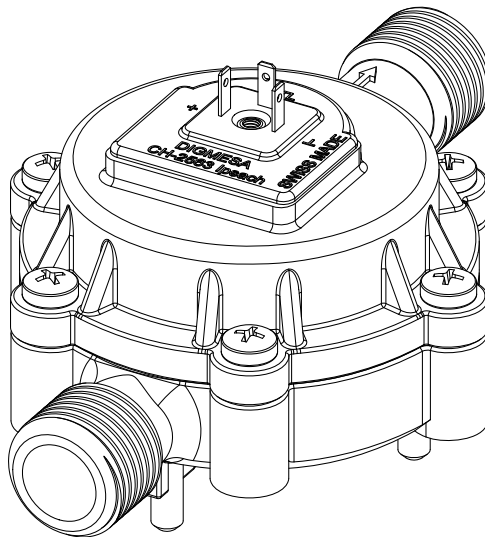


# DATA SHEET



**DIGIMESA**<sup>+</sup>  
CHOOSE THE ORIGINAL

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FMIG 1/2" Arnite  
Part number: 935-1500-x

Digimesa AG, Keltenstrasse 31, CH-2563 Ipsach / Switzerland  
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[www.digimesa.com](http://www.digimesa.com)

Version 03 FMIG 1/2" Arnite 935-1500-x GB Page 1-5

# General Description

The FM Flowmeter is a general-purpose precision device. It measures with constant precision and guarantees maximum accuracy in the measurement of fluid volumes. Its integrated electronic pulse emitter, plus the forces acting centrally upon its vane give an additional guarantee for a practically unlimited useful life. By means of its multi-jet metering principle, a very high degree of accuracy is achieved and for this reason it is

employed in many different industrial sectors.

**Special features:** High accuracy. Sturdy bearing. Impulses can be doubled (turbine with 4 magnets).

## Approvals / Standards

EN55014-1:00+A1:01+A2:02, EN61000-6-3:01+A11:04, IEC61000-6-3:06(ed.2.0), EN61000-3-2:06, IEC61000-3-2:05(ed.3.0), EN61000-3-3:95+A1:01+A2:05, IEC61000-3-3:94+A1:01+A2:05(Cons.ed 1.2), EN55014-2:97+A1:01, EN61000-6-1:01, IEC61000-6-1:05(ed.2)



## Material:

Housing:	PBT 35%GF (Arnite)
Parting disk:	PBT 35%GF (Arnite)
Bearing pin:	Inox 1.4305
Nozzle:	Ø 8.0mm like housing
O-ring:	MVQ (Silicon)
Turbine:	PVDF 2 Magnets 4 Magnets on request
Magnets	Keramik Sr Fe O (in contact with the medium)
Screw:	PT-screw (Phillips cross recessed)

## Technical data:

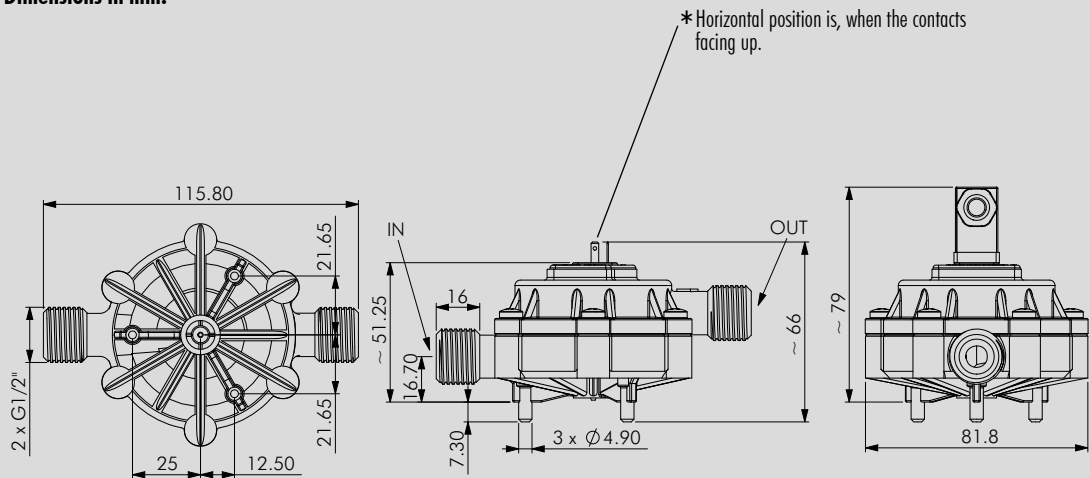
Flow rate:	0.24 - 17 l/min
Continuous operation:	Turbine < 500 rpm
Measuring accuracy:	+/- 2.0% *
Repetition:	< +/- 0.25%
Temperature range:	-10°C to +65°C 14°F to 149°F
Pressure range:	20 bar at 20°C 290 psi/68°F
Mounting position:	Horizontal *
Nozzle size:	Ø 8.0 mm

\* Accuracy in the linear range for individually calibrated equipment

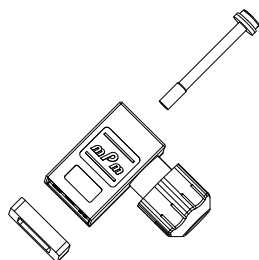
## Electrical connection ratings:

Power supply:	+3.8 to +24 VDC
Consumption:	< 8 mA
Signal connection:	Open collector NPN
Signal voltage:	0 VDC GND (saturation < 0.7 V)
Signal load:	max. 20 mA
Leakage current:	max. 10 µA
Connections:	3Pin- AMP 2.8 x 0.8 mm
Signal:	Square-wave output
Duty Cycle:	~ 50%

## Dimensions in mm:



**Options:** 3-pin valve connector  
Item number: 941-0010-3



We reserve the right to make modifications in the interests of technical progress.

## RESISTANCE

Special regulations which must be complied with by the flowmeter manufacturer apply to each country, e.g. CE, NSF, FDA and SK. The various media flowing through the flowmeter differ from application to application. You are advised to enquire with the medium manufacturer as to whether the entire installation and the flowmeter are resistant to the medium itself (see Material)!

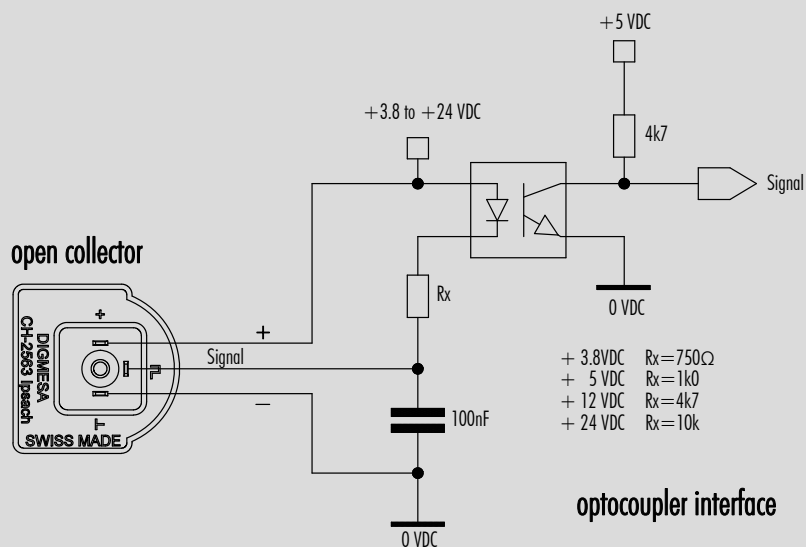
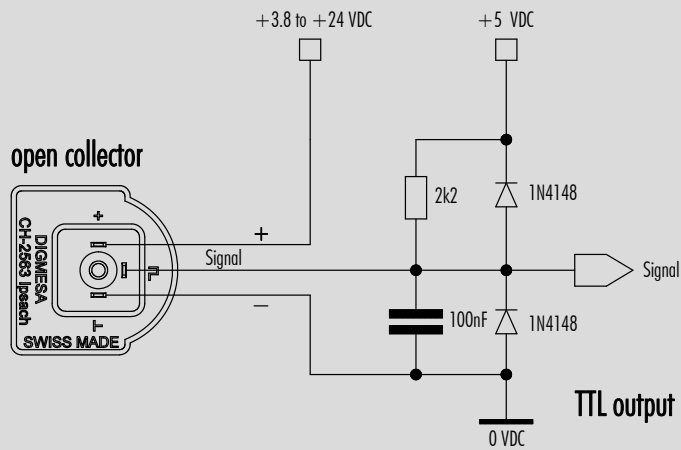
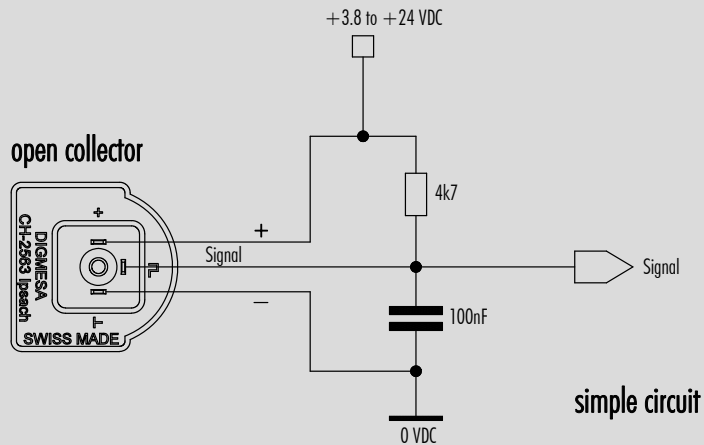
## ELECTRONIC

DIGMESA electronic circuitry is always designed for operation with DIGMESA flowmeters. Please note the following if connecting to other electronic circuitry:

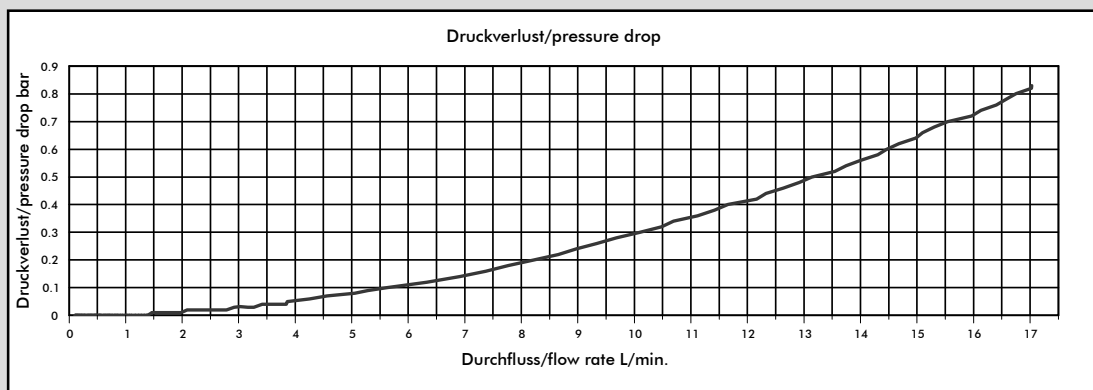
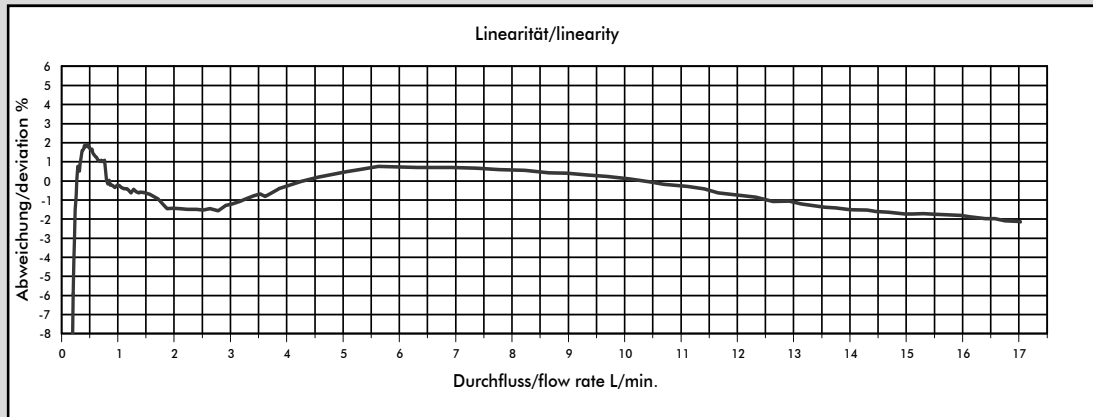
- The flowmeter does not supply an output voltage but switches the signal terminal to 0 V ground (actuated) or leaves it open (non-actuated)
- There must be a pull-up resistor between power supply + and signal depending on electronic circuitry!

Version 03 FMIG 1/2" Arnite 935-1500-x GB Page 2-5

# Interface Connection: Examples Open Collector



# Measurement Curve FM Ø8.00 mm 2 Magnets (#935-1500-2)



Medium: Water / max. Pressure: 3.3 bar

Nozzle size	Pulses/litre	g/pulse	min. flow rate in [litres/min] at linear start	max. flow rate in [litres/min]	Pressure loss in [bar]
Ø 8.00 mm	147	6.7	0.24	17.00	0.83

## MEASUREMENT TIPS

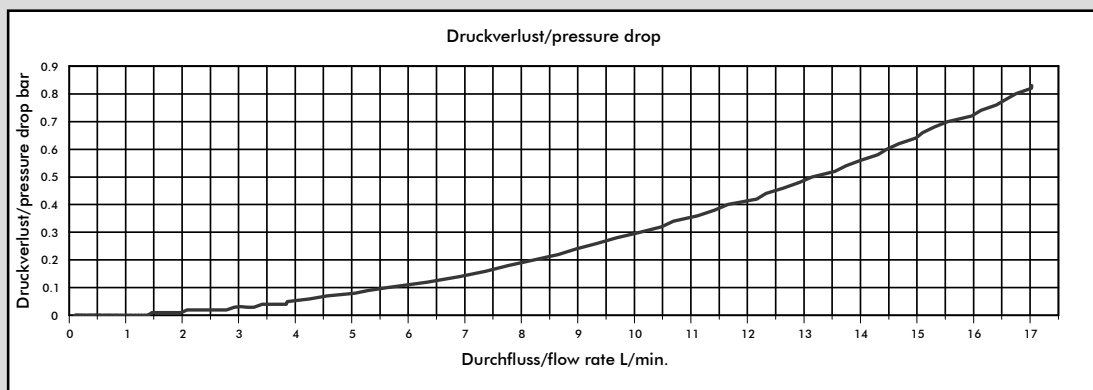
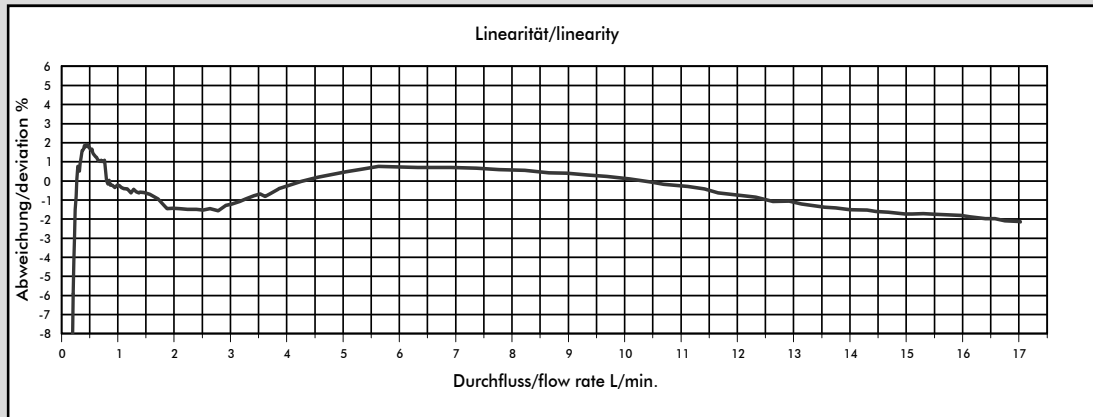
- Ensure that there is no fast-pulsatory movement of the media
- Ensure that there are no reverse pressure surges
- Ensure that there is no air in the system
- Keep the pressure loss as small as possible
- Note the mounting position of the flowmeter
- Min/max flow should be in the linear range of the selected flowmeter
- Clean the system at appropriate intervals
- Avoid electrical current peaks
- Incorrect cabling of power supply +, signal and ground will destroy the flowmeter
- Do not mechanically load electrical contacts
- Avoid moisture on the electrical contacts
- Avoid stray pick-up via the cable (Do not lay cables in parallel with high current loads)

**The values specified must be considered as approximate values.**

**The number of pulses per litre may differ depending on medium and installation.**

**We recommend to calibrate the number of pulses per litre in line with the complete installation.**

# Measurement Curve FM Ø8.00 mm 4 Magnets (#935-1500-4)



Medium: Water / max. Pressure: 3.3 bar

Nozzle size	Pulses/litre	g/pulse	min. flow rate in [litres/min] at linear start	max. flow rate in [litres/min]	Pressure loss in [bar]
Ø 8.00 mm	294	3.4	0.24	17.00	0.83

## MEASUREMENT TIPS

- Ensure that there is no fast-pulsatory movement of the media
- Ensure that there are no reverse pressure surges
- Ensure that there is no air in the system
- Keep the pressure loss as small as possible
- Note the mounting position of the flowmeter
- Min/max flow should be in the linear range of the selected flowmeter
- Clean the system at appropriate intervals
- Avoid electrical current peaks
- Incorrect cabling of power supply +, signal and ground will destroy the flowmeter
- Do not mechanically load electrical contacts
- Avoid moisture on the electrical contacts
- Avoid stray pick-up via the cable (Do not lay cables in parallel with high current loads)

**The values specified must be considered as approximate values.**

**The number of pulses per litre may differ depending on medium and installation.**

**We recommend to calibrate the number of pulses per litre in line with the complete installation.**