SPECIFICATION SHEET
**Hot Water**

# H4300 Woltmann hot water meters

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Permanent flow rate** | **m³/h** | **qp** | 15 | 25 | 40 | 60 | 100 | 150 | 250 |
| **Size** | **mm** | | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| **Maximum working temperature** | | | 130ºC | | | | | | |

The H4300 is a Woltmann-type horizontal vane hot water meter particularly suited to the high and sustained flows of bulk metering to a maximum temperature of 130ºC. A magnetic drive between the measuring element and counter reduces the number of working parts in contact with water and the corrosion and heat-resistant components guarantee excellent measuring properties, reliability and a long service life. The range is designed to incorporate sensor units for remote reading.

## Standard features

- Flanges drilled to BS4504 NP16. Others are optional
- Hermetically vacuum-sealed dry dial register
- Four possible register positions (90º spacing) without breaking calibration seal
- Provision for retro-fitting of two pulse output units
- Vanes parallel to pipe axis to give better flow characteristics
- Measurement mechanism is removable in-situ
- Two measurement mechanisms to cover all sizes
- May be mounted in any position
- Maximum working pressure of 16 bar

## Optional features

- Opto-electronic pulse unit
- Volt-free pulse unit (reed switch)

## Opto-electronic pulse unit (bi-directional)

The unit consists of a pair of infra-red optical sensors which detect the motion of reflective strips printed on the pulse wheel of the register. Forward and reverse flows can readily be measured. The circuit provides bi-directional information via four open collector output connections. A version to DIN 19234 (NAMUR specification) is available to special order.

## Volt-free pulse unit

The unit is a reed switch which uses the motion of a magnet mounted on the pulse wheel to generate a signal.

## Maximum working temperature

For fitted reed or opto pulse units the maximum working temperature of the meter is limited to 100ºC for reed and 80ºC for opto.

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# H4300

## Performance

| Size of meter | | mm | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
|---|---|---|---|---|---|---|---|---|---|
| Permanent flow rate | qp±3% | $m^3/h$ | 15 | 25 | 40 | 60 | 100 | 150 | 250 |
| Permissible continuous load | | $m^3/h$ | 15 | 25 | 45 | 70 | 100 | 150 | 250 |
| Overload flow rate | qs±3% | $m^3/h$ | 30 | 60 | 90 | 140 | 200 | 300 | 500 |
| Transitional flow rate | qt±3% | $m^3/h$ | 2 | 3 | 4 | 6 | 10 | 20 | 20 |
| Minimum flow rate | qmin±5% | $m^3/h$ | 1.0 | 1.6 | 2 | 2.4 | 3.5 | 4 | 8 |
| Flow rate at 0.1 bar pressure loss | | $m^3/h$ | 40 | 50 | 85 | 95 | 200 | 310 | 610 |
| Minimum scale value | | litre | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 5 |
| Maximum registration | millions of | $m^3$ | 1 | 1 | 1 | 1 | 1 | 10 | 10 |
| Reed switch pulse frequency | | litres/pulse | 100/1000 | 100/1000 | 100/1000 | 100/1000 | 100/1000 | 1000/10000 | 1000/10000 |
| Opto switch pulse frequency | | litres/pulse | 1 | 1 | 1 | 1 | 1 | 10 | 10 |

**Dimensions**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Overall length – L | mm | 200 | 200 | 225 | 250 | 250 | 300 | 350 |
| Height to centre line – H1 | mm | 75 | 84 | 92 | 118 | 135 | 143 | 180 |
| Height – H2 | mm | 234 | 234 | 234 | 234 | 234 | 252 | 252 |
| Clearance to remove mech | mm | 430 | 430 | 430 | 430 | 430 | 500 | 500 |
| Width – W | mm | 200 | 200 | 200 | 225 | 270 | 300 | 375 |
| Weight (approx) | kg | 15 | 17 | 19 | 23 | 30 | 40 | 50 |

**Electrical data** (Maximum output ratings)

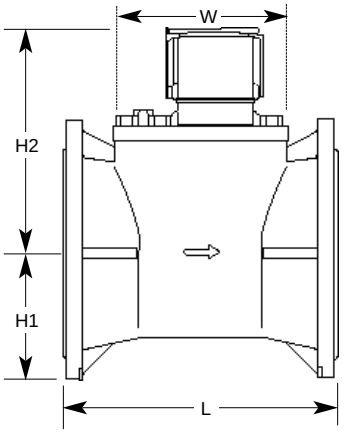
| Opto-electronic pulse unit (bi-directional) | | | Volt-free contactor unit | | |
|---|---|---|---|---|---|
| Vmax | 30V | maximum switching voltage | Vmax | 24V | maximum switching voltage |
| Imax | 50m | maximum switching current | Imax | 100mA | maximum switching current |
| Pmax | 200mW | maximum power rating | Pmax | 10W | maximum power rating |
| | | | Cable | 2m long, bare wire termination (flying lead) | |

**Power requirements** Opto-electronic unit

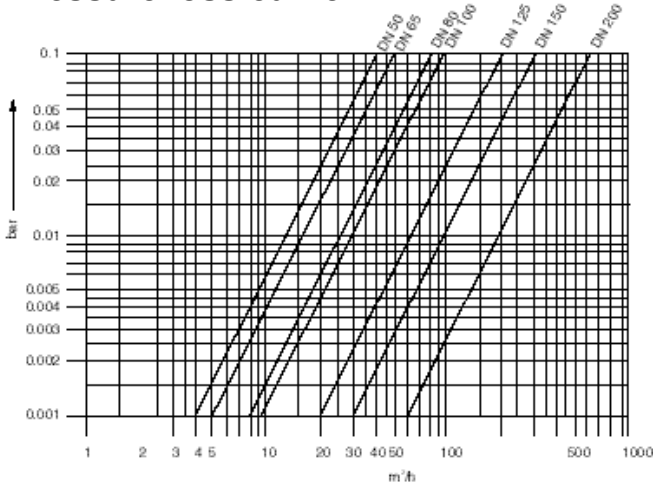
| | |
|---|---|
| Voltage | 3.5V to 15V |
| Current | <1.1mA @ 5V, Imax: <1.5mA |
| Cable | 6 core screened, 5m, 10m or 25m long bare wire termination (flying lead) |

**Mechanical data** (both units)

| | |
|---|---|
| Dimensions | Sensor head: Length 25mm, Width 20mm, Height 10mm |




## Pressure loss curve




**Pressure equipment directive 97/23/EC**
This product is applicable in networks for the supply, distribution and discharge of water and associated equipment and is therefore exempt.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