

OCM EM

Flow Meter for Partially and Fully Filled Pipes and Open Channels



- For all channel shapes, sizes, weirs and flumes
- 24V DC or 230V AC - 115V AC powered
- Depth, velocity and flow measurement
- System operation by on-board membrane keypad and back-lit LC display
- 2 x 0/4-20mA inputs, 2 x 0/4-20mA outputs and 4 relays

A reliable flow meter designed for continuous operation in both, sanitary and storm sewers and open channels.

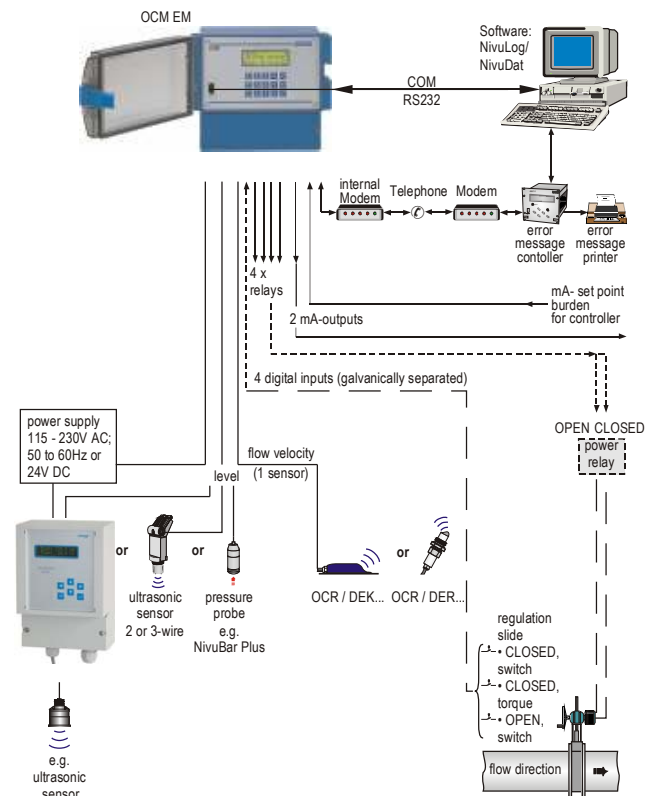
OCM EM flow monitoring system is an AC or DC powered system consisting of a level sensor (hydrostatic pressure or air ultrasonic) and a fully-bidirectional ultrasonic velocity sensor.

OCM EM has a menu-driven membrane keypad and backlit LC display for programming and status check, and can be programmed for any pipe and channel shape and size, and for flumes and weirs. The OCM EM also has an internal 64KB data logger. Optional available is a modem for data transmission.

OCM EM - Equipment Configurations

The minimum equipment configuration for the operation of an OCM EM Flow Monitor consists of a measurement transmitter with an ultrasonic level sensor (or a hydrostatic level sensor) and a velocity sensor.

OCM EM - Overview



OCM EM - Transmitter Specifications

| | |
|-------------------------|---|
| Display / Operation: | 4 x 20 digit LCD (backlit), membrane keypad (15 buttons) |
| Enclosure: | Polycarbonate IP65 (NEMA 4) |
| Internal data logger: | 64KB |
| Internal modem: | optional |
| Inputs: | 2 x 0/4-20mA for level (200 Ohm, 12 bit) 1 x velocity 1 x slide-end/regulator control 1 x torque |
| Outputs: | 2 x 0/4-20mA; galvanically isolated (max. 600 Ohm, 12 bit) 4 x relays as totalizer, boundary contact, error message or slide control programmable, max. capacity 1A/230V AC (cos phi = 1) or 1A/60V DC |
| Control: | 3-point-step regulator with PID-behaviour, fast end control, adjustable slide construction at disturbance, auto flush function at slide transfer |
| Power supply: | 115-230V AC, 50/60Hz; or 24V DC, ±15% |
| Power consumption: | max. 18V A |
| Operating temperature: | -10 to +50°C (14 to 122°F) |
| Storage temperature: | -20 to +60°C (-4 to +140°F) |
| Dimensions (L x W x D): | 192 x 160 x 106mm (7.55 x 6.30 x 4.17in) |
| Weight: | approx. 1.5kg (3.3lbs) |
| Interface: | RS232 |

OCM EM - Applications

- Influent and Effluent Flow Monitoring
- Storm and CSO Monitoring
- Industrial Effluent Monitoring and Control
- WWTP Process Control
- Pre-treatment Compliance
- NPDES Permitting
- Power Plant Cooling- and Feed Water Measurement and Control
- Mining By-Wash Monitoring
- Pump Station Monitoring and Control

OCM EM - Velocity Sensor Specifications

| | |
|-----------------------------------|---|
| Minimum reflecting particle size: | 100ppm; >0.6mm (0.02in) |
| Transmission frequency: | 750 KHz or 2 MHz |
| Measurement range: | -6m/s to 6m/s (-20 fps to 20 fps) |
| Material: | Stainless steel; Epoxy resin; Polyurethane |
| Cable length: | 10m (33ft) or 30m (99ft), extendable up to 150m (492ft) |
| Protection: | IP 68 (NEMA 6) |
| Zero drift: | 100% zero stable |
| Long-time drift: | 0% |
| Accuracy: | ± 1% of measurement reading or +/- 0.03mm/s (whichever is higher) |
| Operating temperature: | -10°C to 50°C (14 F to 122 F) |
| Storage temperature: | -20°C to 60°C (4 F to 140 F) |



Flow measurement in discharge pipes
Interruption-free assembling
of the measurement device



Foul-resistant velocity sensor
due to stream optimized construction