

OIML R-49 FLOWMETER DATA-SHEET

- 💧 OIML R 49, edition 2013, for accuracy class 2
- 💧 Compact and remote version
- 💧 Available for DN25 – DN300
- 💧 Remote reading via Pulse output or RS485 communication



What is OIML?

OIML is an inter-governmental body, established in 1955. Its main objective is to achieve international harmonization for legal metrology, providing an important basis for measurement credibility, eliminating technical barriers to the trade in measuring instruments and promoting international trade by confidence in measurement capability. A main output of OIML's work is the production of International Recommendations (such as R49), which are technically based models for legal control of measuring instruments.

MAGX2 have been type tested and internationally proven and endorsed to the highest accuracy class 2 for cold and hot potable water meters – OIML R49-1 (Organisation Internationale de Métrologie Légale). For full details, OIML R49 is available to download from www.oiml.org. Its requirements are in line with other international standards, such as EN14154 and ISO4064. MAGX2 flowmeter has been evaluated by type approval at the Czech Metrology Institute to OIML R49 and passed the very highest accuracy designations for sizes DN25 to DN300 (1 to 12 in. NB).

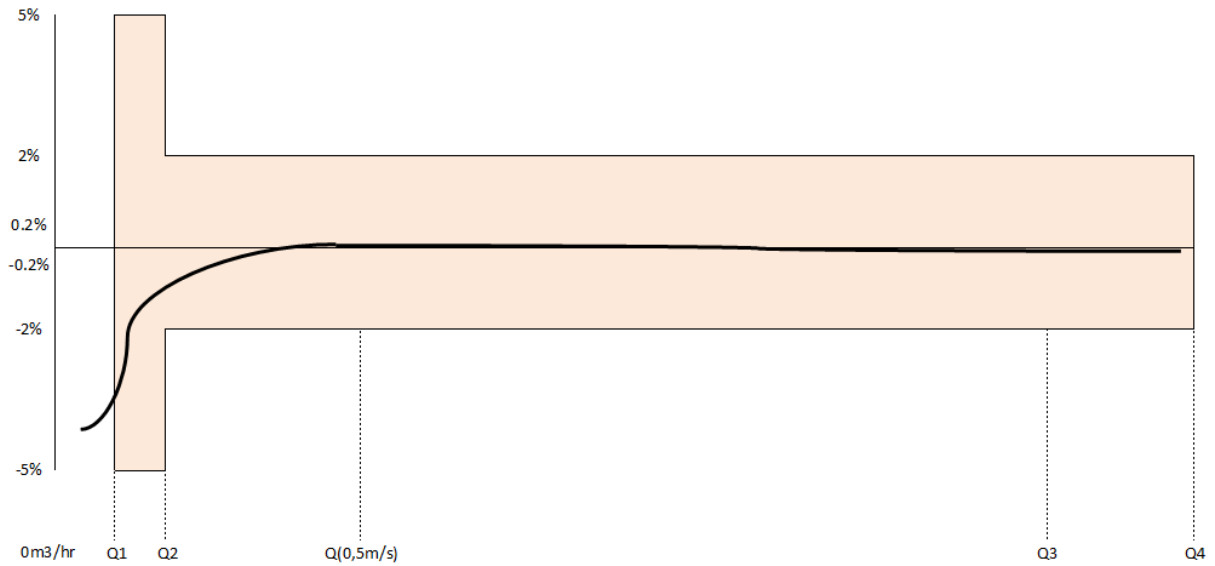
The OIML R49-1 certificate of conformity is available on OIML website (https://www.oiml.org/en/oiml-cs/certificat_view).

Specification

Climatic environment class	B
Electromagnetic class	E2
Pressure class:	MAP10
Temperature class	T50
Pressure loss	ΔP 10
Accuracy class	2
Flow direction	positive
Maximum permissible error for the lower flowrate zone /MPE1)	+/-5%
Maximum permissible error for the upper flowrate zone (MPE0)	+/- 2% for water having a temperature <30°C +/-3 % for water having a temperature > 30°C
Flow profile sensitivity classes	U5 D3
Orientation limitation	any
Low flow cut off	1% from nominal flowrate
Max. cable length for remote version	6 m
Output options	2 options: Pulse output, RS485 communication



Accuracy graph



Q3/Q1 ratio is described in following table:

DN	R	Flow Rate [m3/hr]				R	Flow Rate [m3/hr]				R	Flow Rate [m3/hr]			
		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4
25	50	0,32	0,51	16,00	20,00	100	0,16	0,26	16,00	20,00	160	0,10	0,16	16,00	20,00
32	50	0,50	0,80	25,00	31,25	100	0,25	0,40	25,00	31,25	160	0,16	0,25	25,00	31,25
40	50	0,80	1,28	40,00	50,00	100	0,40	0,64	40,00	50,00	160	0,25	0,40	40,00	50,00
50	50	1,26	2,02	63,00	78,75	100	0,63	1,01	63,00	78,75	160	0,39	0,63	63,00	78,75
65	50	2,00	3,20	100,00	125,00	100	1,00	1,60	100,00	125,00	160	0,63	1,00	100,00	125,00
80	50	3,20	5,12	160,00	200,00	100	1,60	2,56	160,00	200,00	160	1,00	1,60	160,00	200,00
100	50	4,00	6,40	200,00	250,00	100	2,00	3,20	200,00	250,00	160	1,25	2,00	200,00	250,00
125	50	8,00	12,80	400,00	500,00	100	4,00	6,40	400,00	500,00	160	2,50	4,00	400,00	500,00
150	50	12,60	20,16	630,00	787,50	100	6,30	10,08	630,00	787,50	160	3,94	6,30	630,00	787,50
200	50	16,00	25,60	800,00	1000,00	100	8,00	12,80	800,00	1000,00	160	5,00	8,00	800,00	1000,00
250	50	20,00	32,00	1000,00	1250,00	100	10,00	16,00	1000,00	1250,00	160	6,25	10,00	1000,00	1250,00
300	50	32,00	51,20	1600,00	2000,00	100	16,00	25,60	1600,00	2000,00	160	10,00	16,00	1600,00	2000,00

DN	R	Flow Rate [m3/hr]				R	Flow Rate [m3/hr]				R	Flow Rate [m3/hr]			
		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4
25	200	0,08	0,13	16,00	20,00	250	0,06	0,10	16,00	20,00	400	0,04	0,06	16,00	20,00
32	200	0,13	0,20	25,00	31,25	250	0,10	0,16	25,00	31,25	400	0,06	0,10	25,00	31,25
40	200	0,20	0,32	40,00	50,00	250	0,16	0,26	40,00	50,00	400	0,10	0,16	40,00	50,00
50	200	0,32	0,50	63,00	78,75	250	0,25	0,40	63,00	78,75	400	0,16	0,25	63,00	78,75
65	200	0,50	0,80	100,00	125,00	250	0,40	0,64	100,00	125,00	400	0,25	0,40	100,00	125,00
80	200	0,80	1,28	160,00	200,00	250	0,64	1,02	160,00	200,00	400	0,40	0,64	160,00	200,00
100	200	1,00	1,60	200,00	250,00	250	0,80	1,28	200,00	250,00	400	0,50	0,80	200,00	250,00
125	200	2,00	3,20	400,00	500,00	250	1,60	2,56	400,00	500,00	400	1,00	1,60	400,00	500,00
150	200	3,15	5,04	630,00	787,50	250	2,52	4,03	630,00	787,50	400	1,58	2,52	630,00	787,50
200	200	4,00	6,40	800,00	1000,00	250	3,20	5,12	800,00	1000,00	400	2,00	3,20	800,00	1000,00
250	200	5,00	8,00	1000,00	1250,00	250	4,00	6,40	1000,00	1250,00	400	2,50	4,00	1000,00	1250,00
300	200	8,00	12,80	1600,00	2000,00	250	6,40	10,24	1600,00	2000,00	400	4,00	6,40	1600,00	2000,00

Test report number: 6015-PT-P3021-16

OIML Certificate No.: R49/2013-CZ-16.04

How to order your MAGX2 OIML R49 flowmeter?

MAGX2 can be ordered only in this configuration



Model	Ordering code							Description
MAGX2 IP68 OIML	1	2	3	4	5	6	7	OIML R49 Version
								Transmitter
		T						MAGX2 main board, display, 6 buttons control unit
			5					Power supply module
								Version 5 – 12-35 VDC, 90-250 VAC, including battery back-up option
				CM				Sensor to transmitter module
								Version 8
								Remote mounting kit
				C				None
				W				Wall mounting kit
				P				Panel mounting kit
				D				DIN-Rail mounting kit
								Output
					N			None
					P			Pulse output module
								Communication
						N		None
						485		RS485

Model	Ordering code					Description
MAGX2 Sensor	1	2	3	4	5	
						Connection
		D				DIN
		A				ANSI
						Size
		25 / 1				25 mm / 1"
		32 / 1.1/4				32 mm / 1.1/4"
		40 / 1.1/2				40 mm / 1.1/2"
		50 / 2				50 mm / 2"
		65 / 2.1/2				65 mm / 2.1/2"
		80 / 3				80 mm / 3"
		100 / 4				100 mm / 4"
		125 / 5				125 mm / 5"
		150 / 6				150 mm / 6"
		200 / 8				200 mm / 8"
		250 / 10				250 mm / 10"
		300 / 12				300 mm / 12"
						Liner
				HR		Hard rubber
				PT		PTFE
				SR		Soft rubber
				NR		Hygienic rubber
						Connecting flange pressure rating*
					150	150 psi
					300	300 psi
					10	PN10
					16	PN16
					25	PN25
					40	PN40
						Electrodes
					HA	Hastelloy C
					TI	Titanium
					PL	Platinum

*Please note the meters are only MAP10

For more information visit our website or contact us at arkon@arkon.co.uk!

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