# Solenoid Valve Type 3962

Ex d, Ex em or without explosion protection, for controlling pneumatic actuators





## General

The Type 3962 Solenoid Valve ensures a high level of operational reliability for controlling pneumatic actuators in hazardous areas.

They offer different types of protection, switching functions, flow rates and connections for all desired applications.

Special features of the Type 3962 Solenoid Valve include:

#### General

- Life cycle more than 20 million switching cycles
- Ambient temperature 20 to +80 °C, depending on type of protection and temperature class
- Corrosion-resistant enclosure with degree of protection IP 65/66 for applications in humid, corrosive environments
- Wall mounting or pipe mounting
- Attachment to rotary actuators with NAMUR interface according to VDI/VDE 3845
- Attachment to linear actuators with NAMUR rib according to IEC 60534-6-1

#### Pilot valve

- Solenoid and seat valve with return spring
- Version without explosion protection (Type 3962-0) for nominal signal 24/110 V DC or 24/115/230 V AC
- Type of protection "Increased safety" Ex em (Type 3962-4) for nominal signal 24/230 V AC/DC
- Type of protection "Flameproof enclosure" Ex d (Type 3962-9) for nominal signal 24 V DC or 24/115 V AC or 230 V AC/DC, other nominal signals on request
- Power consumption max. 3,9 W (DC) or 9,5 VA (AC), depending on nominal signal
- Air supply 1.4 to 8.0 bar
- Manual override as push button or push button switch (optional)
- Electrical connection using a cable gland M 20 × 1.5 to terminals or using a connector

#### **Booster valve**

- Seat valve with diaphragm element and return spring
- Piston valve, single or double actuated
- 3/2, 5/2, 5/3 or 6/2-way function
- Exhaust feedback (optional)
- K<sub>VS</sub> value 1.4, 2.0, 2.9 (on request) or 4.3
- Operating pressure max. 10.0 bar
- Threaded connection G (NPT)  $\frac{1}{4}$  or  $\frac{1}{2}$
- NAMUR interface <sup>1</sup>/<sub>4</sub>" or <sup>1</sup>/<sub>2</sub>"

## Without explosion protection



Type 3962-0 Solenoid Valve

#### Ex em



Type 3962-0 Solenoid Valve

Ex d



Type 3962-9 Solenoid Valve

Fig. 1

Edition: August 2014 T 3962-5 EN

## **Versions**

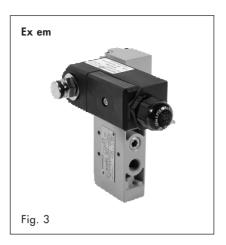
## **Examples of configuration**



## Type 3962-0

- Without explosion protection
  Nominal signal 24/110 V DC or 24/115/230 V AC

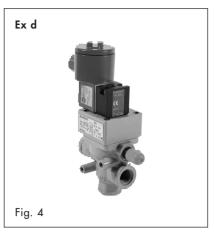
- Nominal signal 24/110 V DC or 24/113
   5/2-way function with spring return mechanism
   K<sub>VS</sub> value 1.4
   Connection G (NPT) <sup>1</sup>/<sub>4</sub>/NAMUR <sup>1</sup>/<sub>4</sub>"
   Mounting to on/off rotary actuators with NAMUR interface <sup>1</sup>/<sub>8</sub>" or <sup>1</sup>/<sub>4</sub>"



## Type 3962-4

- Type of protection "Increased safety" Ex em
  Nominal signal 24/230 V AC/DC
  3/2-way function with spring return mechanism
  Exhaust feedback

- K<sub>VS</sub> value 1.4
   Connection G (NPT) <sup>1</sup>/<sub>4</sub>/NAMUR <sup>1</sup>/<sub>4</sub>"
   Mounting to on/off rotary actuators with NAMUR interface <sup>1</sup>/<sub>8</sub>" or <sup>1</sup>/<sub>4</sub>"



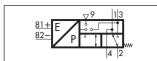
## Type 3962-9

- Type 3962-9

   Type of protection "Flameproof enclosure" Ex d
   Nominal signal 24 V DC or 24/115 V AC or 230 V AC/DC
   3/2-way function with spring return mechanism
   K<sub>VS</sub> value 4.3
   Connection G (NPT) <sup>1</sup>/<sub>2</sub>
   Wall mounting or pipe mounting

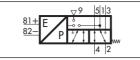
- Wall mounting or pipe mounting

## Solenoid valves with threaded connection for wall mounting or pipe mounting



## Type 3962-XXX013XXXXXXX

- 3/2-way function with spring return mechanism
- Exhaust feedback
- K<sub>VS</sub> value 1.4
- Connection G (NPT) 1/4

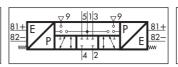


## Type 3962-XXX113XXXXXXX

• 5/2-way function

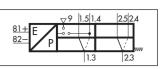
Connection G (NPT) <sup>1</sup>/<sub>2</sub>

with spring return mechanism
• K<sub>VS</sub> value 1.4



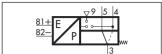
## Type 3962-XXX313XXXXXXX

- 5/3-way function with spring-centered mid-position (2 and 4 closed)
- K<sub>VS</sub> value 1.4
- Connection G (NPT) <sup>1</sup>/<sub>4</sub>



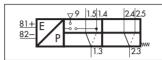
## Type 3962-XXX614XXXXXXX

- 6/2-way function
- with spring return mechanism
   K<sub>VS</sub> value 4.3
- Connection G (NPT) 1/2



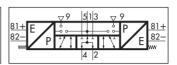
## Type 3962-XXX014XXXXXXX

- 3/2-way function with spring return mechanism
- Connection G (NPT) 1/2



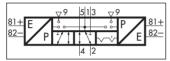
#### Type 3962-XXX114XXXXXXX

- 5/2-way function with spring return mechanism
- K<sub>vs</sub> value 4.3
- Connection G (NPT) 1/2



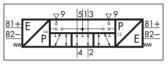
## Type 3962-XXX413XXXXXXX

- 5/3-way function with spring-centered mid-position (2 and 4 to air supply)
- K<sub>VS</sub> value 1.4
- Connection G (NPT) ¹/₄



## Type 3962-XXX213XXXXXXX

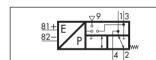
- 5/2-way function with two locking positions
- K<sub>VS</sub> value 1.4
- Connection G (NPT) 1/2



#### Type 3962-XXX513XXXXXXX

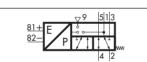
- 5/3-way function with spring-centered mid-position (2 and 4 vented)
- K<sub>VS</sub> value 1.4
- Connection G (NPT) 1/4

## Solenoid valves with NAMUR interface for rotary actuators



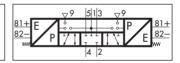
## Type 3962-XXX003XXXXXXX

- 3/2-way function with spring return mechanism
- Exhaust feedback
- K<sub>VS</sub> value 1.4
- Connection G (NPT) 1/4/NAMUR 1/4"
- Attachment to on/off rotary actuators with NAMUR interface <sup>1</sup>/<sub>8</sub>" or <sup>1</sup>/<sub>4</sub>"



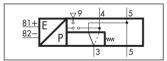
## Type 3962-XXX103XXXXXXX

- 5/2-way function with spring return mechanism
- K<sub>VS</sub> value 1.4
- Connection G (NPT) <sup>1</sup>/<sub>4</sub>/NAMUR <sup>1</sup>/<sub>4</sub>
- Attachment to on/off rotary actuators with NAMUR interface 1/8" or 1/4"



## Type 3962-XXX303XXXXXXX

- 5/3-way function with spring-centered mid-position (2 and 4 closed)
- K<sub>VS</sub> value 1.4
- Connection G (NPT) <sup>1</sup>/<sub>4</sub>/NAMUR <sup>1</sup>/<sub>4</sub>"
- Attachment to rotary actuators with NAMUR interface 1/8" or 1/4"



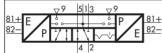
## Type 3962-XXX004XXXXXXX

- 3/2-way function with spring return mechanism

  Exhaust feedback

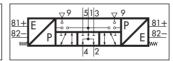
  K<sub>VS</sub> value 4.3

- Connection G (NPT) 1/2/NAMUR 1/2"
- Attachment to on/off rotary actuators with NAMUR interface 3/8" or 1/2"



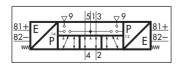
# Type 3962-XXX203XXXXXXX

- 5/2-way function
- with two locking positions
- K<sub>VS</sub> value 1.4
- Connection G (NPT) <sup>1</sup>/<sub>4</sub>/NAMUR <sup>1</sup>/<sub>4</sub>
- Attachment to rotary actuators with NAMUR interface 1/8" or 1/4"



#### Type 3962-XXX403XXXXXXX

- 5/3-way function with spring-centered mid-position (2 and 4 to air supply)
- K<sub>VS</sub> value 1.4
- Connection G (NPT) 1/4/NAMUR 1/4"
- Attachment to rotary actuators with NAMUR interface 1/8" or 1/4"



## Type 3962-XXX503XXXXXXX

- 5/3-way function with spring-centered mid-position (2 and 4 vented)
- K<sub>VS</sub> value 1.4
- Connection G (NPT) <sup>1</sup>/<sub>4</sub>/NAMUR <sup>1</sup>/<sub>4</sub>"
- Attachment to rotary actuators with NAMUR interface <sup>1</sup>/<sub>8</sub>" or <sup>1</sup>/<sub>4</sub>"

## Technical data

General c	lata for pilot valve				
Туре		3962-0	3962-4XXXXXX0(1)	3962-4XXXXX2(3)	3962-9
Constructi	ion	Solenoid and seat valve v	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 aluminum, powder coated, grayish-beige	Polyamide and aluminum, powder coated, grayish-beige	Aluminum, 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, galvanized	Stainless steel		
	Gaskets	Fluoro rubber	Nitrile rubber		
Mounting position		As desired			
Switching cycles		$\geq 2 \times 10^7$			
Weight approx.		170 g	550 g	650 g	ca. 850 g

Electrical data for pilot valve without explosion protection								
Туре		3962-03	3962-05	3962-06	3962-08			
Nominal signal	U <sub>n</sub>	24 V DC (±10%)	230 V AC (±10%), 50 60 Hz, 110 V DC (±10%)	60 Hz, 50 60 Hz 50 60 Hz				
Power consumption	Pick-up	2.7 W	4.9 VA, 3.9 W	4.8 VA	5.2 VA			
	Hold	2.7 W	3.7 VA, 3.9 W	3.6 VA	3.9 VA			
Continuous duty		100%						
Ambient temperature		−20 +80 °C						
Connection Connector according to EN 175301-803, form A								

Electrical data for pilot valve with type of protection "Increased safety" Ex em 1)								
Туре		3962-42	3962-44					
Nominal signal	U <sub>n</sub>	24 V AC/DC (-15 +10%), 40 65 Hz	230 V AC/DC (-15 +10%), 40 65 Hz					
Power consumption		1.8 W						
Continuous duty		100%						
Ambient temperature	T6	−20 +50°C						
in temperature class	T5	−20 +60°C						
Connection		Cable gland M 20×1.5						

<sup>&</sup>lt;sup>1</sup>) According to EC Type Examination Certificate PTB 02 ATEX 2125 X and Certificate of Conformity NEPSI GYJ071071X.

Electrical data for pilot valve with type of protection "Flameproof enclosure" Ex d 1)							
Туре		3962-93	3962-94	3962-96	3962-98		
Nominal signal <sup>2</sup> )	U <sub>n</sub>	24 V DC (±10%)	230 V AC/DC (±10%), 50 60 Hz	115 V AC (±10%), 50 60 Hz	24 V AC (±10%), 50 60 Hz		
Power consumption	Pick-up	3 W	9,5 VA	9,5 VA	9,5 VA		
	Hold	3 W	5 VA	5 VA	5 VA		
Continuous duty		100%		•			
Ambient temperature	T6	−10 +40 °C	_	-	_		
in temperature class	T5	−10 +55°C	-	-	-		
(max. cable temperatu	re) T4	-10 +80°C ( 85°C) -10 +65°C (105°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							

<sup>&</sup>lt;sup>1</sup>) According to EC Type Examination Certificate BAS 02 ATEX 2145, Certificate of Conformity IECEx BAS 04.0028 and Certificate of Conformity CEPEL-EX-195/04.

<sup>&</sup>lt;sup>2</sup>) Other nominal signals on request.

Pneumatic data for pilot valve							
Туре		3962-0	3962-4	3962-9			
Air supply	Medium	Instrument air	·	·			
	Pressure	1.4 10 bar	1.4 8 bar	1.4 8 bar			
Output signal		Pressure of air supply	·	·			
Air consumption		No air consumption					
K <sub>VS</sub> value <sup>1</sup> )		0.06	0.05	0.05			
Switching time		10 ms	30 ms	30 ms			
Control connection	n	CNOMO interface					

<sup>1)</sup> Air flow at  $p_1 = 2.4$  bar and  $p_2 = 1.0$  bar can be calculated according to the following equation:  $Q = K_{VS} \times 36.22$ , expressed in  $m^3/h$ .

## Technical data (continued from page 4)

Booster valve	with single	actuation, K <sub>VS</sub> value 4.3, v	vith threaded connection					
Switching fun	ction	3/2-way function	3/2-way function	5/2-way function	6/2-way function			
K <sub>VS</sub> value 1)			1.9 (4→3), 1.5 (3→4)	1.9 (4→3), 1.5 (3→4)	1.9 (4→3), 1.5 (3→4)			
(in direction o	of flow)	4.3 (3→5), 4.7 (5→3)	$4.3 (3\rightarrow 5), 4.7 (5\rightarrow 3)$	4.3 (3→5), 4.7 (5→3)	4.3 (3→5), 4.7 (5→3)			
Ambient temp	erature <sup>2</sup> )	−20 +80 °C	−45 +80°C	−20 +80 °C	−20 +80 °C			
Construction		Seat valve with diaphragm	element, soft-seated type,	with return spring				
Material	Enclosure	GD AlSi 12, powder-coate	ed, grayish-beige RAL 1019	),				
		Stainless steel 1.4404 (spe	ecial version)					
	Diaphragm	Chloroprene	Silicone rubber	Chloroprene	Chloroprene			
	Gaskets	Chloroprene	Silicone rubber	Chloroprene	Chloroprene			
	Screws	Stainless steel 1.4571						
Actuation		Single actuated by one pilot valve						
Operating me	edium	Instrument air, free of corrosive particles, or nitrogen 3),						
		Instrument air, free of corrosive particles, oil-containing air or noncorrosive gases 4)						
Operating pre		8 bar <sup>3</sup> ) or 10 bar <sup>4</sup> ) (4→3	, 3→5)	8 bar <sup>3</sup> ) o 10 bar <sup>4</sup> ) (as desired)				
(in direction o	of flow)	2 bar (as desired)		2 bar (as desired)				
Switching cyc	les	$\geq 10^7$ ( 6 bar)	≥ 10 <sup>6</sup> ( 6 bar)	$\geq 10^7$ ( 6 bar) $\geq 10^7$ ( 6 bar)				
(operating pr			≥ 10 <sup>6</sup> (10 bar)					
Connection		G (NPT) 1/2						
Weight appro	ox.	585 g (standard version)		1100 g (standard version)				

Booster valve	with single	actuation, K <sub>VS</sub> value 2.0 or	4.3, with NAMUR interface	ce			
Switching function 3/2-way function with exhaust feedback							
K <sub>VS</sub> value 1)		1.1 (4→3)	1.1 (4→3)	1.9 (4→3)	1.9 (4→3)		
(in direction o	f flow)	2.0 (3-5)	2.0 (3→5)	4.3 (3→5)	4.3 (3→5)		
Ambient temp	erature <sup>2</sup> )	−20 +80 °C	−45 +80°C	−20 +80 °C	−45 +80°C		
Construction		Seat valve with diaphragm	element, soft-seated type,	with return spring			
Material	Enclosure	GD AlSi 12, powder-coate Stainless steel 1.4404 (spe	ed, grayish-beige RAL 1019 ecial version)	),			
	Diaphragm	Chloroprene	Silicone rubber	Chloroprene	Silicone rubber		
	Gaskets	Chloroprene	Silicone rubber	Chloroprene	Silicone rubber		
	Screws	Stainless steel 1.4571					
Actuation		Single actuated by one pilot valve					
Operating me	dium	Instrument air, free of corrosive particles, or nitrogen <sup>3</sup> ), Instrument air, free of corrosive particles, oil-containing air or noncorrosive gases <sup>4</sup> )					
Operating pre	ssure max.	8 bar <sup>3</sup> ) or 10 bar <sup>4</sup> )					
Switching cycl	es	$\geq 10^{7}$ ( 6 bar)	$\geq 10^6$ ( 6 bar)	$0^6$ ( 6 bar) $\ge 10^7$ ( 6 bar) $\ge 10^6$ ( 6 bar)			
(operating pre	essure)	,	$\geq 10^5$ (10 bar)	≥ 10 <sup>6</sup> (10 bar)	≥ 10 <sup>5</sup> (10 bar)		
Connection	air supply	G (NPT) 1/4/NAMUR interf	ace <sup>1</sup> / <sub>4</sub> " <sup>5</sup> ), G <sup>3</sup> / <sub>8</sub>	G (NPT) <sup>1</sup> / <sub>2</sub> /NAMUR interface <sup>1</sup> / <sub>2</sub> " <sup>5</sup> )			
	exhaust air G (NPT) $\frac{1}{2}$ /NAMUR interface $\frac{1}{4}$ " 5), G $\frac{3}{8}$ G (NPT) $\frac{1}{2}$ /NAMUR interface $\frac{1}{2}$ " 5)				face <sup>1</sup> / <sub>2</sub> " <sup>5</sup> )		
Weight appro	x.	1380 g (standard version)		1500 g (standard version)			

Air flow at p<sub>1</sub> = 2.4 bar and p<sub>2</sub> = 1.0 bar can be calculated according to the following equation: Q = K<sub>VS</sub>×36.22, expressed in m³/h.
 The permissible maximum temperature of the solenoid valve depends on the permissible ambient temperature of the components, the type of protection and the temperature class.
 With internal air supply.
 With external air supply.
 NAMUR interface according to VDI/VDE 3845.

## Technical data (continued from page 5)

Booster valve with single actuation, K <sub>VS</sub> value 1.4 or 2.9 <sup>6</sup> ), with threaded connection or NAMUR interface							
Switching function		3/2-way function with exhaust feedback	5/2-way function				
K <sub>VS</sub> value <sup>1</sup>	)	1.4 or 2.9 <sup>6</sup> )					
Construction	on	Piston valve, metal-to-metal seating, without overlap,	with return spring				
Material	Enclosure	GD AlSi 12, powder-coated, grayish-beige RAL 1019 Stainless steel 1.4404 (special version)	9,				
	Gaskets	Silicone rubber					
	Filter	Polyethylene					
	Screws	Stainless steel 1.4571					
Actuation		Single actuated by one pilot valve					
Operating	medium	Instrument air, free of corrosive particles, or nitrogen <sup>2</sup> ), Instrument air, free of corrosive particles, loil-containing air or noncorrosive gases <sup>3</sup> )					
Operating	pressure max.	8 bar <sup>2</sup> ) or 10 bar <sup>3</sup> )					
Ambient te	emperature <sup>4</sup> )	−45 +80 °C					
Switching cycles		$\geq 2 \times 10^7$					
Connection		G (NPT) $\frac{1}{4}$ or NAMUR interface $\frac{1}{4}$ " 5) (K <sub>VS</sub> value 1.4), G (NPT) $\frac{1}{2}$ or NAMUR interface $\frac{1}{2}$ " 5) (K <sub>VS</sub> value 2.9)					
Weight approx.		485 g (K <sub>VS</sub> valoe 1.4), 1760 g (K <sub>VS</sub> value 2.9)					

Booster valve with double actuation, K <sub>vs</sub> value 1.4 or 2.9 <sup>6</sup> ), with threaded connection or NAMUR interface								
Switching fu	nction 5/2-way function 5/3-way function 5/3-way function with two locking positions mid-position mid-position 5/3-way function 5/3-way function with spring-centered mid-position mid-position		5/3-way function with spring-centered mid-position (2 and 4 to air supply)					
K <sub>VS</sub> value 1)		1.4 or 2.9 <sup>6</sup> )						
Construction	า	Piston valve, metal-to-meta	al seating, without overlap					
Material	Enclosure	GD AlSi 12, powder-coate Stainless steel 1.4404 (spe	ed, grayish-beige RAL 1019 ecial version)	Ρ,				
	Gaskets	Silicone rubber						
	Filter Polyethylene							
	Screws	Stainless steel 1.4571						
Actuation		Double actuated by two pi	lot valves					
Operating r	medium		osive particles, or nitrogen osive particles, oil-containi		es <sup>3</sup> )			
Operating p	oressure max.	8 bar <sup>2</sup> ) or 10 bar <sup>3</sup> )						
Ambient ten	nperature <sup>4</sup> )	−45 +80 °C						
Switching c	ycles	$\geq 2 \times 10^7$						
Connection G (NPT) $\frac{1}{4}$ or NAMUR interface $\frac{1}{4}$ " 5) (K <sub>VS</sub> value 1.4), G (NPT) $\frac{1}{2}$ or NAMUR interface $\frac{1}{2}$ " 5) (K <sub>VS</sub> value 2.9)								
Weight approx.  685 g (K <sub>VS</sub> value 1.4), 2180 g (K <sub>VS</sub> value 2.9)								

Air flow at p<sub>1</sub> = 2.4 bar and p<sub>2</sub> = 1.0 bar can be calculated according to the following equation: Q = K<sub>VS</sub> × 36.22, expressed in m³/h.
 With internal air supply.
 With external air supply.
 The permissible maximum temperature of the solenoid valve depends on the permissible ambient temperature of the components, the type of protection and the temperature class.
 NAMUR interface according to VDI/VDE 3845.
 On request.

## Versions and ordering data

Type 3962 Soleno		Order no. 3962-			.										٠
Type of protection	Without explosion protection		0	<b>A</b>			lack	<b></b>	<b></b>	<b></b>	<b></b>	<b></b>	<b></b>	lack	4
	II 2 G Ex em II T5/T6 <sup>1</sup> )		4												
	II 2 G Ex d IIC T3/T4/T5/T6 <sup>2</sup> )		9												
Nominal signal	24 V AC/DC	(Type													
	24 V DC	(Types -0 and	-9)	3											
	230 V AC/DC	(Types -4 and	-9)	4											
	230 V AC/110 V DC	(Type	-0)	5											
	115 V AC	(Types -0 and													
	24 V AC	(Types -0 and	-9)	8											
Manual override	None			(	)										
	Push button accessible from the outside	(Types -0 aı	nd -	9) 2	2										
	Push button switch accessible from the outside	(Ty <sub>l</sub>	oe -	0) (	3										
	Lever-type switch accessible from the outside	(Ty <sub>l</sub>	oe -	9) 4	1										
Switching	3/2-way function with spring return mechanism				7	0									
function	5/2-way function with spring return mechanism <sup>3</sup> )				Т	1									
	5/2-way function with two locking positions				1	2									
	5/3-way function with spring-centered mid-position	(2 and 4 closed)			7	3									
	5/3-way function with spring-centered mid-position	(2 and 4 to air supply)			7	4									
	5/3-way function with spring centered mid position	(2 and 4 vented)			1	5									
	6/2-way function with spring return mechanism				1	6									
Attachment	NAMUR interface according to VDI/VDE 3845				_	٦	0								
	Threaded connection for wall mounting or pipe mou	nting				1	1								
	CNOMO interface, 30 mm (pilot valve as spare par	t)				1	2								
	NAMUR rib according to IEC 60534-6-1					T	3								
K <sub>VS</sub> value <sup>4</sup> )	1.4 <sup>5</sup> )							3							
	4.3							4							
	0.05 (pilot valve as spare part)							5	11						
	2.96)							6	11						
	2.0							7	11						
Air connection	G 1/ <sub>4</sub>								0	11					
	1/ <sub>4</sub> NPT								1	11					
	G 1/2								2	11					
	1/ <sub>2</sub> NPT								3	11					
	Without threaded connection (pilot valve as spare p	art)							4						
Air supply	Internal connection for on/off actuators									0	1				
	External connection for continuous actuators									1	11				
Electrical	Female thread M 20×1.5							(Ту	ре	-9)	0	0			
connection	Cable gland M 20×1.5 made of polyamide, black							(Ty	ре	-4)	0	1			
	Adapter M $20 \times 1.5$ to female thread $\frac{1}{2}$ NPT							(Ty	ре	-9)	1	2			
	Connector according to EN 175301-803, form A, m	nade of polyamide, blad	ck <sup>7</sup> )						_		2	_			
Degree of	IP 65	1 /									nd .		1		
protection	IP 66						.,	•			pe ·	_	_		
Exhaust air filter	None									. , ,		•		0	
at the pilot valve	Filter M 5 made of polyethylene, IP 54							(Tv	уре	s -(	) ar	nd -	9)	1	
	Filter-check valve G 1/4 made of stainless steel 1.430	05, IP 65									) ar			_	ı
Ambient	-20 +80 °C							, . ,	. 1			(Typ			C
temperature 8)	-20 +60 °C											(Typ			1
•	-10 +40 °C (max. +80 °C at T4)											(Typ			2
	-40 +40°C (max. +80°C at T4)											(Typ			⊢
	1-0 C (max. 1-00 C at 14)											117	<i>-</i>	'	_

1) According to EC Type Examination Certificate PTB 02 ATEX 2125 X and Certificate of Conformity NEPSI GYJ071071X.

3) Not available with NAMUR interface/ $K_{\rm VS}$  value 4.3.

7) The female connector is not included in the delivery (see "Spare parts and accessories", page 8).

<sup>2)</sup> According to EC Type Examination Certificate BAS 02 ATEX 2145, Certificate of Conformity IECEx BAS 04.0028 and Certificate of Conformity CEPEL-EX-195/04.

<sup>4)</sup> Air flow at  $p_1 = 2.4$  bar and  $p_2 = 1.0$  bar can be calculated according to the following equation:  $Q = K_{VS} \times 36.22$ , expressed in m<sup>3</sup>/h. 5) For versions with NAMUR interface/type of protection Ex d a distance plate is required (see "Spare parts and accessories", page 9).

<sup>6)</sup> On request.

<sup>8)</sup> The permissible maximum temperature of the solenoid valve depends on the permissible ambient temperature of the components, the type of protection and the temperature class.

# Spare parts and accessories

Spare parts						
Order no.	Designation					
8502-1091	Molded gasket (for air supply on booster valve with K <sub>VS</sub> value 1.4)					
0520-0620 0520-0622 0520-1097 0520-1128	Diaphragm made of CR, $-20$ to $+80$ °C (for booster valve with K <sub>VS</sub> value 4.3) Diaphragm made of CR, $-20$ to $+80$ °C (for booster valve with K <sub>VS</sub> value 1.4) Diaphragm made of VMQ, $-45$ to $+80$ °C (for booster valve with K <sub>VS</sub> value 4.3) Diaphragm made of VMQ, $-45$ to $+80$ °C (for booster valve with K <sub>VS</sub> value 1.4)					
1180-8311 1180-8553	Actuating element insert, $-20$ to $+80^{\circ}\text{C}$ (for booster valve with K <sub>VS</sub> value 4.3) Actuating element insert, $-45$ to $+80^{\circ}\text{C}$ (for booster valve with K <sub>VS</sub> value 4.3)					
8421-0044 8421-9002 8421-0364 8421-0368 8421-1077 8421-0407 8421-0407 8421-0418 8421-0102 8421-0101	O-ring 2.9 × 1.78 made of NBR (for CNOMO interface) O-ring 13 × 3.5 made of VMQ (for NAMUR interface \( \frac{1}{4}\) at booster valve with \( \frac{1}{4}\) value 1.4) O-ring 16 × 2 made of NBR (for NAMUR interface \( \frac{1}{4}\) at booster valve with \( \frac{1}{4}\) value 2.0) O-ring 16 × 2 made of VMQ (for NAMUR interface \( \frac{1}{4}\) at booster valve with \( \frac{1}{4}\) value 2.0) O-ring 24 × 2 made of NBR (for NAMUR interface \( \frac{1}{2}\) at booster valve with \( \frac{1}{4}\) value 4.3) O-ring 24 × 2 made of VMQ (for NAMUR interface \( \frac{1}{2}\) at booster valve with \( \frac{1}{4}\) value 4.3) O-ring 26 × 3 made of EPDM(for NAMUR interface \( \frac{1}{2}\) at booster valve with \( \frac{1}{4}\) value 4.3) O-ring 26 × 2 made of NBR (for actuating element insert at booster valve with \( \frac{1}{4}\) value 4.3) O-ring 26 × 2 made of VMQ (for actuating element insert at booster valve with \( \frac{1}{4}\) value 4.3) O-ring 36 × 2 made of NBR (for actuating element insert at booster valve with \( \frac{1}{4}\) value 2.0 and 4.3) O-ring 36 × 2 made of VMQ (for actuating element insert at booster valve with \( \frac{1}{4}\) value 2.0 and 4.3)					

Accessories					
Order no.	Designation				
0790-6658	Female connector according to EN 175301-803, form A, made of polyamide, black, degree of protection IP 65, with cable gland Pg 9 (for cable diameter 4 to 8 mm) and flat gasket made of nitrile rubber				
8834-0388	Luminary gasket, 12 to 24 V AC/DC, with LED, green (for female connector according to EN 175301-803, form A)				
8808-0200	Ex d cable gland M 20×1.5 made of brass (for cable diameter 6.5 to 14 mm)				
8324-1280	Filter made of polyethylene, connection M 5, degree of protection IP 54				
1790-7408 1790-7253 1790-9645 1790-9646	Filter-check valve with screw-in case G $^{1}/_{4}$ made of polyamide, degree of protection IP 65 Filter-check valve with screw-in case G $^{1}/_{4}$ made of stainless steel 1.4305, degree of protection IP 65 Filter-check valve with screw-in case G $^{1}/_{4}$ made of polyamide, degree of protection NEMA 4 Filter-check valve with screw-in case G $^{1}/_{4}$ made of stainless steel 1.4305, degree of protection NEMA 4				

## Spare parts and accessories (continued from page 8)

Mounting kits for solenoid valves with threaded connection		
Order no.	Designation	
1400-6759	Mounting kit for linear actuators (actuator size $80/240 \text{ cm}^2$ , connection G $^{1}/_{4}$ ) with screwed pipe connection, connection G $^{1}/_{4}/G$ $^{1}/_{4}$ , made of stainless steel	
1400-6735 1400-6761	Mounting kit for linear actuators (actuator size $350/700 \text{ cm}^2$ , connection G $\frac{3}{8}$ ) with screwed pipe connection, connection G $\frac{1}{2}/G$ $\frac{3}{8}$ , made of stainless steel with screwed pipe connection, connection G $\frac{1}{4}/G$ $\frac{3}{8}$ , made of stainless steel	
1400-6736	Mounting kit for linear actuators (actuator size 1 400 cm <sup>2</sup> , connection G $^{3}/_{4}$ ) with screwed pipe connection, connection G $^{1}/_{2}$ /G $^{3}/_{4}$ , made of stainless steel	
1400-6737	Mounting kit for linear actuators (actuator size 2800 cm², connection G 1) with screwed pipe connection, connection G 1/2/G 1, made of stainless steel	
1400-6749 1400-6750	Mounting kit for linear actuators (actuator size $80/240~\text{cm}^2$ , connection G $^1/_4$ ) with bracket made of stainless steel and screwed joints for pipe $8\times1$ , connection G $^1/_4/G$ $^1/_4$ , made of steel, galvanized and screwed joints for pipe $8\times1$ , connection G $^1/_4/G$ $^1/_4$ , made of stainless steel	
1400-6738 1400-6739 1400-6743 1400-6744 1400-6745	Mounting kit for linear actuators (actuator size $350/700 \text{ cm}^2$ , connection G $\sqrt[3]_8$ ) with bracket made of stainless steel and screwed joints for pipe $8\times1$ , connection G $\sqrt[1]_4/G$ $\sqrt[3]_8$ , made of steel, galvanized and screwed joints for pipe $8\times1$ , connection G $\sqrt[1]_4/G$ $\sqrt[3]_8$ , made of stainless steel and screwed joints for pipe $12\times1$ , connection G $\sqrt[1]_4/G$ $\sqrt[3]_8$ , made of polyamide and screwed joints for pipe $10\times1$ , connection G $\sqrt[1]_4/G$ $\sqrt[3]_8$ , made of polyamide	
1400-6740 1400-6741 1400-6742	Mounting kit for linear actuators (actuator size 700 cm², connection G $^3/_8$ ) with bracket made of stainless steel and screwed joints for pipe $12 \times 1$ , connection G $^1/_2/G$ $^3/_8$ , made of steel, galvanized and screwed joints for pipe $12 \times 1$ , connection G $^1/_4/G$ $^3/_8$ , made of steel, galvanized and screwed joints for pipe $12 \times 1$ , connection G $^1/_2/G$ $^3/_8$ , made of stainless steel	

Mounting kits and accessories for solenoid valves with NAMUR interface		
Order no.	Designation	
1400-6746 1400-6747 1400-6748	Mounting kit for linear actuators (actuator size $350/700 \text{ cm}^2$ , connection G $3/8$ ) with NAMUR rib via adapter plate NAMUR interface $1/4$ " to NAMUR rib (order no. $1400\text{-}6751$ ) with screwed joints for pipe $12 \times 1$ , connection G $1/4/6$ $3/8$ , made of steel, galvanized with screwed joints for pipe $12 \times 1$ , connection G $1/4/6$ $3/8$ , made of stainless steel with screwed joints for pipe $10 \times 1$ , connection G $1/4/6$ $3/8$ , made of polyamide	
1400-6752 1400-6753 1400-6756	Mounting kit for linear actuators (actuator size $80/240 \text{ cm}^2$ , connection $G^{-1}/_{4}$ ) with NAMUR rib via adapter plate NAMUR interface $^{1}/_{4}$ " to NAMUR rib (order no. $1400\text{-}6751$ ) with screwed joints for pipe $6 \times 1$ , connection $G^{-1}/_{4}/G^{-1}/_{4}$ , made of steel, galvanized with screwed joints for pipe $6 \times 1$ , connection $G^{-1}/_{4}/G^{-1}/_{4}$ , made of stainless steel with screwed joints for hose $10 \times 1$ , connection $G^{-1}/_{4}/G^{-1}/_{4}$ , made of polyamide	
1400-6754 1400-6755 1400-6757	Mounting kit for linear actuators (actuator size $350/700 \text{ cm}^2$ , connection G $^3/_8$ ) with NAMUR rib via adapter plate NAMUR interface $^1/_4$ " to NAMUR rib (order no. $1400\text{-}6751$ ) with screwed joints for pipe $8\times1$ , connection G $^1/_4/G$ $^3/_8$ , made of steel, galvanized with screwed joints for pipe $8\times1$ , connection G $^1/_4/G$ $^3/_8$ , made of stainless steel with screwed joints for pipe $10\times1$ , connection G $^1/_4/G$ $^3/_8$ , made of polyamide	
1400-6759	Mounting kit for linear actuators (actuator size 80/240 cm <sup>2</sup> , connection G $^{1}/_{4}$ ) with screwed pipe connection G $^{1}/_{4}/G$ $^{1}/_{4}$ , made of stainless steel	
1400-3001	Mounting kit for Type 3353 Angle Seat Valve with adapter plate for NAMUR interface $\frac{1}{4}$ " made of stainless steel 1.4301	
1400-9741 1402-0234	Distance plate with NAMUR interface $^{1}/_{4}$ " to rotary actuator $^{1}/_{4}$ ", incl. fixing screws and gaskets, made of aluminum, powder-coated, grayish-beige RAL 1019 made of stainless steel 1.4404	

# **Spare parts and accessories** (continued from page 9)

Accessories for mounting kits		
Order no.	Designation	
0320-1416	Bracket for NAMUR rib (required when a positioner or a limit switch is to be mounted to linear actuators with nominal size < DN 50 at the same time)	
8320-0131	Hexagon socket head screw M 8 × 60 – A 4 DIN 931	
1400-6751	Adapter plate NAMUR interface 1/4" to NAMUR rib	

(Specifications subject to change without notice.)

SAMSOMATIC GMBH

Weismüllerstraße 20–22 60314 Frankfurt am Main, Germany

Phone: +49 69 4009-0 Fax: +49 69 4009-1644 E-mail: samsomatic@samsomatic.de Internet: http://www.samsomatic.de