AN 130

Hydraulic Sensor
for hot water up to 130 °C, PN 16 and PN 25

M-T Q_n ... AN

Special Features

Fully dry dial meter with no gear reduction in the wet chamber

Wear resistant tungsten carbide / sapphire bearing

Magnetic coupling protected against magnetite

Pulse sender safe from interference

Easy to repair construction with external regulation

Description

The hydraulic AN 130 sensors are multi-jet dry dial vane impeller hot water meters, suitable for installing in central heating and cooling systems and remote warning systems. With their built-in pulse sender they are approved as a volume measurement element for heat meters.

Versions for horizontal, rising and falling flow directions with screwings (PN 16) or flanges (horizontal flow, PN 25) are available.

Pattern Approval

22.16

95.07

Technical Data

Display:	00000.000 m³
Working pressure:	16 bar 25 bar (Special version)
Working temperature:	5 ... 130 °C
PTB-Approval:	Class B
Pulse sender	
Pulse sender:	Reed switch permanently installed
Cable length:	2 m
Load capacity:	max. 0.1 A, max. 28 V
Contact resistance:	max 105 Ohm
Pulse value:	10 Litres / pulse For other pulse values see special versions

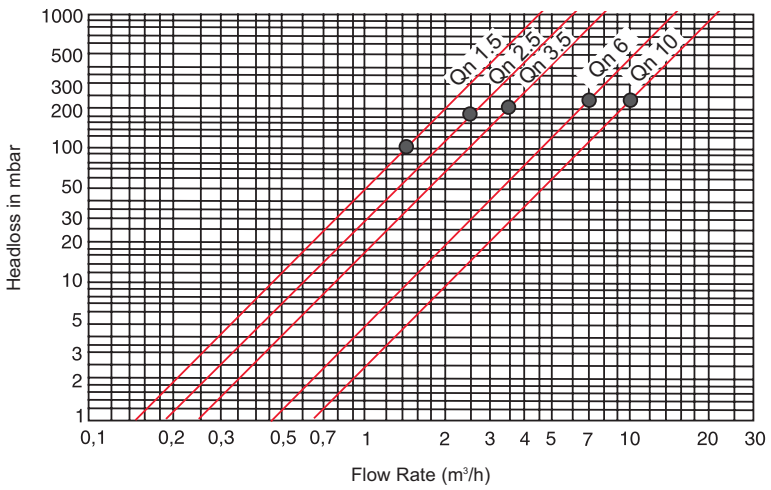
Materials

Casing:	Brass, painted
Impeller:	Plastic
Impeller cup:	Plastic
Bearing pin:	Tungsten carbide
Impeller bearing :	Sapphire
Magnetic coupling:	Ceramic permanent magnets

Performance Data

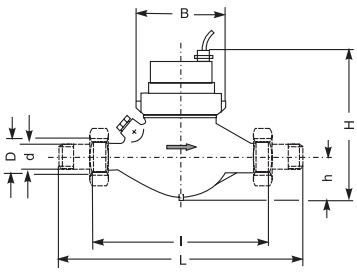
Nominal-size	**Q_n**		**1,5**	**2,5**	**3,5**	**6**	**10**
Continuous loading	Q_n	m³/h	1,5	2,5	3,5	6	10
Max. flow rate (short-term)	Q_{max}	m³/h	3	5	7	12	20
Transitional flow-rate	Q_t	l/h	120	200	280	400	800
Minimum flow rate	Q_{min}	l/h	30	50	70	120	200
Pressure drop at	Q_n	bar	0,11	0,18	0,2	0,25	0,25
Flow rate at 1 bar pressure drop		m³/h	4,7	6,0	8,1	12,5	20,5

Typical Head Loss Curve

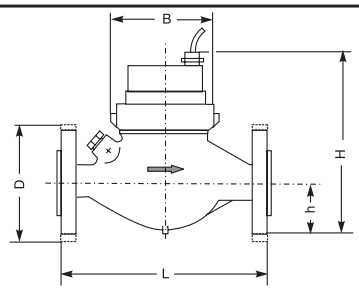


Dimensions and Weights

Horizontal installation for threaded fittings, Type M-T Q n ... AN R ... K 10							
Size marking	Q_n	m^3/h	1,5	2,5	3,5	6	10
Nom. connection size	DN	mm	20	20	25	32	40
		inches	3/4	3/4	1	1 1/4	1 1/2
Pipe connection thread [1])	d	inches	R 3/4	R 3/4	R 1	R 1 1/4	R 1 1/2
Meter stub thread [2])	D	inches	G 1	G 1	G 1 1/4	G 1 1/2	G 2
Installed length without fittings	l	mm	190	190	260	260	300
Installed length with fittings	L	mm	288	288	378	378	438
Height	H	mm	155	155	170	170	190
Height	h	mm	36,5	36,5	103	103	140
Width	B	mm	97	97	103	103	140
Weight of meter without fittings		~kg	2,0	2,1	2,9	2,9	5,2
Weight of meter with fittings		~kg	2,5	2,6	3,6	3,6	6,5



Horizontal installation with flanges, Type M-T Q n ... AN R ... K 10							
Size marking	Q_n	m^3/h	1,5	2,5	3,5	6	10
Nom. connection size	DN	mm	20	20	25	32	40
Installed length	L	mm	190	190	260	260	300
Height	H	mm	157	157	179	179	197
Height	h	mm	46	46	51	51	68
Flange diameter	D	mm	105	105	115	115	150
Width	B	mm	95	95	101	101	131
Weight		~kg	3,5	3,5	4,8	4,8	8



Installation in falling line for threaded fittings, Type M-T Q n ... FAN R ... K 10							
Size marking	Q_n	m^3/h	1,5	2,5	3,5	6	10
Nom. connection size	DN	mm	20	20	25	25	40
		inches	3/4	3/4	1	1	1 1/2
Pipe connection thread [1])	d	inches	R 3/4	R 3/4	R 1	R 1	R 1 1/2
Meter stub thread [2])	D	inches	G 1	G 1	G 1 1/4	G 1 1/4	G 2
Installed length without fittings	l	mm	105	105	150	150	200
Installed length with fittings	L	mm	203	203	268	268	338
Height	H	mm	160	160	175	175	195
Height	h	mm	13	13	22	22	30
Axial offset	b	mm	100	100	105	105	120
Width	B	mm	97	97	103	103	140
Weight of meter without fittings		~kg	2	2,1	3,3	3,3	5
Weight of meter with fittings		~kg	2,3	2,4	3,8	3,8	6,3

Installation in rising line for threaded fittings, Type M-T Q n ... SAN R ... K 10							
Size marking	Q_n	m^3/h	1,5	2,5	3,5	6	10
Nom. connection size	DN	mm	20	20	25	25	40
		inches	3/4	3/4	1	1	1 1/2
Pipe connection thread [1])	d	inches	R 3/4	R 3/4	R 1	R 1	R 1 1/2
Meter stub thread [2])	D	inches	G 1	G 1	G 1 1/4	G 1 1/4	G 2
Installed length without fittings	l	mm	105	105	150	150	200
Installed length with fittings	L	mm	203	203	268	268	338
Height	H	mm	155	155	170	170	190
Height	h	mm	19	19	33	33	30
Axial offset	b	mm	82	82	94	94	120
Width	B	mm	97	97	103	103	140
Weight of meter without fittings		~kg	2	2,1	3,3	3,3	5
Weight of meter with fittings		~kg	2,3	2,4	3,8	3,8	6,3

Connection thread dimensions:

1) d Withworth tapered pipe thread — R 1/2” to R 2” to ISO 7/1 = DIN 2999 Part 1

2) D Pipe thread — G 1 to G 2 B to DIN ISO 228/1

Ordering Notes

Horizontal version for threaded fittings
Pulse sender, 10 Litres/pulse, Certified Class B

Ordering Text				Order Ref No
M-T Q_n 1,5	AN	R 3/4“	K 10	88188300
M-T Q_n 2,5	AN	R 3/4“	K 10	88188500
M-T Q_n 3,5	AN	R 1“	K 10	88188700
M-T Q_n 6	AN	R 1“	K 10	88188800
M-T Qn 6	AN	R 1 1/4“	K 10	88188801
M-T Q_n 10	AN	R 1 1/2“	K 10	88188900

Special versions on request

Special housing Q_n 1,5 Installed length 165 mm R 1/2” K 10

Special housing Q_n 6 Installed length 260 mm R 1 1/4” K 10

Special size Q_n 15 Installed length 270 mm R 2” K 100

Pulse values 1 / 2.5 / 25 Litres / pulse on request

Falling line version for threaded fittings
Pulse sender, 10 Litres / pulse, Certified Class B

Ordering Text				Order Ref No
M-T Q_n 1,5	FAN	R 3/4“	K 10	88188303
M-T Q_n 2,5	FAN	R 3/4“	K 10	88188503
M-T Q_n 3,5	FAN	R 1“	K 10	88188703
M-T Q_n 6	FAN	R 1“	K 10	88188803
M-T Q_n 10	FAN	R 1 1/2“	K 10	88188903

Horizontal version with flanges, PN 16
Pulse sender, 10 Litres / pulse, Certified Class B

Ordering Text					Order Ref No
M-T Q_n 1,5	ANF	DN 20	PN 16	K 10	88188304
M-T Q_n 2,5	FAN	DN 20	PN 16	K 10	88188504
M-T Q_n 3,5	FAN	DN 25	PN 16	K 10	88188704
M-T Qn 6	FAN	DN 32	PN 16	K 10	88188805
M-T Q_n 10	FAN	DN 40	PN 16	K 10	88188904

Rising line version for threaded fittings
Pulse sender, 10 Litres / pulse, Certified Class B

Ordering Text				Order Ref No
M-T Q_n 1,5	SAN	R 3/4“	K 10	88188302
M-T Q_n 2,5	SAN	R 3/4“	K 10	88188502
M-T Q_n 3,5	SAN	R 1“	K 10	88188702
M-T Q_n 6	SAN	R 1“	K 10	88188802
M-T Q_n 10	SAN	R 1 1/2“	K 10	88188902

Horizontal version with flanges, PN 25
Pulse sender, 10 Litres / pulse, Certified Class B

Ordering Text					Order Ref No
M-T Q_n 1,5	ANF	DN 20	PN 25	K 10	88188351
M-T Q_n 2,5	FAN	DN 20	PN 25	K 10	88188551
M-T Q_n 3,5	FAN	DN 25	PN 25	K 10	88188751
M-T Q_n 6	FAN	DN 25	PN 25	K 10	88188851
M-T Q_n 10	FAN	DN 40	PN 25	K 10	88188951

L H 7100 INT / 003-0804 • Subject to change without notice