

## System Description

The dust monitor **DYNAguard\_GM** is used for the detection of filter (hose, cloth, fabric filters) malfunction e.g. broken bag or gross failure.

The DYNAguard technology is based on a modified triboelectric principle detecting particles interacting with the sensing rod and such particles just passing the rod. Build up on the rod surface will not be detected, only moving particles generate a flow rate proportional signal which is monitored by the electronics. Three electronics versions are available with analog (GM20), relay (GM01) or transistor (GM02) output. Adaptation is done under normal conditions by switches and potentiometer, DYNAguard's alarm level (GM01, GM02) can be set above this background. Signal averaging is selectable by the user.

The sensor length should be 1/3 to 2/3 of the duct diameter, 800mm maximum.

Installation is done on the clean gas side downstream the filter at a metal duct by welding on of a thread bush boring through the duct wall and screwing in DYNAguard. Upstream and downstream the sensor at least three duct diameters should be straight without any fittings like valves or dampers.

Commissioning is simple and requires no tools or specialised equipment.

## Technical Data

material	housing	stainl. steel 1.4305 (AISI 303)
	sensor rod	standard: stainl. steel 1.4571 (AISI 316Ti)
	isolation	standard: polyamide (PA), 2mm
	sealing	standard: 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
process cond.	sensitivity	0.1 mg/m <sup>3</sup>
	temperature	standard: max. 90°C (194°F)
		optional 130 °C / 200 °C
output	pressure	max. 6 bar (84 lbs)
	DYNAguard GM01	relay: max. 48 V AC/DC, 1A
		high/low switchable
	DYNAguard GM02	transistor: galvanically isolated
		max. 31 V DC, 15 mA
		high/low switchable
	DYNAguard GM20	4-20 mA, galvanically isolated
		load < 500 Ω
supply voltage	DYNAguard GM01/02	17...31 V DC, max. 60 mA
	DYNAguard GM20	17...31 V DC, max. 90 mA
adjustment	sensitivity	1...180.000
	damping	0-10 s (GM01/02), 0-180 s (GM20)
	switchpoint	1...10 (DYNAguard GM01/02)
	zero set	4 mA (DYNAguard GM20)

## Filter Watch particulate monitor for filter failure

- broken bag
- gross failure



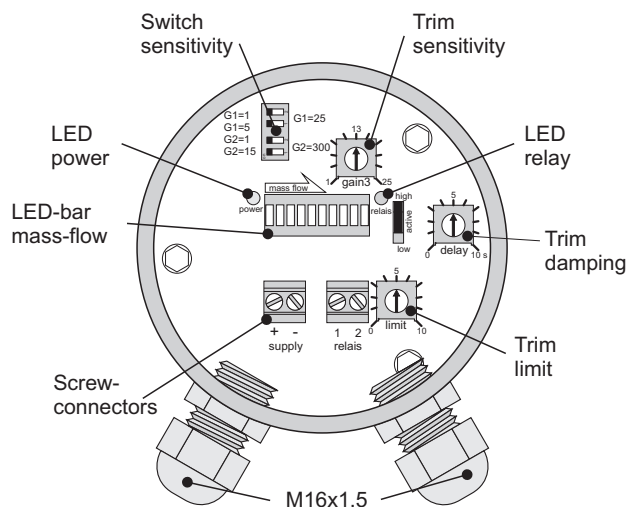
Installation

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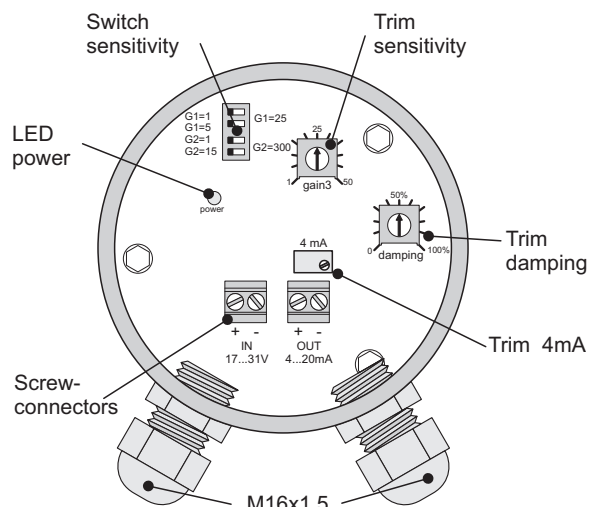
Instrumentation for Powder and Bulk Industries

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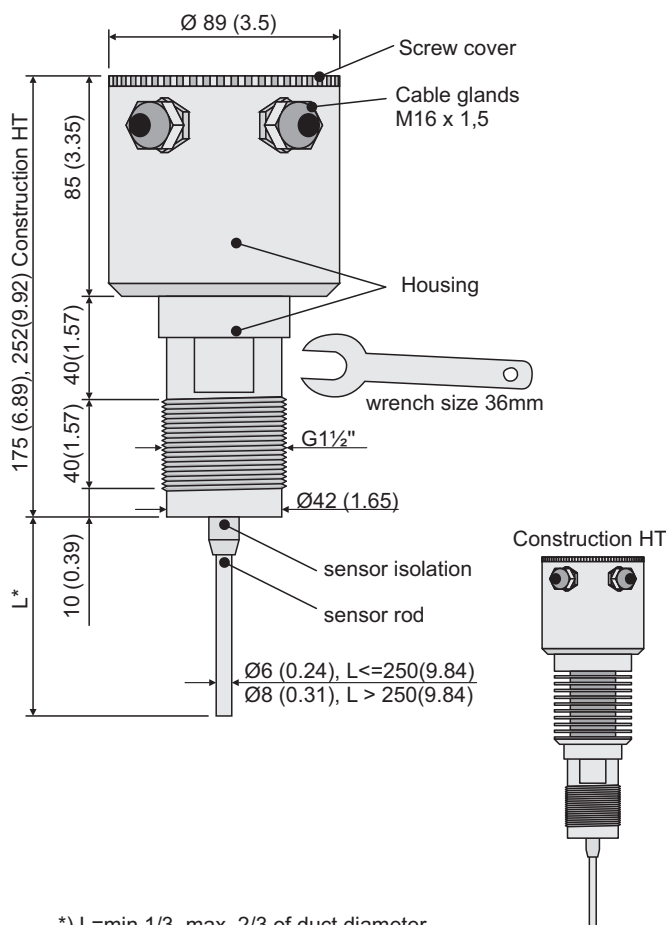
## Switching output: DYNAguard GM01 and 02



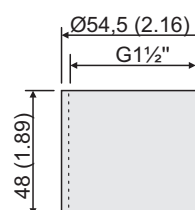
## Analog output: DYNAguard GM20



## Dimensions in mm (in)



## Accessory: thread bush



## Ordering key

### DYNAguard A/B/C/D/E/F/G/H/I

#### A: Output

GM01: Relay  
GM02: Transistor  
GM20: Analog output 4-20mA

#### B: Thread size

G1,5: G 1 1/2"  
40...800

#### C: Length of sensor rod in mm

20: 1.4571 (AISI 316Ti)  
E: Material of sensor insulation

#### F: Material of seals

00: NBR (standard)  
10: FPM  
20: silicone

#### G: Options

00: without  
HT: High temperature (200°C, 392°F)

#### H: Certificates

00: without  
Ex2: ATEX-Zone 2 and 22  
II 3G EEx nA II T4  
II 3D IP67 T100°C  
CSA: Ex nA IIC  
Class I, Div. 2, Groups A,B,C,D  
Class II, Div. 2, Groups E,F,G  
Class III, Div. 2

#### I: Accessories

00: without  
01: thread bush 1.4301 (AISI 304)  
02: thread bush 1.4571 (AISI 316Ti)

#### Temperatur ranges:

DYNAguard A/B/C/D/30/20/G/H/I  
T<sub>process, max</sub> = 130°C (266°F)  
DYNAguard A/B/C/D/30/20/HT/H/I  
T<sub>process, max</sub> = 200°C (392°F)

technical data subject to change without notice

Contact your national or area sales and service office

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