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You can read the recommendations in the user guide, the technical guide or the installation guide for HONEYWELL EW447. You'll find the answers to all your questions on the HONEYWELL EW447 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

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Honeywell

EW447-EW452 Series
Mechanical Heat Meters
FOR HEATING AND COOLING APPLICATIONS

PRODUCT DATA



Design

Hydronic meters of the EW447-452 Series consist of:

- Electronic energy integrator with fixed cable connection to the volume measuring component, supply and return temperature probe
- Mechanical volume measuring component with external threads according to ISO228 (DN15...DN40) or flanges (DN25...DN100)

Materials

- Housing of electronic energy integrator made of plastic
- Housing of mechanical volume measuring component made of brass (EW447, EW448, EW450 and EW451) or of cast iron (EW449 and EW452)

Application

Static compact heat meter with electronic measurement, consisting of electronic energy integrator and mechanical volume measuring component.

Metering of hydronic heating and / or cooling energy in hydronic systems based on volume, supply and return temperature. EW447-EW449 models are suitable for energy metering of heating systems.

EW450-EW452 models are suitable for energy metering of cooling and combined cooling and heating systems.

Features

- Electronic sensor control for recording flow rate
- Nominal size up to 60 m³/h
- Model 447/450 with direct electronic impeller scanning
- Model 448/449/451/452 with magnetic coupling for electronic scanning of sensor disc
- Lithium battery guarantees longer lifetime than calibration interval
- Optical ZVEI interface equipped as standard
- Primary interface
- Optional: M-Bus interface to EN 1434-3
- Optional: Pulse output for energy and volume for heat meter
- Pulse output for cold and heat energy in cooling & heat meter (open-collector)
- Adjustable reading date for billing
- Rotatable integrator
- RF version in preparation

Software

Hydro-Set software parametrization tool based on M-Bus and optical interface for

- Readout of measured values
- 18 final monthly values
- Value on readout date
- Error log
- Total down time
- Max. power
- Max. flow rate
- Max. temperature
- Operating hours
- Etc.
- Printing meter logs
- Meter configuration
- Readout date
- Primary address
- Limits for cooling & heat meter
- Reset of max. values

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Manual abstract:

Features · Electronic sensor control for recording flow rate · Nominal size qp 0.6 to qp 60 m3/h · Model 447/450 with direct electronic impeller scanning Model 448/449/451/452 with magnetic coupling for electronic scanning of sensor disc · Lithium battery guarantees longer lifetime than calibration interval · Optical ZVEI interface equipped as standard · Primary interface · Optional: M-Bus interface to EN 1434-3 · Optional: Pulse output for energy and volume for heat meter Pulse output for cold and heat energy in cooling & heat meter (open-collector) · Adjustable reading date for billing · Rotatable integrator · RF version in preparation Design Hydronic meters of the EW447-452 Series consist of: · Electronic energy integrator with fixed cable connection to the volume measuring component, supply and return temperature probe · Mechanical volume measuring component with external threads according to ISO228 (DN15...DN40) or flanges (DN25...DN100) Software Hydro-Set software parametrization tool based on M-Bus and optical interface for · Readout of measured values · 18 final monthly values · Value on readout date · Error log · Total down time · Max. power · Max. flow rate · Max. temperature · Operating hours · Etc. · Printing meter logs · Meter configuration · Readout date · Primary address · Limits for cooling & heat meter · Reset of max. values EN0H-2601GE25 R0809 Materials · Housing of electronic energy integrator made of plastic · Housing of mechanical volume measuring component made of brass (EW447, EW448, EW450 and EW451) or of cast iron (EW449 and EW452) Honeywell Subject to change EW447-EW452 SERIES MECHANICAL HEAT METERS Specifications Table 1. Specifications Medium Medium temperature Ambient temperature Operating pressure kvs(cv)-values Ambient class Protection class Type Measuring process Water quality to VDI2035 5..

.90°C (41...194°F) 5.

..55°C (41...131°F) - PTB approval PN16 see table below EN1434 class C IP54 Compact heatmeter to EN1434 EW447/EW450: direct electronic impeller scanning EW448/EW449/EW451/EW452: multijet impeller scanning via magnetic coupling with sensors LCD, 7-digit MWh - kWh - GJ - MJ - kW - m³/h - l/h - m³ - l 9 999 999 - 999 999.9 - 99 999.99 - 9 999.999 Power - Energy - Flow rate - Temperature Pt500 with 2-wire leads Pt500 peak < 2; rms 0,012 mA 32s 147K 3K 0.25K 0.

..150°C 3.0V lithium battery Table 2. Specifications Series qp m3/h m3/h l/h l/h m3/h mbar EW447/EW450 0.6 1.5 2.5 1.2 3 5 0.6 1.

5 2.5 6 15 25 2 4 6 1.22 3.04 5.08 243 243 242 EW448/EW451 3.

5 6 10 7 12 20 3.5 6 10 70 120 200 35 60 100 7 12 20 250 250 250 Temperature sensors Pt500 type temperature sensors to DIN EN 60751 are used as standard. The temperature sensors are permanently connected to the integrator. They have the following cable lengths: EW447/EW450 0.4m with sensor installed in volume measuring housing 1.

5m for sensor installation in corresponding supply/return pipe EW448/EW451 1.5m with sensor installed in volume measuring housing 3m for sensor installation in corresponding supply/return pipe EW449/EW452 2 x 6m for sensor installation in supply and corresponding return pipe 15 50 15 300 60 60 62 EW449/EW452 25 40 50 110 25 40 500 800 60 90 66 141 142 80 60 140 60 1200 90 190 100 Display Units Total values Values displayed Temperature sensors Sensor current Measuring cycle Max. measurable temperature difference Min. measurable temperature difference Energy billing from Absolute temperature measuring range (integrator) Operating voltage Maximum (qs) Nominal (qp) Minimum (qi) Starting kvs (cv)-value p at qp Function Integrator The integrator contains all the necessary circuits for recording flow rate and temperature and for calculating, logging and displaying the data. The meter can be conveniently read from a single line seven-digit display with units and symbols. @@@@A button is mounted on the front panel of the meter. This can be pressed for a short or long time. @@@@The display switches off automatically and changes to the power save mode if the button is not pressed for 5 minutes. Subject to change 3 Loop Overview Honeywell EN0H-2601GE25 R0809 EW447-EW452 SERIES MECHANICAL HEAT METERS EW447, EW448 and EW449 Series Main loop Service loop EN0H-2601GE25 R0809 4 Honeywell Subject to change EW447-EW452 SERIES MECHANICAL HEAT METERS EW450, EW451 and EW452 Series Main loop Service loop Easy operation A pushbutton mounted on the front of the meter is used to switch to the various displays. The button can be pressed for a short or long time.

A short press of the button (< 3 seconds) switches to the next display within a loop and a long press (> 3 seconds) switches to the next display loop. Honeywell Subject to change 5 EN0H-2601GE25 R0809 EW447-EW452 SERIES MECHANICAL HEAT METERS Dimensions Fig. 1. Dimensions EW447 and EW450 Fig. 2. Dimensions EW448 and EW451 Fig. 3. Dimensions EW449 and EW452 Table 4. Dimensions Nominal size DN size Body length Height of pipe axis to top Height of pipe axis to bottom Body thread Flange diameter Bolt circle diameter Weight L [mm] H [mm] h [mm] G [inch] D [mm] h [mm] [kg] qp [m3/h] 0.6 / 1.

5 15 110 75 G3/4B 0,9 2.5 20 130 75 G1B 1 3.5 / 6 25 260 110 45 G1 1/4B 2,9 10 40 300 125 50 G2B 5,1 15 50 270 125 84 Flanged 165 125 14,2 25 65 300 125 97 Flanged 185 145 18 40 80 300 160 102 Flanged 200 160 24 60 100 360 170 113 Flanged 220 180 28 Installation Position · EW447/EW448/EW450 and EW451: installation in any position possible · EW449 and EW452: installation only in horizontal position possible EN0H-2601GE25 R0809 6 Honeywell Subject to change EW447-EW452 SERIES MECHANICAL HEAT METERS Accessories Union nut, sealing and externally threaded red bronze tailpiece DN 15 VA7401A015 DN 20 VA7401A020 DN 25 VA7401A025 Sanpress red bronze compression-fitting with sealing DN15, for 15 mm pipe-Ø VA7404A015 DN15, for 18 mm pipe-Ø VA7404A018 DN20, for 22 mm pipe-Ø VA7404A020 DN25, for 28 mm pipe-Ø VA7404A025 Union nut, sealing and internally threaded red bronze tailpiece DN 15 VA7405A015 DN 18 VA7405A018 DN 20 VA7405A020 DN 25 VA7405A025 Ballvalve with connection for supply temperature sensor G1/2" internal thread G3/4" internal thread G1" internal thread EWA087HY004 EWA087HY005 EWA087HY006 Ballvalve with two side connections G1/4" internal thread and one blind stop G1/2" internal threads VB550SY2015 G3/4" internal threads VB550SY2020 G1" internal threads VB550SY2025 G1 1/4" internal threads VB550SY2032 G1 1/2" internal threads VB550SY2040 NOTE: Only available in packing units of 6 pcs or 8 pcs (3/4") For connection of supply temperature sensor adapter EWA354830 is required Tailpiece for connection of supply temperature sensor R1/2" external thread, M10x1 sensor thread G1/4" external thread, M10x1 sensor thread EWA087HY003 EWA354830 Brass immersion pocket (for use with MID meters) 35mm EWA3002684 52mm EWA3002685 85mm EWA3004406 120mm EWA3004407 Measuring Accuracy Tolerances to EN 1434 class 2 Typical Measuring RAY-HEAT Error [%] +5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5 10 100 1000 10000 Flow rate [m3/h] Fig.



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4. EW447 and EW450 Series Error [%] +5 +4 +3 +2 +1 +0 -1 -2 -3 -4 -5 qi qp Flow rate [m3/h] Fig.
5. EW448 and EW451 Series Error [%] +5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5 qi C qi B qp qs Flow rate [m3/h] Fig. 6. EW449 and EW452 Series Honeywell
Subject to change 7 ENOH-2601GE25 R0809 EW447-EW452 SERIES MECHANICAL HEAT METERS Flow Diagram 6 qp 0.6 qp 1.
5 qp 2.5 qp 3.5 qp 6 qp 10 qp 15 qp 25 qp 40 qp 60 10 kg/h 2 Flow rate 0.0028 l/sec 3 4 0.010 5 6 7 8 9 100 0.025 2 0.05 3 4 0.10 5 6 7 8 9 1000 0.25 2 0.50 3
4 1.
0 5 6 7 8 9 10000 2.5 2 Fig. 7. @@@@.



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