

Flow Meters FM1-CA and FM3 Reducing the cost for compressed air



Technical Information

Flow Meters FM1-CA and FM3

Though electricity, water and air are among the most important energy sources in many industrial plants, compressed air is by far the most expensive.

Accurate consumption measurement and its totalisation allows the supply of costly compressed air to be matched to actual demand. In addition minimisation of leakage losses helps to reduce costs. An innovative and economical solution is

available to achieve these objectives. The E-T-A Flow Meter FM1-CA provides a convenient plug-in design with monitoring head types CSP and CSF, facilitating installation in any sensor adapter, suitable for all three levels of compressed air distribution:

- main pipes up to DN500
- all distribution pipes
- supply pipes from DN15 (1/2")

The calorimetric measuring principle of the FM1-CA and the FM3 ensures they will reliably measure even a very small volume flow which is a pre-condition for the detection and remedy of even the smallest leakages.

Technical data of Flow Meter FM1-CA and Monitoring Heads CSP/CSF

Measuring range for pipe diameters DN15...DN500	standard volume flow to DIN 1343 0-50 Nm ³ /h...50,000 Nm ³ /h
2 x 16 digit LC display	present/ total/min./max. consumption fault indication
2 scalable analogue outputs (temperature and flow)	0/1 - 5 V or 0/2 - 10 V or 0/4 - 20 mA
Freely scalable mass flow dependent pulse output	for external counter or digital input ease of connection to building control systems
Totaliser/zero suppression	consumption measurement/leakage detection
Robust stainless steel sensor (1.4571) type CSP-11, max. 100 bar	for pipe diameters DN15...DN50, for use with sensor adapters type TP and BV
Robust stainless steel sensor (1.4571) type CSF-11, max. 20 bar	for pipe dia. DN65...DN500, monitoring head with variable immersion depth

Technical data of Flow Meter FM3, Sensor Adapter Types TP and BV

Consumption measurement and leakage	branch pipes, machinery connections
Measuring range for pipe diameters DN15...DN50 (1/2" ... 2")	standard volume flow to DIN 1343 0-6 Nm ³ /h...500 Nm ³ /h
Compact flow meter	monitoring head with integral electronic control circuit, fits into sensor adapters TP and BV
Non-linear output signals	4 - 20 mA or 0/20 - 100 Hz
Sensor adapter types TP and BV	DN15...DN50 made of brass, red brass or stainless steel 1.4571

Features and benefits

- comparison can be made between compressed air produced and used
- optimisation of the entire compressed air generation and supply system
- system expansion can be tailor-made to actual demand
- ease of detection and remedy of leakages
- significant reduction of energy costs

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Sensor adapter TP / Ball valve BV



Electronic Flow monitor FM3

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