

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			130°C						

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 130°C. 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 (90° 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.

Performance

Size of meter	mm	50	65	80	100	125	150	200	
Permanent flow rate	qp±3%	m³/h	15	25	40	60	100	150	250
Permissible continuous load	m³/h	15	25	45	70	100	150	250	
Overload flow rate	qs±3%	m³/h	30	60	90	140	200	300	500
Transitional flow rate	qt±3%	m³/h	2	3	4	6	10	20	20
Minimum flow rate	qmin±5%	m³/h	1.0	1.6	2	2.4	3.5	4	8
Flow rate at 0.1 bar pressure loss	m³/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 m³	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)

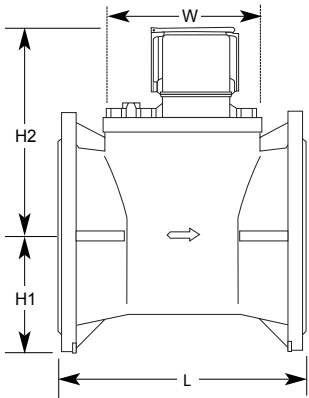
Opto-electronic pulse unit (bi-directional)			Volt-free contactor unit		
Vmax	30V	maximum switching voltage	Vmax	24V	maximum switching voltage
Imax	50mA	maximum switching current	Imax	100mA	maximum switching current
Pmax	200mW	maximum power rating	Pmax	10W	maximum power rating
			Cable	2m long, bare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

Power requirements Opto-electronic unit

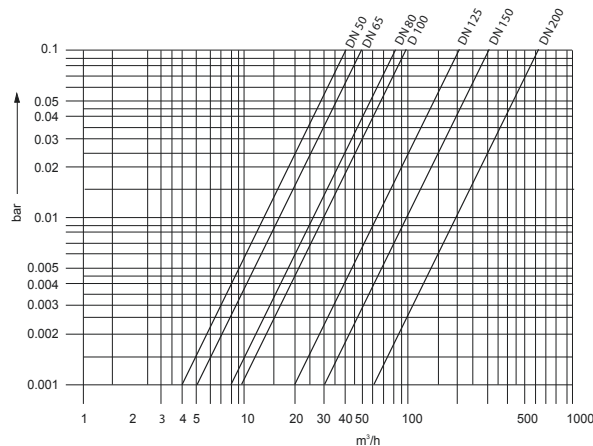
Voltage	3.5V to 15V
Current	<1.1mA @ 5V, I _{max} : <1.5mA
Cable	6 core screened, 5m, 10m or 25m long bare wire termination (flying lead)

Mechanical data (both units)

Dimensions	Sensor head: Length 25mm, Width 20mm, Height 10mm
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Pressure loss curve



The Company's policy is one of continuous improvement and the right is reserved to modify the specifications without notice.

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