

Diaphragm valve T4 with pneumatic actuating drive



Symbol photo



Symbol photo

This document does not constitute a guarantee, it is for initial information purposes only. The product range is continually upgraded, the designs and types therefore only reflect the state of the art at the time of printing.
Subject to technical modifications!

General:

- Material: PVC-U, PP, PVDF
- Seal material: EPDM, FPM
PTFE / EPDM
- Dimensions: DN15 – DN50
d20 – d63
1/2" – 2"

Connector types:

- Solvent socket PVC: DIN / ISO / ASTM / JIS
- Solvent spigot PVC: DIN
- Fusion spigot PP / PVDF: DIN
- Fusion socket PP / PVDF / PE: DIN
- Backing flange PVDF: DIN / ANSI
- Fixed flange PVC / PP: DIN / ANSI / JIS / BS
- Fix flange PP / PVDF: DIN / ANSI / JIS / BS

Operating pressure: PN10

Control functions:

- NC – Normally closed
- NO – Normally open
- DA – Double acting

Features pneumatic actuating drive:

Body material: PA-GF
Control air socket: Stainless steel
Control air: Neutral gases / air
Installation position: Any, preferred
drive facing upwards

Technical features:

- Rapid opening and closing
- High flow rate
- Visual position indication
- NAMUR connector for solenoid valve

Accessories:

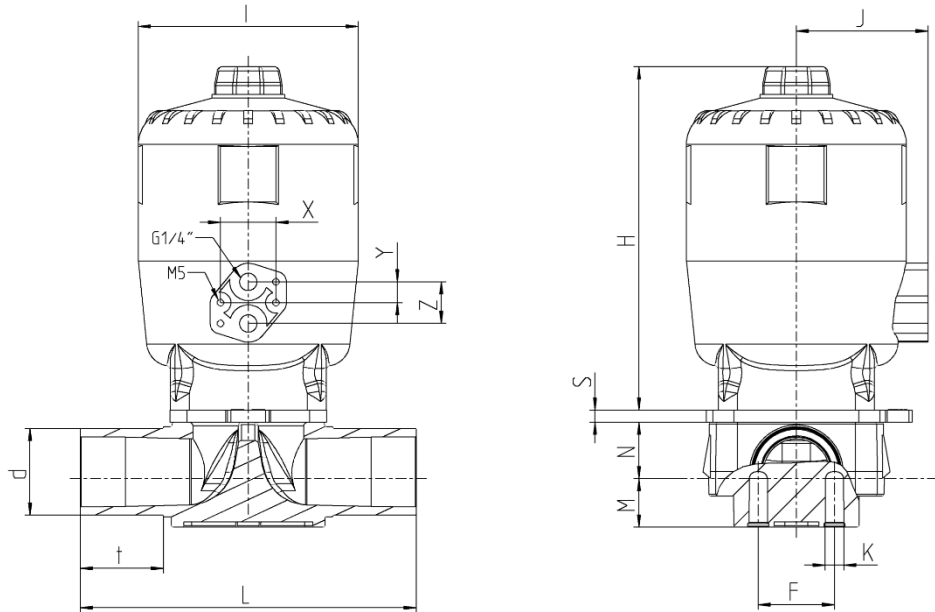
- Electrical position indicator
- Electropneumatic positioner
- 3/2 and 5/2 solenoid valve

Diaphragm valve T4

with pneumatic actuating drive



Dimensions:



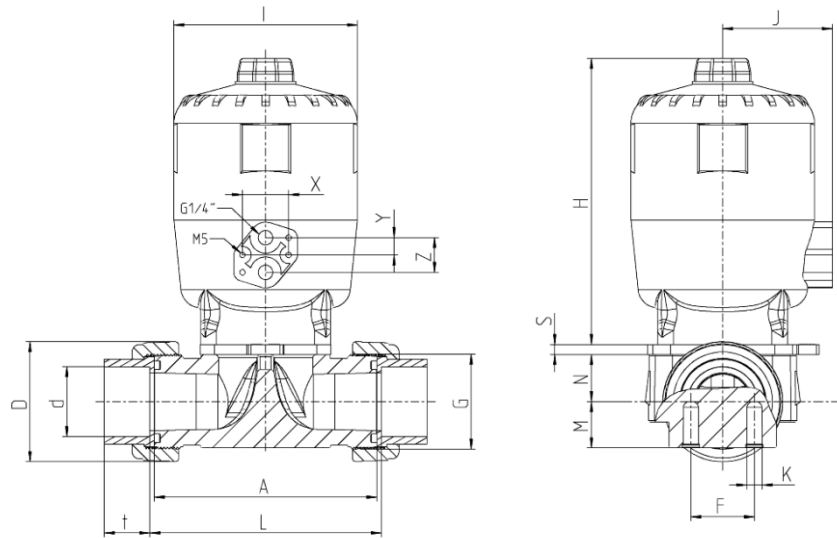
PVC-U / PP / PVDF
Connector type
 PVC solvent spigot
 PP / PVDF fusion spigot

DN	15	20	25	32	40	50
d	20	25	32	40	50	63
inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
S	5	5	6	7	7	7.5
F	25	25	25	45	45	45
K	M6	M6	M6	M8	M8	M8
L	124	144	154	174	194	224
t _{KS} ¹	16	19	22	26	31	38
M _{PVC}	17	17	21	33	33	40.5
N _{PVC}	19	19	20	31	31	34.5
M _{PP / PVDF}	16.5	16.5	20	25.5	32	38.5
N _{PP / PVDF}	18	18	21	24	29	34.5
Drive	K62	K62	K82-62*	K82	K122	K123
H	129.5	129.5	151	151	240	240
I	80	80	100	100	160	160
J	52	52	60.5	60.5	87	87
X	32	32	32	32	32	32
Y	12	12	12	12	12	12
Z	24	24	24	24	30	30

*For version PO-NC with PTFE-Membrane
¹ KS = Solvent spigot

Dimensions in mm

Diaphragm valve T4 with pneumatic actuating drive



PVC-U / PP / PVDF
Connector type
 PVC solvent socket
 PE / PP / PVDF fusion socket

	15	20	25	32	40	50	
DN	15	20	25	32	40	50	
d	20	25	32	40	50	63	
inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	
G	1"	1 1/4"	1 1/2"	2"	2 1/4"	2 3/4"	
F	5	5	6	7	7	7.5	
K	M6	M6	M6	M8	M8	M8	
PVC	t_{KM}¹	16	19	22	26	31	38
	t_{SM}² PE	16	17.5	19.5	22	25	29
	A	90	108	116	136	154	184
	D	44	53	60	74	83	103
	M	17	17	21	33	33	40.5
	L	97	114	122	142	160	190
L_{SM}² PE	95	116	126	148	173	209	
PP / PVDF	t_{SM}²	16	18	20	22**	24.5	29
	A	90	108	116	136**	154	184
	D	47	57	64	78	89	109
	M	17	17	20	25.5	32	39
	N	18	18	21	24	29	34.5
L	96	114	122	142**	161	190	
Drive	K62	K62	K82-K62*	K82	K122		K123
H	129.5	129.5	129.5	151	151		240
I	80	80	100	100	160		160
J	52	52	60.5	60.5	87		87
X	32	32	32	32	32		32
Y	12	12	12	12	12		12
Z	24	24	24	24	30		30

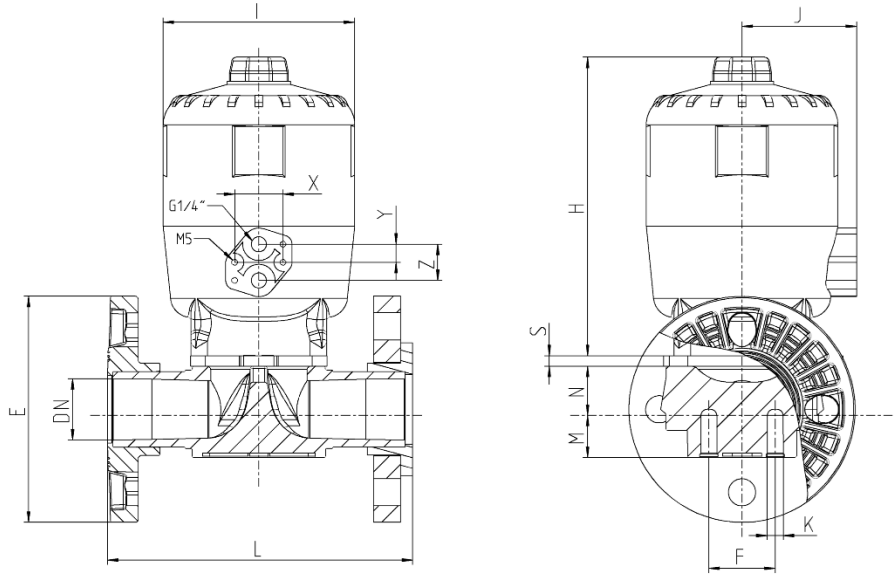
*For version PO-NC with PTFE-Membrane

Dimensions in mm

**Exception PP: t_{SM}² = 34mm; A = 170mm; L = 176mm

¹ KM = Solvent socket ² SM = Fusion socket

Diaphragm valve T4 with pneumatic actuating drive



PVC-U / PP / PVDF

Connector type

PVC/PP fixed flange

PVDF with PP backing flange with steel inlay

	DN	15	20	25	32	40	50
	d	20	25	32	40	50	63
	inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	S	5	5	6	7	7	7
	F	25	25	25	45	45	45
	K	M6	M6	M6	M8	M8	M8
PVC	E _{FF} ²	97	105	125	140	150	165
	M	17	17	21	33	33	40.5
	N	19	19	20	31	31	34.5
	L _{FF} ²	130	150	160	180	200	230
PP / PVDF	E _{PVDF LF} ¹	95	-	-	-	-	-
	E _{PP FF} ²	95	-	-	-	-	-
	M	17	17	20	25.5	32	39
	N	18	18	21	24	29	34.5
	L _{PVDF LF} ¹	130	-	-	-	-	-
	L _{PP FF} ²	130	-	-	-	-	-
Drive	K62	K62	K82-62*	K82	K122		K123
H	129.5	129.5	151	151	240		240
I	80	80	100	100	160		160
J	52	52	60.5	60.5	87		87
X	32	32	32	32	32		32
Y	12	12	12	12	12		12
Z	24	24	24	24	30		30

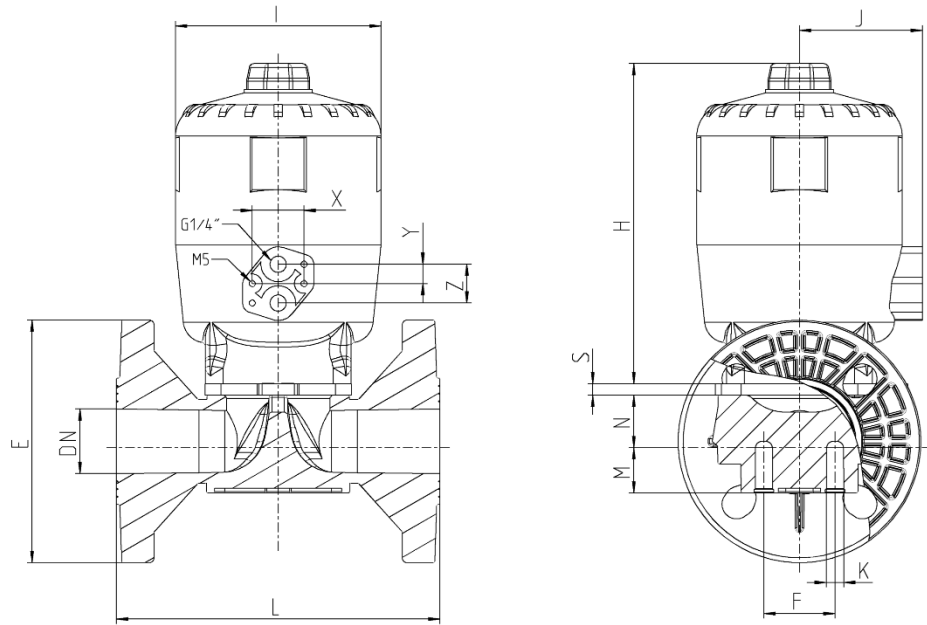
*For version PO-NC with PTFE-Membrane

¹ LF = Backing flange

² FF = Fixed flange

Dimensions in mm

Diaphragm valve T4 with pneumatic actuating drive



PP / PVDF
Connector type
PP / PVDF fix flange

DN	20		25	32	40	50
d	25		32	40	50	63
inch	3/4"		1"	1 1/4"	1 1/2"	2"
S	5		6	7	7	7.5
F	25		25	45	45	45
K	M6		M6	M8	M8	M8
M	17		20	25.5	32	39
N	18		21	24	29	34.5
E	105		125	140	150	165
L	150		160	180	200	230
Drive	K62	K82-62*	K82	K122		K123
H	129.5	151	151	240		240
I	80	100	100	160		160
J	52	60.5	60.5	87		87
X	32	32	32	32		32
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Z	24	24	24	30		30

*For version PO-NC with PTFE-Membrane

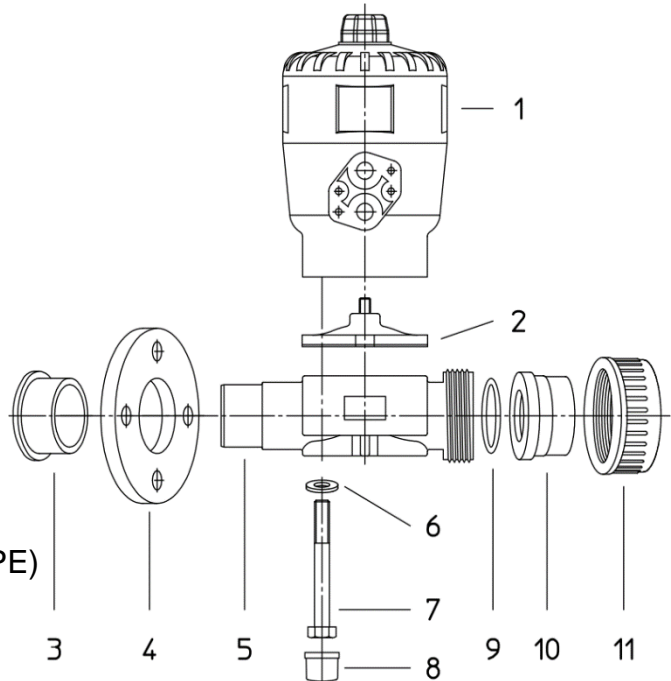
Dimensions in mm

Diaphragm valve T4 with pneumatic actuating drive



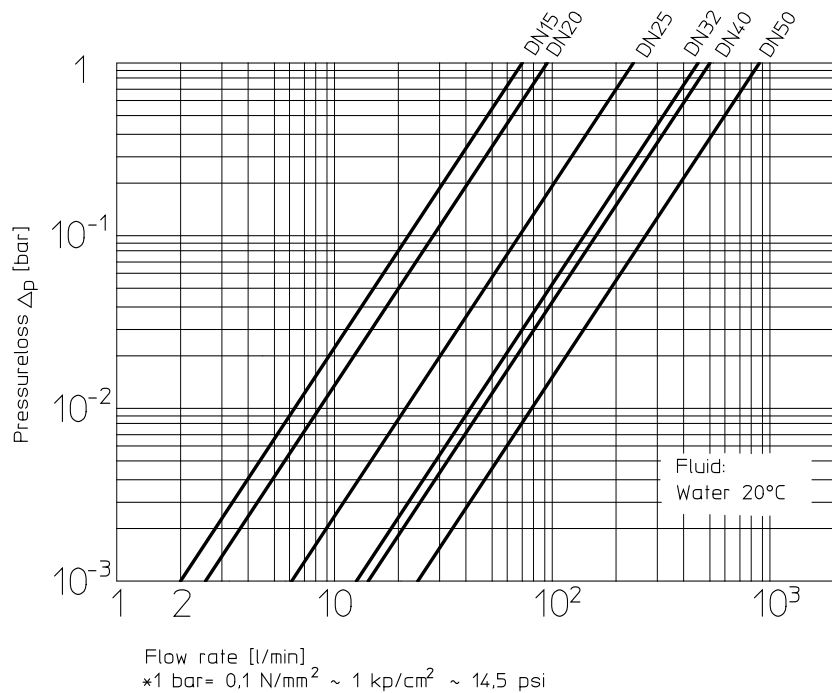
Exploded drawing:

- 01. Pneumatic actuating drive (PA-GF)
- 02. Diaphragm (EPDM / FPM / EPDM-PTFE)
- 03. Flange adaptor (PVC-U / PP-H / PVDF)
- 04. Flange (PP-GF steel insert)
- 05. Lower part (PVC-U / PP-H / PVDF)
- 06. Washer (A2)
- 07. Hexagon bolt (A2)
- 08. Cap (PE)
- 09. O-ring (EPDM / FPM)
- 10. End connections (PVC-U / PP-H / PVDF / PE)
- 11. Union nut (PVC-U / PP-H / PVDF)



Diagrams:

Pressure loss diagram



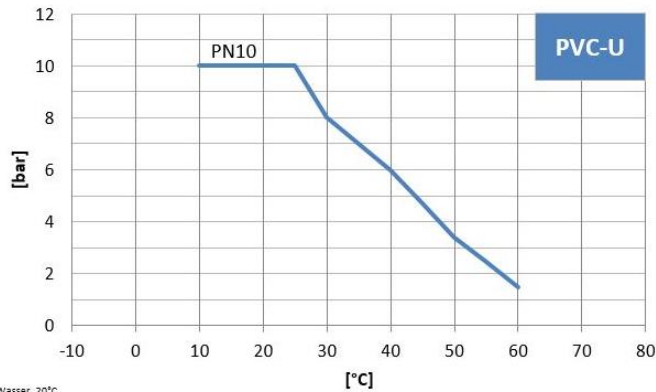
Cv value table

Pressure loss	DN15	DN20	DN25	DN32	DN40	DN50
1 bar	70 l/min	95 l/min	250 l/min	450 l/min	500 l/min	880 l/min

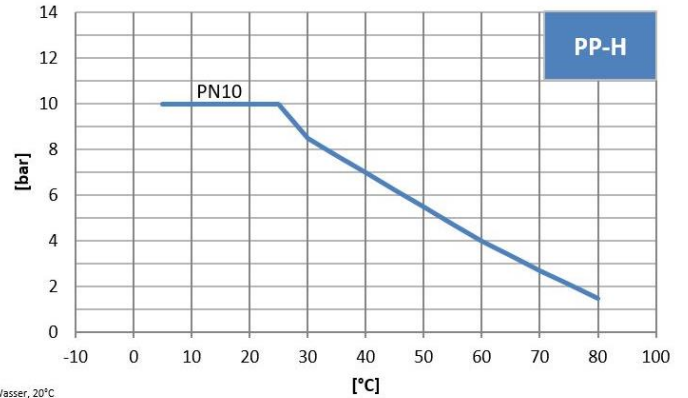
Diaphragm valve T4 with pneumatic actuating drive



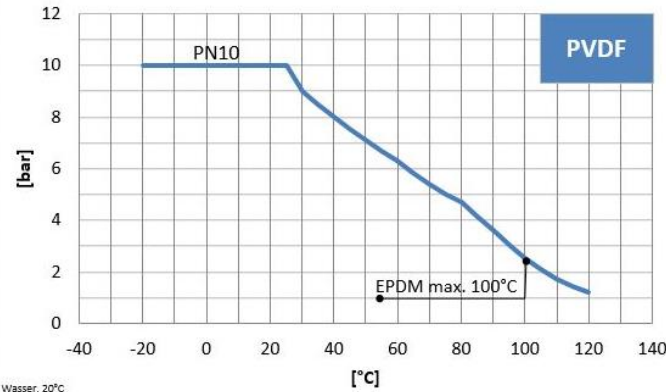
Pressure – Temperature - diagram



Wasser, 20°C
Water, 20°C



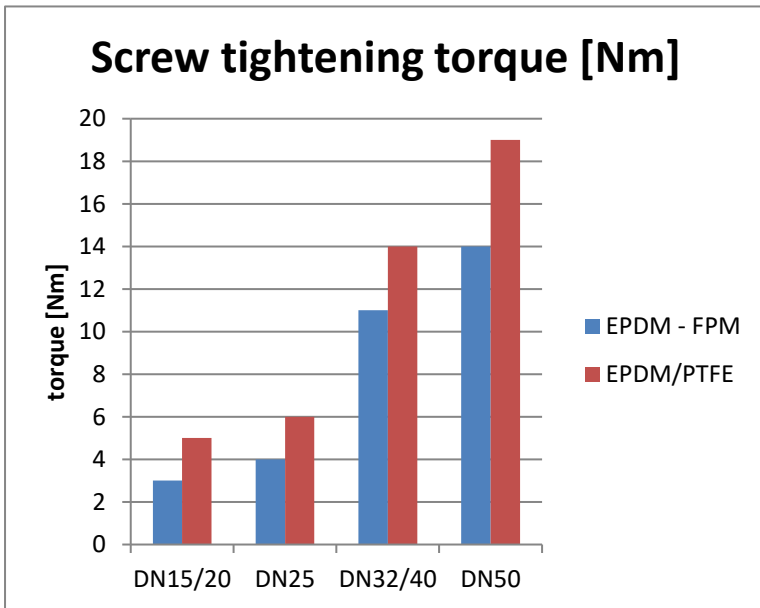
Wasser, 20°C
Water, 20°C



Wasser, 20°C
Water, 20°C

The values of the pressure-temperature diagrams are based on a lifetime of 25years at static pressure load and apply to water or watery media.

Screw tightening torque



Screw tightening torque [Nm]		
Dimension	EPDM - FPM	EPDM/PTFE
DN15/20	3	5
DN25	4	6
DN32/40	11	14
DN50	14	19

Application note:
Before and after the pressure test, it is recommended to retighten the screws crosswise.
The tightening of the screws must be carried out in a depressurized state and in the open position of the valve.

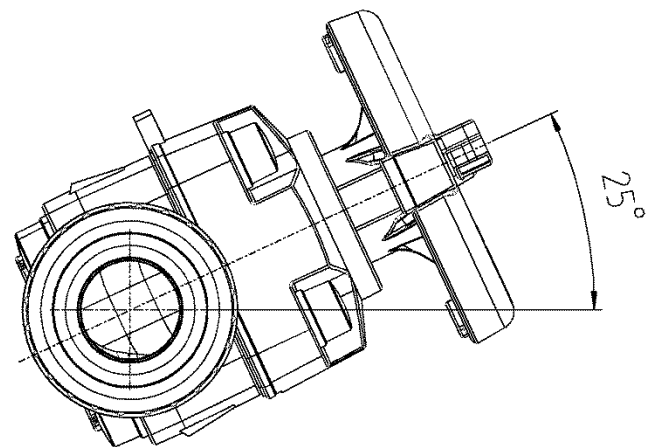
Diaphragm valve T4
with pneumatic actuating drive

Control pressure technical data:

Dimension	Drive	Control pressure
DN15 / DN20	K62	5.5 – 10 bar
DN15 / DN20 (for NC + PTFE)	K82-62	5.5 – 10 bar
DN25	K82	5.5 – 10 bar
DN32 / DN40	K122	5.5 – 10 bar
DN50	K123	5.5 – 10 bar

Emptying of diaphragm valves

In order to achieve the optimum emptying of the diaphragm valve in horizontal mounted piping systems, we recommend the installation of the diaphragm valve according to the respective angle of rotation and an installation down-grade about 2°.



Diaphragm valve T4 with pneumatic actuating drive

Accessories:

Solenoid Valve NAMUR

General:

- Solenoid valve NAMUR with combined 5/2- and 3/2- ways function
- Pneumatic connection G 1/4"
- Easy conversion from 5/2- to 3/2-way-function
- with override
- ATEX version available
- Silencer and exhaust air throttle valve available

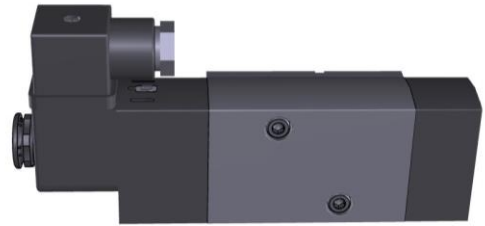
Material:

- Body: aluminium
- Seals: NBR
- Screws and spring: stainless steel

Voltage:

- 24 V DC
- 230 V AC

ATTENTION: For diaphragm valves with pneumatic actuating drive K122 / K123 (DN32 - DN50) an additional adapter (item 50826) is required.



Electrical position indicator

General:

- LED position indicator
- Degree of protection: IP65
- Ambient temperature: 0°C to +55°C
- Cable bushing

Material:

- Body: PPS
- Cover: PC
- Sealing: EPDM

Voltage ranges:

- 0 - 48 V AC/DC (max. 2A)
- 50 – 250 V AC/DC (max. 2A)
- 24VDC inductive (max. 200mA)



Diaphragm valve T4 with pneumatic actuating drive

Electropneumatic positioner

General:

- To be used with NC-actuators
- LED status indicator
- Holding or venting version (at voltage failure)
- Degree of protection: IP66
- Ambient temperature: 0°C to +50°C
- Cable bushing

Material:

- Body: Aluminum anodized
- Cover: PA

Pneumatic:

- Medium: Air or neutral gases filtered, oiled or unoled
- Connector: G 1/8"
- Pressure: max.10 bar input pressure

Voltage:

- Supply: 24VDC
- Setpoint: 0 – 10 V / 0 – 20 mA / 4 – 20 mA

Adapter required:

- DN15 to DN25: 51368
- DN32 to DN50: 51369

