HYDROMETER

DATASHEET FLOW SENSOR WP / WPH-XKA
MODEL 456

22.16

87.01

NOTE

HYDROMETER contact water meter model 456 can be supplied calibrated on request. The meter is tested for compliance with the figures specified in the calibration regulations.

APPLICATION

❏ For installation in any position

❏ For hot water up to 120 °C (up to 130 °C with counter extension)

❏ Construction dimensions to DIN ISO 4064, DN 50 – 300 (DN 400 and DN 500 on request)

❏ Operating pressure up to 16 bar (PN up to 40 bar on request)

❏ Contact rating (without series resistor) max. 24 V (SELV), 0.2 A

❏ Volume measuring component for measuring heat for billing hot water consumption. Facility for remote transmission of flow rates
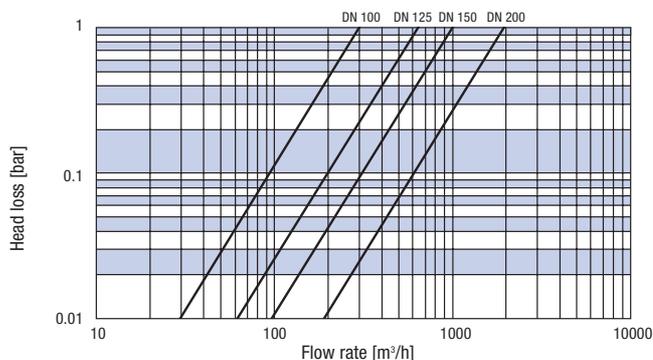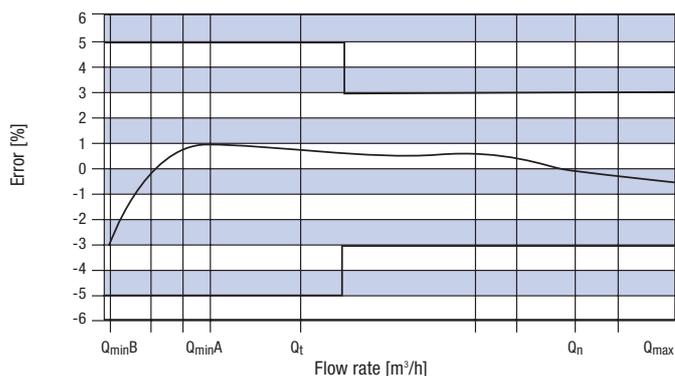
FEATURES

❏ Easily replaceable reed switch

❏ Completely dry-running – no gears in the wet chamber

❏ Encapsulated, evacuated and waterproof counter

❏ Condensation-proof transparent cover for unobstructed reading

❏ Meter head can be turned to any position for easier reading

❏ Outstanding long-term accuracy achieved by mounting vane in ring sapphire and carbide bearing

❏ Sealed shield protects against magnetic interference

❏ The reed switch is fitted with a 100 Ω, $1/4$ W protective resistor (cable length 3 m). Can be ordered without resistor

❏ Very low head loss

HEAD LOSS GRAPH FOR WP-XKA/WPH-XKA

TYPICAL ERROR GRAPH FOR WP-XKA/WPH-XKA

NOTE

When using the contact water meters as volume measuring components, we recommend that the meters are selected so that the head loss of 0.1 bar is not exceeded at maximum load!

TECHNICAL DATA

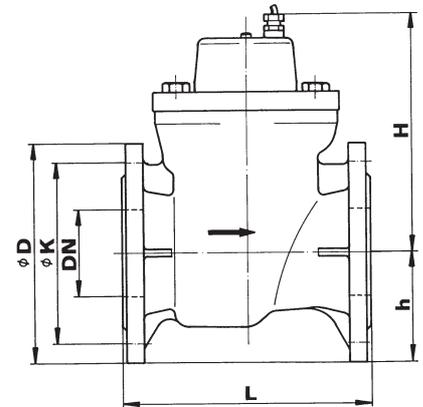| Model				456					
Type				WP-XKA			WPH-XKA		
Nominal diameter	DN	mm	100	125	150	200	250	300
Nominal flow rate	Q_n	m³/h	60	100	150	250	400	600
Continuous load		m³/h	70	100	150	250	400	600
Maximum flow rate (short-term+factory data)	Q_{max}	m³/h	180	250	350	600	800	1000
Flow rate at 1 bar head loss		m³/h	95	200	310	610	1300	2000
Transition flow limit	Q_t	m³/h	9	15	22.5	37.5	45	50
Lower measuring range limit	Q_{min}	m³/h	2	3	4.5	8	25	30
Starting flows		l/h	500	800	2000	2200	10000	15000
Flange - dimensions to DIN 2501/PN 16 — Outer Ø	D	mm	220	250	285	340	405	460
Hole pitch Ø	K	mm	180	210	240	295	350/355	400/410
Number of bolts	Quantity		8	8	8	8/12	12	12
Height	H	mm	200	200	217	217	240	270
	h	mm	110	125	145	172	203	230
Length to DIN 19625	L	mm	250	250	300	350	450	500
Dial indication range	min.	l	0.05	0.05	0.5	0.5	0.5	0.5
	max.	m³	10^6	10^6	10^7	10^7	10^7	10^7
Weight		kg	19.8	22.4	32.5	45	108	136
Flow resistance coefficient Zeta			18	9.9	8.6	7.0	3.8	3.3

DIMENSIONS

Available pulse rates:
WP-XKA 50 - 125   25 · 100 · 250 · 1000 litres/pulse
WP-XKA 150 - 300   250 · 1000 · 2500 · 10000 litres/pulse
DN 250 + 300 without approval. Minor technical changes may occur in the course of further development.

ORDER REFERENCES

Model	DN /PN	Type designation	l/pulse	Overall length	Temperature	Connection	*Metrol. cl.	Article number
456	100 / 16	WP-XKA	100	250 mm	120 °C	Fl /8-hole	A•H/V	456 000 65
456	100 / 16	WP-XKA	250	250 mm	120 °C	Fl /8-hole	A•H/V	456 000 68
456	125 / 16	WP-XKA	100	250 mm	120 °C	Fl /8-hole	A•H/V	456 000 81
456	125 / 16	WP-XKA	250	250 mm	120 °C	Fl /8-hole	A•H/V	456 000 84
456	150 / 16	WPH-XKA	100	300 mm	120 °C	Fl /8-hole	A•H/V	456 000 90
456	150 / 16	WPH-XKA	250	300 mm	120 °C	Fl /8-hole	A•H/V	456 000 93
456	200 / 10	WPH-XKA	250	350 mm	120 °C	Fl /8-hole	A•H/V	456 001 06
456	200 / 10	WPH-XKA	250	350 mm	120 °C	Fl /8-hole	A•H/V	456 001 16
456	200 / 16	WPH-XKA	250	350 mm	120 °C	Fl /12-hole	A•H/V	456 001 10
456	200 / 16	WPH-XKA	1000	350 mm	120 °C	Fl /12-hole	A•H/V	456 001 08
456	250 / 16	WPH-XKA	250	450 mm	120 °C	Fl /12-hole	no approval	456 001 21
456	250 / 16	WPH-XKA	1000	450 mm	120 °C	Fl /12-hole	no approval	456 001 20
456	300 / 16	WPH-XKA	1000	500 mm	120 °C	Fl /12-hole	no approval	456 001 29

* tested to the metrological class indicated!

NOTE

The types listed in the order references are standard meters.

Explanation of type designations:

W : Woltman meter

P : impeller axis parallel to direction of flow

H : removable measuring insert

X : counter type

K : pulse output

A : metal shield