DYNAguard GM

Datasheet

System Description

The dust detector **DYNAguard_GM** is used for the detection of filter 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 by 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 damping is adjustable by the user.

The sensor length should be between 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 a thread bush, boring through the duct wall and screwing in the DYNAguard. Upstream and downstream of the sensor, at least three duct diameters should be straight without any fittings like valves or dampers.

Comissioning is simple and requires no tools or specialised equipment.

Dust Detector

Broken Bag Detector

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^3
	temperature	standard:	max. 90°C (194°F)
			optional 130°C/200°C/290 °C
	pressure		max. 6 bar (84 lbs)
output	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)

DYNA Instruments

Instrumentation for Powder and Bulk Industries

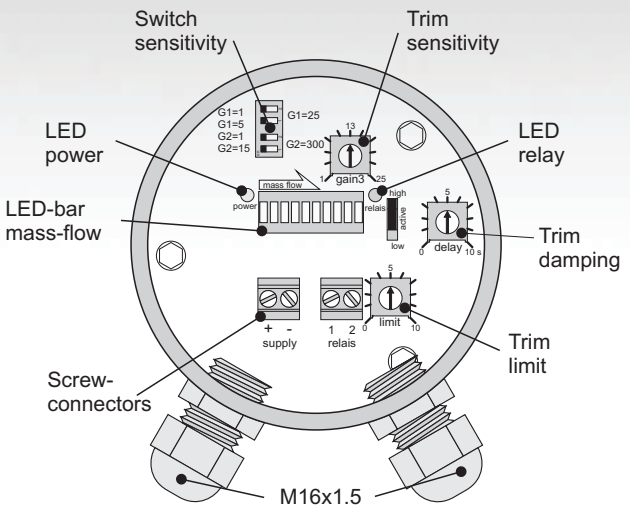
DYNA Instruments GmbH
Tempowerkring 7
D-21079 Hamburg
Germany

Telefon: + 49 (0)40 79 01 85-0
Telefax: + 49 (0)40 79 01 85-18
E-Mail: info@dynainstruments.com
Internet: www.dynainstruments.com

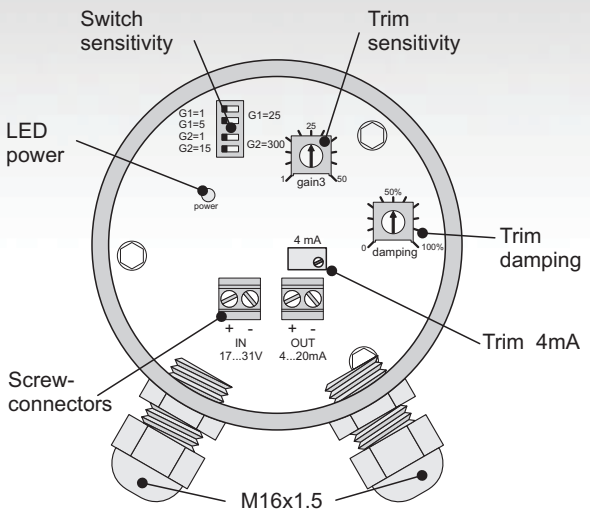
DYNAguard GM

Datasheet

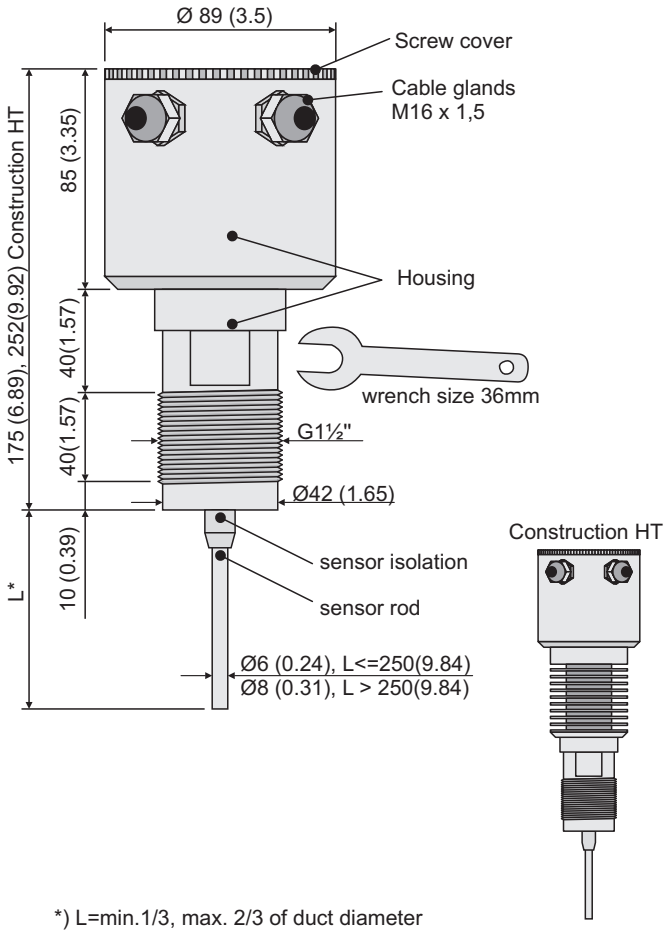
Switching output: DYNAguard GM01 and 02



Analog output: DYNAguard GM20

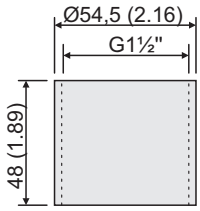


Dimensions in mm (in)



*) L=min.1/3, max. 2/3 of duct diameter

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 ½"
C: Length of sensor rod in mm
40...800
D: Material of sensor rod
20: 1.4571 (AISI 316Ti)
E: Material of sensor insulation
20: PTFE
30: Peek
51: PA (standard)
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)

Temeratur ranges:
DYNAguard A/B/C/D/**30**/**20**/G/H/I
$T_{process,\ max}$ = 130°C (266°F)
DYNAguard A/B/C/D/**30**/**20**/**HT**/H/I
$T_{process,\ max}$ = 200°C (392°F)

technical data subject to change without notice

DYNA Instruments
Instrumentation for Powder and Bulk Industries

Contac your regional representative: