

Description

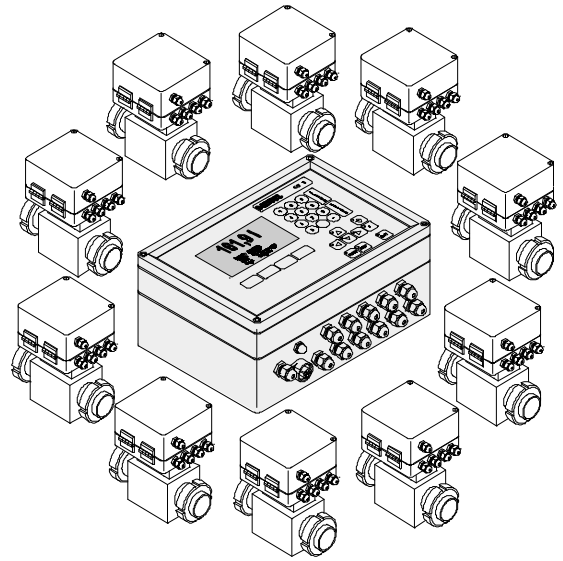
The volumetric filling management type **ZEVODAT-F™** serves for the control, indication, and recording of simple or complex filling systems.

Its range of application reaches from the semi-automatic filling of single packing drums up to the fully automatic filling of a huge number of packing drums within packaging machines.

The filling process is controlled by a high-precision electromagnetic flow measurement combined with an exact switch-off calculation for the stopping of single-stage or two-stage filling profiles.

The **GEA Diessel** flow meters of the series **IZM-S™** or **IZM-M™** (see data sheets D12.70E and D12.85E) guarantee the high accuracy values even in case of minimum filling periods of e.g. less than 1 second.

ZEVODAT-F™ is in a position to permanently manage all measuring instruments through the **GEA Diessel CS3-BUS**, i.e. to indicate the measured values and the current states, to parameterize individual devices, to collect a filling statistics of all metering points, to enable the recording of data by means of printers or standardized interface protocols.



Special features

Electromagnetic flow meters type **IZM-S™** and **IZM-M™**

- Exact filling by:
 - high-precision flow meters,
 - special calculating and control procedures,
 - quick calculating and response times (multiprocessor technique),
 - taking over the direct control function of the circuit elements.
- Quick automatic correction upon a change of the filling parameters.
- Packing drums of 4 different sizes (**IZM-S™**) or 16 different sizes (**IZM-M™**) can be automatically selected for each metering point without necessitating any accessory unit.
- The integrated time monitoring function ("Timeout") guarantees a synchronized filling sequence.
- External STOP input in case of a faulty filler function or a cleaning signal (CIP).
- The flow meters can be supplied in a Weights & Measures approved version **IZM-SE™** or **IZM-ME™** suitable for calibration.

Filling management system type **ZEVODAT-F™** (in a field housing or panel-mounting design)

- Simultaneous indication of the liquid level of several metering points
- Selection of single metering points for parameterization or service purposes
- Several signals for overfilling and/or underfilling can be sent either for each metering point or as a collective message
- Optionally it is possible to integrate some additional **GEA Diessel** process metering systems for a complete quality assurance.
- Statistical functions for indicating and recording the data of each metering point and packing drum size are available as a standard.
- Different interfaces can be used for the data transmission to higher-ranking controllers or the logging of operational data.
- Optionally it is possible to jointly select up to 16 different packing drum sizes for all metering points and to control the cleaning function (CIP) centrally.

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Volumetric Filling Management
ZEVODAT-F™

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Technical data

- Electromagnetic transmitter type **IZM-S™/IZM-SE™** as per data sheet D12.20E or **IZM-M™/IZM-M™** as per data sheet D12.85E.

Measuring ranges and accuracy

Nominal widths:	DN10 / DN15 / DN25 / DN32 / DN40 / DN65 / DN80 / DN100 / DN125	
Measuring range:	Flow velocity: Total flow range: Measuring accuracy (typical): Reproducibility:	0.05 ... 10 m/s 14 ... 650,000 l/h <±0.25% from the measured value <±0.05 %

Typically obtainable filling accuracy (with direct valve control through the integrated filling control) in case of minimum filling quantities:

		Filling times			
		≥ 0.5 sec.	≥ 2 sec.	≥ 5 sec.	≥ 10 sec.
Typical filling quantities and tolerances	DN10	20ml ± 0.2ml	20ml ± 0.2ml	200ml ± 0.4ml	400ml ± 0.5ml
		50ml ± 0.3ml	50ml ± 0.3ml	500ml ± 0.5ml	1000ml ± 1.0ml
		100ml ± 0.5ml	100ml ± 0.5ml	1000ml ± 0.7ml	2000ml ± 2.0ml
	DN15	20ml ± 0.4ml	200ml ± 0.5ml	500ml ± 0.6ml	1000ml ± 1.0ml
		50ml ± 0.5ml	400ml ± 0.6ml	1000ml ± 0.7ml	2000ml ± 2.0ml
		100ml ± 0.6ml	600ml ± 0.7ml	1500ml ± 0.8ml	3000ml ± 3.0ml
	DN25	20ml ± 0.2ml	600ml ± 0.5ml	500ml ± 0.6ml	3000ml ± 1.0ml
		50ml ± 0.3ml	1000ml ± 0.6ml	1000ml ± 0.7ml	5000ml ± 2.0ml
		100ml ± 0.5ml	2000ml ± 0.7ml	1500ml ± 0.8ml	10000ml ± 3.0ml

The normal measuring tolerances according to data sheets D12.70E or D12.85E are valid for longer filling times and larger quantities, on the condition that the internal filling controller offers a direct switching mode.

2. ZEVODAT-F™

Dimensions:	Field housing: Panel-mounting version:	330 mm x 230 mm x 155 mm (L x B x H) On request (according to the design and requirements)
Display:	16 lines x 40 characters	125 mm x 70 mm (width x height)
Max. number of BUS users:		200
Equipment:	Standard: Options:	TERM1 module and BUS connection On request (according to the design and requirements)

Applications

- By integration in keg-line controllers, the kegs are fully automatically filled and the volume is monitored (even as a Weights & Measures approved filling process).
- Semiautomatic filling of containers, receptacles, vessels, bags, etc.
- Fully automatic filling of beakers within packaging machines.