


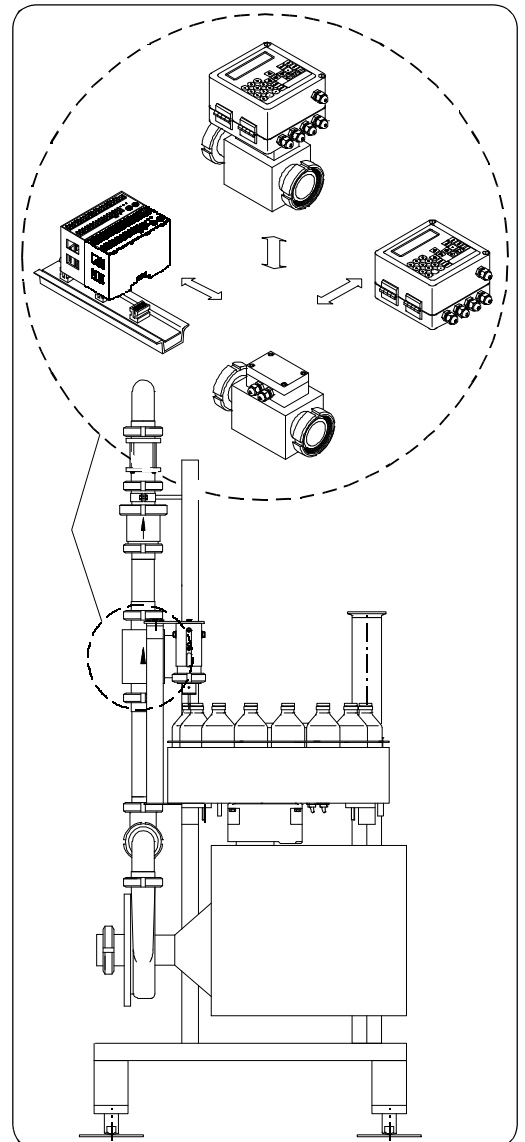
Description

The electromagnetic flow meter type IZM-F has been designed for fast high-precision measurements in filling processes and dosing systems. Liquid products of a minimum conductivity of 5 $\mu\text{S}/\text{cm}$ are measured contactlessly and independently of the pressure, temperature, viscosity, and density of the product. The integrated filling logic enables the IZM-F to control the complete filling process.

Combined with an appropriate quick-closing valve, the IZM-F guarantees a high and reliable filling precision in addition to its high measuring accuracy. The small dimensions of the transmitter allow a space-saving installation that is especially important on filling machines.

Special features

- transmitter housing made of stainless steel
- wear-resisting and maintenance-free
- transmitter entirely suitable for CIP
- high measuring accuracy / reproducibility / filling precision
- standard availability of a filling statistics per container-/package
- parameterizable "bottle-breakage recognizing" function
- 8 digital inputs and outputs each
- self-monitoring with automatic error diagnosis
- remote maintenance through CS3-BUS connection
- space-saving fitting dimensions due to the separated design
- converter designed as a module to suit the DIN profile rail
- electromagnetically compatible design (CE-sign )
- internal monitoring functions according to the PTB directives
- automatic conversion of the measuring range if the expected flow rate is exceeded
- realization of the complete control of the filling process by the integrated quantity preselection function
- possible change of the electronic system without alignment (transmitter data stored in the MEM box)



Technical data

Transmitter		
Connections and nominal widths:	Special design:	DN 10, DN 15 (on demand)
	Others:	See data sheet D12.60E
Materials:	Measuring tube:	Stainless steel, material no. 1.4301 (AISI type 304)
	Liner:	PTFE
	Electrodes:	Stainless steel, material no. 1.4404 (AISI type 316 L)
	Transmitter housing:	Stainless steel, material no. 1.4301 (AISI type 304) [blasted]
Product temperature:		150 °C max.
Cleaning temperature:		150 °C max.
Product conductivity:		5 $\mu\text{S}/\text{cm}$ min.
Admissible pressure:		0.5 bar min. absolute at 20 °C, 16 bars max.
Protection:		IP67

DIESSEL GmbH & Co.

P.O. Box 10 03 63
D-31103 Hildesheim
Germany
☎ **49(0)5121-742-0

Electromagnetic Flow Meter
IZM

Typ: F filling processes

D12.55E

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Inlet and outlet tube sections:

The length of the inlet tube section depends on the condition before the flow meter. An inlet tube section of 3 x the nominal width and an outlet tube section of 1 x the nominal width should be considered. Asymmetric flow profiles, that may be caused e.g. by valves or stop plugs before the flow meter, require longer inlet tube sections.

Grounding:

The performance of the IZM-F and the electrical safety regulations according to VDE 0100/part 540 require a faultless grounding of the transmitter. In plastic lines or insulated pipe lines, adjusting lines have to be fitted between the inlet and the outlet tube through the ground screw of the transmitter.

Flow ranges and error tolerances:

Measuring accuracy: $\pm 0.25\%$ of the measured value within a flow range of 10%... 100%

Reproducibility: $\pm 0.1\%$ of the measured value

Total flow range: 25 ... 6,000 l/h (adjustable within a range of 10% ... 100%)

Filling:

Typical filling quantities and filling accuracies for the use of the integrated DIESSEL filling controller and a quick-closing valve:

		Filling times			
		0.5 sec.	2 sec.	5 sec.	10 sec.
typical filling quantities and filling tolerances	DN10	20 ml \pm 0.2 ml	20 ml \pm 0.3 ml	200 ml \pm 0.4 ml	400 ml \pm 0.5 ml
		50 ml \pm 0.3 ml	50 ml \pm 0.4 ml	500 ml \pm 0.5 ml	1000 ml \pm 1.0 ml
		100 ml \pm 0.5 ml	100 ml \pm 0.5 ml	1000 ml \pm 0.7 ml	2000 ml \pm 2.0 ml
	DN15	50 ml \pm 0.4 ml	200 ml \pm 0.5 ml	500 ml \pm 0.6 ml	1000 ml \pm 1.0 ml
		100 ml \pm 0.5 ml	400 ml \pm 0.6 ml	1000 ml \pm 0.7 ml	2000 ml \pm 2.0 ml
		150 ml \pm 0.6 ml	600 ml \pm 0.7 ml	1500 ml \pm 0.8 ml	3000 ml \pm 3.0 ml
	DN25	150 ml \pm 0.6 ml	600 ml \pm 0.8 ml	1500 ml \pm 2.0 ml	3000 ml \pm 3.0 ml
		200 ml \pm 0.7 ml	1000 ml \pm 1.0 ml	2500 ml \pm 3.0 ml	5000 ml \pm 5.0 ml
		500 ml \pm 0.8 ml	2000 ml \pm 2.0 ml	5000 ml \pm 5.0 ml	10000 ml \pm 10.0 ml

Conditions of use:

It is possible to measure all liquid products that have a minimum conductivity of 5 μ S/cm. The measuring principle allows both laminar and turbulent flows to be measured. A major precondition for correct measurements is a permanently flooded pipe. Any control devices or other parts built in are installed after the IZMF. An installation into an ascending tube is recommended. When the unit is installed horizontally, the electrode axis has to be horizontal, too.

Special design:

