

MESLCD6 LCD DUAL RESETABLE COUNTER + RATE FLOWMETERS

Positive Displacement (sizes: 20, 25, 32 and 40 mm)

NEW FEATURES:

- **Dual Display with Bigger Digits**—FLOWRATE indicator and resettable COUNTER.
- **6 digits resettable COUNTER** in Litres (L) or KiloLitres (KL) up to **3 decimal place** and **RATE** in Litres per minute (L/M) or Litres per second (L/S) up to **2 decimal place**.
- **Smart 1 point re-calibration function** – User friendly, with self-calculation for a new k-factor (Calibration Factor).
- **External re-calibrate via PC** with RFID and EWM calibration software –No need to access buttons
- **External Reset input** for PLC/mechanical switch - (OPTIONAL)
- **Wake-Reset function** –turns on the display before resetting the total - (OPTIONAL)

STANDARD FEATURES:

- Nutating wobble disc measurement chamber.
- Small impurities can pass chamber without jamming.
- Low hydraulic thrust minimises wear.
- Sealed IP65 digital display capsule.
- Wide impact resistant glass lens for easy cleaning and quick reading.
- Internal 5-10 year long-life Lithium battery.
- $\pm 1.5\%$ accuracy curve, with 0.2% repeatability.
- Simple upgrade to high resolution pulse counter for future automatic batching applications.



The MESLCD6 series magnetically-coupled positive-displacement flowmeters incorporate an LCD resetable display counter and flowrate meter, powered by an internal long life (5-10 year) Lithium battery. With low to high flowrange performance, the meters are suitable for a wide range of batching and measurement applications for water and water-based chemicals. They are ideal in situations where there is no external power supply available, making them totally portable flowmeters.

The nutating disc measurement chamber used provides high reliability and accuracy for measurement of liquids with varying specific gravities, and can pass small impurities without blockage to the measuring chamber.

The digital LCD display head is fully self contained, with a wide impact-resistant flat glass lens for easy cleaning and quick reading. The display head couples to the main meter body by a bayonet turn-and-lock fitting action. The display can be refitted to four viewing positions.

To operate, lift the hinged lid twice. The LCD display digits turn on and are automatically zeroed and ready for measurement. The display counts in single Litres or KiloLitres up to 999999. The decimal point versions count either to 99999.9 Litres/KiloLitres (1 decimal place version), 9999.99 Litres/KiloLitres (2 decimal place version) or 999.999 Litres/KiloLitres with Flowrate indicator in Litres per minute (L/M) or Litres per seconds (L/S). Closing the lid resets total digits (000000).

If there is no flow for 5 minutes, then the display goes to sleep (goes blank) to conserve battery power. From sleep mode, the display is reawakened by either:

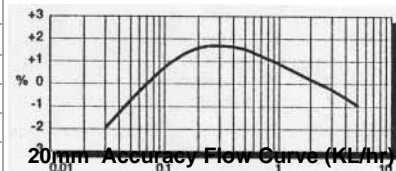
- The occurrence of flow (the count before going to sleep is continued); or
- By closing and re-opening the lid (the count is reset).

FLOWRANGE DATA

Size (mm)		20	25	32	40
Start flow @ $\pm 5\%$	Litres per minute	0.6	1.1	1.5	3.0
Minimum flow $\pm 1.5\%$	Litres per minute	1.5	2.7	3.8	7.5
Nominal flow $\pm 1.5\%$	Litres per minute	45	65	125	200
Maximum flow $\pm 1.5\%$	Litres per minute				
• Admixture (Specific Gravity 1.4)		54	80	132	268
• Admixture (Specific Gravity 1.1)		68	102	168	340
• Water (Specific Gravity 1.0)		75	112	185	375

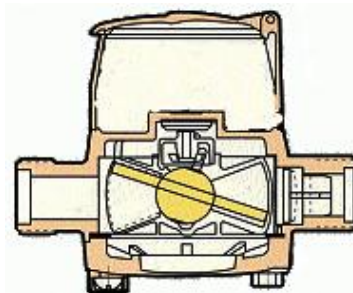
Size mm	20	25	32	40
Number of digits in LCD display	Counter: 6 digits		Flowrate: 5 digits	
Digit height	Counter: 12 mm		Flowrate: 6mm	
Max reading (non-decimal place version)	999999 L (Litres) or KL (Kilolitres)			
Max reading (decimal place version)	99999.9 / 9999.99 / 999.999 L (Litres) or KL (KiloLitres)			
Weight (# including connectors)	1.5 kg	2.3 kg	6 kg	17 kg #
Connection type	$\frac{3}{4}$ " BSP(m)	1" BSP(m)	$1\frac{1}{4}$ " BSP(m)	$1\frac{1}{2}$ " Oval flanged kit BSP(f)

Accuracy range (min-max)	$\pm 1.5\%$	
Repeatability	$\pm 0.2\%$	
Headloss at nominal flow	25 kPa (3 m)	
Max. cont. working pressure	≤ 32 mm: 1160 kPa; 40mm: 1034 kPa	
Power source	3.6v 2100mAh Lithium cell (5-10 year life)	
Readout	Flowrate	L/M (Litres per minute)
		L/S (Litres per second)
	Counter	L (Litres)
		KL (KiloLitres)
Environmental	IP65 0% to 75% relative humidity Up to 2000m Altitude 5 °C - 40 °C Ambient Operating Temperature	



MATERIAL SPECIFICATIONS

1.	Digital display head	Polyacetal c/w copper capsule & toughened glass
2A.	Meter body	Cast gun-metal
3.	Strainer	Polyacetal
5.	Measuring chamber	Synthetic Polymer (Nepton)
6.	Chamber O ring	NBR rubber
7.	Base sealer ring	NBR rubber
8.	Base plate	20 mm: ABS Plastic.
8M.	Base plate	25-32mm: Cast Iron, powder coated.
9.	Base body screws	Stainless Steel
14.	Upper case	40mm: Gunmetal



Measurement Chamber internal view

INSTALLATION

1. LCD display head is rated IP65. Avoid prolonged direct sunlight on the LCD display. Display can be positioned in 90° increments.
2. Flowmeters may generally be installed in any plane without affecting accuracy (but not upside down if particles are present, as mag-drive assembly may be obstructed). **Ensure arrow on meter body coincides with forward direction of flow.**
3. Flush out pipelines thoroughly before connecting flowmeter.
4. Although the flowmeter can pass small impurities, a filter box or strainer (800 micron filter recommended) should be fitted prior to the meter if the fluid to be measured contains excessive impurities and particles.
5. Any flow restriction or regulation valve should be fitted preferably before the flowmeter. Quick-closing valves should be fitted before the meter if used for higher-end flowrates (thus avoiding sudden pressures on the flowmeter chamber) provided that the plumbing configuration allows the pipe to remain full where the flowmeter is located.
6. Once installed, the flowmeter must measure liquid with **full pipe at all times**.
7. To avoid damage to measuring chamber, never exceed the rated maximum flowrate.
8. To change viewing display angle, push in the display head locking pin and turn display head anti-clockwise. Lift off capsule and re-position to desired viewing position. Re-insert locking pin.
CAUTION: Do not press on, or impact, the copper base of the display head.
9. **IMPORTANT: AS LAST STEP OF INSTALLATION, A CALIBRATION CHECK OF FLOWMETER MUST BE PERFORMED.**

MAINTENANCE

If flow becomes excessively restricted, digits fail to count, or meter is out of calibration, then:

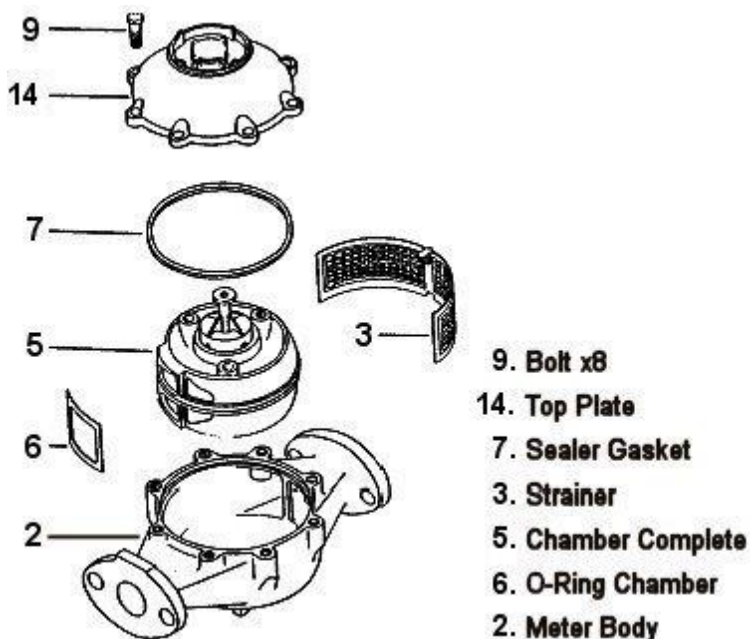
1. Close service gate valve. Push in the locking pin on the digital display head. Turn the display head anticlockwise, pull up display head and remove. **CAUTION: Do not press on, or impact, the copper base of the display head.**
2. To access measuring chamber: undo flanges if applicable, rotate meter body (40mm flowmeter has access from top). Unscrew the 4x base screws, remove base plate and base seal ring. Using long nose pliers, pry and pull out the white strainer screen which then unlocks the measuring chamber assembly. Remove chamber and inspect.
3. If required, clean chamber parts in warm water or dilute acid (4:1 Water:Hydrochloric-acid). Make sure internal chamber wobble disc roller pin is in place and shutter plate is refitted. Then, reassemble meter by repositioning the measuring chamber and lock in position with strainer plate. Refit other components and seal the flowmeter.
4. **IMPORTANT: AFTER ANY SERVICE, A CALIBRATION CHECK OF THE FLOWMETER MUST BE PERFORMED.**

NOTE: If the flowmeter is used with sticky admixtures and runs dry, then flush with water, otherwise admixture may crystallise and seize chamber parts, necessitating service and cleaning.

Arrow on meter body indicates direction of flow.



20, 25 & 32mm meter components

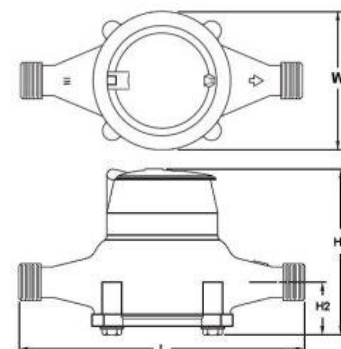


40mm & 50mm meter components

DIMENSIONS

Meter Size	mm	20	25	32	40
Length body end to end	L	191	229	273	330
Overall Height	H1	158	158	200	252
Overall Width	W	92	92	165	205
Height undefaced to centre	H2	41	41	54	65

DIMENSIONS 20, 25 & 32mm



ORDER CODE

ORDER CODE	Size	Display
MES20LCD6	20mm	Standard settings:
MES25LCD6	25mm	-Flowrate in Litres per minute (L/M)
MES32LCD6	32mm	-Counter in Litres (L)
MES40LCD6	40mm	-No decimal place

OPTIONALS

-KL	Total in KiloLitres	-DP1	1 decimal place
-LPS	Rate in Litres per seconds	-DP2	2 decimal place*
-NRT	No-reset of total	-DP3	3 decimal place
* Flowrate indicator up to 2 decimal place only			

OPTIONS for 20mm flowmeter only (add suffix to Order Code)

-E	EDPM seal for better resistance to chemical admixtures (in lieu of rubber seal)
-T	Teflon-coated body only.

Due to continuous product improvement, specifications are subject to change without notice.

