

MES-MR

Mechanical register totaliser flowmeter with contact closure high rate pulse output

Sizes 20, 25, 32, 40 & 50 mm

- Nutating disc measurement.
- High rate of pulses for precision data logging.
- Mechanical totaliser register.
- Low head pressure loss.
- Passes impurities without jamming.
- Accuracy +/-1.5%, with 0.1% repeatability.



25mm size shown

The MESM series nutating disc positive displacement flowmeters are fitted with a non-resettable mechanical totaliser sealed counter and with a reed switch contact-closure output (the flowmeters are also available with the mechanical counter only and no pulse output). The pulse output delivers a high rate of pulses per volume, making these meters ideal for precision data logging and batching applications. The volt-free contact allows use in remote areas where no power source is available.

The nutating disc design allows the meter to be used in applications where the water is not pure, and the meter can pass small impurities without blockage. These meters are ideal for economical totalising applications e.g. for measurement of water consumption. A range of water-based chemical liquids can be measured.

The body and measurement chambers of the 20, 25, 32, 40mm and 50mm size meters are common to the entire MES range of flowmeters (MES, MESLCD5, MESM and MESR series). Therefore, the MES20M mechanical totaliser meter for example can be upgraded to a digital LCD resettable unit (MES20LCD) or to a transistor pulse output unit (MES20) by simply changing the capsule head.

SPECIFICATIONS

Size mm	20	25	32	40	50
Start flow @ ±5% accuracy	0.6	1.1	1.5	3.0	4.0
Minimum flow Litres/min @ ±1.5%	1.5	2.7	3.8	7.5	9.5
Nominal flow Litres/min	45	65	125	200	360
Maximum flow Litres/min	75	112	185	375	600
Minimum register reading	1 Litre	1 Litre	1 Litre	1 Litre	1 Litre
Maximum register reading	99999 M ³	99999 M ³	99999 M ³	99999 M ³	99999 M ³
Reed Switch Pulse Output (pulses / Litre)	60.6	34.2	16	7.2	3.9
Connection Type	¾" BSP(m)	1" BSP(m)	1 ¼" BSP(m)	1 ½" flanged	2" flanged
Weight (kg) (# including connectors)	1.8	2.6	6.0	17 #	21 #

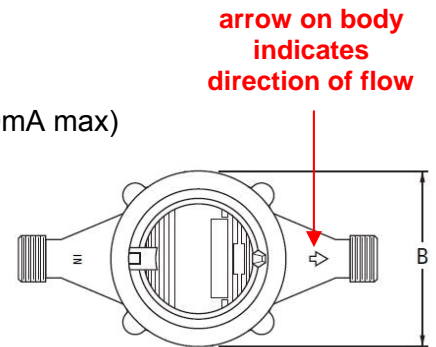
Other Data

Accuracy minimum to maximum flowrange curve	± 1.5 %
Repeatability of set flowrate	± 0.1 %
Headloss at maximum continuous flow	25 kPa (3 metres)
Maximum continuous working pressure	<= 32mm 1160 kPa; 40 & 50mm: 1034 kPa
Maximum temperature	50 °C

Pulse Output Data

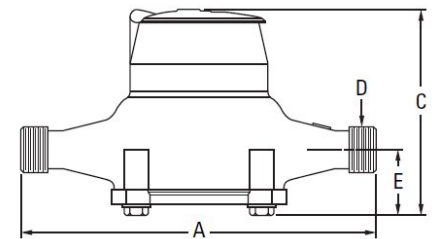
2-wire connection (shielded) with 270 Ω internal current limiting resistor.
 Max. current switching: 5VDC = 18mA, 12VDC = 44mA, 24VDC = 88mA (100mA max)

<u>Dimensions in mm</u>	size mm	20	25	32	40	50
Length of threaded end	A	191	229	273	330	432
Overall height	C	158	178	200	252	283
Height from under face to centreline	E	41	48	54	65	79
Overall width	B	092	111	165	205	240



MATERIAL SPECIFICATIONS (MESM)

Register window	Tempered Glass.
Register body & lid	Synthetic polymer.
Register internals	Hermetically sealed (mechanical only).
Dry gearing	Plastic.
Magnet	Polymer Barium Ferrite.
Meter body	Gunmetal AS 1565 C83810.
Filter	Polyolefin.
Measuring chamber & disc	Polyphenylene.
Nutating disc peg	Stainless steel AS1444-316.
Roller pin & drive shaft	Nylon 11, glass fibre, graphite.
Chamber O ring & Base seal	Ethylene propylene & Neoprene.
Base plate	20 & 25mm: Cast Iron with Nylon cup; 32-50mm: Gunmetal.
Base bolts	Stainless Steel 304.



ORDERING CODES

Order Code	Size	Display/Output
MES20-MR	20mm (3/4")	Mechanical + Pulse
MES20-M	20mm (3/4")	Mechanical
MES25-MR	25mm (1")	Mechanical + Pulse
MES25-M	25mm (1")	Mechanical
MES32-MR	32mm (1 1/4")	Mechanical + Pulse
MES32-M	32mm (1 1/4")	Mechanical
MES40-MR	40mm (1 1/2")	Mechanical + Pulse
MES40-M	40mm (1 1/2")	Mechanical
MES50-MR	50mm (2")	Mechanical + Pulse
MES50-M	50mm (2")	Mechanical



Reading shown above is 109 L

Note: 1 M³ = 1,000Litres

Options for 20mm size:

- S Ryton chamber for petroleum based products.
- S-T Ryton chamber and teflon coated body for corrosive chemicals.