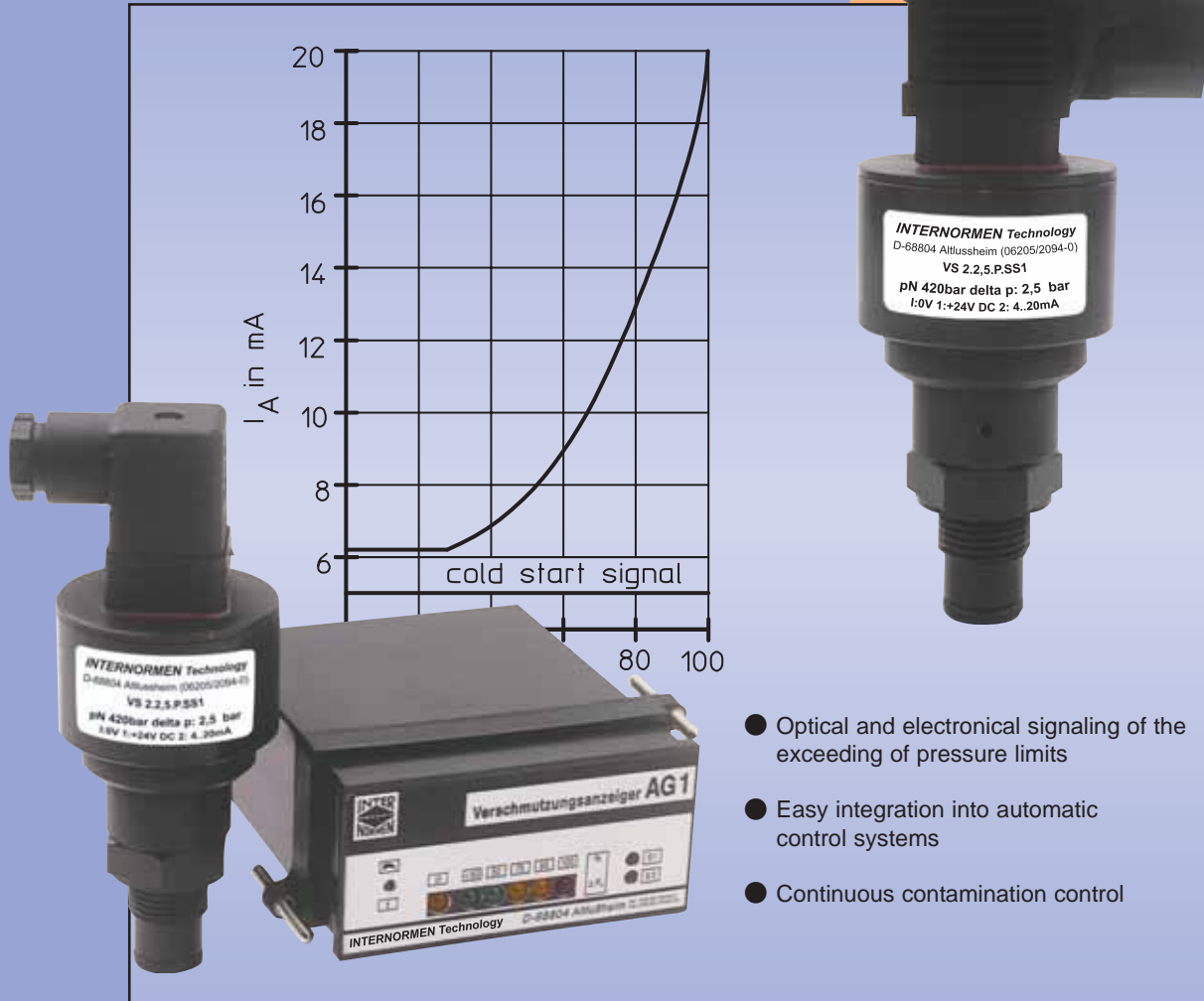


INTERNORMEN

Intelligent Filter Control by Electronics



Electronical Clogging Sensors and
Indicating Systems for Hydraulic
and Lubricating Oil Filters

internormen 
 **electronics**



Electronical Clogging Sensor VS 1

- Continuous pressure difference measuring
- Optimal utilization of the filter elements based on a high definition of the measure value within the final measure range
- Early identification of increased contamination inside the system
- Cold start indication up to approx. 77°F
- Suppression of pressure peaks
- Dust-proof and splash-proof aluminium or stainless steel housing
- Interference-free signal transmission over longer distances
- Interchangeable with clogging indicators type AE and type AO

Type code (ordering example):

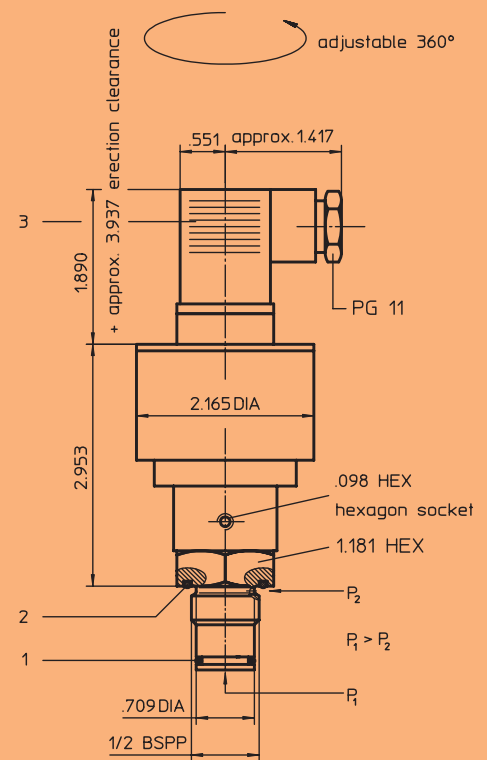
VS1.	1,5.	P.	-.	GS	-.	E
1	2	3	4	5	6	7

- 1** | VS 1 = electronical clogging sensor with analog 4...20mA output signal
- 2** | 1,5 = pressure difference 22 PSI range
2,5 = pressure difference 36 PSI range
5,0 = pressure difference 73 PSI range
6,0 = pressure difference 87 PSI range } Δp -nominal
- 3** | Sealing material:
P = Nitrile (NBR)
V = Viton (FPM)
- 4** | VA = stainless steel
- = standard version
- 5** | GS = line adapter DIN 43650-A, three channel plug
- 6** | - = standard
- 7** | E = 0 volt free of grounding
G = 0 volt grounded

Technical Data:

max. operating pressure: 6000 PSI
 screw thread: G 1/2
 distribution voltage: 24V DC \pm 20%;
 residual ripple: < 10%
 temperature range: +14°F...+212°F (fluids)
 +14°F...+176°F (electronics)
 connection: according to DIN 43650-A
 three-channel plug
 line adapter: GDM 3011
 output signal: 4...20mA; max. load: 400 Ohm
 error of measurement: \pm 5% of the final value (Δp -nominal)
 system of protection: IP 65 according to DIN 40050

Clogging Sensors VS 1 ... VS 2 ... GS



Indicating System AG 1 (control panel set)

- Evaluation set for current signals emitted by VS 1
- Pressure difference indication by LED-band
- 2 x relay switching contacts (75% und 100% of the Δp -nominal range)
- Indication of switching position by LED
- Cold start indication by LED
- Adjustable pressure peak suppression

Technical Data:

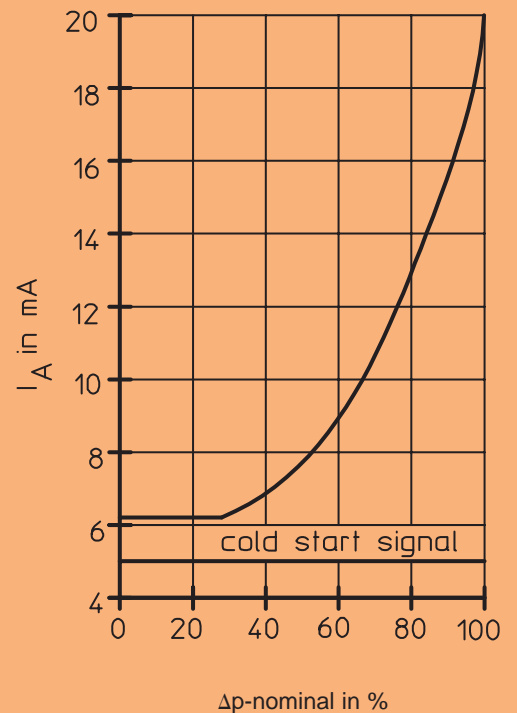
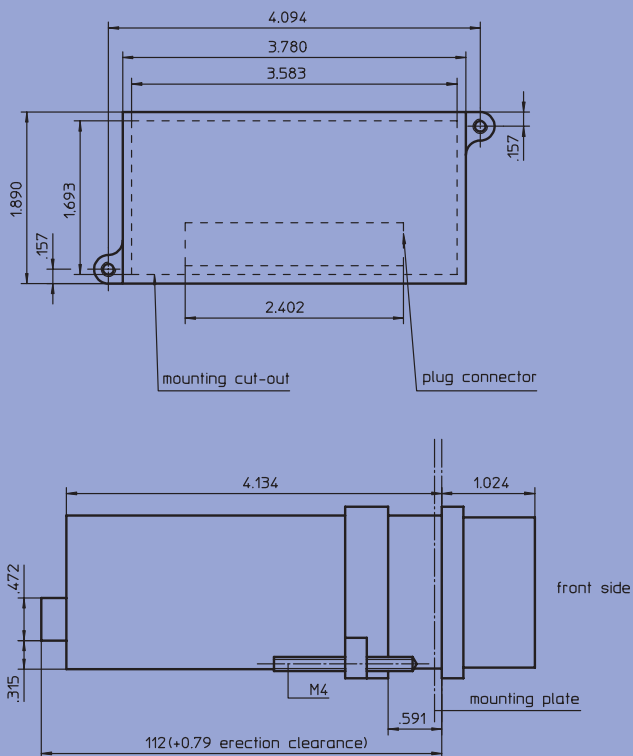
distribution voltage:	24V DC \pm 20%; residual ripple: < 10%
contacts:	2 x contact maker; U_{max} : 240V AC I_{max} : 0,5A P_{max} : 10 Watt
temperature range:	32°F...158°F
system of protection:	IP 53 (only front side with transparent protection cap)
housing dimensions:	according to DIN 43700 (see illustration)

Type code (ordering example):

AG 1
1

1 AG 1 = electronic display unit with clear protective cover mounts remote in control cabinets to be used with electronic clogging sensor VS 1

Indicating system AG 1



REQUEST DATA SHEETS NO.1617 FOR VS 1/AG 1 AND NO.1618 FOR VS 2/SS 1 FOR FURTHER DETAILS.

MODERN LABORATORIES WITH UP-TO-DATE TEST EQUIPMENT GUARANTEE BEST QUALITY.

Electronical Clogging Sensor VS 2

- Discrete control of the filter contamination by means of two PNP-switching contacts (75% and 100% of the Δp -nominal range)
- Indication of switching position by LED immediately at the sensor in connection with the signal plug SS 1
- Cold start suppression up to approx. 77°F
- Suppression of pressure peaks
- Interchangeable with clogging indicators type AE and type AO

Type code (ordering example):

VS2	.	1,5	.	P.	.	-	.	GS
1	2	3	4	5				

- 1] VS 2 = electronic clogging sensor with
2 x PNP-switching contacts
(75% and 100% of the Δp -nominal range)
- 5] GS = connector plug (type of plug: GDM 3011)
SS 1 = signal plug to indicate the actual switching
position at the VS 2 by 3 LED
(plug type: GDME 311)

2; 3; 4 see VS 1

Technical Data:

max. operating pressure: 6000 PSI
screw thread: G 1/2
distribution voltage: 24V DC \pm 20%;
residual ripple: < 10%
temperature range: +14°F...+212°F (fluids)
+14°F...+176°F (electronics)
connection: according to DIN 43650-A
three channel plug
PNP-switching contacts: contact-maker;
 $I_{max.} = 200mA$ with 24 V
system of protection: IP 65 according to DIN 40050

Spare Parts VS 1, VS 2

item	qty.	designation	dimension	article-no.	
1	1	O-ring	14x2	304342 (NBR)	304722(FPM)
2	1	O-ring	22x2	304708 (NBR)	304721(FPM)
3	1	GS	DIN 43650-A	312492	
4	1	SS1	DIN 43650-A	310403	

Request data sheets no. 1617 for VS 1/AG 1 and
no. 1618 for VS 2/SS 1 for further details.

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Signal Plug SS 1

