted up to 1 m away even in the series version. The mounting plate can be used as a wall holder. The electronic unit also features an optical interface and options for remote reading, such as M-Bus or pulse output. And, of course, it is testable on NOWA test stands.



**Technical data of electronic unit**

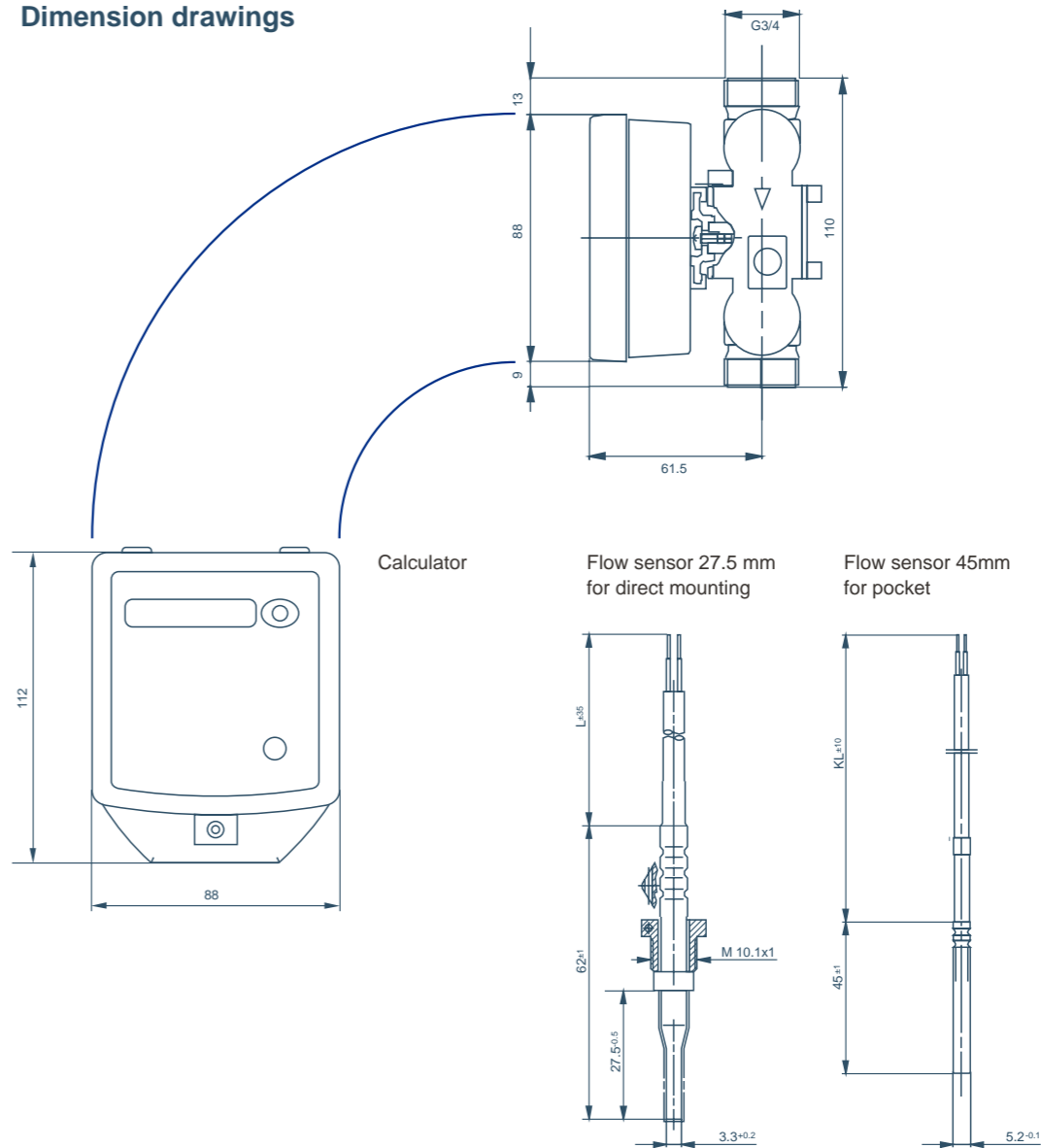
Temperature range	15 - 105	°C
Temperature difference range	3 - 80	K
Response threshold	0.2	K
Length of control line	100	cm
Degree of protection	IP 54	
Power supply	Battery for 10	years
Ambient temperature	5 - 55	°C
Outputs	Pulse or Mbus	

**Technical data of measuring tube**

	15mm	20mm
Nominal flow rate $q_p$	1.5	2.5
Maximum flow rate $q_s$	3.0	5.0
Minimum flow rate $q_i$	0.015	0.025
Mounting length	110	130
Thread connection	G 3/4B	G 1B
Pressure drop $\Delta p_p$ at $q_p$	130	205

All versions at PN 16

**Dimension drawings**



All dimensions in mm