

MTWD-M-CC

Multi-jet dry dial meter for hot water with flood-proof (IP68) hermetically sealed glass/copper register

The current level of development of the MTWD-M-CC guarantees the most precise measurement results, minimum bearing load and a long service life.

The MTWD-M-CC is ideally suited to measuring tasks at temperatures up to 90°C. By using special materials, outstanding measurement readings can be combined with a high maximum temperature.

The meter is equipped with an 8-digit glass/copper register (IP68) and a modulator disc. This enables electronic, non-reactive scanning and is the basis for remote reading of meter data via radio with LoRaWAN® or wM-Bus. A combined M-Bus/pulse module is also possible.



M-Bus

M-Bus

LoRaWAN

Performance characteristics at a glance

- Multi-jet dry dial meter with protected magnetic coupling
- For horizontal and vertical installation, also available in standpipe and downpipe design on request
- Equipped with glass/copper register (IP68) as standard
- Brass body according to UBA (Federal Environment Office) list
- Register rotatable 355°
- Operating pressure MAP 16
- Approved in accordance with MID

Applications

- For the consumption measurement of hot and clean drinking water or service water up to 90°C

AMR options

- As standard with communication interface for EDC modules (Electronic Data Capture):
 - EDC LPWAN radio module (868 MHz) for LoRaWAN®
 - EDC wireless M-Bus radio module (868 MHz)
 - EDC- combined M-Bus and pulse module

Technical data				Riser / Down		Riser		
Permanent flowrate	Q_3	m ³ /h	2.5	4	4	6.3	6.3	10
Comparable to nominal flowrate (EEC)	Q_n	m ³ /h	1.5	2.5	2.5	3.5	3.5	6
Attainable measuring range	Q_3/Q_1	R	80H	80H/40V	R80H	80H/40V	R80H	80H/40V
Standard measuring range ¹	Q_3/Q_1	R	80H	80H/40V	R80H	80H/40V	R80H	80H/40V
Comparable to metrological class (EEC)	Class	-	B-H	B-H/A-V	B-H	B-H/A-V	B-H	B-H/A-V
Overload flowrate ²	Q_4	m ³ /h	3.13	5	5	7.88	7.88	12.5
Transitional flowrate ²	Q_2	l/h	50H	80H/160V	80	126H/252V	126	200H/400V
Minimum flowrate ²	Q_1	l/h	31H	50H/100V	50	79H/158V	79	125H/250V
Start-up flow rate	-	l/h	<10	<10	<10	<18	<18	<18
Display range	min.	l	0.02	0.02	0.02	0.02	0.02	0.02
	max.	m ³	R8 99,999.999	R8 99,999.999	99,999.999	R8 99,999.999	99,999.999	R8 99,999.999
Temperature range	-	°C	0.1°C - 90°C	0.1°C - 90°C	0.1 - 90	0.1°C - 90°C	0.1 - 90	0.1°C - 90°C
Operating pressure	MAP	bar	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16
Pulse value	-	l/pulse	1	1	1	1	1	1
Pressure loss class at Q_3	Δp	bar	$\Delta 0.63$	$\Delta 0.63$	$\Delta 0.63$	$\Delta 0.63$	$\Delta 0.63$	$\Delta 0.63$
Mechanical environmental condition	-	-	M2	M2	M2	M2	M2	M2
Climatic condition ³	-	°C	5°C - 55°C	5°C - 55°C	5 - 55	5°C - 55°C	5 - 55	5°C - 55°C
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0
Dimensions and weights:								
Nominal diameter	DN	mm	15	20	20	25	25	25
		inch	½"	¾"	¾"	1"	1"	1"
Overall length without connectors ¹	L2	mm	165/170	190	105	260	150	260
Overall length with connectors approx.	L1	mm	245/250	286	201	378	268	378
Thread meter G x B	D1	inch	¾"	1"	1"	1 ¼"	1 ¼"	1 ¼"
Thread connector R x	D2	inch	½"	¾"	¾"	1"	1"	1"
Width approx.	B	mm	95	95	95	95	95	95
Height approx.	H1	mm	120	120	140	120	160	120
	H2	mm	35	25	---	35	---	40
Weight approx.	-	kg	1.3	1.6	1.7	2.1	2.1	2.1

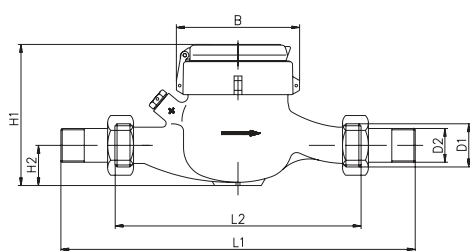
¹ Other measuring ranges (R) and overall lengths on request

² The data refers to the standard measuring range

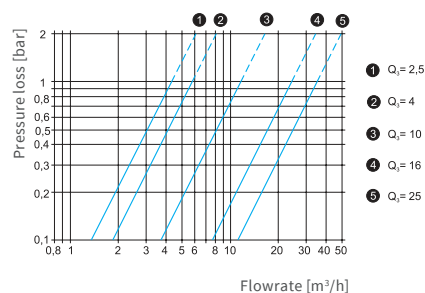
³ Condensation possible

⁴ Only available as factory tested version

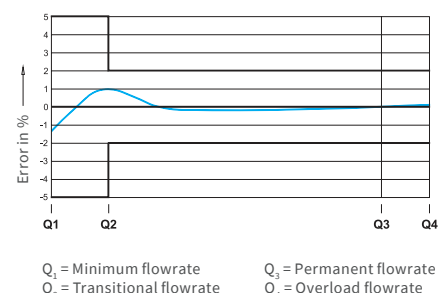
Attention: not all versions are available in all markets



Dimensions



Typical pressure loss curve



Q_1 = Minimum flowrate
 Q_2 = Transitional flowrate
 Q_3 = Permanent flowrate
 Q_4 = Overload flowrate

Typical error curve

Technical data				Riser		Riser	
Permanent flowrate	Q_3	m ³ /h	10	10	16	16	25 ⁴
Comparable to nominal flowrate (EEC)	Q_n	m ³ /h	6	6	10	10	16
Attainable measuring range	Q_3/Q_1	R	80H/40V	R80H	80H/40V	R80H	80H/40V
Standard measuring range ¹	Q_3/Q_1	R	80H/40V	R80H	80H/40V	R80H	80H/40V
Comparable to metrological class (EEC)	Class	-	B-H/A-V	B-H	B-H/A-V	B-H	B-H/A-V
Overload flowrate ²	Q_4	m ³ /h	12.5	12.5	20	20	31.3
Transitional flowrate ²	Q_2	l/h	200H/400V	200	320H/640V	320	501H/1000V
Minimum flowrate ²	Q_1	l/h	125H/250V	125	200H/400V	200	313H/625V
Start-up flow rate	-	l/h	<18	<18	<40	<40	<45
Display range	min.	l	0.02	0.02	0.02	0.02	0.02
	max.	m ³	R8 99,999.999	99,999.999	R8 99,999.999	99,999.999	R8 99,999.999
Temperature range	-	°C	0.1°C - 90°C	0.1 - 90	0.1°C - 90°C	0.1 - 90	0.1°C - 90°C
Operating pressure	MAP	bar	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16
Pulse value	-	l/pulse	1	1	1	1	1
Pressure loss class at Q_3	Δp	bar	$\Delta 0.63$	$\Delta 0.63$	$\Delta 0.63$	$\Delta 0.63$	$\Delta 0.63$
Mechanical environmental condition	-	-	M2	M2	M2	M2	M2
Climatic condition ³	-	°C	5°C - 55°C	5 - 55	5°C - 55°C	5 - 55	5°C - 55°C
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0
Dimensions and weights:							
Nominal diameter	DN	mm	32	25	40	40	50
		inch	1 ¼"	1"	1 ½"	1 ½"	2"
Overall length without connectors ¹	L2	mm	260	150	300	150/200	300
Overall length with connectors approx.	L1	mm	384	268	428	278/328	444
Thread meter G x B	D1	inch	1 ½"	1 ¼"	2"	2"	2 ½"
Thread connector R x	D2	inch	1 ¼"	1"	1 ½"	1 ½"	2"
Width approx.	B	mm	95	95	110	110	110
Height approx.	H1	mm	120	160	145	165	150
	H2	mm	40	---	50	---	60
Weight approx.	-	kg	2.2	2.1	3.6	4.0/4.9	4

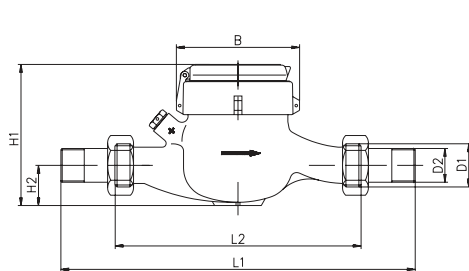
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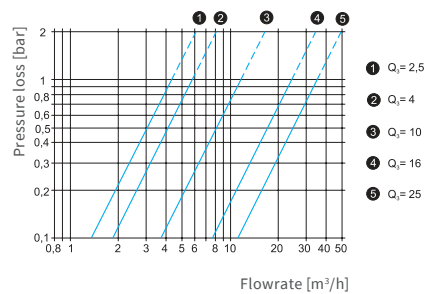
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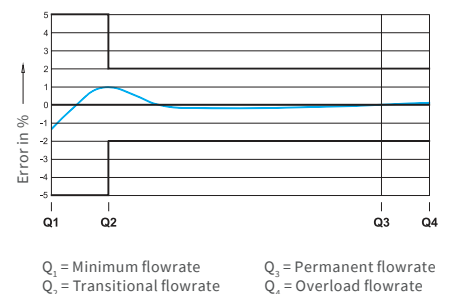
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Dimensions



Typical pressure loss curve



Q_1 = Minimum flowrate
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 Q_3 = Permanent flowrate
 Q_4 = Overload flowrate

Typical error curve