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# System 8

The name “System 8” stands for a modular system of solenoid coils, armature systems, solenoid operators and solenoid valves. The diameter of the armatures of all valve components is approximately 8 mm. This value is the major characteristic of this type. The components' efficiency has been increased to the optimum in years of simulation, construction and practical testing.

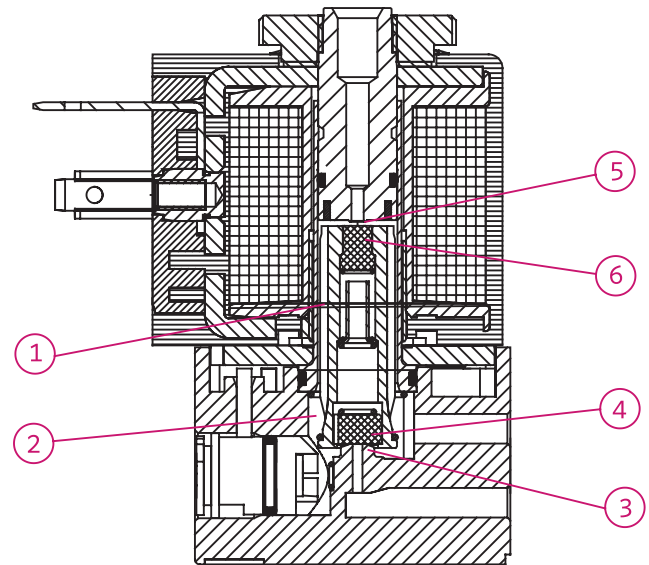
## APPLICATION OF SYSTEM 8

The solenoid operators and solenoid valves of system 8 can be used for operating 2/2- or 3/2 way valves, especially in pneumatics. Available switching functions are *normally closed* and *normally open*.

For 3/2 way valves of this series, typical maximum values for operating pressure and nominal orifice are 16 bar/2.5 mm. 2/2 way solenoid operators and solenoid valves can also be used for controlling liquids.

## FUNCTION

While the solenoid operator/solenoid valve is de-energized, the armature<sup>1</sup> is being pushed down on the lower valve seat<sup>3</sup> by the reset spring<sup>2</sup>. The lower valve seat is closed by a sealing element<sup>4</sup>. In this switch position the upper valve seat<sup>5</sup> in the magnetic core is open.



exceeds the force of the reset spring and moves the armature into the opposite extreme position. In this case the upper valve seat<sup>5</sup> is closed by the sealing element<sup>6</sup>, whereas the lower valve seat<sup>3</sup> is open.

Solenoid operators and solenoid valves have identical functionality. However, if solenoid operators are ordered, neither the lower valve seat nor the valve body is shipped. Those components have to be provided by the customer.

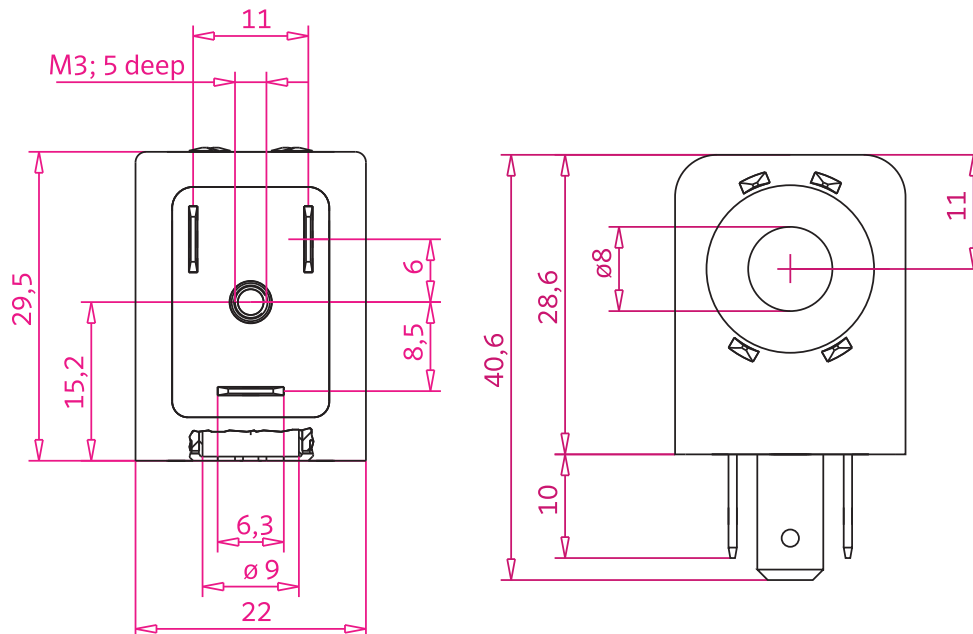
2/2 way valves do not have an upper valve seat. Besides that, the function of the magnet is identical.

## SOLENOID COIL

Width: 22 mm  
 Connection type: industry form  
 Moulding material: thermoset resin

### General Data

Voltage tolerance ..... ± 10 %  
 Ambient temperature ..... - 20 °C to + 50 °C  
 Relative duty cycle ..... 100 %  
 Insulation class of insulating materials  
 according to DIN VDE 0580 ..... F  
 Degree of protection with connector  
 according to EN 60529 ..... IP 65 (IP 67 possible with accessoires)  
 Imprint ..... *nass magnet* (customer imprint possible)  
 Protection class ..... I



**Technical Data Standard Versions**

Part No.	Voltage	Frequency [Hz]	Rated Power [W]	Power Level [VA]	Power Level	$\Delta\theta_{32}$ [K]
108-030-0048	24 V DC	-	2,0		2	35
108-030-0862	110 V AC	50		4,1	2	50
108-030-0862	110 V AC	60		3,3	2	50
108-030-0798	230 V AC	50		3,9	2	50
108-030-0798	230 V AC	60		3,2	2	50
108-030-0050	24 V DC	-	2,6		3	45
108-030-0052	24 V AC	50		6,0	3	75
108-030-0052	24 V AC	60		4,9	3	75
108-030-0049	220 V AC	50		6,0	3	75
108-030-0049	220 V AC	60		4,9	3	75
108-030-0051	230 V AC	50		6,0	3	75
108-030-0051	230 V AC	60		4,9	3	75
108-030-0043	12 V DC	-	4,6		4	70
108-030-0043	24 V AC	50		7,1	4	90
108-030-0044	24 V DC	-	4,8		4	70
108-030-0044	48 V AC	50		7,7	4	90
108-030-0047	220 V AC	50		8,5	4	95
108-030-0046	230 V AC	50		7,9	4	90
108-030-0046	230 V AC	60		6,4	4	90
108-030-0047	240 V AC	60		9,0	4	95
108-030-1169	12 V DC	-	5,5		5	85
108-030-0045	24 V DC	-	6,0		5	85
108-030-1169	24 V AC	50		9,2	5	105
108-030-0045	48 V AC	60		7,6	5	85
108-030-1120	230 V AC	50		9,4	5	102

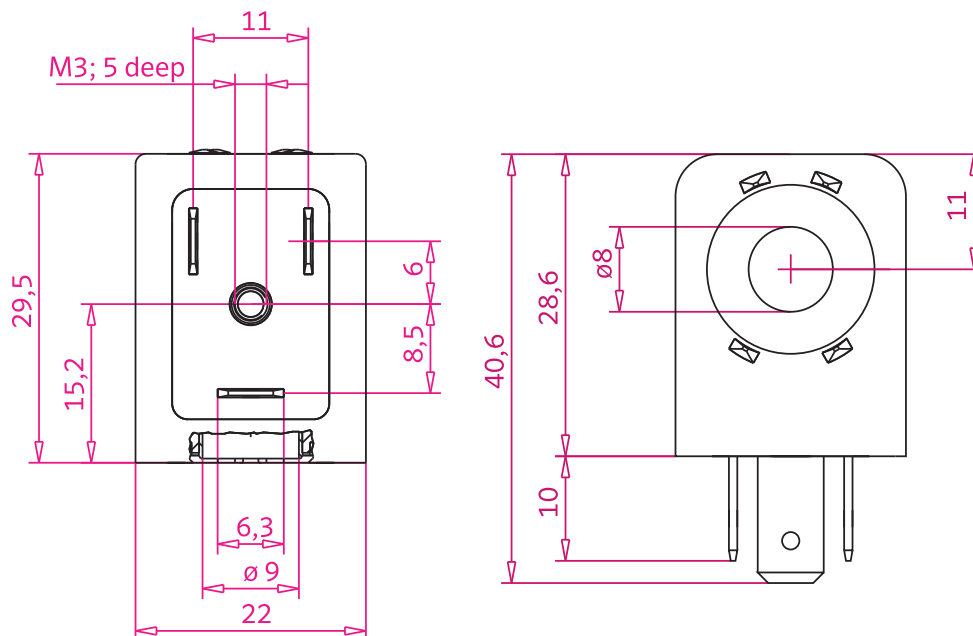
 $\Delta\theta_{32}$  [K]: steady-state over-temperature according to VDE 0580

## SOLENOID COIL

Width: 22 mm  
 Connection type: industry form  
 Moulding material: thermoplastic

### General Data

Voltage tolerance ..... ± 10 %  
 Ambient temperature ..... - 20 °C to + 50 °C  
 Relative duty cycle ..... 100 %  
 Insulation class of insulating materials  
 according to DIN VDE 0580 ..... F  
 Degree of protection with connector  
 according to EN 60529 ..... IP 65  
 Imprint ..... *nass magnet* (customer imprint possible)  
 Protection class ..... I



**Technical Data Standard Versions**

Part No.	Voltage	Frequency [Hz]	Rated Power		Power Level	$\Delta\theta_{32}$ [K]
			[W]	[VA]		
108-030-0278	24 V DC	-	1,1		1	20
108-030-0273	24 V DC	-	2,0		2	35
108-030-0279	24 V AC	50		3,6	2	50
108-030-0279	24 V AC	60		3,0	2	50
108-030-0268	110 V AC	50		4,1	2	50
108-030-0268	110 V AC	60		3,3	2	50
108-030-0276	220 V AC	50		3,9	2	50
108-030-0276	220 V AC	60		3,2	2	50
108-030-0294	230 V AC	50		3,9	2	50
108-030-0294	230 V AC	60		3,2	2	50
108-030-0271	12 V DC	-	2,4		3	45
108-030-0275	24 V DC	-	2,6		3	45
108-030-0260	48 V DC	-	2,7		3	75
108-030-0260	110 V AC	50		6,0	3	75
108-030-0274	110 V DC	-	3,6		3	75
108-030-0274	220 V AC	50		6,0	3	105
108-030-0281	230 V AC	50		6,0	3	75
108-030-0281	240 V AC	60		5,5	3	75
108-030-0257	12 V DC	-	4,6		4	100
108-030-0257	24 V DC	50		7,1	4	100
108-030-0258	24 V DC	-	4,8		4	70
108-030-0258	48 V AC	50		8,0	4	70
108-030-0259	48 V DC	-	5,0		4	70
108-030-0267	110 V AC	50		8,6	4	100
108-030-0267	110 V AC	60		6,6	4	100
108-030-0261	220 V AC	50		9,3	4	105
108-030-0269	230 V AC	50		7,9	4	95
108-030-0269	230 V AC	60		6,4	4	99
108-030-0270	12 V AC	50		8,8	5	105
108-030-0264	24 V DC	-	6,0		5	85
108-030-0263	24 V AC	50		9,3	5	110
108-030-0266	110 V AC	50		8,6	5	105
108-030-0286	110 V DC	-	6,1		5	105
108-030-0266	120 V AC	60		8,7	5	105
108-030-0272	110 V DC	-	4,9		5	105
108-030-0272	220 V AC	50		8,5	5	105
108-030-0287	220 V AC	50		8,0	5	105
108-030-0286	230 V AC	60		9,7	5	105
108-030-0298	220 V AC	50		8,0	5	105
108-030-0298	230 V AC	50		9,4	5	105

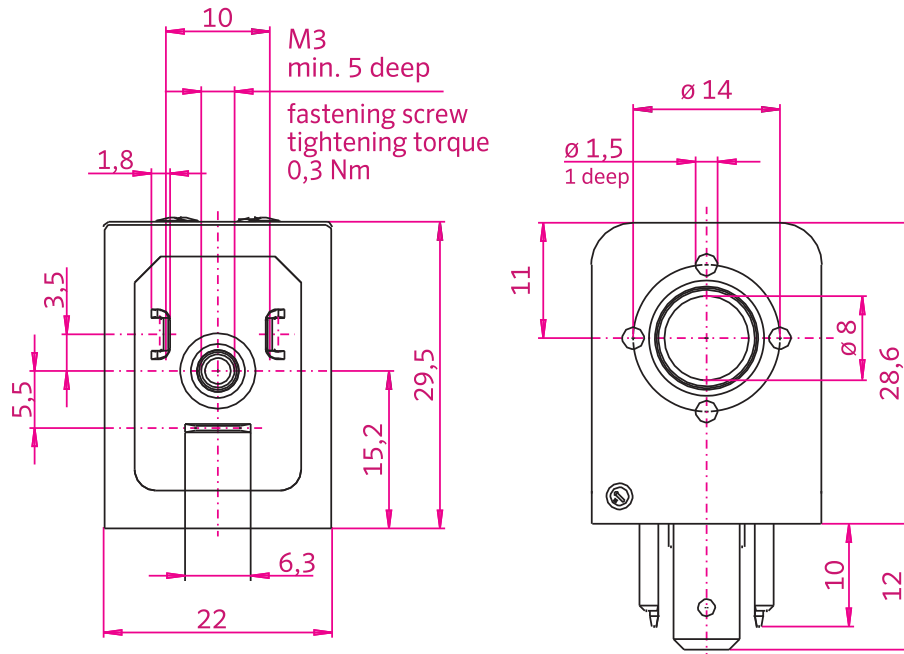
 $\Delta\theta_{32}$  [K]: steady-state over-temperature according to VDE 0580

## SOLENOID COIL

Width: 22 mm  
 Connection type: form B - EN 175301-803-B  
 Moulding material: thermoset resin

### General Data

Voltage tolerance ..... ± 10 %  
 Ambient temperature ..... - 20 °C to + 50 °C  
 Relative duty cycle ..... 100 %  
 Insulation class of insulating materials  
 according to DIN VDE 0580 ..... F  
 Degree of protection with connector  
 according to EN 60529 ..... IP 65 (IP 67 possible with accessoires)  
 Imprint ..... *nass magnet* (customer imprint possible)  
 Protection class ..... I



**Technical Data** Standard Versions

Part No.	Voltage	Frequency [Hz]	Rated Power [W]      [VA]	Power Level	$\Delta\theta_{32}$ [K]
108-030-0524	24 V DC	-	6,0	5	85
108-030-0524	48 V AC	60	7,6	5	85
108-030-0525	110 V AC	50	8,6	5	105
108-030-0525	120 V AC	60	8,7	5	105

$\Delta\theta_{32}$  [K]: steady-state over-temperature according to VDE 0580

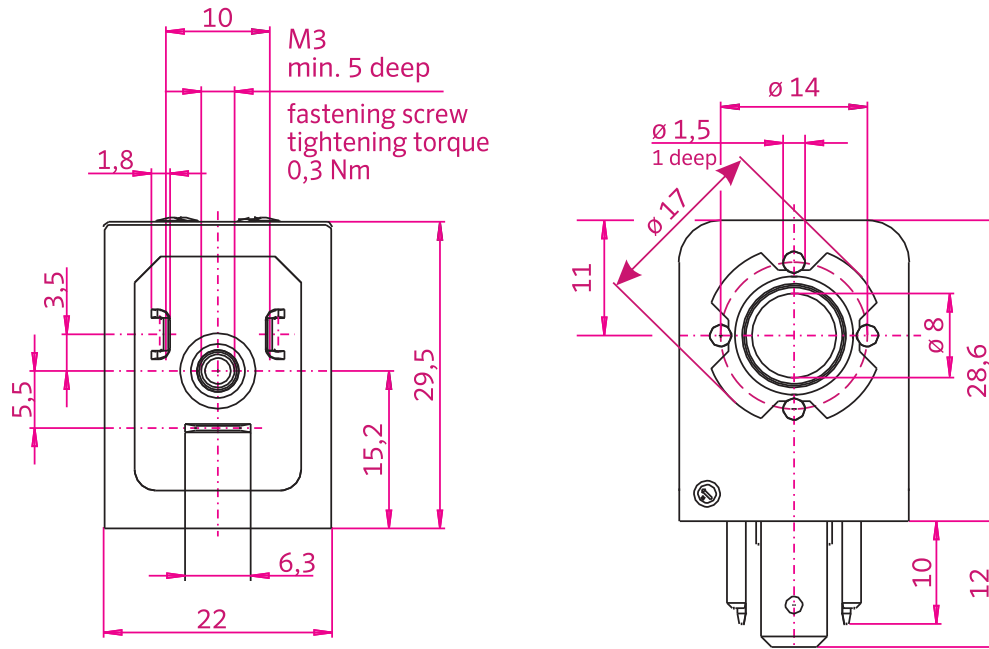


## SOLENOID COIL

Width: 22 mm  
 Connection type: form B - EN 175301-803-B  
 Moulding material: thermoplastic

### General Data

Voltage tolerance ..... ± 10 %  
 Ambient temperature ..... - 20 °C to + 50 °C  
 Relative duty cycle ..... 100 %  
 Insulation class of insulating materials  
 according to DIN VDE 0580 ..... F  
 Degree of protection with connector  
 according to EN 60529 ..... IP 65  
 Imprint ..... *nass magnet* (customer imprint possible)  
 Protection class ..... I



**Technical Data Standard Versions**

Part No.	Voltage	Frequency [Hz]	Rated Power [W]      [VA]	Power Level	$\Delta\theta_{32}$ [K]
108-030-0889	24 V DC	-	1,7	2	35
108-030-0891	24 V DC	-	2,6	3	45
108-030-0892	230 V AC	50	6,0	3	75
108-030-0892	230 V AC	60	4,9	3	75
108-030-0887	24 V DC	-	4,8	4	70
108-030-0887	48 V AC	50	7,7	4	70
108-030-0890	110 V AC	-	4,9	4	100
108-030-0890	220 V AC	50	8,5	4	100
108-030-0893	24 V AC	50	7,9	4	95
108-030-0893	24 V AC	60	6,4	4	95
108-030-0888	24 V DC	-	6,0	5	85
108-030-0888	48 V AC	60	7,6	5	85

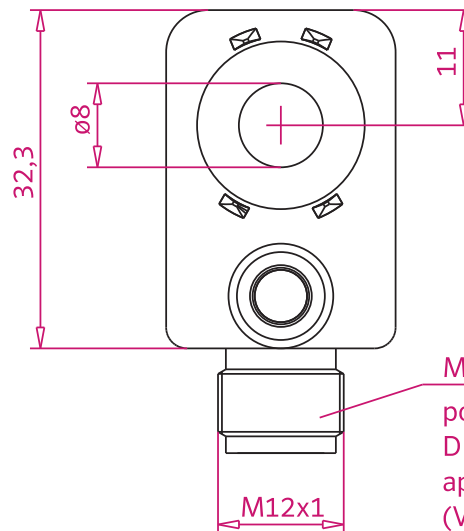
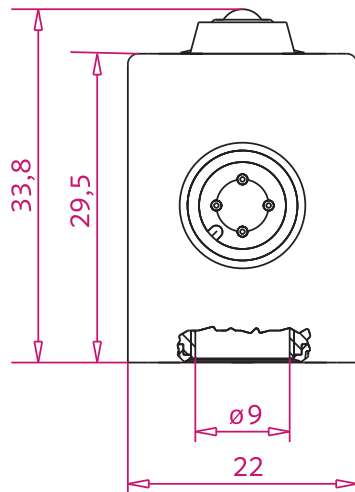
$\Delta\theta_{32}$  [K]: steady-state over-temperature according to VDE 0580

## SOLENOID COIL

Width: 22 mm  
 Connection type: M 12 metal thread  
 Moulding material: thermoset resin

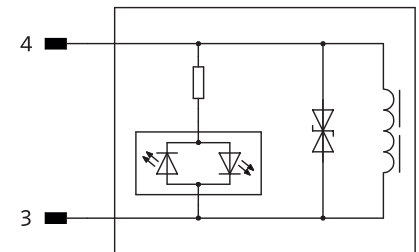
### General Data

Voltage tolerance ..... ± 10 %  
 Ambient temperature ..... - 20 °C to + 50 °C  
 Relative duty cycle ..... 100 %  
 Insulation class of insulating materials  
 according to DIN VDE 0580 ..... F  
 Degree of protection with connector  
 according to EN 60529 ..... IP 65 (IP 67 on request)  
 Imprint ..... *nass magnet* (customer imprint possible)  
 Protection class ..... II



M12-Connector  
 port acc. to  
 DIN EN 60947-5-2  
 appendix D  
 (VDE 0660 part 208)

Circuit Diagram



**Technical Data** Standard Versions

Part No.	Voltage	Rated Power [W]	Power Level	$\Delta\theta_{st}$ [K]	LED yellow
108-030-1109	24 V DC	2,5	3	45	x
108-030-0240	24 V DC	4,8	4	70	x

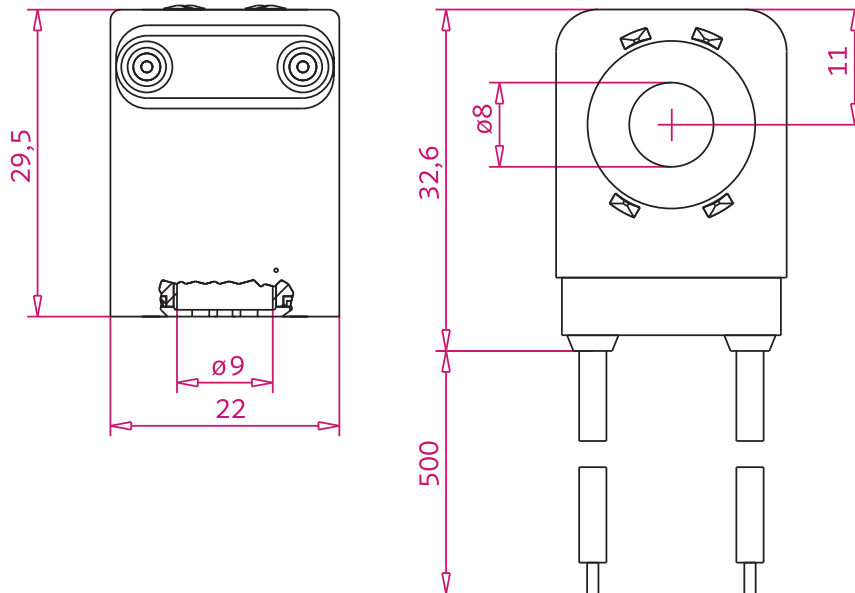
$\Delta\theta_{st}$  [K]: steady-state over-temperature according to VDE 0580

## SOLENOID COIL

Width: 22 mm  
 Connection type: flying leads  
 Moulding material: thermoplastic

### General Data

Voltage tolerance ..... ± 10 %  
 Ambient temperature ..... - 20 °C to + 50 °C  
 Relative duty cycle ..... 100 %  
 Insulation class of insulating materials  
 according to DIN VDE 0580 ..... F  
 Degree of protection ..... IP 65  
 Imprint ..... *nass magnet* (customer imprint possible)  
 Protection class ..... III



**Technical Data Standard Versions**

Part No.	Voltage	Frequency [Hz]	Rated Power		Power Level	$\Delta\theta_{32}$ [K]	Length of Flying Leads
			[W]	[VA]			
108-030-0788	24 V DC	-	2,6		3	45	500 mm
108-030-0785	48 V DC	-	2,7		3	45	500 mm
108-030-0784	24 V DC	-	4,8		4	70	500 mm
108-030-0784	48 V AC	50		8,5	4	70	500 mm
108-030-0785	110 V AC	50		6,0	4	45	500 mm
108-030-0786	24 V DC	-	6,0		5	85	500 mm

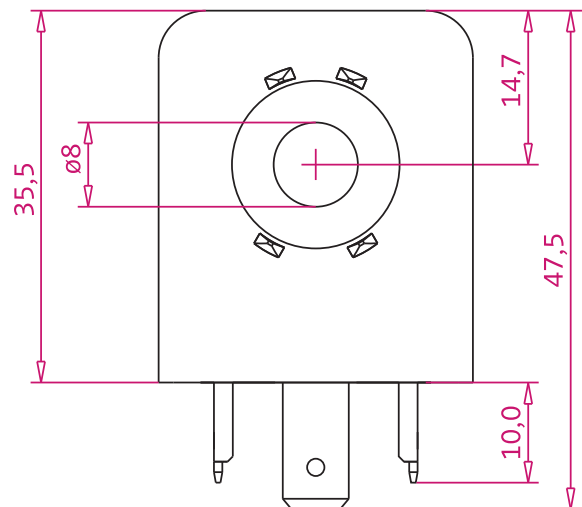
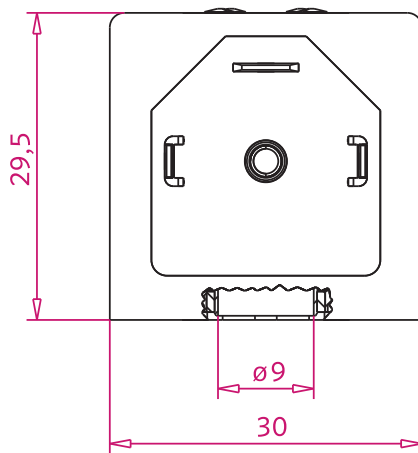
$\Delta\theta_{32}$  [K]: steady-state over-temperature according to VDE 0580

## SOLENOID COIL

Width: 30 mm  
 Connection type: form A - EN 175301-803-A  
 Moulding material: thermoset resin

### General Data

Voltage tolerance ..... ± 10 %  
 Ambient temperature ..... - 20 °C to + 50 °C  
 Relative duty cycle ..... 100 %  
 Insulation class of insulating materials  
 according to DIN VDE 0580 ..... F  
 Degree of protection with connector  
 according to EN 60529 ..... IP 65 (IP 67 possible with accessoires)  
 Imprint ..... *nass magnet* (customer imprint possible)  
 Protection class ..... I



**Technical Data Standard Versions**

Part No.	Voltage	Frequency [Hz]	Rated Power [W]	Power Level [VA]	$\Delta\theta_{32}$ [K]
108-030-1089	24 V DC	-	2,1	3	35
108-030-0093	24 V DC	-	2,7	4	35
108-030-0716	24 V AC	50	5,2	4	70
108-030-0716	24 V AC	60	3,9	4	60
108-030-0092	220 V AC	50	4,9	4	60
108-030-0092	240 V AC	60	4,8	4	60
108-030-0094	24 V DC	-	4,5	5	60
108-030-0098	48 V DC	-	4,9	5	60
108-030-0477	110 V AC	50	7,6	5	70
108-030-0477	120 V AC	60	6,9	5	70
108-030-0096	48 V AC	50	9,9	6	85
108-030-0096	48 V AC	60	7,1	6	85
108-030-0095	110 V AC	-	6,9	6	90
108-030-0097	110 V AC	50	10,5	6	90
108-030-0097	120 V AC	60	9,9	6	90
108-030-0095	220 V AC	50	10,5	6	90

$\Delta\theta_{32}$  [K]: steady-state over-temperature according to VDE 0580

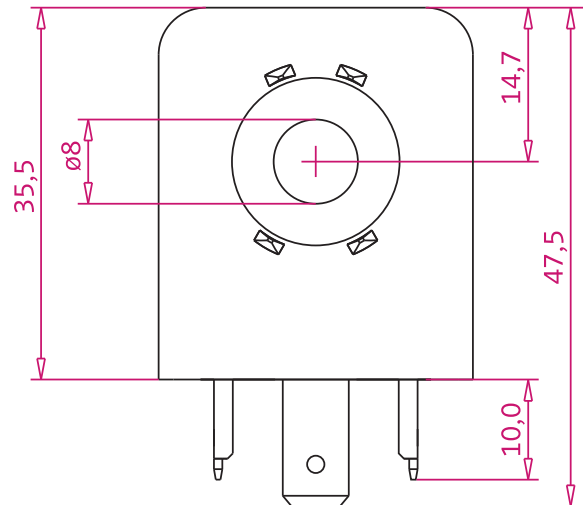
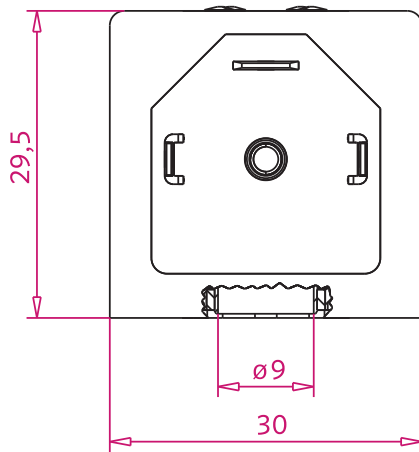


## SOLENOID COIL

Width: 30 mm  
 Connection type: form A - EN 175301-803-A  
 Moulding material: thermoplastic

### General Data

Voltage tolerance ..... ± 10 %  
 Ambient temperature ..... - 20 °C to + 50 °C  
 Relative duty cycle ..... 100 %  
 Insulation class of insulating materials  
 according to DIN VDE 0580 ..... F  
 Degree of protection with connector  
 according to EN 60529 ..... IP 65  
 Imprint ..... *nass magnet* (customer imprint possible)  
 Protection class ..... I



**Technical Data Standard Versions**

Part No.	Voltage	Frequency [Hz]	Rated Power [W]      [VA]	Power Level	$\Delta\theta_{32}$ [K]
108-030-0570	24 V DC	-	0,7	1	15
108-030-0559	24 V DC	-	2,1	3	35
108-030-0564	12 V DC	-	2,6	4	40
108-030-0557	24 V AC	50	5,2	4	70
108-030-0557	24 V AC	60	3,9	4	70
108-030-0560	24 V DC	-	2,7	4	40
108-030-0555	48 V DC	-	3,4	4	60
108-030-0555	110 V AC	50	4,8	4	60
108-030-0553	220 V AC	50	4,9	4	60
108-030-0553	220 V AC	60	3,7	4	60
108-030-0561	24 V DC	-	4,5	5	60
108-030-0554	110 V DC	-	6,0	5	75
108-030-0569	110 V DC	-	5,3	5	75
108-030-0556	110 V AC	50	7,6	5	70
108-030-0556	120 V AC	60	6,9	5	70
108-030-0554	220 V AC	50	8,0	5	75
108-030-0569	230 V AC	50	7,9	5	75
108-030-0558	12 V DC	-	6,2	6	85
108-030-0563	24 V DC	-	6,8	6	85
108-030-0563	48 V AC	50	9,9	6	90
108-030-0562	110 V DC	-	6,5	6	90
108-030-0565	110 V AC	50	10,5	6	90
108-030-0565	120 V AC	60	9,9	6	90
108-030-0562	220 V AC	50	10,5	6	90
108-030-0568	230 V AC	50	10,5	6	90
108-030-0568	230 V AC	60	7,6	6	90

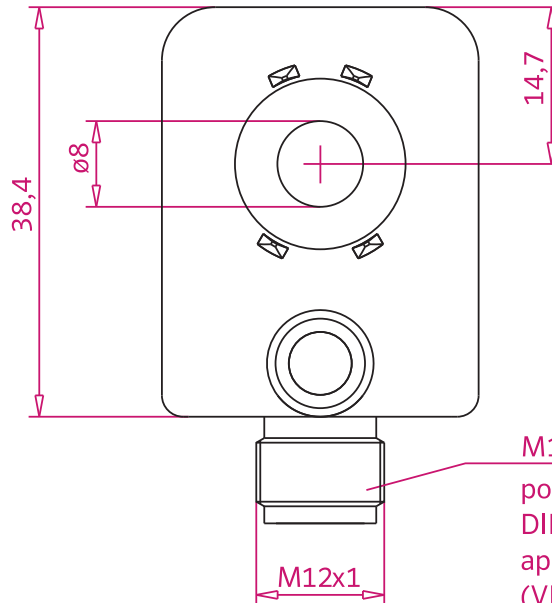
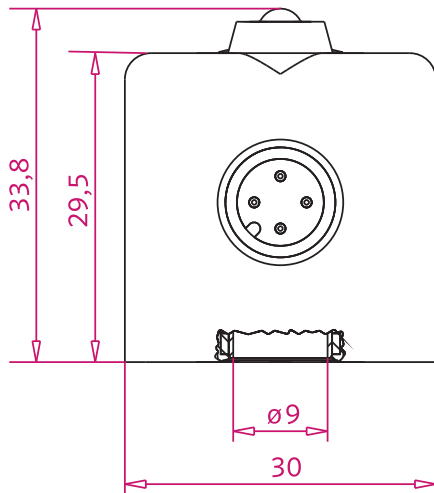
$\Delta\theta_{32}$  [K]: steady-state over-temperature according to VDE 0580

## SOLENOID COIL

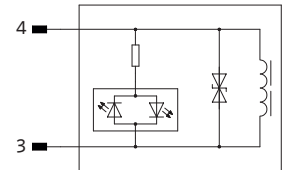
Width: 30 mm  
 Connection type: M 12 metal thread  
 Moulding material: thermoset resin

### General Data

Voltage tolerance ..... ± 10 %  
 Ambient temperature ..... - 20 °C to + 50 °C  
 Relative duty cycle ..... 100 %  
 Insulation class of insulating materials  
 according to DIN VDE 0580 ..... F  
 Degree of protection with connector ..... IP 65 (IP 67 on request)  
 Imprint ..... *nass magnet* (customer imprint possible)  
 Protection class ..... II



Circuit Diagram



M12-Connector  
 port acc. to  
 DIN EN 60947-5-2  
 appendix D  
 (VDE 0660 part 208)

**Technical Data** Standard Versions

Part No.	Voltage	Rated Power [W]	Power Level	$\Delta\theta_{32}$ [K]	LED	Contact 2-pole
108-030-0181	24 V DC	2,7	4	35	yellow	x
108-030-0182	24 V DC	4,5	5	60	yellow	x

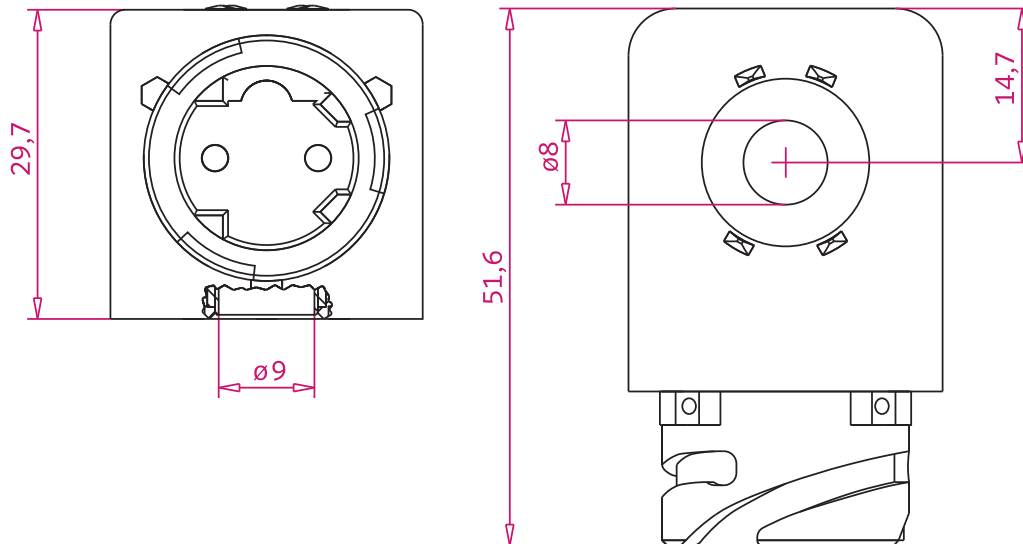
$\Delta\theta_{32}$  [K]: steady-state over-temperature according to VDE 0580

## SOLENOID COIL

Width: 30 mm  
 Connection type: bayonet (connector DIN 72585)  
 Moulding material: thermoplastic

### General Data

Voltage tolerance .....  $\pm 10\%$  ( $\pm 30\%$  on request)  
 Ambient temperature .....  $-40\text{ }^{\circ}\text{C}$  to  $+50\text{ }^{\circ}\text{C}$   
 (+  $80\text{ }^{\circ}\text{C}$  on request)  
 Relative duty cycle ..... 100 %  
 Degree of protection with connector  
 according to EN 60529 ..... IP 6K 9K  
 Imprint ..... *nass magnet* (customer imprint possible)  
 Protection class ..... III



**Technical Data** Standard Version

Part No.	Voltage	Rated Power [W]	Power Level	$\Delta\theta_{32}$ [K]
108-030-0256	24 V DC	4,5	5	60

$\Delta\theta_{32}$  [K]: steady-state over-temperature according to VDE 0580

## SPECIAL REMARKS

**Note:** The proportions of the solenoid coils displayed in the images on this page do not represent the actual proportions.

The technical data are valid for the indicated standard voltages. Other voltages are available on request.

Perfect function of these solenoid coils with the pertinent components included in this catalogue is assured with the winding having reached its operating temperature (max. ambient temperature and max. voltage tolerance). The steady-state over-temperature is reached in case of valve bodies of plastic and coil encapsulation made of Thermoplastic. All valves are designed in compliance with DIN VDE 0580. Arrangement of the valves in modular design is possible, however, it may ensue a higher temperature increased by up

to 20 K and may limit the function. A general lifetime of the products cannot be specified, as it is decisively influenced by ambient conditions, the single application and combination with other components. The function can only be fulfilled in case of exclusive use of *nass magnet* products.

Should there be deviating or additional operating conditions compared to the abovementioned conditions, special testing is necessary in order to verify the usability of the *nass magnet* products.

***nass magnet* will be glad to give you the required advice.**



**Width:** 22 mm  
**Connection type:** industry form  
**Moulding material:** thermoset resin and thermoplastic



**Width:** 22 mm  
**Connection type:** form B  
**Moulding material:** thermoset resin and thermoplastic



**Width:** 22 mm  
**Connection type:** flying leads  
**Moulding material:** thermoplastic



**Width:** 22 mm  
**Connection type:** M 12 metal thread  
**Moulding material:** thermoset resin



**Width:** 30 mm  
**Connection type:** form A  
**Moulding material:** thermoset resin and thermoplastic



**Width:** 30 mm  
**Connection type:** M 12 metal thread  
**Moulding material:** thermoset resin



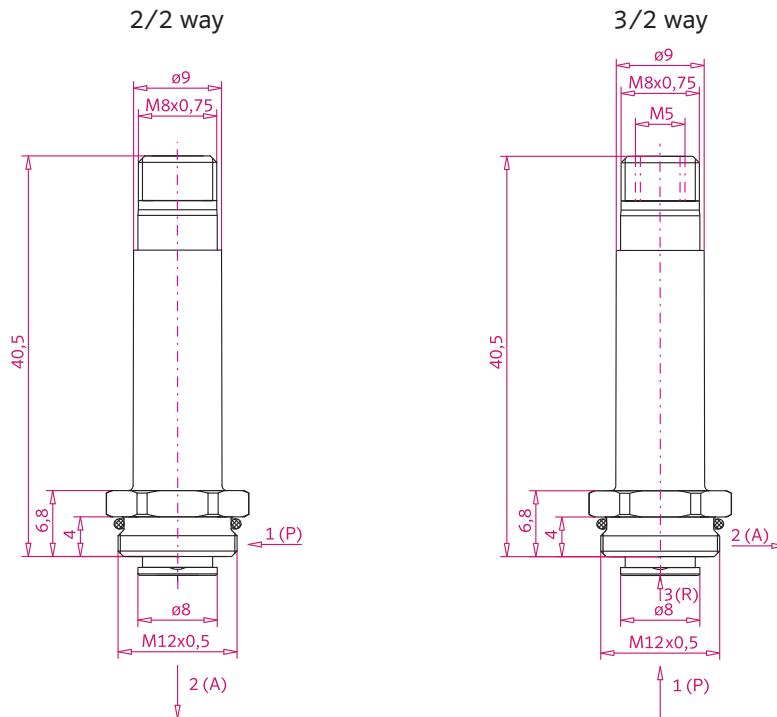
**Width:** 30 mm  
**Connection type:** bayonet  
**Moulding material:** thermoplastic

## ARMATURE ASSEMBLY GW (THREAD)

Switching function: 2/2 and 3/2 way  
 De-energized state: NC (normally closed)  
 Connection type: thread M 12 x 0,5

### General Data

Ambient temperature ..... - 10 °C to + 50 °C  
 Quality of medium according to ISO 8573-1 ..... compressed air class 4, 3, 4  
 Mounting position ..... any (preferably plunger in vertical direction)





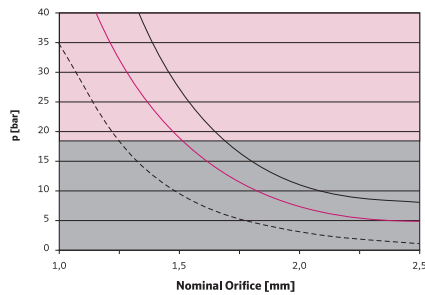
## Technical Data Standard Versions

Part No.	Function	Power Level	Nominal Orifice [mm]		Pressure [bar]	Appropriate for		Armature Guide
			inlet	exhaust		brass	stainless steel	
108-010-0082	3/2 way NC	1	0,6	0,8	10	DC	x	
108-010-0085	3/2 way NC	1	0,8	1,0	8	DC	x	
108-010-0027	3/2 way NC	2	0,8	1,0	10	DC AC	x	
108-010-0017	3/2 way NC	3	1,0	1,3	10	DC AC	x	
108-010-0053	3/2 way NC	3	1,0	1,3	10	DC AC		x
108-010-0005	2/2 way NC	3, 4, 5, 6	see below			DC AC	x	
108-010-0014	2/2 way NC	3, 4, 5, 6	see below			DC AC		x
108-010-0016	3/2 way NC	4	1,3	1,5	10	DC AC	x	
108-010-0002	3/2 way NC	5	1,5	1,7	10	DC AC	x	
108-010-0045	3/2 way NC	5	1,5	1,7	10	DC AC		x
108-010-0004	3/2 way NC	6	1,7	1,7	10	DC AC	x	

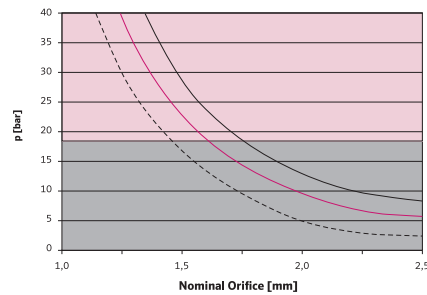
## Power Levels for 2/2 Way Versions

AC - 50 Hz    
  AC - 60 Hz    
  DC - 5 % residual ripple    
 max. test pressure: 18 bar · special versions on request

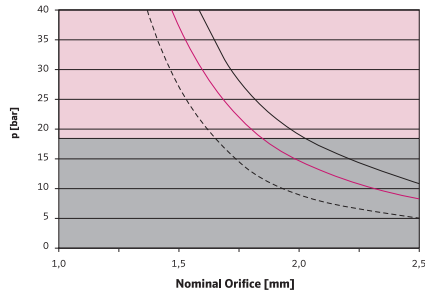
**Power Level 3**



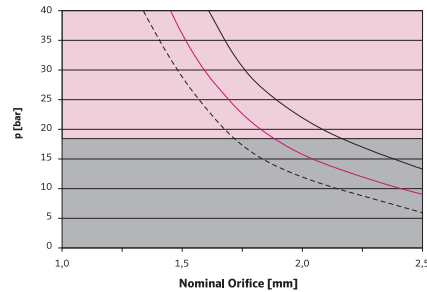
**Power Level 4**



**Power Level 5**



**Power Level 6**



## ARMATURE ASSEMBLY FL

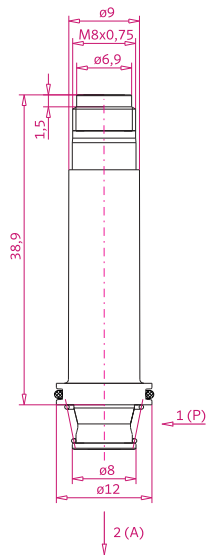
Switching function: 2/2 and 3/2 way  
 De-energized state: NC (normally closed),  
 NO (normally open)  
 Connection type: flange



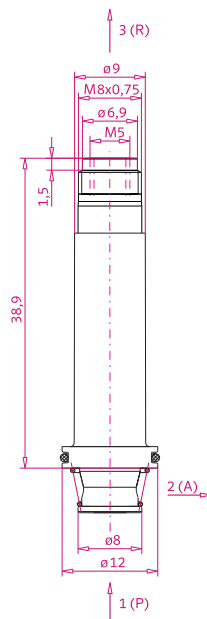
### General Data

Ambient temperature ..... - 10 °C to + 50 °C  
 Quality of medium according to ISO 8573-1 ..... compressed air class 4, 3, 4  
 Mounting position ..... any (preferably plunger in vertical direction)

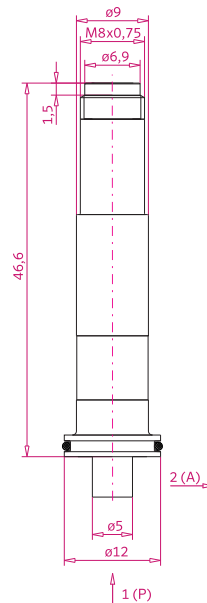
2/2 way (NC)



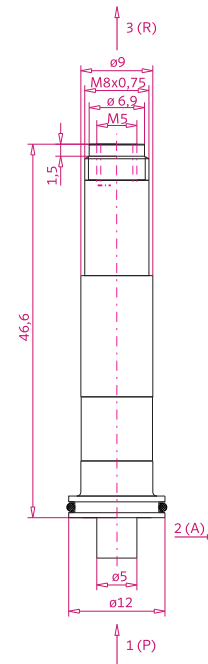
3/2 way (NC)



2/2 way (NO)



3/2 way (NO)



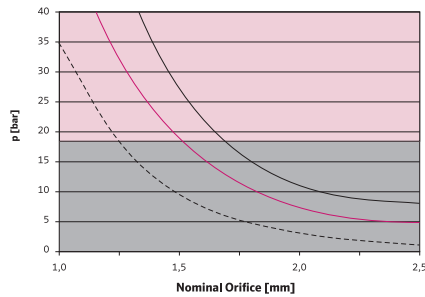
## Technical Data Standard Versions

Part No.	Function	Power Level	Nominal Orifice [mm]		Pressure [bar]	Appropriate for	Armature Guide	
			inlet	exhaust			brass	stainless steel
108-010-0081	3/2 way NC	1	0,6	0,8	10	DC	x	
108-010-0084	3/2 way NC	1	0,8	1,0	8	DC	x	
108-010-0100	3/2 way NC	1	0,6	0,8	10	DC		x
108-010-0026	3/2 way NC	2	0,8	1,0	10	DC AC	x	
108-010-0007	3/2 way NC	3	1,0	1,3	10	DC AC		x
108-010-0010	3/2 way NC	3	1,0	1,3	10	DC AC	x	
108-010-0006	2/2 way NC	3, 4, 5, 6	see below			DC AC	x	
108-010-0088	2/2 way NC	3, 4, 5, 6	see below			DC		x
108-010-0009	3/2 way NC	4	1,3	1,5	10	DC AC	x	
108-010-0049	3/2 way NC	4	1,3	1,5	10	DC AC		x
108-010-0172	3/2 way NO	4	1,0	1,3	10	DC	x	
108-010-0001	3/2 way NC	5	1,5	1,7	10	DC AC	x	
108-010-0060	3/2 way NC	5	1,5	1,7	10	DC AC		x
108-010-0003	3/2 way NC	6	1,7	1,7	10	DC AC	x	
108-010-0066	3/2 way NC	6	1,7	1,7	10	DC AC		x

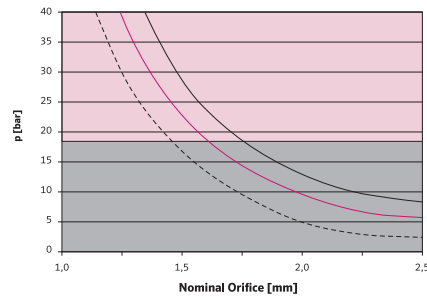
## Power Levels for 2/2 Way Versions

AC - 50 Hz   
  AC - 60 Hz   
  DC - 5 % residual ripple   
 max. test pressure: 18 bar · special versions on request

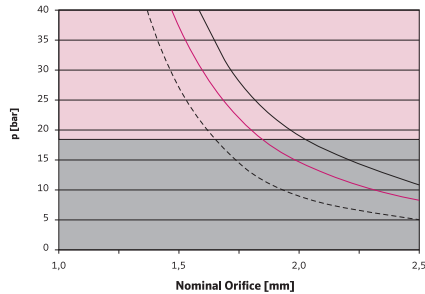
**Power Level 3**



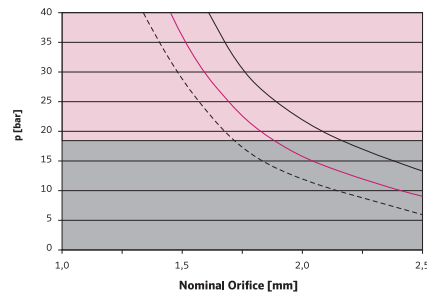
**Power Level 4**



**Power Level 5**



**Power Level 6**

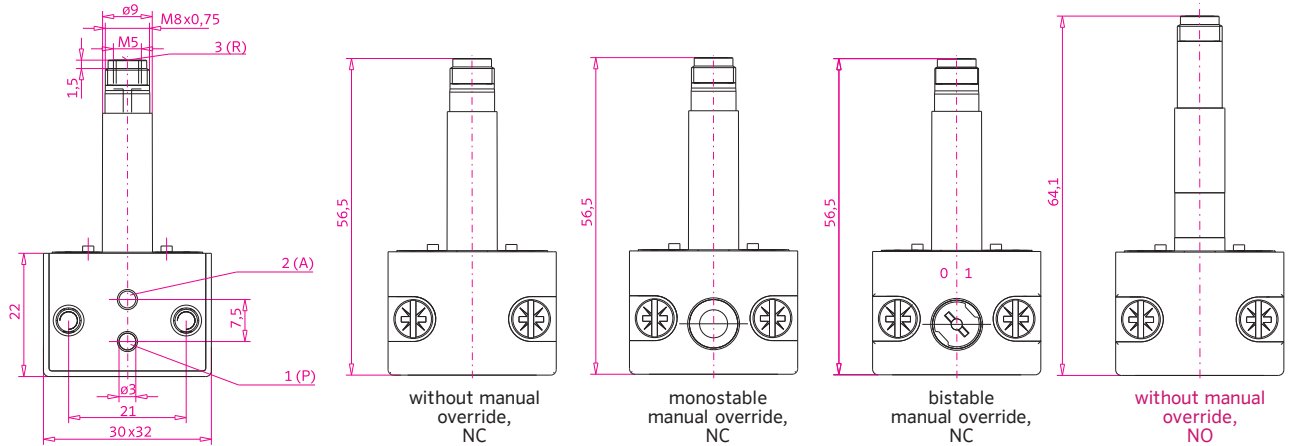


## VALVE SYSTEM CNOMO

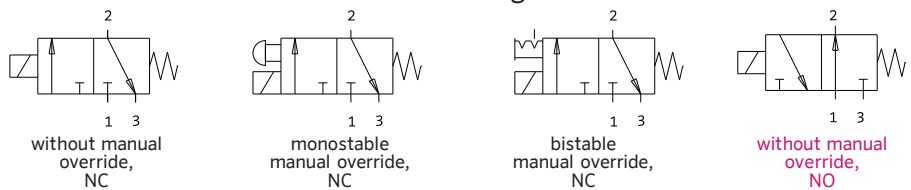
Height: 22 mm  
 Switching function: 2/2 and 3/2 way  
 De-energized state: NC (normally closed), NO (normally open)  
 Valve body: plastics

### General Data

Ambient temperature ..... - 10 °C to + 50 °C  
 Quality of medium according to ISO 8573-1 ..... compressed air class 4, 3, 4  
 Mounting position ..... any (preferably plunger in vertical direction)  
 Sealing material ..... FPM (other sealing materials on request)



### Pneumatic Diagram



## Technical Data Standard Versions

Part No.	Power Level	Nominal Orifice [mm]		Pressure [bar]	Flow Rate* [l/min]		Manual Override		Appropriate for	
		inlet	exhaust		1-2	2-3	bistable	monostable		
108-050-0190	1	0,8	1,0	8	20	30	x		DC	
108-050-0194	1	0,6	0,7	10	12	22	x		DC	
108-050-0202	1	0,8	1,0	8	20	30			DC	
108-050-0207	1	0,8	1,0	8	20	30		x	DC	
108-050-0243	2	0,8	1,0	10	20	30	x		DC	AC
108-050-0109	3	1,0	1,3	10	35	60	x		DC	AC
108-050-0110	3	1,0	1,3	10	35	60			DC	AC
108-050-0126	3	1,0	1,3	10	35	60		x	DC	AC
108-050-0111	4	1,3	1,5	10	50	75	x		DC	AC
108-050-0114	4	1,3	1,5	10	50	75			DC	AC
108-050-0127	4	1,3	1,5	10	50	75		x	DC	AC
108-050-0122	5	1,5	1,7	10	65	90	x		DC	AC
108-050-0124	5	1,5	1,7	10	65	90			DC	AC
108-050-0130	5	1,5	1,7	10	65	90		x	DC	AC
108-050-0116	6	1,3	1,5	16	50	75	x		DC	AC
108-050-0118	6	1,3	1,5	16	50	75			DC	AC
108-050-0125	6	1,7	1,7	10	80	90			DC	AC
108-050-0160	6	1,7	1,7	10	80	90		x	DC	AC
108-050-0137	6	1,3	1,5	16	50	75		x	DC	AC

\* qv flow rate at an inlet pressure of 6 bar (X = 1 bar) and 0 °C; flow rate detection in compliance with ISO 6358

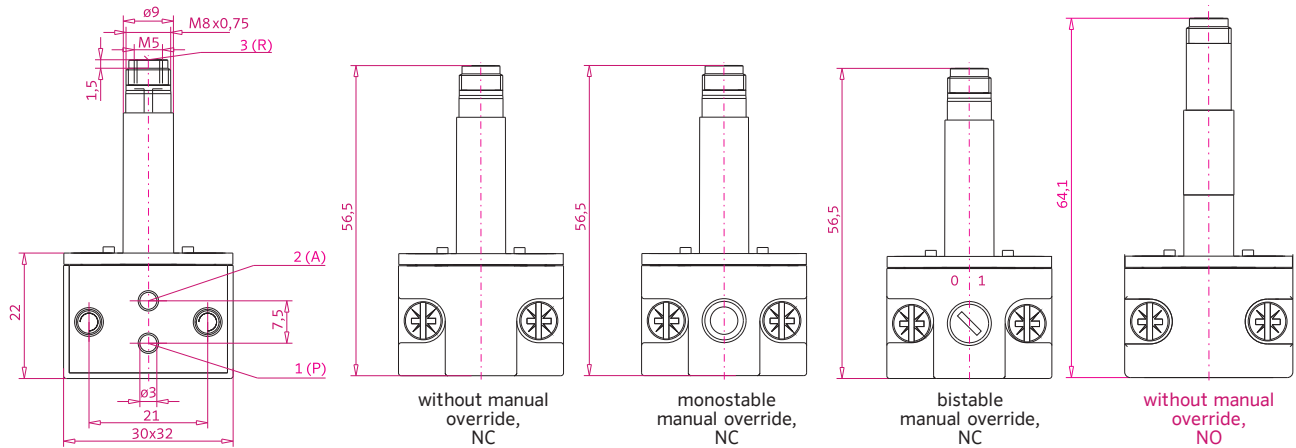
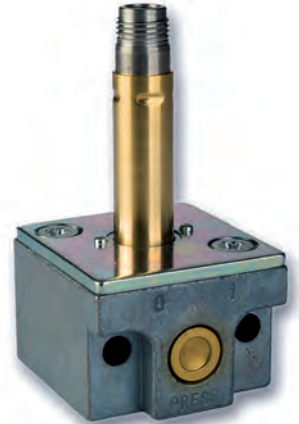
**Note:** Bistable manual override is a combination of the pushing/resetting function and the rotating/latching function.

## VALVE SYSTEM CNOMO

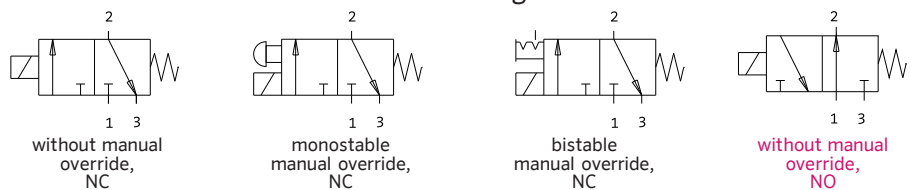
Height: 22 mm  
 Switching function: 3/2 way, 2/2 way possible with accessoires  
 De-energized state: NC (normally closed), NO (normally open)  
 Valve body: aluminium, coated

### General Data

Ambient temperature ..... - 10 °C to + 50 °C  
 Quality of medium according to ISO 8573-1 ..... compressed air class 4, 3, 4  
 Mounting position ..... any (preferably plunger in vertical direction)



### Pneumatic Diagram



## Technical Data Standard Versions

Part No.	Power Level	Nominal Orifice [mm]		Pressure [bar]	Flow Rate* [l/min]		Manual Override		Appropriate for	
		inlet	exhaust		1-2	2-3	bistable	monostable		
108-050-0189	1	0,8	1,0	8	20	30	x		DC	
108-050-0201	1	0,8	1,0	8	20	30		x	DC	
108-050-0002	3	1,0	1,3	10	35	60	x		DC	AC
108-050-0242	3	1,0	1,3	10	35	60			DC	AC
108-050-0003	4	1,3	1,5	10	50	75	x		DC	AC
108-050-0023	4	1,3	1,5	10	50	75		x	DC	AC
108-050-0004	5	1,5	1,7	10	65	90	x		DC	AC
108-050-0005	5	1,5	1,7	10	65	90			DC	AC
108-050-0007	5	1,5	1,7	10	65	90		x	DC	AC
108-050-0135	5	1,0	1,3	16	35	60		x	DC	AC
108-050-0006	6	1,7	1,7	10	84	94			DC	AC
108-050-0035	6	1,7	1,7	10	84	94		x	DC	AC
108-050-0037	6	1,3	1,5	16	50	75		x	DC	AC

\* qv flow rate at an inlet pressure of 6 bar (X = 1 bar) and 0 °C; flow rate detection in compliance with ISO 6358

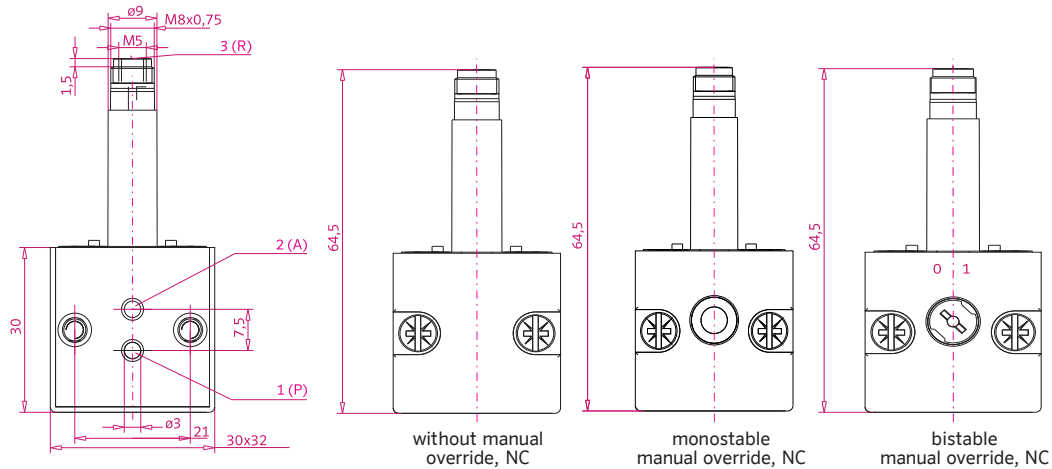
**Note:** Bistable manual override is a combination of the pushing/resetting function and the rotating/latching function.

## VALVE SYSTEM CNOMO

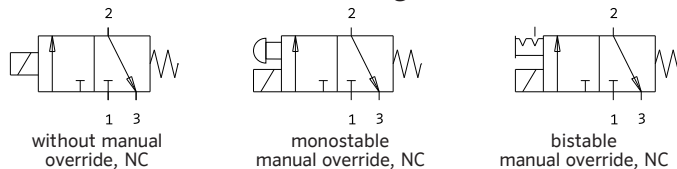
Height: 30 mm  
 Switching function: 3/2 way, 2/2 way possible with accessoires  
 De-energized state: NC (normally closed)  
 Valve body: plastics

### General Data

Ambient temperature ..... - 10 °C to + 50 °C  
 Quality of medium according to ISO 8573-1 ..... compressed air class 4, 3, 4  
 Mounting position ..... any (preferably plunger in vertical direction)  
 Sealing material ..... FPM (other sealing materials on request)



### Pneumatic Diagram





**Technical Data** Standard Version

Part No.	Power Level	Nominal Orifice [mm]		Pressure [bar]	Flow Rate* [l/min]		Manual Override		Appropriate for	
		inlet	exhaust		1-2	2-3	bistable	monostable	DC	AC
108-050-0169	3	1,0	1,3	10	35	60	x		DC	AC

\* qv flow rate at an inlet pressure of 6 bar (X = 1 bar) and 0 °C; flow rate detection in compliance with ISO 6358

**Notes:**

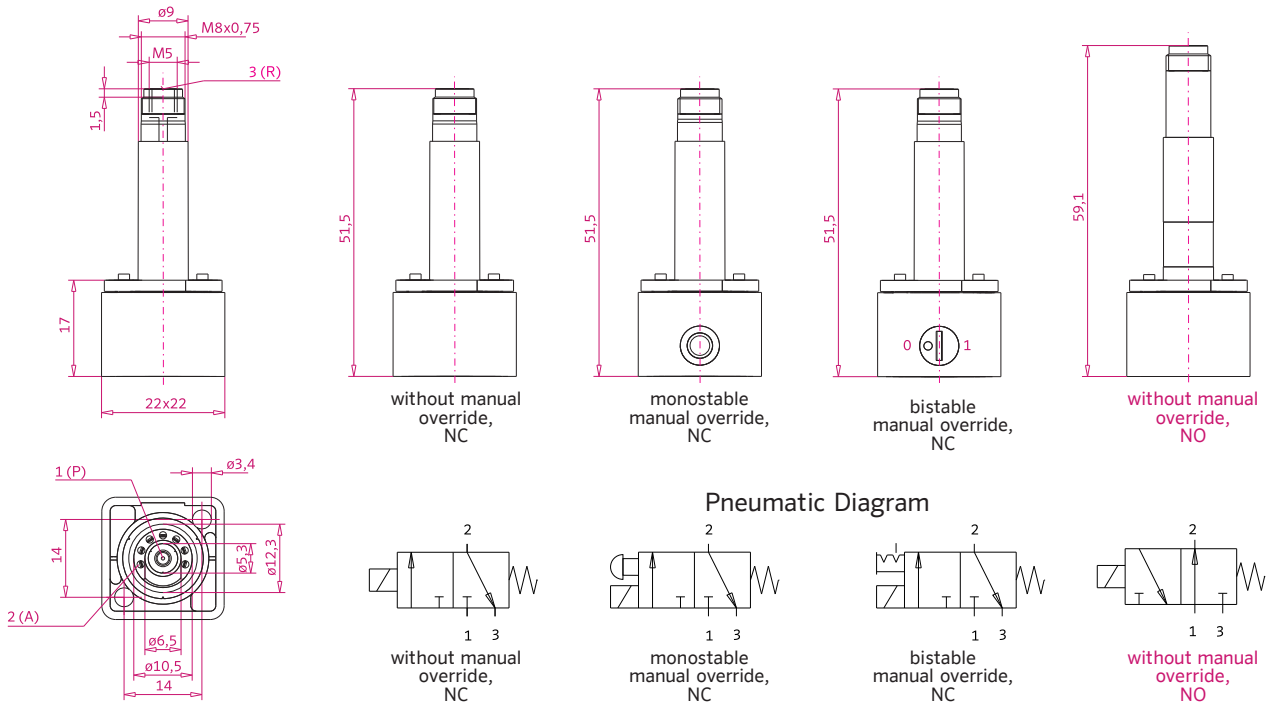
- Bistable manual override is a combination of the pushing/resetting function and the rotating/latching function.
- Switching function 3/2 way NO (normally open) on request

## VALVE SYSTEM KR

Switching function: 3/2 way  
 De-energized state: NC (normally closed), NO (normally open)  
 Gasket of the pneumatic interface: concentric O’rings (KR)  
 sealing material FPM  
 Valve body: plastics

### General Data

Ambient temperature ..... - 10 °C to + 50 °C  
 Quality of medium according to ISO 8573-1 ..... compressed air class 4, 3, 4  
 Mounting position ..... any (preferably plunger in vertical direction)



## Technical Data Standard Versions

Part No.	Power Level	Nominal Orifice [mm]		Pressure [bar]	Flow Rate* [l/min]		Manual Override		Appropriate for	
		inlet	exhaust		1-2	2-3	bistable	monostable		
108-050-0188	1	0,8	1,0	8	20	30			DC	
108-050-0196	1	0,6	0,8	10	12	22	x		DC	
108-050-0208	1	0,8	1,0	8	20	30	x		DC	
108-050-0008	3	1,0	1,3	10	35	54	x		DC	AC
108-050-0013	3	1,0	1,3	10	35	54			DC	AC
108-050-0078	3	1,0	1,3	10	35	54		x	DC	AC
108-050-0009	4	1,3	1,5	10	55	70	x		DC	AC
108-050-0014	4	1,3	1,5	10	55	70			DC	AC
108-050-0072	4	1,3	1,5	10	55	70		x	DC	AC
108-050-0012	5	1,5	1,7	10	65	80	x		DC	AC
108-050-0015	5	1,5	1,7	10	65	80			DC	AC
108-050-0063	5	1,5	1,7	10	65	80		x	DC	AC

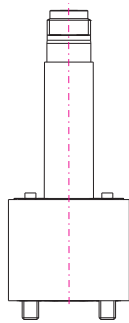
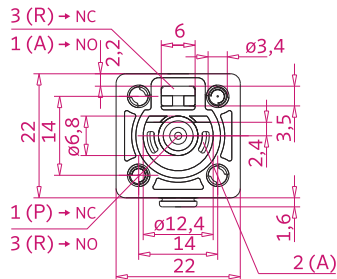
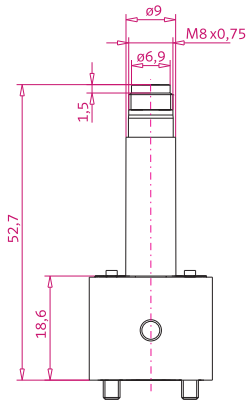
\* qv flow rate at an inlet pressure of 6 bar (X = 1 bar) and 0 °C; flow rate detection in compliance with ISO 6358

## VALVE SYSTEM GKR

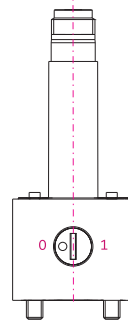
Switching function: 3/2 way  
 De-energized state: NC (normally closed), NO (normally open)  
 Gasket of the pneumatic interface: internal exhaust  
 sealing material FPM  
 Valve body: plastics

### General Data

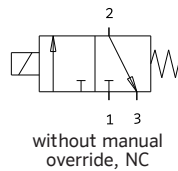
Ambient temperature ..... - 10 °C to + 50 °C  
 Quality of medium according to ISO 8573-1 ..... compressed air class 4, 3, 4  
 Mounting position ..... any (preferably plunger in vertical direction)



without manual  
override, NC

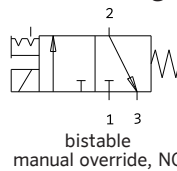


bistable  
manual override, NC

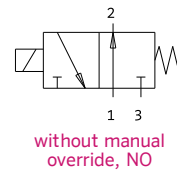


without manual  
override, NC

### Pneumatic Diagram



bistable  
manual override, NC



without manual  
override, NO

**Technical Data Standard Versions**

Part No.	Power Level	Nominal Orifice [mm]		Pressure [bar]	Flow Rate* [l/min]		Manual Override		Appropriate for	
		inlet	exhaust		1-2	2-3	bistable	monostable	DC	AC
108-050-0099	3	1,0	1,3	10	26	42	x		DC	AC
108-050-0081	4	1,3	1,5	10	48	56	x		DC	AC

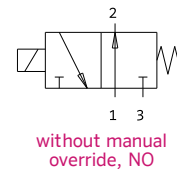
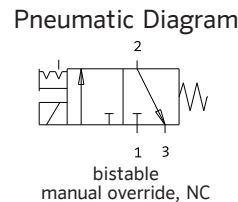
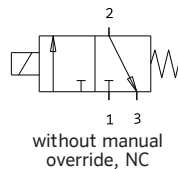
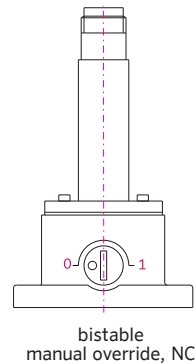
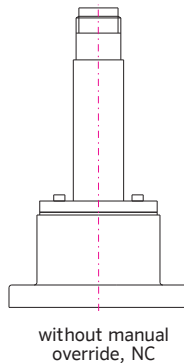
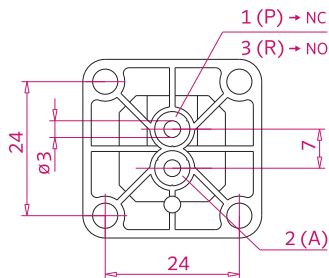
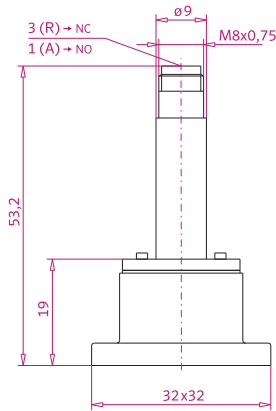
\* qv flow rate at an inlet pressure of 6 bar (X = 1 bar) and 0 °C; flow rate detection in compliance with ISO 6358

## VALVE SYSTEM FL

Switching function: 3/2 way  
 De-energized state: NC (normally closed), NO (normally open)  
 Gasket of the pneumatic interface: O'rings, asymmetrical (FL)  
 sealing material FPM  
 Valve body: plastics

### General Data

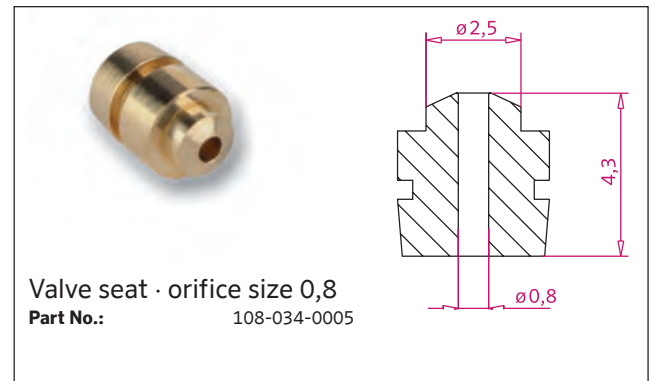
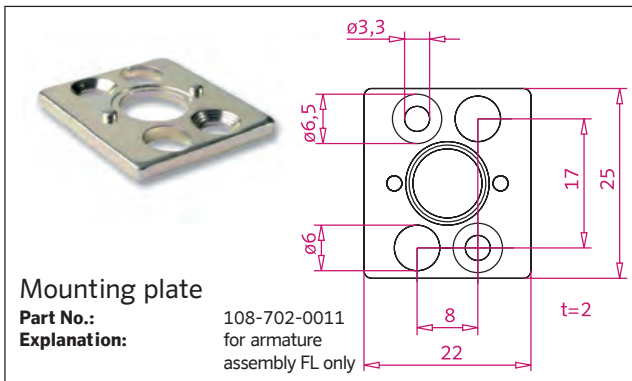
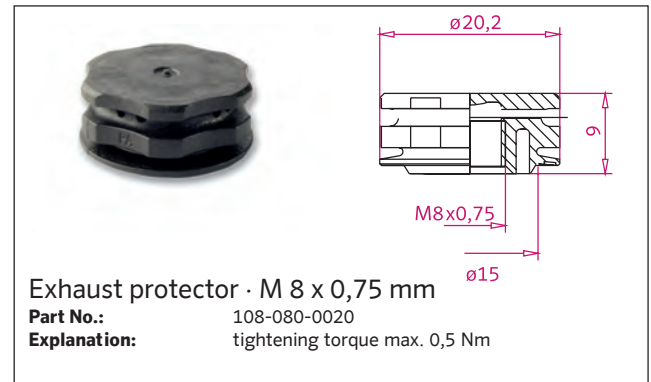
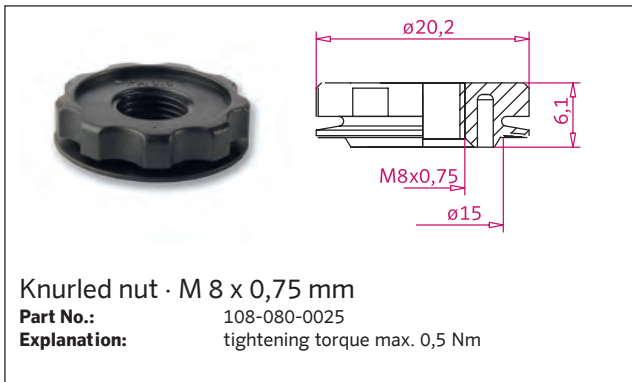
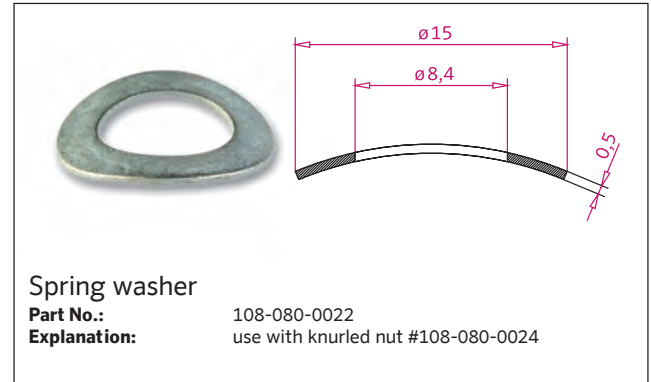
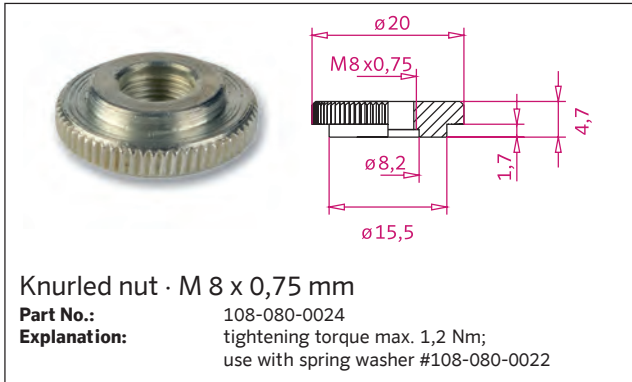
Ambient temperature ..... - 10 °C to + 50 °C  
 Quality of medium according to ISO 8573-1 ..... compressed air class 4, 3, 4  
 Mounting position ..... any (preferably plunger in vertical direction)



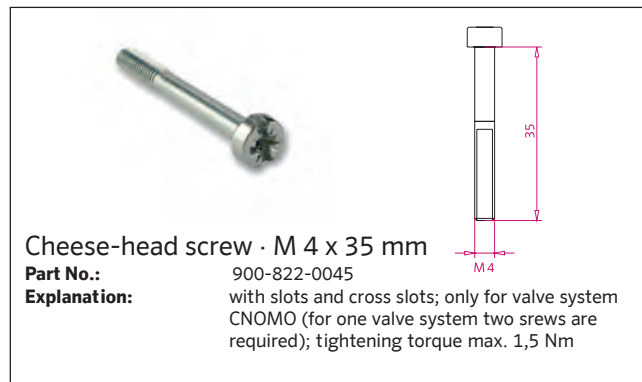
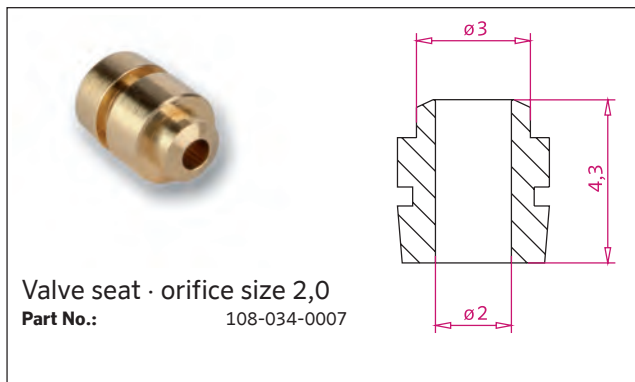
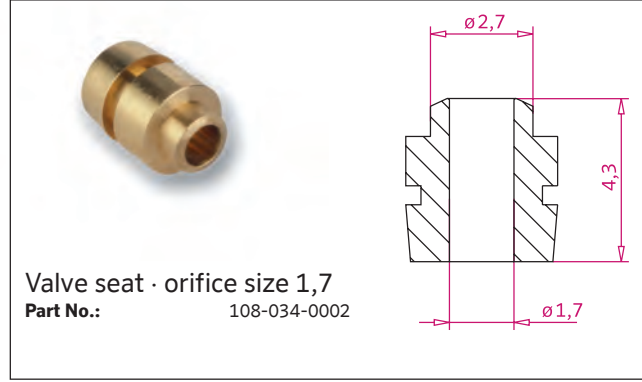
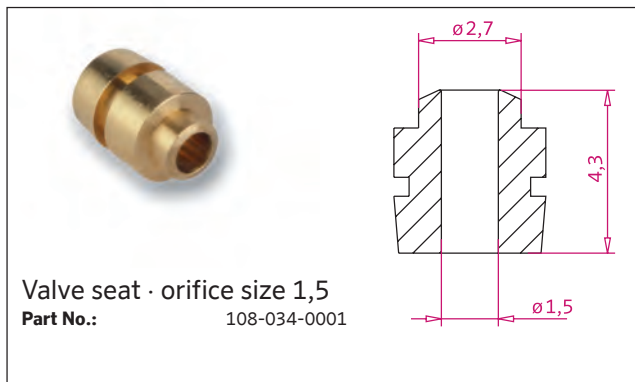
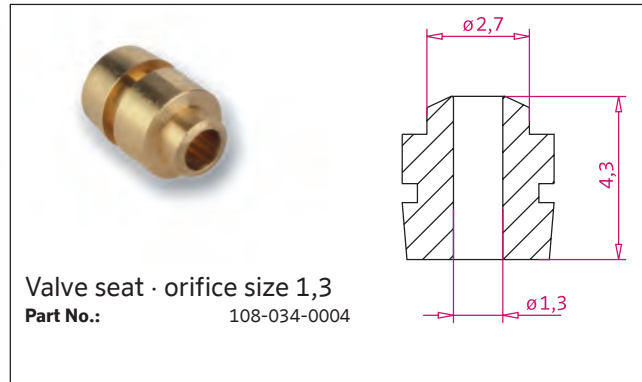
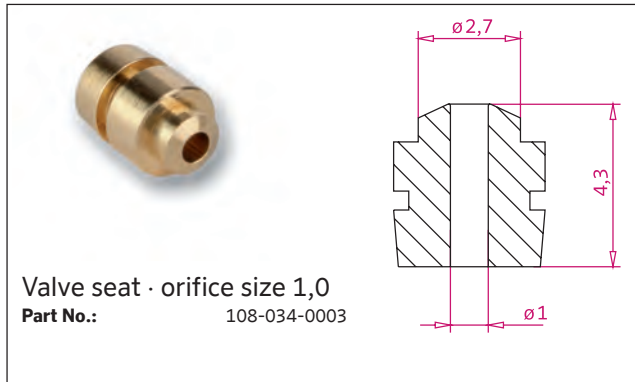
**Technical Data Standard Versions**

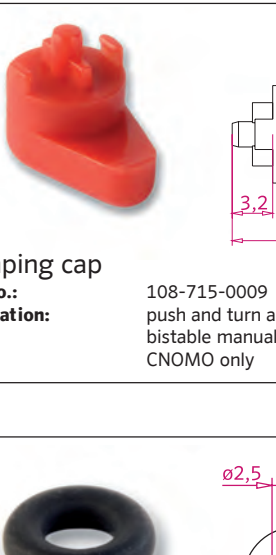
Part No.	Power Level	Nominal Orifice [mm]		Pressure [bar]	Flow Rate* [l/min]		Manual Override		Appropriate for	
		inlet	exhaust		1-2	2-3	bistable	without	DC	AC
108-050-0044	3	1,0	1,3	10	25	58	x		DC	AC
108-050-0045	4	1,3	1,5	10	52	80	x		DC	AC
108-050-0046	5	1,5	1,7	10	64	88	x		DC	AC
108-050-0047	5	1,5	1,7	10	64	88		x	DC	AC

\* qv flow rate at an inlet pressure of 6 bar (X = 1 bar) and 0 °C; flow rate detection in compliance with ISO 6358






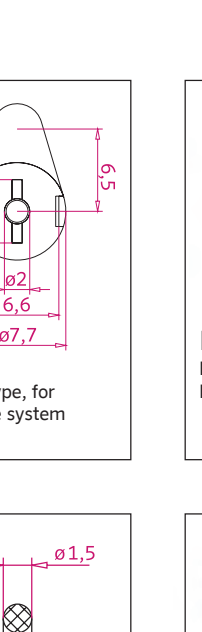




**Clamping cap**  
**Part No.:** 108-715-0009  
**Explanation:** push and turn actuation, clip-on type, for bistable manual override; for valve system CNOMO only



**Push cap**  
**Part No.:** 108-715-0010  
**Explanation:** push and turn actuation, clip-on type, for monostable manual override; for valve system CNOMO only



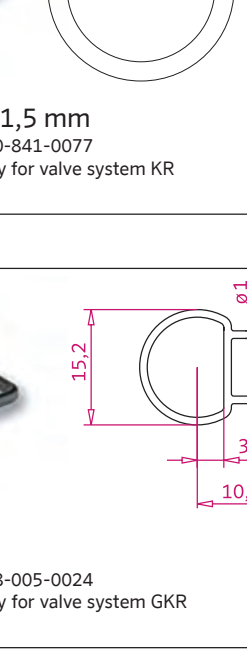
**O'ring FPM · 2,5 x 1,5 mm**  
**Part No.:** 900-841-0065  
**Explanation:** only for valve systems KR and GKR



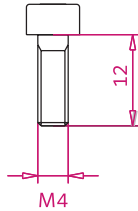
**O'ring FPM · 11,5 x 1,5 mm**  
**Part No.:** 900-841-0077  
**Explanation:** only for valve system KR



**Cheese-head screw · M 3 x 18 mm**  
**Part No.:** 900-822-0037  
**Explanation:** slotted and with cross recess, tightening torque max. 0,5 Nm; for valve system KR only

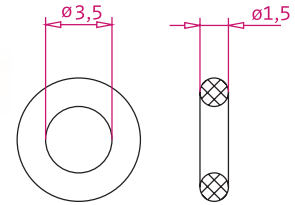


**Gasket FPM**  
**Part No.:** 108-005-0024  
**Explanation:** only for valve system GKR



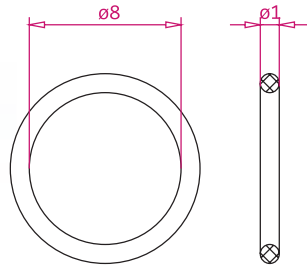
Cheese-head screw · M 4 x 12 mm

**Part No.:** 900-822-0041  
**Explanation:** tightening torque max. 0,7 Nm ;  
 for valve system FL only; for one valve system  
 two screws are required



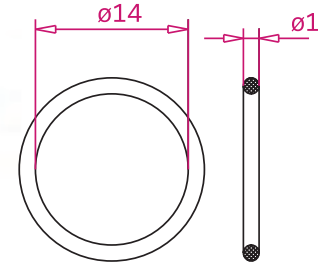
O'ring FPM · 3,5 x 1,5 mm

**Part No.:** 900-841-0068  
**Explanation:** only for valve system FL



O'ring FPM · 8,0 x 1,0 mm

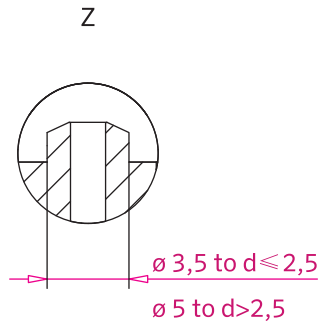
**Part No.:** 900-841-0074  
**Explanation:** to obtain IP 67; for one valve system two  
 O'rings are required



O'ring FPM · 14,0 x 1,0 mm

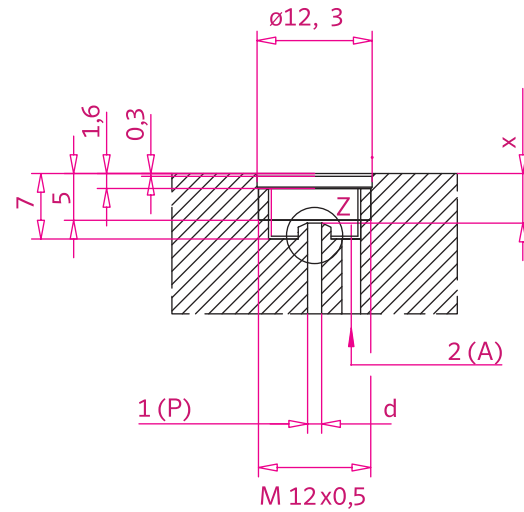
**Part No.:** 900-841-0082  
**Explanation:** to obtain IP 67; for one valve system one O'ring  
 is required

## PNEUMATIC CONNECTION SOLENOID OPERATOR

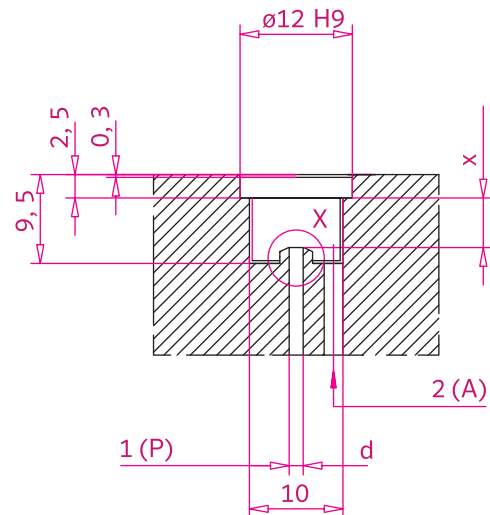


d	x	
0,6	5,00	5,20
0,8	5,05	5,25
1,0	5,10	5,30
1,3	5,15	5,30
1,5	5,20	5,30
1,7	5,25	5,30
2,0	5,30	-
2,5	5,40	-
3,0	5,50	-
3,5	5,60	-

**Thread Version with O'ring Seal**



**Flange Version with O'ring Seal**



**Note:**

Specifications regarding the characteristic of the customer interface are available at *nass magnet* on request.