Pilot Valves Type 3962

for Booster Valves Type 3756, Diaphragm Valves Type 3994-0671 and valves acc. to ISO 5599/1 with CNOMO interface

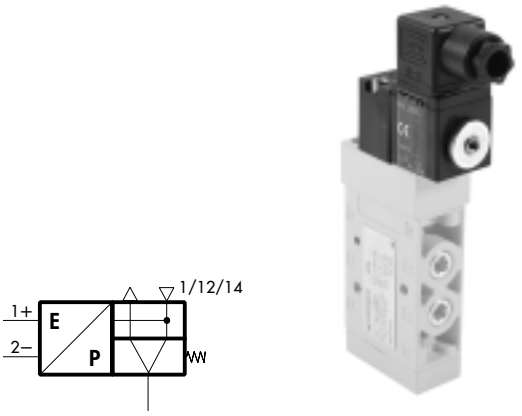
General notes

The Type 3962 Pilot Valves are used for controlling Type 3756 Booster Valves (see Data Sheets T 756-1/5 EN and T 756-6 EN), Type 3994-0671 Diaphragm Valves (see Data Sheet T 994-0671 EN) and valves acc. to ISO 5599/1 with CNOMO interface.

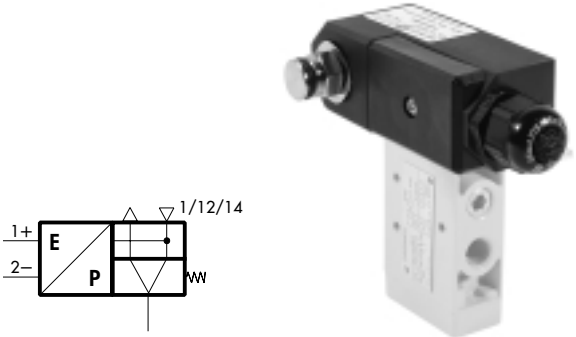
Type 3962 Booster Valves performance features:

- Standard version for nominal signals of 24 V DC, 24 V AC, 115 V AC or 230 V AC
- Type of protection „e" EEx em T5/T6 for nominal signals of 24 V AC/DC, 115 V AC/DC or 230 V AC/DC
- Type of protection „Flameproof enclosure" EEx d T4/T5/T6 for nominal signals of 24 V DC, 24 V AC, 115 V AC or 230 V AC
- Power consumption ≤ 3 W (DC) or ≤ 10 VA (AC), depending on nominal signal
- Pushbutton or pushbutton switch as manual operation function (optionally)
- Plug-type connector acc. to DIN 43 650 or screwed cable gland
- Non-corrosive enclosure with degree of protection IP 65
- Power supply 1.4 ... 8 bar
- CNOMO interface
- Service life ≥ 2×10^7 cycles
- Ambient temperature −20 ... +80 °C, depending on type of protection and temperature class

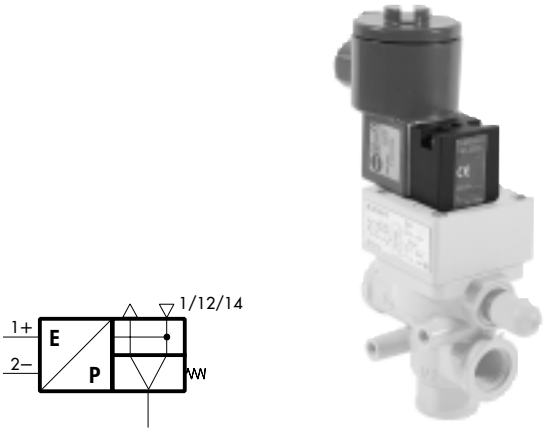
Versions



Type 3962-0X33 Pilot Valve,
combined with Type 3756-3407 5/2 way Booster Valve



Type 3962-4X02 EExem Pilot Valve,
combined with Type 3756-3406 3/2 way Booster Valve



Type 3962-9X04 EExd Pilot Valve,
combined with Type 3756-1403 3/2 way Booster Valve

Fig. 1

Technical data

General data					
Type		**3962-0X33**	**3962-4X02**	**3962-4X03**	**3962-9X04**
Construction		Solenoid and seat valve with return spring			
Degree of protection		IP 65	IP 65	IP 65	IP 66
Material	Casting compound	Polyamide	Polyurethane	Polyurethane	–
	Enclosure	Polyamide, black	Polyamide and Aluminium, powder coated, grey-beige	Polyamide and Aluminium, powder coated, grey-beige	Aluminium, anodized and powder coated, red
	Internal parts	Stainless steel and brass	Stainless steel and brass, nickel-plated	Stainless steel and brass, nickel-plated	Brass
	Screws	Steel, zinc coated	Stainless steel		
	Seals	Fluor rubber	Nitrile butadiene rubber		
Mounting position		As desired (see Mounting and Operating Instructions EB 962-4 EN)			
Service life		$\geq 2 \times 10^7$ cycles			
Weight		Approx. 170 g	Approx. 550 g	Approx. 650 g	Approx. 850 g

Electrical data for devices without Ex-protection					
Type		**3962-0333**	**3962-0133**	**3962-0233**	**3962-0433**
Nominal signal	U_n	24 V DC (±10%)	230 V AC (±10%), 50 … 60 Hz	115 V AC (±10%), 50 … 60 Hz	24 V AC ±(10%), 50 … 60 Hz
Power consumption	Pick-up	2.7 W	6.0 VA	6.0 VA	6.0 VA
	Hold	2.7 W	3.7 VA	3.7 VA	3.7 VA
Continuous duty		100%			
Ambient temperature		−20 … +80 °C			
Connection		Appliance connector acc. to DIN 43 650, form A			

Electrical data for devices with type of protection EEx em II T6 [1])				
Type		**3962-41XX**	**3962-42XX**	**3962-44XX**
Nominal signal	U_n	230 V AC/DC (−15 … +10%), 40 … 65 Hz	115 V AC/DC (−15 … +10%), 40 … 65 Hz	24 V AC/DC (−15 … +10%), 40 … 65 Hz
Power consumption	Pick-up	1.8 W		
	Hold	1.8 W		
Continuous duty		100%		
Ambient temperature in temperature class	T6	−20 … +50 °C		
	T5	−20 … +60 °C		
Connection		Screwed cable gland Pg 13.5		

[1]) Acc. to Certificate of Conformity PTB No. Ex-95.D.2077X

Electrical data for devices with type of protection EEx d II T6 [1])					
Type		**3962-9304**	**3962-9104**	**3962-9204**	**3962-9404**
Nominal signal	U_n	24 V DC (±10%)	230 V AC (±10%), 50 … 60 Hz	115 V AC (±10%), 50 … 60 Hz	24 V AC (±10%), 50 … 60 Hz
Power consumption	Pick-up	3 W	10 VA	10 VA	10 VA
	Hold	3 W	9.5 VA	9.5 VA	9.5 VA
Continuous duty		100%			
Ambient temperature in temperature class (max. cable temperature)	T6	−10 … +40 °C	–	–	–
	T5	−10 … +55 °C	–	–	–
	T4	−10 … +65 °C (105 °C) −10 … +80 °C (85 °C)	−10 … +40 °C (90 °C)	−10 … +40 °C (90 °C)	−10 … +40 °C (90 °C)
	T3	–	−10 … +55 °C (105 °C)	−10 … +55 °C (105 °C)	−10 … +55 °C (105 °C)
Connection		Female thread M 20 × 1.5			

[1]) Acc. to Certificate of Conformity BAS No. Ex-86B1279X

Pneumatical data					
Type		**3962-0X33XX**	**3962-4X0200**	**3962-4X0300**	**3962-9X0400**
Air supply	Medium	Instrument air			
	Pressure	1.4 … 10 bar	1.4 … 8 bar	1.4 … 8 bar	1,4 … 8 bar
Output signal		Pressure of air supply			
Air consumption		No air consumption			
K_{vs} value [1])		0.06	0.05	0.05	0.05
Switching time		10 ms	30 ms	30 ms	30 ms
Control connection		CNOMO interface			

[1]) Air flow with $p_1 = 2.4$ bar and $p_2 = 1.0$ bar can be calculated acc. to the following equation: $Q = K_{vs} \times 36.22$ in m^3/h

Dimensions for Type 3962-0X33

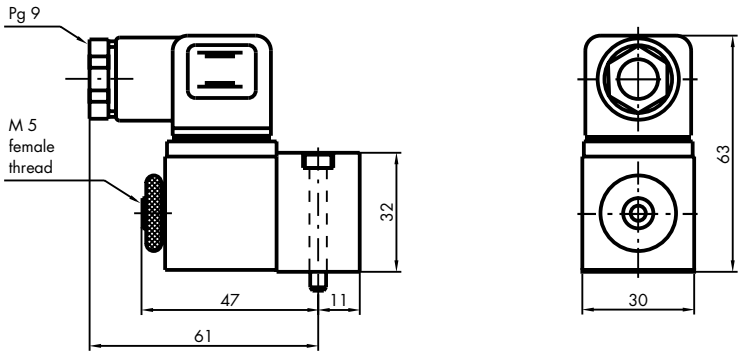
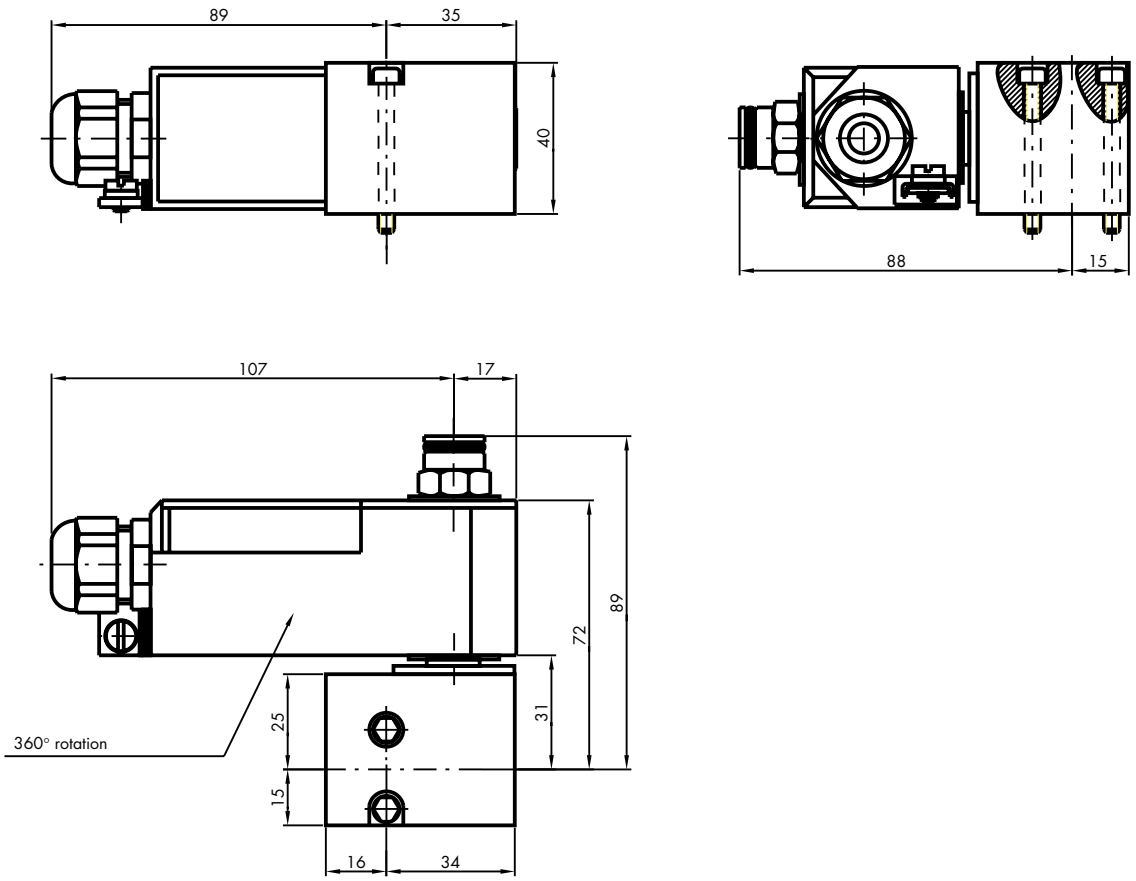


Fig. 2 · Dimensions in mm

Dimensions for Type 3962-4X02



Dimensions for Type 3962-4X03

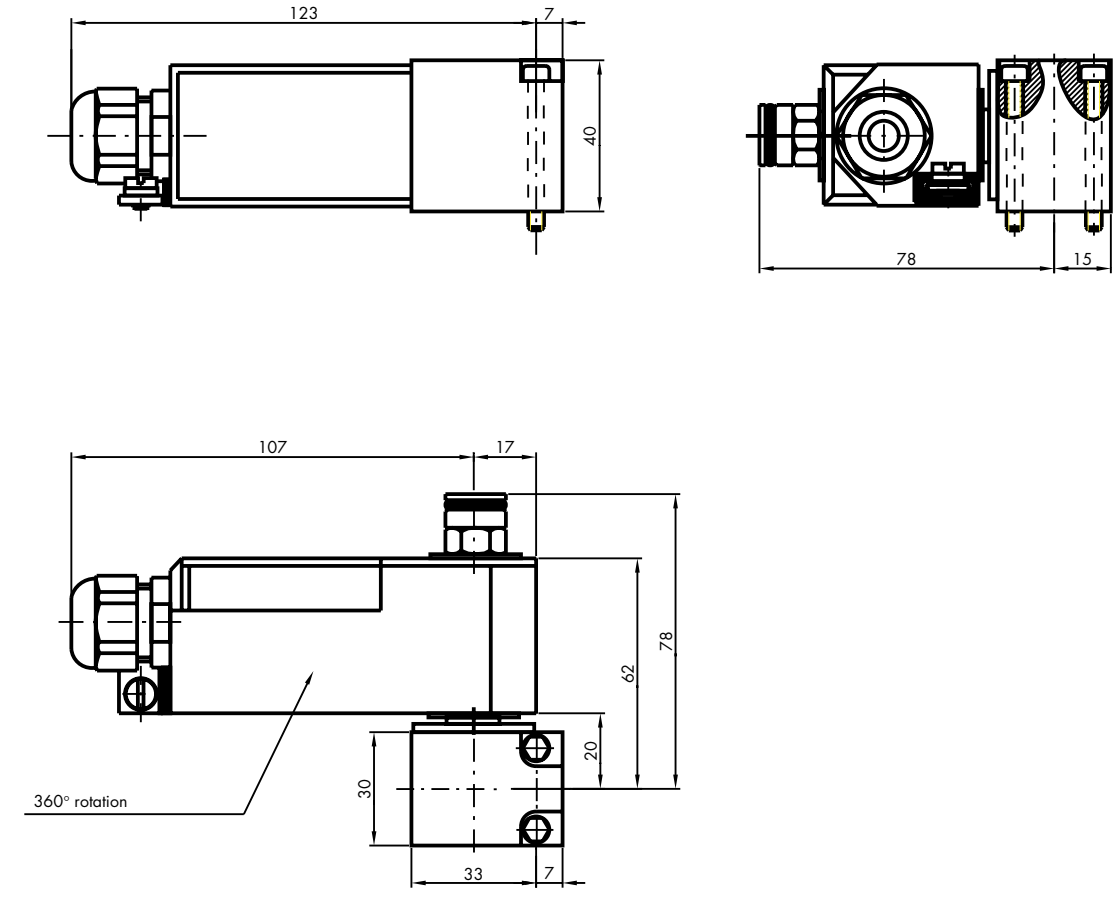


Fig. 3 · Dimensions in mm

Dimensions for Type 3962-9X04

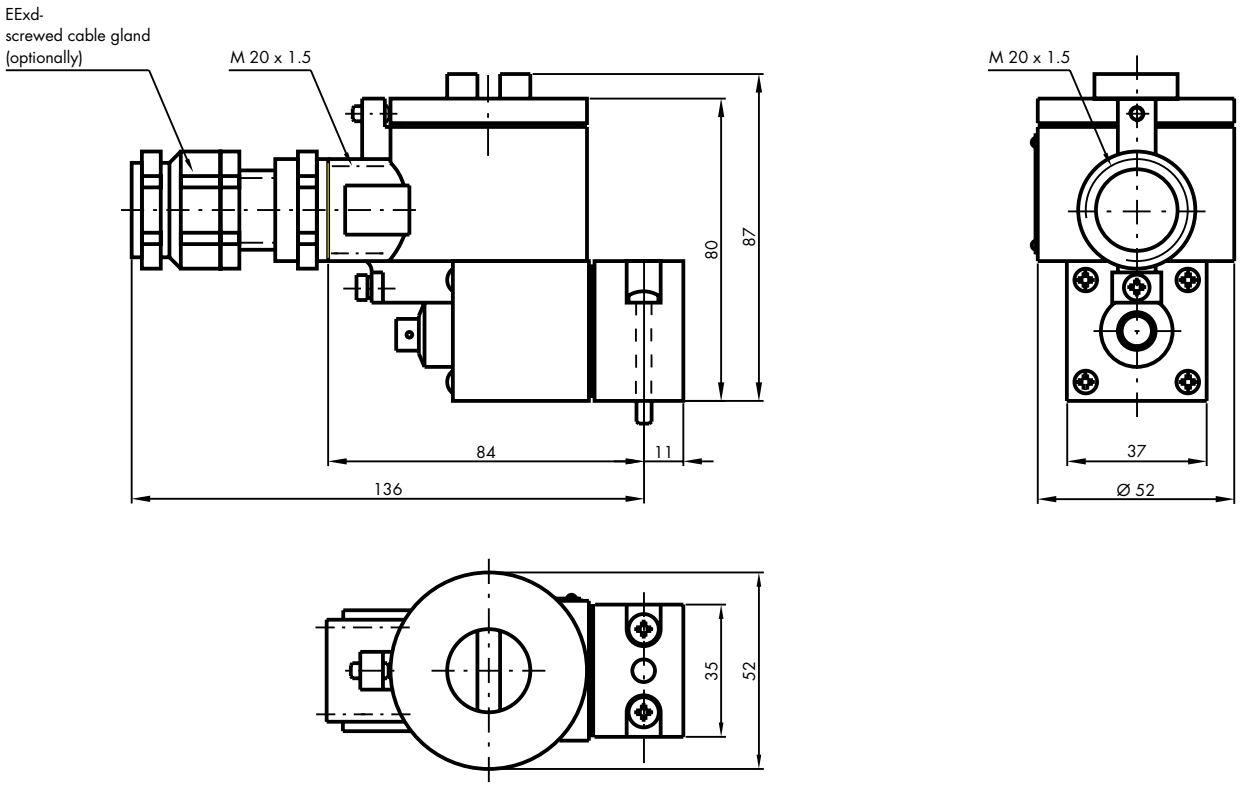


Fig. 4 · Dimensions in mm

Versions and ordering data

Pilot valve					Order no. 3962-	.	.	..	.	.
Type of protection	Without Ex-protection (only for Type 3962-0X33)					**0**	▲	▲	▲	▲
	EEx em T5/T6					**4**				
	EExd IIC T4/T5/T6					**9**				
Nominal signal	24 V DC (not for Type 3962-4)						**3**			
	230 V AC (AC/DC for Type 3962-4)						**1**			
	115 V AC (AC/DC for Type 3962-4)						**2**			
	24 V AC (AC/DC for Type 3962-4)						**4**			
	Special version						**9**			
Function and attachment	**K_{vs} value [1]**	**Air supply [2]**	**Ambient temperature [3]**	**Electrical connection and degree of protection**						
3/2 way function for all Types 3756	0.06	1.4 ... 10 bar	−20 ... +80 °C	Appliance connector acc. to DIN 43650 [4], degree of protection IP 65		**0**	.	**33**	.	.
3/2 way function for Type 3756, $^1/_4$"	0.05	1.4 ... 8 bar	−20 ... +60 °C	Screwed cable gland Pg 13.5, degree of protection IP 65		**4**	.	**02**	**0**	**0**
3/2 way function for Type 3756, $^1/_2$"	0.05	1.4 ... 8 bar	−20 ... +60 °C	Screwed cable gland Pg 13.5, degree of protection IP 65		**4**	.	**03**	**0**	**0**
3/2 way function for all Types 3756	0.05	1.4 ... 8 bar	−10 ... +40 °C	Female thread M 20 × 1,5 [5], degree of protection IP 66		**9**	.	**04**	.	.
Manual operation function	Without manual operation function								**0**	▲
	Pushbutton switch (not for Type 3962-4)								**1**	
	Pushbutton (not for Type 3962-4)								**2**	
Exhaust air filter	Without exhaust air filter									**0**
	Filter made of polyethylene, degree of protection IP 54 (not for Type 3962-4)									**1**

Available ex stock

[1]) Air flow with $p_1 = 2.4$ bar and $p_2 = 1.0$ bar can be calculated acc. to the following equation: $Q = K_{vs} \times 36.22$ in m^3/h
[2]) The max. permissible air supply pressure can be limited by the controlled booster valve
[3]) Permissible ambient temperature for type of protection EEx em und EExd see certificate of conformity
[4]) The cable socket with flat gasket is not delivered together with the pilot valve (see "Accessories and spare parts")
[5]) The EExd screwed cable gland M 20 × 1.5 is not delivered together with the pilot valve (see "Accessories and spare parts")

Accessories and spare parts

Filter made of polyethylene,
connection M 5, degree of protection IP 54
Order no. 8324-1280

Filter-check valve made of polyamide,
connection M 5, degree of protection IP 65
on request

Filter-check valve made of WN 1.4305 (Material no. acc. to. DIN),
connection M 5, degree of protection IP 65
on request

Cable socket acc. to DIN 43650, form A, made of polyamide,
with screwed cable gland Pg 9 (for cable ∅ 4 ... 8 mm)
and flat gasket made of nitrile butadiene rubber
Order no. 0790-6658

Luminary gasket, 12 ... 24 V AC/DC, with LED, green
(for cable socket acc. to DIN 43650, form A)
Order no. 8834-0390

EExd screwed cable gland M 20 × 1.5 made of brass
(for cable ∅ 6.5 ... 14 mm)
Order no. 8808-0200

Piping accessories see Data Sheet Z 900-1 EN

(Specifications subject to change without notice)

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