

# RTKD-M / RTKD-M-CC

## Rotary piston dry-dial meter for cold water

### Available with flood-proof (IP 68) hermetically seal glass/copper register

The RTKD positive displacement meter records the flow rate according to the volumetric measuring principle. It offers a very high measuring range, excellent measuring stability and therefore guarantees extremely precise consumption recording.

The RTKD-M features a very low starting flow and is permitted for all installation positions. The meter is equipped with an 8-digit dry-dial meter register and a modular disc. This enables electronic, non-reactive scanning and is the basis for remote reading of meter data via radio with LoRaWAN® or wM-Bus (according to OMS). A combined M-Bus/pulse module is also possible.



### Performance characteristics at a glance

- Rotary piston dry-dial meter for any installation position (except overhead)
- Highest precision and reliability even in case of low flow rates
- Register cap made of UV-resistant polymer plastic
- Available with glass/copper register (IP68)
- Optional RTKD-N with 7-digit register 10 l/pulse
- Optional RTKD-N with 8-digit register 1 l/pulse
- Register rotatable 355°
- Operating pressure MAP 16
- Approved in accordance with MID

### Applications

- For the consumption measurement of cold and clean drinking water or service water up to 50°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 according to OMS standard (868 MHz), EN 13757-4
  - EDC- combined M-Bus and pulse module

Technical data								
Permanent flowrate	Q <sub>3</sub>	m <sup>3</sup> /h	1.6	1.6	2.5	2.5	2.5	4
Comparable to permanent flowrate (EEC)	Q <sub>n</sub>	m <sup>3</sup> /h	1	1	1.5	1.5	1.5	2.5
Attainable measuring range <sup>1</sup>	Q <sub>3</sub> /Q <sub>1</sub>	R	250	250	400	400	250	400
Comparable to metrological class (EEC)	Class	-	> C	> C	> C	> C	> C	> C
Overload flowrate	Q <sub>4</sub>	m <sup>3</sup> /h	2	2	3.13	3.13	3.13	5
Transitional flowrate	Q <sub>2</sub>	l/h	10.2	10.2	10.0	10.0	16.0	16.0
Min. flowrate	Q <sub>1</sub>	l/h	6.4	6.4	6.3	6.3	10.0	10.0
Start-up flow rate	-	l/h	< 2	< 2	< 2	< 2	< 2	< 2
Display range	min.	l	0.02	0.02	0.02	0.02	0.02	0.02
	max.	m <sup>3</sup>	R8 99,999.999	R8 99,999.999	R8 99,999.999	R8 99,999.999	R8 99,999.999	R8 99,999.999
Temperature range	-	°C	0.1 - 50	0.1 - 50	0.1 - 50	0.1 - 50	0.1 - 50	0.1 - 50
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 <sub>3</sub>	Δp	bar	Δ0.40	Δ0.40	Δ0.63	Δ0.63	Δ0.63	Δ0.63
Mechanical environmental condition	-	-	M2	M2	M2	M2	M2	M2
Climatic condition <sup>2</sup>	-	°C	5 - 55	5 - 55	5 - 55	5 - 55	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0

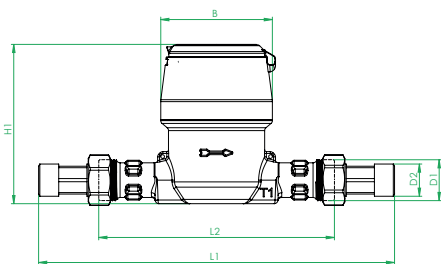
**Dimensions and weights:**

Nominal diameter	DN	mm	15	15	15	15	20	20
		inch	½"	½"	½"	½"	¾"	¾"
Overall length without connectors	L2	mm	110/115	165/170	110/115	165/170	165/190	105
Overall length with connectors	L1	mm	190/195	245/250	190/195	245/250	261/286	201
Thread meter G x B	D1	inch	¾"	¾"	¾"	¾"	1"	1"
Thread connector R x	D2	inch	½"	½"	½"	½"	¾"	¾"
Width	W	mm	89.5	89.5	89.5	89.5	90	90
Height approx.	H1	mm	122	122	122	122	135	135
Weight approx.	-	kg	0.86	0.98	0.86	0.98	1.28/1.35	1.15

<sup>1</sup> Other measuring ranges (R) on request

<sup>4</sup> Condensation possible

<sup>3</sup> Only available in M-CC design



Dimensions

Technical data							
Permanent flowrate	Q <sub>3</sub>	m <sup>3</sup> /h	4	6.3 <sup>3</sup>	10 <sup>3</sup>	10 <sup>3</sup>	16 <sup>3</sup>
Comparable to permanent flowrate (EEC)	Q <sub>n</sub>	m <sup>3</sup> /h	2.5	3.5	6	6	10
Attainable measuring range <sup>1</sup>	Q <sub>3</sub> /Q <sub>1</sub>	R	400	200	315	315	315
Comparable to metrological class (EEC)	Class	-	> C	> C	> C	> C	> C
Overload flowrate	Q <sub>4</sub>	m <sup>3</sup> /h	5	7.87	12.5	12.5	20
Transitional flowrate	Q <sub>2</sub>	l/h	16.0	50.4	50.8	50.8	81.3
Min. flowrate	Q <sub>1</sub>	l/h	10.0	31.5	31.8	31.8	50.8
Start-up flow rate	-	l/h	< 2	< 8	< 8	< 8	< 11
Display range	min.	l	0.02	0.02	0.02	0.02	0.02
	max.	m <sup>3</sup>	R8 99,999.999	R8 99,999.999	R8 99,999.999	R8 99,999.999	R8 99,999.999
Temperature range	-	°C	0.1 - 50	0.1 - 50	0.1 - 50	0.1 - 50	0.1 - 50
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 <sub>3</sub>	Δp	bar	Δ0.63	Δ0.40	Δ0.63	Δ0.63	Δ0.63
Mechanical environmental condition	-	-	M2	M2	M2	M2	M2
Climatic condition <sup>2</sup>	-	°C	5 - 55	5 - 55	5 - 55	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0

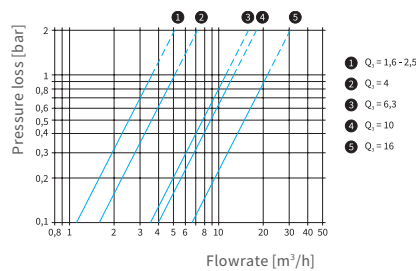
**Dimensions and weights:**

Nominal diameter	DN	mm	20	25	25	32	40
		inch	¾"	1"	1"	1 ¼"	1 ½"
Overall length without connectors	L2	mm	165/190	260	260	260	300
Overall length with connectors	L1	mm	261/286	374	374	384	428
Thread meter G x B	D1	inch	1"	1 ¼"	1 ¼"	1 ½"	2"
Thread connector R x	D2	inch	¾"	1"	1"	1 ¼"	1 ½"
Width	W	mm	90	137	137	137	180
Height approx.	H1	mm	135	153	153	153	167
Weight approx.	-	kg	1.28/1.35	3.7	3.7	3.77	6.8

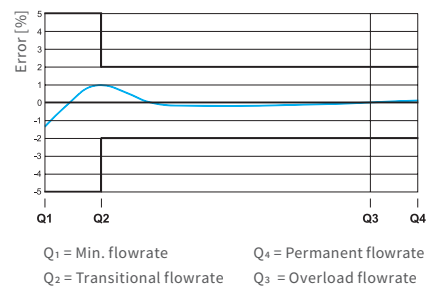
<sup>1</sup> Other measuring ranges (R) on request

<sup>4</sup> Condensation possible

<sup>3</sup> Only available in M-CC design



Typical pressure loss curve



Typical error curve

## Technical data sheet

### **ZENNER International GmbH & Co. KG**

Römerstadt 6  
D-66121 Saarbrücken  
Germany

Telefon +49 681 99 676-0  
Telefax +49 681 99 676-3100

E-Mail [info@zenner.com](mailto:info@zenner.com)  
Internet [www.zenner.com](http://www.zenner.com)