

Flow Indicator for Solids

-Relay output

-Transistor output

-Current output

Function

The indicator of **DYNAguard-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 solids, solid lining will not be detected.

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)
	process coupling	stainl. steel 1.4571 (AISI 316Ti)
	isolation	polyamide (PA), 2mm
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.	temperature	max. 90°C (194°F)
	pressure	max. 40 bar (570 lbs)
output	DYNAguardK01	relay: max. 48 V AC/DC, 1A
		high/low switchable
	DYNAguardK02	transistor: galvanically isolated
		max. 31 V DC, 15 mA
		high/low switchable
	DYNAguardK20	4-20 mA, galvanically isolated
		load < 500 Ω
supply voltage	DYNAguardK01/K02	17...31 V DC, max. 60 mA
	DYNAguardK20	17...31 V DC, max. 90 mA
adjustment	sensitivity	1...180.000
	damping	0...10 s (K01/02), 0...180 s (K20)
	switchpoint	1...10 (DYNAguardK01/K02)
	Zero set	4 mA (DYNAguardK20)

CE

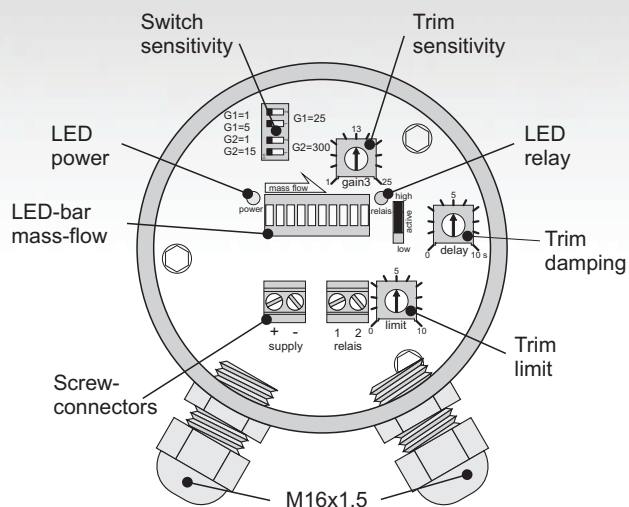


Characteristics

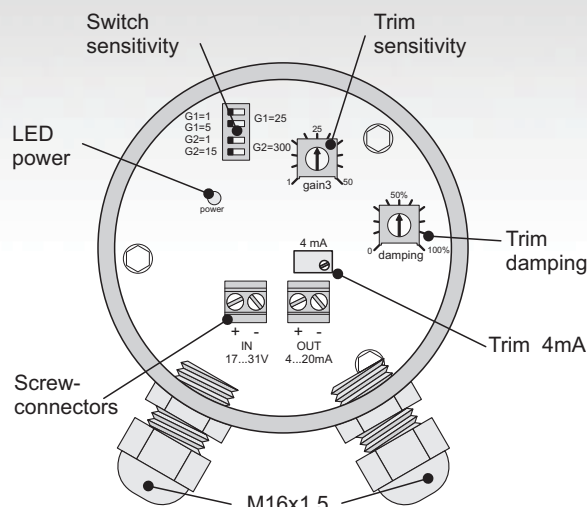
- non-contact / non-intrusive measurement
- compact construction
- simple installation between DIN- / ANSI - flanges
- measurement display with LED-bar conditions displayed by LED (relay / transistor output)
- stainless steel housing
- usable up to 40 bar (570 lbs)
- adjustable sensitivity
- adjustable switchpoint (limit switch)
- adjustable damping



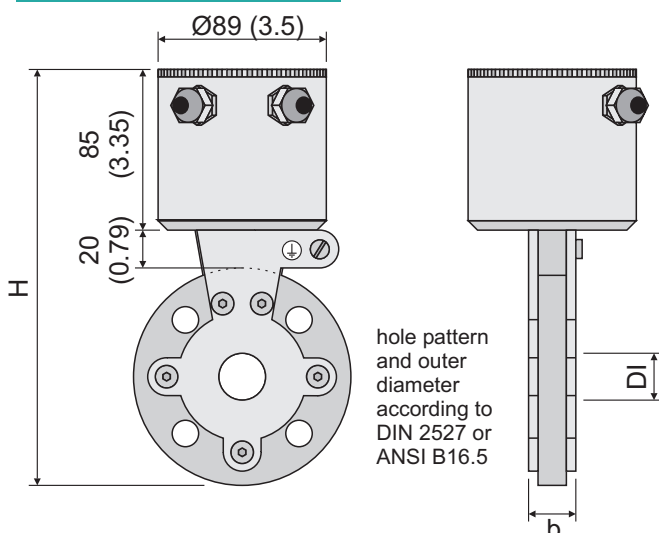
Switching output: DYNAguard K01 and K02



Analog output: DYNAguard K20



Dimensions in mm (in)



DIN-flange

nominal pressure (PN): 10, 16, 25, 40 bar

nom. size (DN)	H	b	standard diameter DI	
			row1	row2
10	195 (7.68)	20 (0.78)	10.4 (0.41)	13.6 (0.54)
15	200 (7.87)	20 (0.78)	16.0 (0.63)	17.3 (0.68)
20	210 (8.27)	20 (0.78)	20.4 (0.80)	22.3 (0.88)
25	220 (8.66)	25 (0.94)	24.8 (0.98)	28.5 (1.22)
32	245 (9.65)	25 (0.94)	32.8 (1.29)	37.2 (1.46)
40	255 (10.04)	25 (0.94)	39.3 (1.55)	43.1 (1.70)
50	270 (10.63)	25 (0.94)	51.2 (2.02)	54.5 (2.15)
65	290 (11.42)	25 (0.94)	70.3 (2.77)	-
80	305 (12.01)	25 (0.94)	82.5 (3.25)	-
100	325 (12.80)* 340 (13.39)**	30 (1.18)	100.8 (3.97)	107.1 (4.22)

*PN10/16 **PN25/40

ANSI-flange

nominal pressure (PN): 150, 300 lbs

nom. size (DN)	H 150 lbs	H 300lbs	b	standard diam. DI
1/2"	194 (7.63)	200 (7.87)	20 (0.87)	15.7 (0.622)
3/4"	204 (8.03)	222 (8.74)	20 (0.87)	20.8 (0.824)
1"	213 (8.39)	229 (9.02)	25 (0.94)	26.7 (1.049)
1 1/4"	222 (8.74)	238 (9.37)	25 (0.94)	35.1 (1.380)
1 1/2"	232 (9.13)	260 (10.24)	25 (0.94)	40.9 (1.610)
2"	257 (10.12)	270 (10.63)	25 (0.94)	52.6 (2.067)
2 1/2"	283 (11.14)	296 (11.65)	25 (0.94)	62.7 (2.469)
3"	296 (11.65)	315 (12.40)	25 (0.94)	78.0 (3.068)
3 1/2"	322 (12.68)	334 (13.15)	30 (1.18)	90.2 (3.548)
4"	335 (13.19)	359 (14.13)	30 (1.18)	102.4 (4.031)

all dimensions in mm(in)

technical data subject to change without notice

Ordering key

DYNAguard A/B/C/D/E/F/G

A: Output

K01: Relay
K02: Transistor
K20: Analog output 4-20mA

B: Process coupling

DF: DIN-flange
AF: ANSI-flange

C: Flange nominal pressure PN

10,16,25,40: DIN-flange
150lbs, 300lbs: ANSI-flange

D: Flange nominal size DN

10...100: DIN-flange
1/2"...4": ANSI-flange

E: Inner diameter DI in mm

10.4...107.1: DIN-flange
15.7...90.2: ANSI-flange

F: Options

D: Customer determined
inner diameter DI

G: Certificates

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

II 3G EEx nA II T4
II 3D IP67 T100°C

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DYNA Instruments

Instrumentation for Powder and Bulk Industries