

Flow Indicator for Solids

-Relay output

-Transistor output

-Current output

Function

The sensor electronics units of **Flow-GuardV-series** connected with process couplings of ESR.../m/... series helps to monitor the mass flow in solid material handling applications such as pneumatic transport lines, feeders or gravity chutes in a wide range of mass flow from g/h to t/h.

Flow problems with transports or the delivery of powders, dust, pellets, or granulates can be detected early with this device. This helps to prevent serious difficulties that can occur due to clogged piping, material loss, or other technical problems with the system.

The meter detects *moving* electrical charges that are produced, for example, through friction with other objects such as the pipe wall and then naturally adhere to the solids surface, solid lining will not be detected.

A multitude of sensor mechanics units makes process coupling very easy and allows cost effective solutions for almost any monitoring application - also in existing conveying systems. The advantage of this modular concept also appears in case of refit or exchange.

The device is not applicable for solids which build up an electrical conducting layer on the sensor through friction or deposition.

Technical Data

material	connector head	stainl. steel 1.4305 (AISI 303)
	screw-link	stainl. steel 1.4571 (AISI 304)
	sealing	NBR
ambient cond.	temperature	-20°C...+70°C (-4°F...158°F)
	degree of protection	IP 67 (EN 60529)
	EMC	according to EN 61326-1
output	Flow-GuardV01	relay: max. 48 V AC/DC, 1A high/low switchable
	Flow-GuardV02	transistor: galvanically isolated max. 31 V DC, 15 mA high/low switchable
	Flow-GuardV20	4-20 mA, galvanically isolated load < 500 Ω supply voltage
	Flow-GuardV01/V02	17...31 V DC, max. 60 mA
	Flow-GuardV20	17...31 V DC, max. 90 mA
adjustment	sensitivity	1...180.000
	damping	0...10 s (V01/02), 0...180 s (V20)
	switchpoint	1...10 Flow-GuardV01/V02 zero set 4 mA Flow-GuardV20

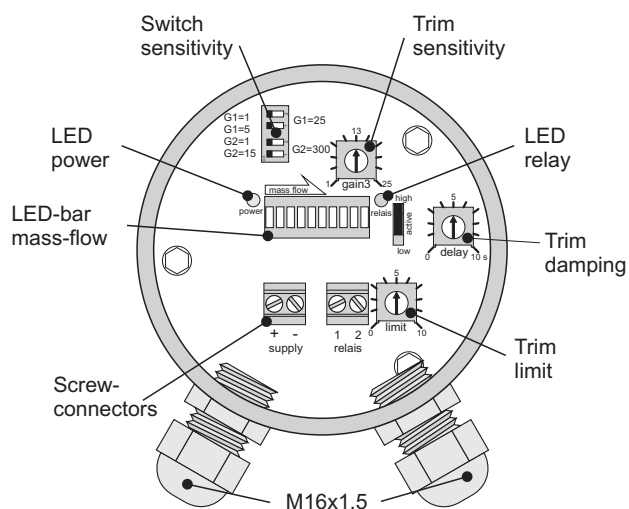
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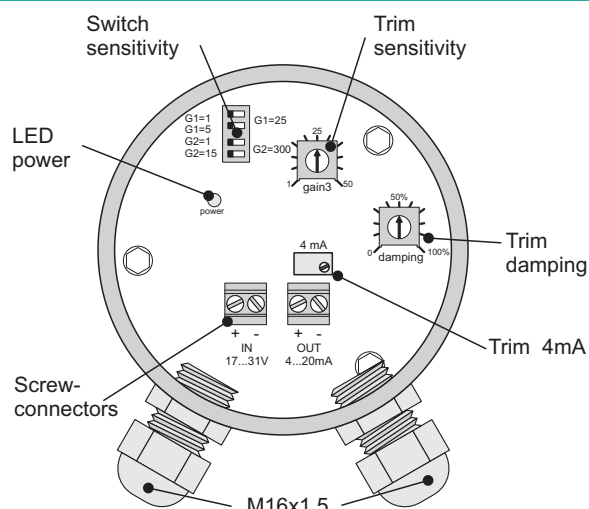
Characteristics

- electronic module without process coupling (please refer to ESR...)
- multitude of couplings are available
- variable use
- revolving screw-link to the process coupling
- measurement display with LED-bar conditions displayed by LED (relay / transistor output)
- stainless steel housing
- adjustable sensitivity
- adjustable switchpoint (limit switch)
- adjustable damping

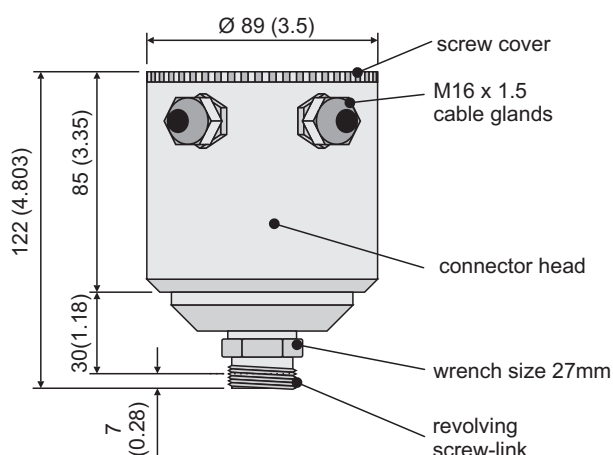
Switching output: Flow-Guard V01 and V02



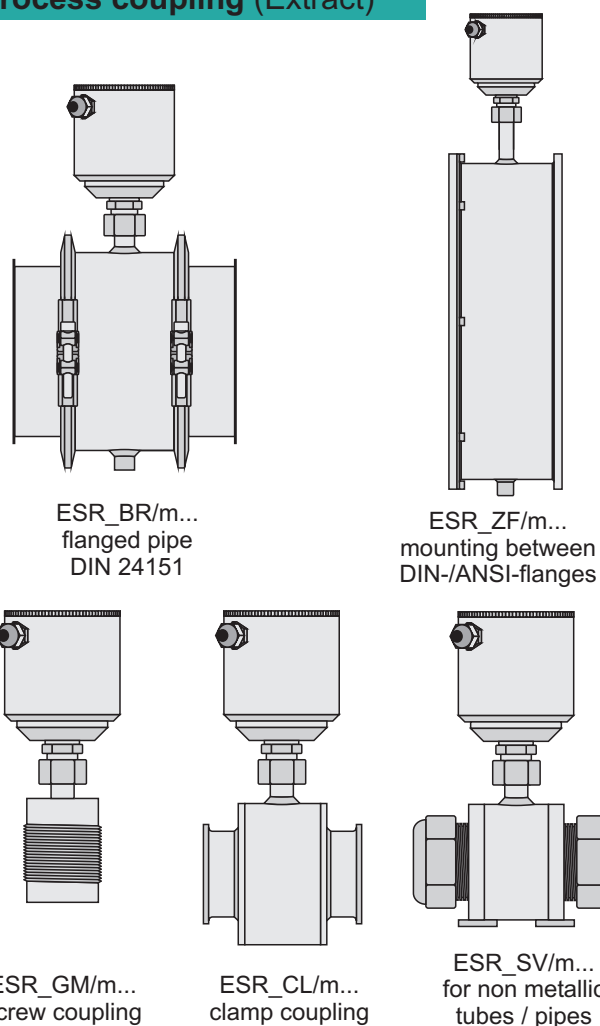
Analog output: Flow-Guard V20



Dimensions in mm (in)



Process coupling (Extract)



Ordering key

Flow-Guard A/B

A: Output

V01: Relay
V02: Transistor
V20: Analog output 4-20mA

B: Certificates

0: Ex-free area
Ex2: ATEX-Zone 2 and/or 22

process coupling:
please refer to
data sheet ESR.../m/...

II 3G EEx nA II T4
II 3D IP67 T100°C

technische Änderungen vorbehalten

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