

Diaphragm Seal

990.22 clamp connection

and electronic pressure switch with display PSD-4

E 06.05.09

Ed.17.01

Design	Diaphragm Seal for hygienic and sterile industry with clamp connection SMS, ASME or DIN Electronic pressure switch with display PSD-4
Type	990.22
Pressure rate	PN 40 for pressure range from 0-1 bar to 0-40 bar
Material standard	Upper part of stainless steel 1.4404 (316L) Lower part and connection stainless steel 1.4435 (316L) Diaphragm of stainless steel 1.4435 (316L) Option: Electropolished with surface roughness $Ra \leq 0,38 \mu m$
Level of cleanliness	Oil and grease free per ASTM G93-03 level E ($< 550 \text{ mg/m}^2$)
Clamp SMS	Clamp connection from DN 1" to DN 3" Pipe standard per BS4825 Part 3 DN 1 1/2" (TC 50,5) for pipe dim 38,1x1,6 DN 2" (TC 64) for pipe dim 50,8x1,6
Clamp ASME	Clamp connection DIN 32676 from DN 1" to DN 3" Pipe standard per ASME BPE or DIN 11866 row C DN 1 1/2" for pipe dim 38,1x1,65 DN 2" for pipe dim 50,8x1,65
Clamp DIN	Clamp connection DIN 32676 from DN 26,9 to DN 76,1 Pipe standard per DIN 11866 row B or ISO 1127 row 1 DN 33,7 for pipe dim 33,7x2 DN 42,4 for pipe dim 42,4x2
Surface roughness	$Ra \leq 0,76 \mu m$ per ASME BPE SF3 or $Ra \leq 0,38 \mu m$ per ASME BPE SF3 (electropolished)
Process temperature	Max +80°C, in sterilisation (SIP) max +130°C
Ambient temperature	Ambient temperature standard +10+40°C Option lowest temperature to max -40°C Option highest temperature to max +60°C
Working Pressure	90% of full scale range by fluctuating pressure full scale value by short time pressure
Filling media	KN 59 Neobee M-20 (FDA 21 CFR 172.856) KN 92 white minerale oil (FDA 21 CFR 172.878) KN 7 glycerine (FDA 21 CFR 182.1320)
Certificate (option)	EN 10204-2.2 FDA-approval filling media EN 10204-2.2 Surface roughness of wetted parts EN 10204-2.2 Test report State-of-the-art EN 10204-3.1 Certificate wetted parts incl. chemical analysis EN 10204-3.1 Certification of class and accuracy EN 10204-3.1 Accuracy calibration values listed EN 10204-3.1 Pressure and stability test EN 10204-3.1 Helium leak test
More options	Material syrafast stainless steel 1.4539 Material Hastelloy C276 (2.819) Material Hastelloy C22 (2.4602) Origen of wetted parts from EU, Schweiz or USA



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Electronic pressure switch with display PSD-4

Design	Electronic pressure switch with display
Type	PSD-4
Accuracy	0,5% including non-linearity, hysteresis, zero offset and end value deviation
Wetted parts	Wetted parts in stainless steel 1.4404 (316L)
Case	Rotatable case in stainless steel with plastic cap
Display	14-segment LED, red, 4-digit, 9 mm (0.35 inch) character size Display can be turned electronically through 180° Update (adjustable): 100, 200, 500 or 1,000 ms
Zero offset adjustment	Zero offset adjustment max. 3 % of span
Power supply	15-36 VDC
Electrical connection	Circular connector M12 x 1 (4-pin or 5-pin)
Accuracy, output	Switch point accuracy: $\leq \pm 1$ % of span Adjustment accuracy: $\leq \pm 0.5$ % of span
Vibration resistance	20 g (IEC 60068-2-6, under resonance)
Shock resistance	50 g (IEC 60068-2-27, mechanical)
Service life, mechanics	100 million load cycles
Ingress protection	IP 65 and IP 67
RoHs	RoHs conformity 2011/65/EU
Pressure range	0-1 bar, 0-1,6 bar, 0-2,5 bar, 0-4 bar, 0-6 bar, 0-10 bar, 0-16 bar, 0-25 bar, 0-40 bar -1/0 bar, -1/+1,5 bar, -1/+3 bar, -1/+5 bar eller -1/+9 bar
Switching thresholds	Switch point 1 and switch point 2 are individually adjustable
Switching functions	Normally open, normally closed
Output signals	1 x PNP + 4-20 mA, 2 x PNP or 2 x PNP + 4-20 mA
Switching voltage	Power supply - 1 V
Switching current	Without IO-Link: max. 250 mA with IO-Link: SP1 max. 100 mA, SP2 max. 250 mA
IO-Link (option)	IO-Link, revision 1.1 IO-Link is optionally available for all output signals. With the IO-Link option, switching output SP1 is always PNP

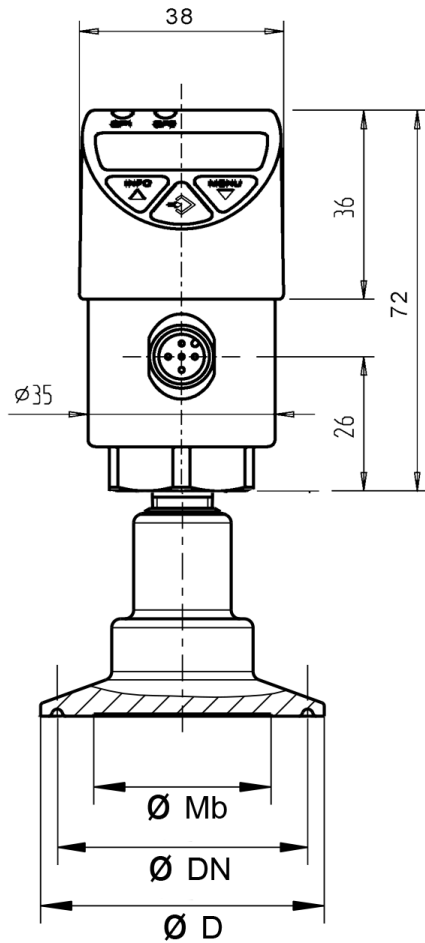


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Diaphragm Seal 990.22 with clamp
for pipe standard BS4825 part 3 or O.D.-Tube

DN	D	Mb	Pipe	PN
DN 1"	50,5	22	25,4 x 1,6	40
DN 1 1/2"	50,5	32	38,1 x 1,6	40
DN 2"	64	40	50,8 x 1,6	40
DN 2 1/2"	77,5	52	63,5 x 1,6	40
DN 3"	91	59	76,2 x 1,6	25

Diaphragm Seal 990.22 with clamp DIN 32676
for pipe standard DIN 11866 row C or ASME BPE

DN	D	Mb	Pipe	PN
DN 1"	50,5	22	25,4 x 1,65	40
DN 1 1/2"	50,5	32	38,1 x 1,65	40
DN 2"	64	40	50,8 x 1,65	40
DN 2 1/2"	77,5	52	63,5 x 1,65	40
DN 3"	91	59	76,2 x 1,65	25

Diaphragm Seal 990.22 with clamp DIN 32676
for pipe standard DIN 11866 row C or ISO 1127

DN	D	Mb	Pipe	PN
DN 26,9	50,5	22	26,9 x 1,6	40
DN 33,7	50,5	25	33,7 x 2	40
DN 42,4	64	32	42,4 x 2	40
DN 48,3	64	40	48,3 x 2	40
DN 60,3	77,5	52	60,3 x 2	40
DN 76,1	91	59	76,1 x 2	25

DN = diameter of lower part
PN = max pressure rate
Mb = diameter of diaphragm