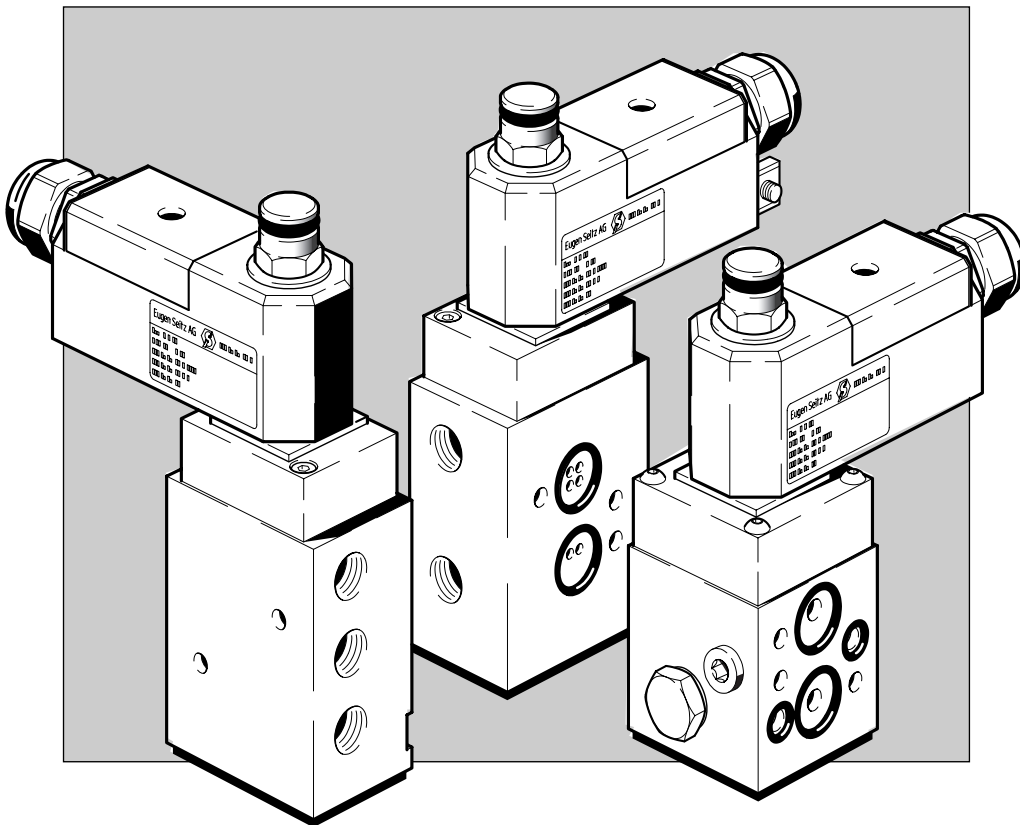


Pilot operated solenoid valves for pneumatic actuators

- **3/2 and 5/2 way solenoid valves**
- **Orifice size 6 and 12 mm**
- **NAMUR and threaded connections**
- **Pressure range 0 (2) ... 8 bar**
- **For air and inert gases**
- **With TÜV-approval up to AK-7 / SIL 4**



Valve group CP-11

The valve group CP-11 is part of the series of pilot operated solenoid valves. According to type and application, the valves are pilot operated with internal, or internal and external control air.

Application

The valves of the group CP-11 are used above all for the control of pneumatic actuators.

With NAMUR interface they are particularly suitable for quarter turn actuators. The integrated spring chamber ventilation protects actuators with spring return from the hostile environments.

The valves with external control air connections are recommended for quick exhaust applications with high flow rate and no minimum operating pressure.

Thanks to a wide range of solenoids in various type of protection for hazardous areas and environmental protected valves, the group CP-11 solenoid valves are particularly valued in the chemical- and petrochemical industry.

Standard models

Design

Pilot operated spool valve and poppet valve.

Function

According to type 3/2 way or 5/2 way, single or dual solenoid

Pressure range

2 ... 8 bar and 0 ... 8 bar depending on type (see type overview)

Media

- Filtered, lubricated or lubricant-free compressed air
- Instrument air
- Nitrogen and other inert gases

Flow direction

See functional symbol

Temperature ranges

- Medium: (-40) -25 ... +60°C (+80°C)
 - Ambient: (-40) -25 ... +60°C (+80°C)
- Please observe the allowed ambient temperature range for the solenoid!

Solenoid

Size 11

Materials

- Housing: Aluminium ematal coated
- Seals: Nitrile-butadiene rubber (NBR)
- Spool: Aluminium altef coated
- Internal parts: various materials
- General: non ferrous metal free
- End plugs: brass nickle plated

Operating life

> 5 million switchings

Mounting position

Any position

Mounting options

- Pipe installation
- NAMUR interface

NPT connection thread

On request

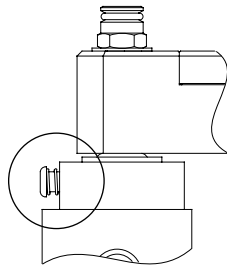
Manual override

Upon request the valves listed in the type overview are available in models with push-buttons for manual operation. The type description changes as follows:

Example without manual override:
Type CP 0623 CNE **oH**

Example with manual override:
Type CP 0623 CNE **DK**

Thanks to robust design, long and reliable operation can be guaranteed.



Type of protection EEx i

The valves listed in the type overview correspond to the models for solenoids in the type of protection EEx me or standard type with 1.8 W. In the type of protection EEx i they receive an additional designation:

Example with solenoid 1.8 W:
Type CP 0632 CNE oH

Example with solenoid in EEx i:
Type CP 0632 CNE oH **i**

Adapter with filter

In order to prevent solenoid valve failure we offer an adapter filter in our product line. The built in sieve, with mesh width 0.1 mm, filters dirt particles and can be easily cleaned or replaced.

The adapter has a G 1/4 straight male thread with O-ring seal (NBR) and is available with G 1/4 or NPT 1/4 connection thread (see Fig. 15).

G 1/4 - NPT 1/4	Order No. 125.298.00
G 1/4 - G 1/4	Order No. 125.889.00
G 1/8 - NPT 1/4	Order No. 150.836.00
G 1/8 - G 1/4	Order No. 150.835.00

Exhaust protector IP65

Suitable for solenoid valves with NAMUR connection and integral spring chamber ventilation. The spring chamber of the actuator and the solenoid itself are protected against the penetration of aggressive ambient air or rain by the non-return system. Functional reliability and operating life are thereby increased.

Order No. 126.920.00 (see Fig. 16)

Solenoid valve for universal application

New and unique, with integrated automatic shuttle valve. A universally applicable solenoid valve for all applications with spring return:

Type CP 0632 CPU oH with NAMUR interface and threaded port connections is usable on linear actuators as well as quarter turn actuators, without modification.

With the mounting plate, available as an accessory, the valve can be mounted and encased in on the NAMUR rib.

EMATAL - Corrosion protection

Eugen Seitz AG aluminium valves are "hard ematalised" as standard.

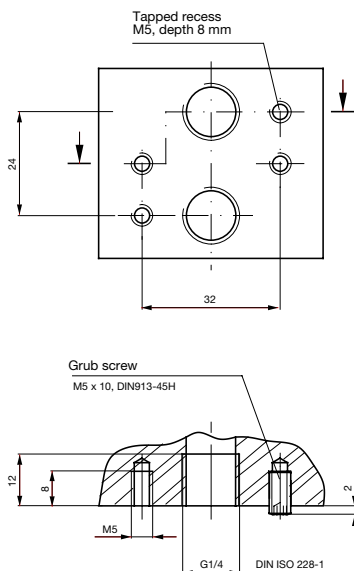
Ematal is a surface treatment in which a very hard and compact aluminium oxide layer with titanium oxide intercalation is applied to the valve. This produces a long-lasting protection against corrosion and mechanical stress.

For detailed information with an overview of the chemical resistance please request the "Hard ematal surface treatment for solenoid valves" technical information.

NAMUR interface

For quarter turn actuators

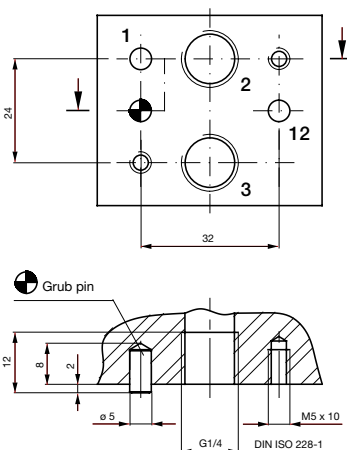
The NAMUR interface allows solenoid valves to be screwed simply and directly onto the quarter turn actuator. Time-consuming, complicated assembly is no longer necessary. A grub screw guarantees that the established initial position cannot be changed by simply turning the valve.



For actuators with linear movements

Solenoid valves with the NAMUR interface for actuators with linear movements are mountable directly on position regulators and signal devices of linear actuators with the corresponding interface without a connecting plate.

The control signal of the positioner leads by the solenoid valve through the additional pressure connection 1 on the NAMUR flange area. Connection 12 supplies the necessary control air.



NAMUR flow control plate

An intermediate flow control plate is available as an accessory for the 3/2 way and 5/2 way valves with NAMUR interface.

Order no. 126.938.00 (see figure 13)
Order no. 117.402.00 (see figure 14)

NAMUR connection plate

A NAMUR connection plate for direct mounting on the NAMUR rib of diaphragm actuators is also available as an accessory.

Order no. 124.579.00 (see figure 17)

Clamp complete, for attachment to NAMUR lantern

Order no. 127.618.00 (see figure 19)

Mounting plate

A plate for mounting on the NAMUR rib or otherwise fastening on plant is available as an accessory for the universal solenoid valve type CP 0632 CPU oH.

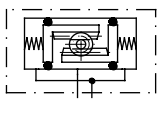
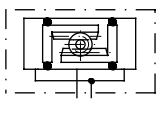

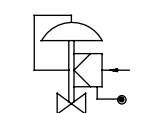


Order no. 126.391.00 (see figure 18)

Clamp complete, for attachment to NAMUR lantern

Order no. 127.618.00 (see figure 19)

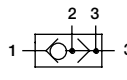
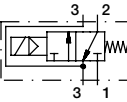
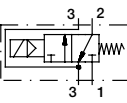
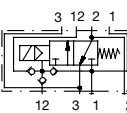
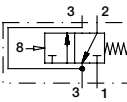
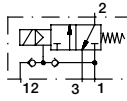
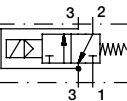
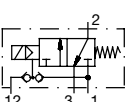
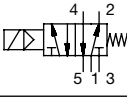
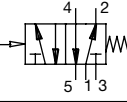
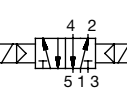
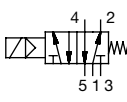
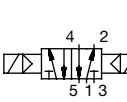
Application overview

The valve group CP-11 is characterised by its versatility.

Application	Connection	Connection												Symbol			
		CP 0632 CNP	CP 0632 CNE oH	CP 0632 CNX oH	CP 0632 CPU oH	CP 0632 CNP	CP 0632 CGK oH	CP 1232 CNE oH	CP 1232 CGK oH	CP 0652-NE oH	CP 0652-NP	CP 0652-BNE oH	CP 0652-GE oH		CP 0652-BGE oH	DW CP32 CGD oH	
Control of a single acting quarter turn actuator	NAMUR	•	•	•	•	•	•										
	threaded			•		•		•								•	
Control of a double acting quarter turn actuator	NAMUR								•	•	•						
	threaded											•	•				
Control of a single acting actuator with linear movement	NAMUR	•	•	•	•	•		•									
	threaded				•		•		•							•	
Safety quick exhaust of an actuator with positioner	NAMUR				•			•									
	threaded				•		•		•								



overview

Function	Interface or port size	Functional symbol	Number of solenoids	Orifice size [mm]	kv value [m³/h] [l/min]	Press. [bar]	Weight [kg]	Mode of operating Remarks	Valve type	Fig. no.
3/2 NC	NAMUR and G 1/4		-	inflow 4 outflow 5	0.13/2.2 0.5/8.6	2...8	0.25	pilot air operated spring return	CP 0532 CNP	20
			1	6	0.65/11	2...8	0.63	pilot solenoid operated spring return	CP 0632 CNE oH	1
			1	inflow 6 outflow 7	0.5/8 0.65/10	2...8	0.6	pilot solenoid operated spring return	CP 0632 CNX oH 3)	2
			1	inflow 6 outflow 7	0.5/8 0.65/10	0...8	0.55	pilot solenoid operated with internal or external control air supply and automatic shuttle valve	CP 0632 CPU oH 1) 2) 3)	3
			-	6	0.65/11	0...8	0.43	pilot air operated spring return	CP 0632 CNP	11
	G 1/4		1	inflow 6 outflow 7	0.72/12 1.38/23	0...8	0.55	pilot solenoid operated with internal or external control air supply and automatic shuttle valve	CP 0632 CGK oH 3)	4
	NAMUR and G 1/2		1	12	3.8/63	2...8	0.88	pilot solenoid operated spring return	CP 1232 CNE oH	5
G 1/4 and G 1/2		1	12	3.8/63	0...8	0.88	pilot solenoid operated with internal or external control air supply and automatic shuttle valve	CP 1232 CGK oH	6	
5/2	NAMUR and G 1/4		1	6	0.65/11	2...8	0.62	pilot solenoid operated spring return	CP 0652 -NE oH	7
			-	6	0.65/11	0...8	0.43	pilot air operated spring return	CP 0652 -NP	12
			2	6	0.65/11	2...8	0.79	pilot solenoid operated bistable	CP 0652 BNE oH	9
	G 1/4		1	6	0.65/11	2...8	0.62	pilot solenoid operated spring return	CP 0652 -GE oH	8
			2	6	0.65/11	2...8	0.79	pilot solenoid operated bistable	CP 0652 BGE oH	10

1) With TÜV-approval for control valves according to DIN EN 161, DIN 3394 part 1 and 2

2) Version with TÜV-approval up to AK-7 according to DIN V 19251 available

3) Version with TÜV-approval up to SIL 4 according IEC 61 508 available.

Detailed overview of solenoid valves with TÜV-approval in separate folder.



Dimensional drawings

Figure 1

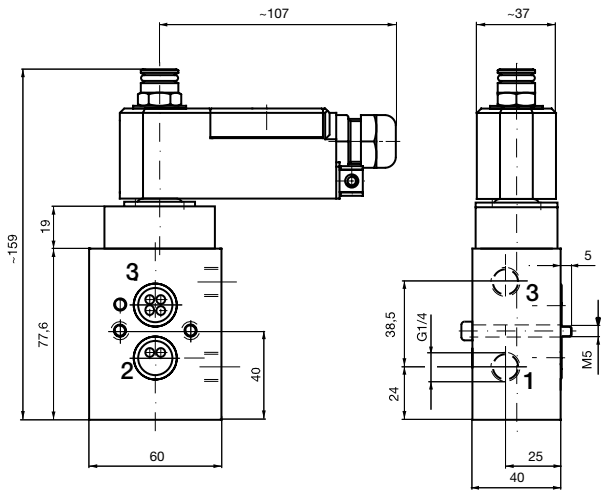


Figure 2

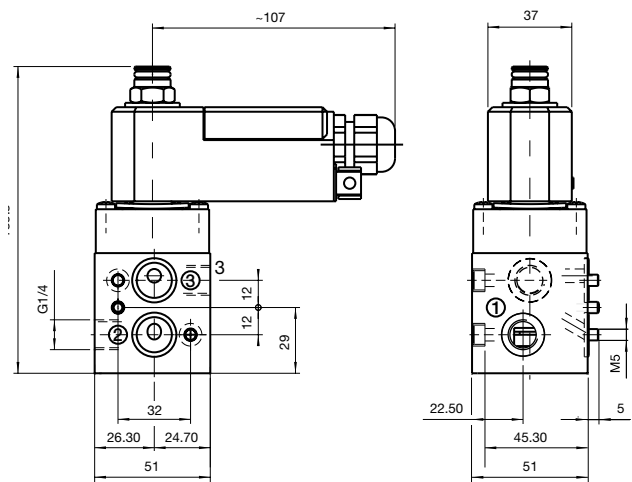


Figure 3

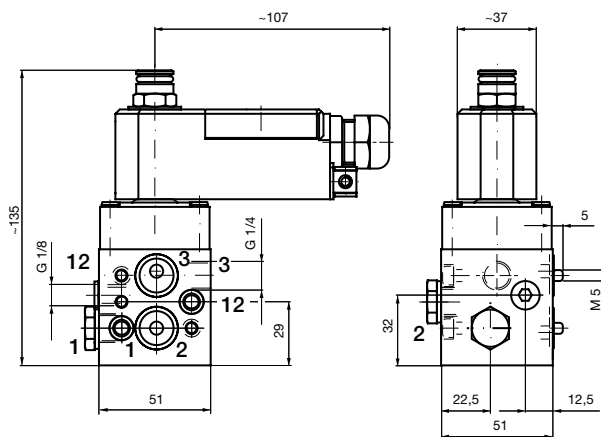


Figure 4

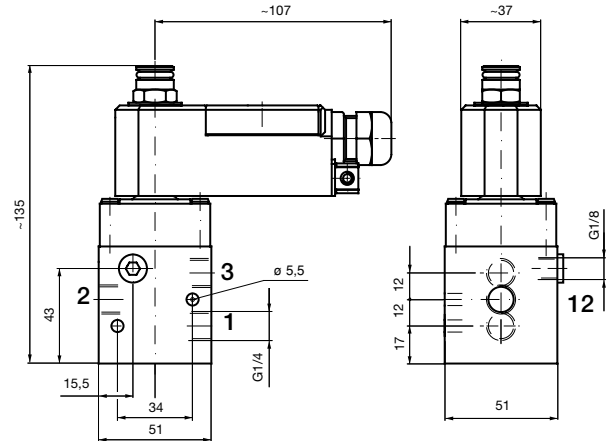


Figure 5

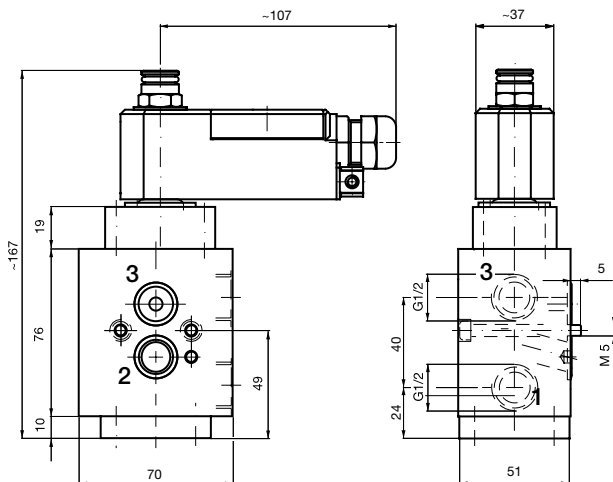
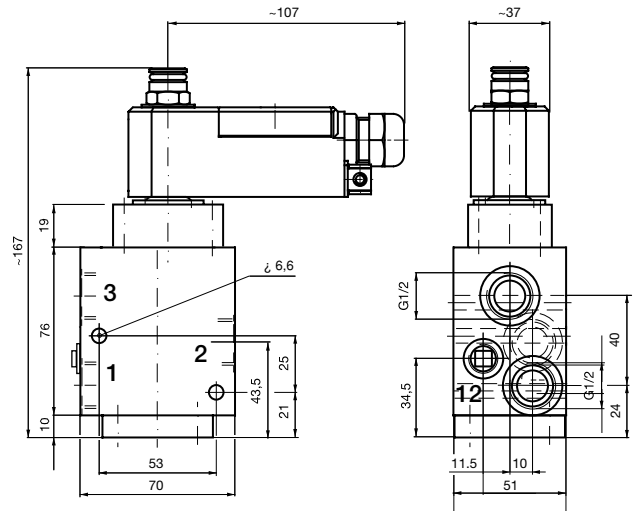


Figure 6



- Illustration with construction type 52 solenoid
- Solenoid can be rotated through 360°
- NAMUR fastening set is included



Dimensional drawings

Figure 7

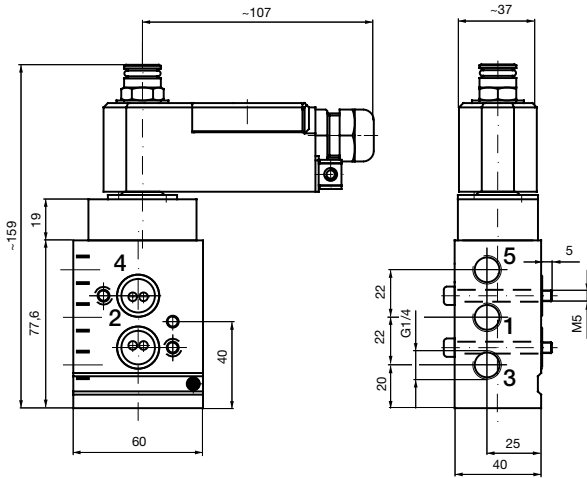


Figure 8

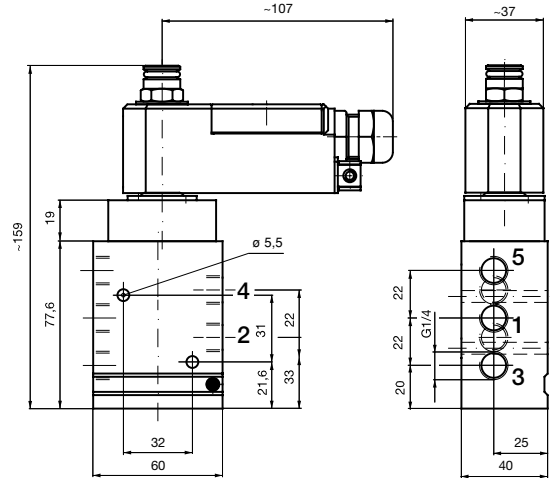


Figure 9

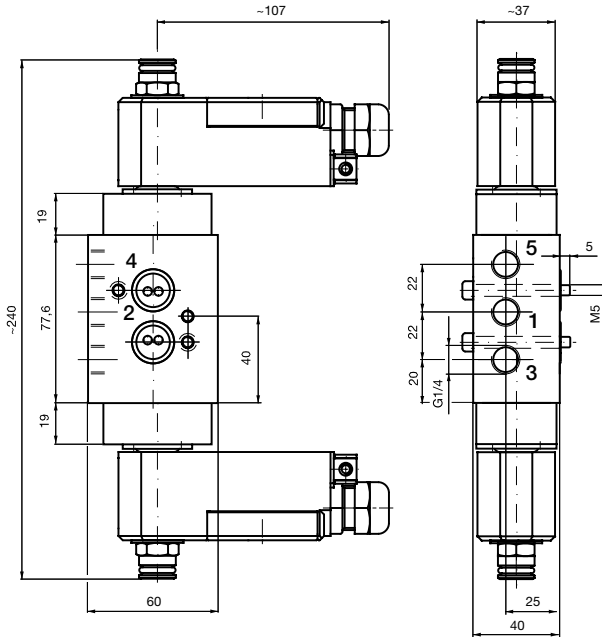


Figure 10

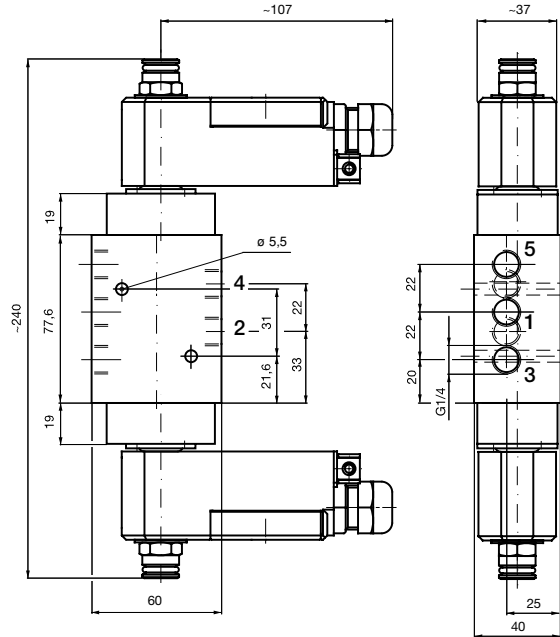


Figure 11

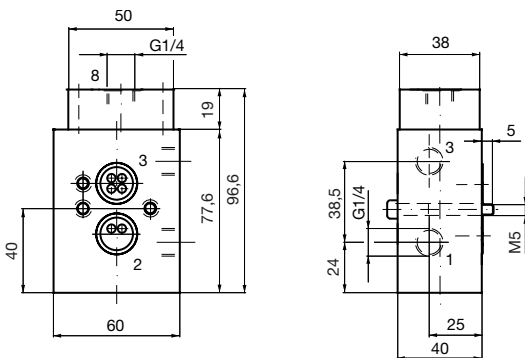
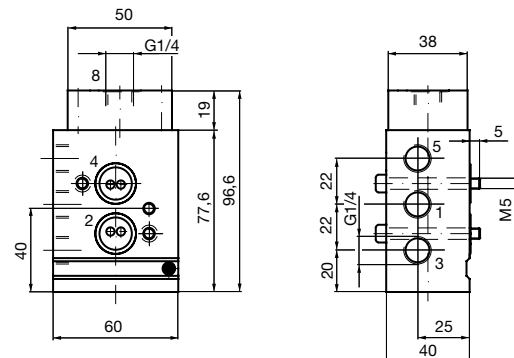


Figure 12



- Illustration with construction type 52 solenoid
- Solenoid can be rotated through 360°
- NAMUR fastening set is included



Dimensional drawings accessories

Figure 13 NAMUR flow control plate

For single-acting quarter-turn actuators.
Closing or opening time adjustable.

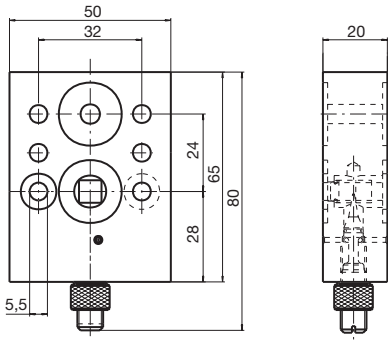


Figure 14 NAMUR flow control plate

For single-acting quarter-turn actuators - closing time adjustable.
For double-acting quarter-turn actuators - closing and opening time adjustable.

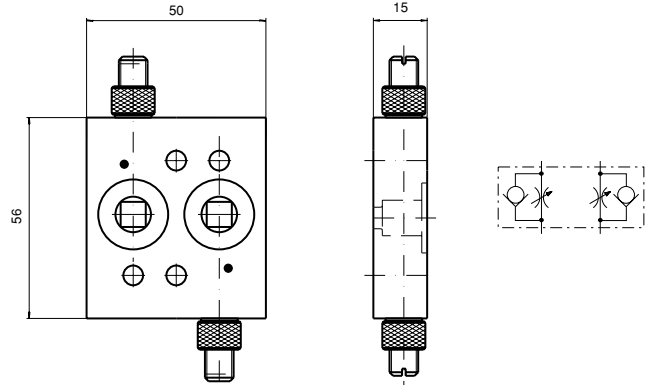


Figure 15 Adapter with filter

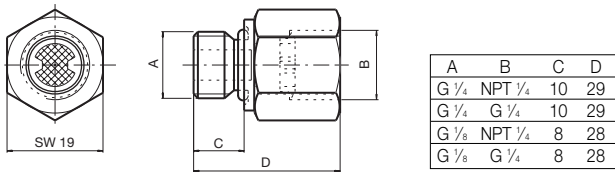


Figure 16 Exhaust protector IP65

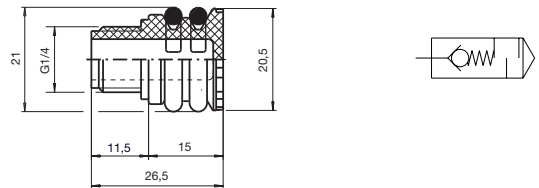


Figure 17 NAMUR connection plate

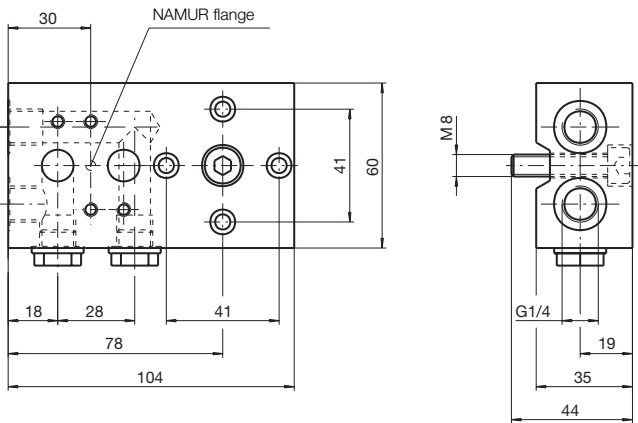


Figure 18 Mounting plate for type CP 0632 CPU

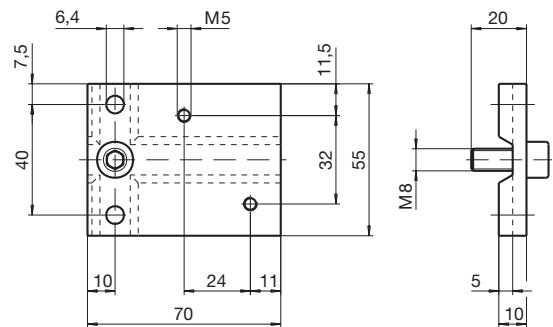


Figure 19 Clamp complete

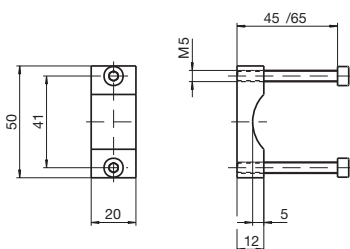
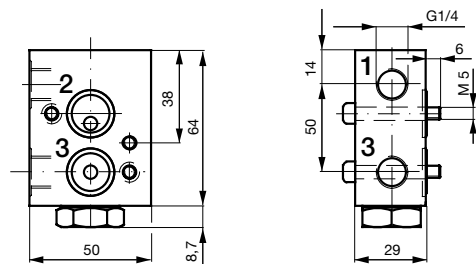
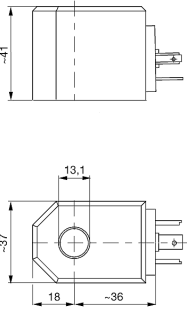
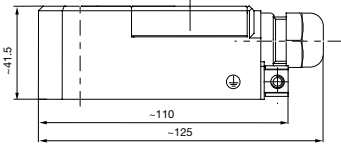
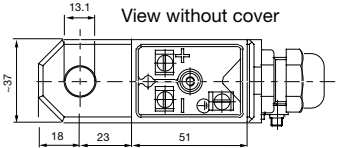
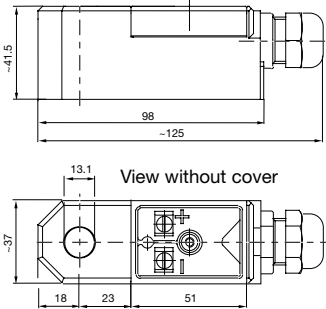
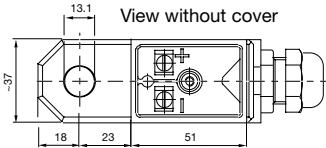






Figure 20 Venting and exhausting block



Technical data of solenoids

Solenoids	With standard protection	For potentially explosive atmospheres		
Drawing		 View without cover 		 View without cover 
Solenoid type	DC 11 A 37 AC 11 C 37 UC 11 F 37	- 11 C 52 11 F 52	- - 11 F 53	11 G 52 - -
Integrated fuse	no	no	yes	no
Rated voltage (others on request)	24 V, 110 V, 230 V	24 V, 110 V, 230 V	24 V	14 V ... 32 V *)
Operating time	100 %	100 %	100 %	100 %
Ambient temperature	-25 ... +60 °C	-20 ... +50 °C (60°C)	-20 ... +40 °C	-30 ... +50 °C (65°C)
Ex-protection	-	⊕ II 2 G EEx em II T6 (T5) ⊕ II 2 D IP65 T 80 °C (T 95 °C)	⊕ II 2 G EEx me II T6 ⊕ II 2 D T70 °C	⊕ II 2 G EEx ia IIC T6 (T5)
Degree of protection	IP65	IP65		IP65
Rated power	1.8 W (DC) / 3 VA (AC)	1.8 W (DC) / 3 VA (AC)		0.2 W ... 1.1 W *)
Connection	Plug-in connection according DIN 43650 form A. Available with/without socket.	Terminal box; cable inlet with M 20 x 1.5 gland. Cable ø 6 ... 12 mm		Terminal box; cable inlet with M 20 x 1.5 gland. Cable ø 5 ... 9 mm
Certificate				
Weight	~210 g	~330 g		~330 g

*) dependant on supply device

Detailed information about the entire range of solenoids can be found in separate leaflets.

How to order

