FLOWguard S

Flow Monitoring for Powders in Flexible Hoses

Function

The FLOWguard S is used to monitor the flow of solids in flexible hoses. It alarms through a relay output when a threshold is exceeded or trends the flow with the Analog (4-20mA) version.

When granulates, powders, blasting material, dust or other solids are (pneumatically) transported; blockages are immediately detected due to an empty feed bin or plug condition.

The measurement principle is based on the detection of moving electrical charges which naturally adhere to the solids surface and are produced e.g. through friction on the hose-wall. Only moving particles generate a signal.

The hose is simply passed through the instrument (version T) and is tightened with the hose fittings.

In applications with conductive hoses, for larger diameters or in cases where the hose must be cut for installation, the versions E or W are used. Here the hose is plugged into hose fittings or fixed on nozzles from two sides.

The device cannot be used if bulk solids build up an electrically conductive layer on the inner hose wall.

Relay / Analog Output
Contactless Measurement
Easy Installation

Technical Data		
material	electonics housing	stainl. steel 1.4305 (AISI 303)
	sensorpipe	POM (standard)
	seal	NBR (standard)
		FPM (Ex-version)
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	sensitivity	0,1 mg/m^3
	temperature	standard: max. 70°C (158°F)
	pressure	max. 10 bar (140 lbs)
output	FLOWguard S01	relay: max. 48 V AC/DC, 1A
	FLOWguard S02	transistor: galvanically isolated max. 31 V DC, 15 mA
	FLOWguard S20	4-20 mA, galvanically isolated load < 500 ΩSupply
voltage	FLOWguard S01/02	17...31 V DC, max. 60 mA
	FLOWguard S20	17...31 V DC, max. 90 mA
adjustment	sensitivity	1...180.000
	damping	0-10 s (S01/02), 0-180 s (S20)
	switchpoint	1...10 (FLOWguard S01/02)
	Zero set	4 mA (FLOWguard S20)
	output	high/low switchable

GTS, Inc.
PO BOX 799, Shalimar, FL 32579 USA
PH (850) 651-3388 FAX (850) 651-4777
EMAIL: info@onthelevel.com

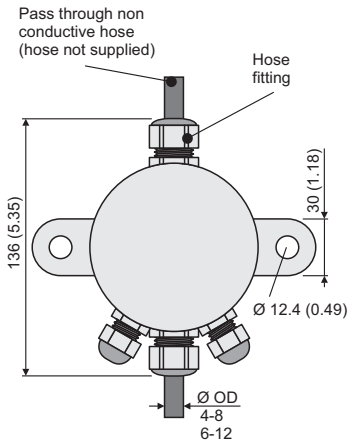
FLOWguard S

compact reliable economical

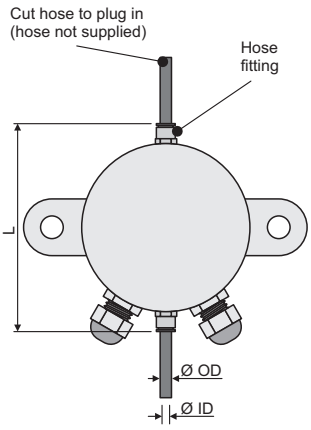
Datasheet

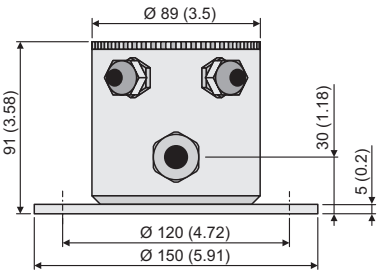
Dimensions (non-Ex Version) mm (in)

FLOWguard_S...T



FLOWguard_S...E

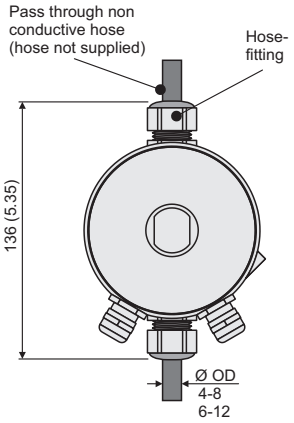




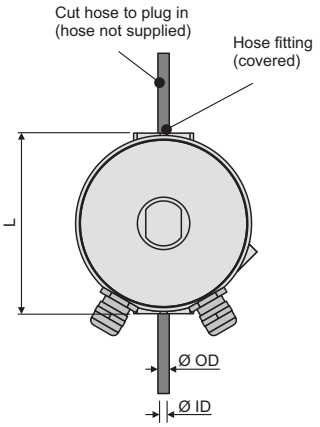
Ø OD	Inlet ØID	L
4	2,7	113 (4.45)
6	4	116 (4.57)
8	6	132 (5.20)
10	8	129 (5.08)
12	10	144 (5.67)
14	12	146 (5.75)
16	13	155 (6.10)

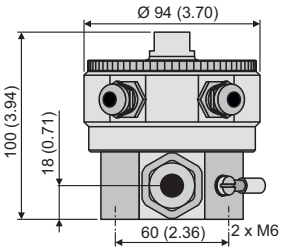
Dimensions (Ex Version) mm (in)

FLOWguard_S...T



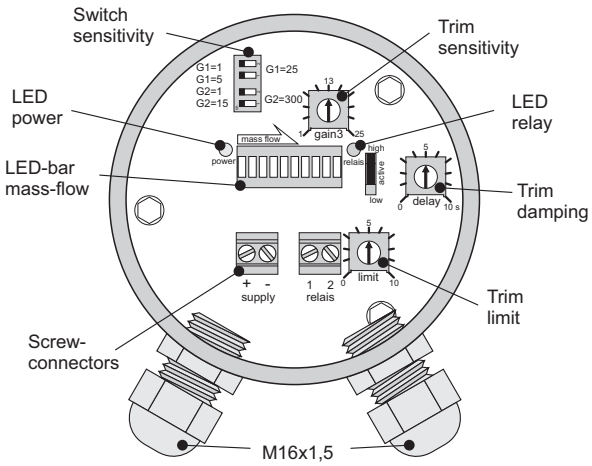
FLOWguard_S...E



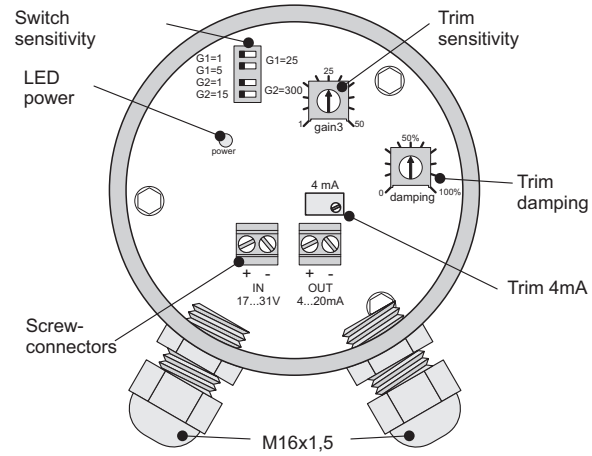


Ø OD	Inlet ØDI	L
4	2,7	90 (3.54)
6	4	90 (3.54)
8	6	106 (4.17)
10	8	103 (4.06)
12	10	118 (4.65)
14	12	120 (4.72)
16	13	129 (5.08)

Relay output: FLOWguard S01



Analog output: FLOWguard S20



Ordering key FLOWguard S a/b/c/d/e/f

A: Output
01: Relay
02: Transistor
20: Analog output 4-20mA

b: Version
E: Plug-in hose fitting
T: Pass through hose fitting
W: Plug-on hose fitting

c: Hose diameter

FLOWguard S...E
hose outer diameter:
4: 4 mm (0.16 in)
6: 6 mm (0.24 in)
8: 8 mm (0.32 in)
10: 10 mm (0.39 in)
12: 12 mm (0.47 in)
14: 14 mm (0.55 in)
16: 16 mm (0.63 in)

FLOWguard S...T
hose outer diameter:
4-8: 4...8 mm (0.16...0.32 in)
6-12: 6...12 mm (0.24...0,47 in)

FLOWguard S...W
nozzle inner/outer diameter:
16-19: 16/19 mm (0.63/0.75 in)
34-38: 34/38 mm (1.34/1.5 in)

d: Material of sensor tube
51: PA (standard Ex-Vision)
56: POM (standard non Ex)

e: Material seals
00: NBR (standard non Ex)
10: FPM (standard Ex-version)

f: Certificates
without: Version for non EX area
Ex2: Version for the use in ATEX-Zone 2 and/or 22

II 3G Ex nA IIB T4 Gc
II 3D Ex tc IIIB T100°C Dc Ip65

Wear protection inlet for FLOWguard S...E or FLOWguard S...W (included)

Material:	PA	
Outer/inner dia.:	4 / 2,7	6 / 4
	8 / 6	10 / 8
	12 / 10	14/12
	16/13	

(in mm)

technical data subject to change without notice

GTS, Inc.
PO BOX 799, Shalimar, FL 32579 USA
PH (850) 651-3388 FAX (850) 651-4777
EMAIL: info@onthelevel.com