Technical Data Sheet Type 48

2/2-way solenoid valve

NC - Valve normally closed (as standard)

NO - Valve normally open (as option)

Direct operated piston design. No differential pressure is necessary for operation. When energized, the valve seat is opened directly.

In standard (NC) the valve closes with spring power.

- **Solenoid valve for gaseous and liquid media**

Type 48

TECHNICAL SPECIFICATIONS

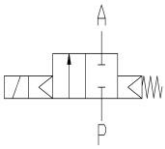
Type of control:	Direct operated, no pressure difference required
Design:	Poppet design
Connection:	Threaded Rp3/8 - Rp3 DIN 2999 (BSP) Other connections like NPT on request
Installation:	Actuator in upright position Lying position of actuator on request
Pressure:	0-5 bar (see table page 2)
Medium:	Clean, neutral, gaseous and liquid medium
Viscosity:	22 mm²/s
Temperature range:	Medium: -40 °C bis +80 °C Ambient: -40 °C bis +50 °C In consideration of the restrictions described on page 4
Body material:	Brass 2.0402 Stainless steel 1.4581
Metallic inner parts:	Brass and stainless steel
Sealing:	NBR, FKM, PTFE, EPDM
Supply voltage:	AC~ 24V, 110V, 230V DC= 12V, 24V Other supply voltages on request
Voltage tolerance:	-10% / +10%
Power consumption:	.012 = 18 W .148 = 10 W .802 = 24 W .808 = 24 W .322 = 30 W .328 = 24 W .242 = 46 W .248 = 30 W .272 = 100 W .278 = 47 W .352 = 150 W .358 = 75 W
Protection class:	IP65 according to DIN EN 60529
Duty factor:	100% ED-VDE 0580
Connection type:	Plug / Terminal box
Ex-proof:	acc. to 2014/34/EU (ATEX) Further Ex-proof on request

VALVE FEATURES

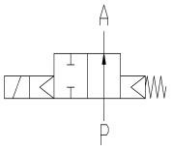
- No pressure difference required
- High life time
- Simple compact valve design
- Reliable and sturdy sealing elements
- Long-term availability of spare parts

FUNCTION

NC – non energized closed



NO – non-energized open



CERTIFICATES

ORDERING SYSTEM

Valve type												Coil system			Valve options	
.	4	8	2	3	/	1	0	0	1	/	.	8	0	2	-	H A

Connection

58	G 3/8
59	G 3/8
68	G 1/2
69	G 1/2
21	G 1/4
22	G 3/8
23	G 1/2
24	G 3/4
25	G 1
26	G 1 1/4
27	G 1 1/2
28	G 2
29	G 2 1/2
30	G 3

Body material

10	Brass 2.0402
08	St.steel 1.4581

Seal material

01	NBR
02	FKM
04	PTFE
06	EPDM

2	Standard IP65
8	Explosion proof acc. to directive 2014/34/EU (ATEX)

TECHNICAL FEATURES

Type 48

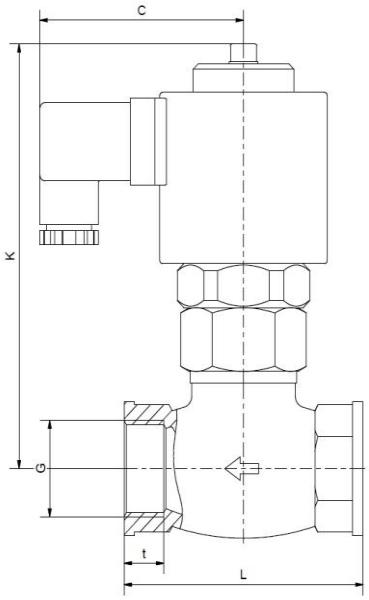
				max. pressure for coils					
Rp	Seat mm	Kv-value m³/h	Standard type	.012	.802	.322	.242	.272	.352
3/8	8	1,2	.4858/..01/...	0-3	0-5	-	-	-	-
3/8	10	2,1	.4859/..01/...	0-2	0-3	-	-	-	-
1/2	8	1,2	.4868/..01/...	0-3	0-5	-	-	-	-
1/2	10	2,1	.4869/..01/...	0-2	0-3	-	-	-	-
1/2	13	3,2	.4823/..01/...	-	0-1	0-2	0-5	-	-
3/4	18	4,9	.4824/..01/...	-	0-0,4	0-1	0,2,5	0-5	-
1	24	8,5	.4825/..01/...	-	0-0,3	0-0,5	0-1	0-1,6	-
1 1/4	29	15,0	.4826/..01/...	-	-	0-0,3	0-0,6	0-1	-
1 1/2	35	20,0	.4827/..01/...	-	-	0-0,1	0-0,3	0-0,5	0-0,8
2	45	30,0	.4828/..01/...	-	-	-	0-0,15	0-0,4	0-1
2 1/2	62	58,0	.4829/1001/...	-	-	-	-	0-0,15	0-0,4
3	75	60,0	.4830/1001/...	-	-	-	-	0-0,1	0-0,3

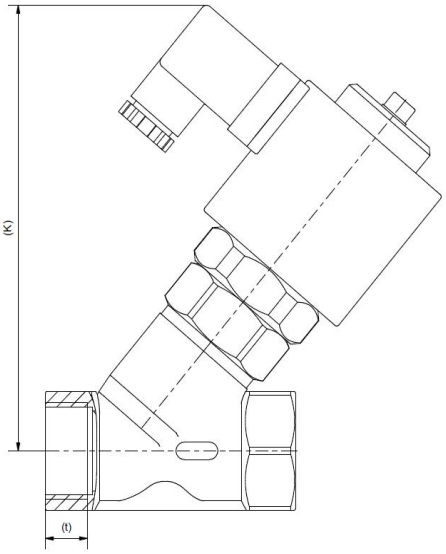
The flow rate mentioned in the table applies to the strongest coil.

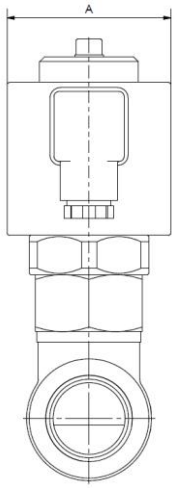
				max. pressure for ATEX-coils					
Rp	Seat mm	Kv-value m³/h	Standard type	.148	.808	.328	.248	.278	.358
3/8	8	1,2	.4858/..01/...	0-1	0-5	-	-	-	-
3/8	10	2,1	.4859/..01/...	0-0,5	0-3	-	-	-	-
1/2	8	1,2	.4868/..01/...	0-1	0-5	-	-	-	-
1/2	10	2,1	.4869/..01/...	0-0,5	0-3	-	-	-	-
1/2	13	3,2	.4823/..01/...	-	0-1	-	-	-	-
3/4	18	4,9	.4824/..01/...	-	0-0,4	0-0,8	-	-	-
1	24	8,5	.4825/..01/...	-	0-0,3	0-0,5	0-0,7	0-1	-
1 1/4	29	15,0	.4826/..01/...	-	-	0-0,1	0-0,3	0-0,8	-
1 1/2	35	20,0	.4827/..01/...	-	-	-	0-0,2	0-0,3	-
2	45	30,0	.4828/..01/...	-	-	-	-	0-0,2	0-0,35
2 1/2	62	58,0	.4829/1001/...	-	-	-	-	-	0-0,15
3	75	60,0	.4830/1001/...	-	-	-	-	-	0-0,1

The flow rate mentioned in the table applies to the strongest coil.

DIMENSIONS







Magnet	.012/.148*		.802/.808*				.322/.328*				
Type	4858-59	4868-69	4858-69	4823	4824	4825	4823	4824	4825	4826	4827
G	3/8	1/2	3/8-1/2	1/2	3/4	1	1/2	3/4	1	1 1/4	1 1/2
A	36	36	50	50	50	50	63	63	63	63	63
C	61	61	70	70	70	70	77	77	77	77	77
K	75	75	92	107 (125)	113 (129)	117 (133)	137 (145)	139 (152)	147 (154)	149 (160)	144 (164)
L	54	54	54	65	75	90	65	75	90	110	120
t	10	10	10	11 (12)	12 (13)	14 (15)	11 (12)	12 (13)	14 (15)	16 (17)	18 (19)
kg	0,6	0,6	1	1,1	1,2	1,5	2	2	2,3	2,6	3

Values in brackets apply to the stainless steel angle seat version

*Differing dimension “C“ for ATEX-coils

Magnet	.242/.248					.272/.278					
Type	4824	4825	4826	4827	4828	4825	4826	4827	4828	4829	4830
G	3/4	1	1 1/4	1 1/2	2	1	1 1/4	1 1/2	2	2 1/2	3
A	77	77	77	77	77	105	105	105	105	105	105
C	93	93	93	93	93	107	107	107	107	107	107
K	166 (179)	165 (184)	170 (192)	180 (190)	178 (203)	197 (207)	200 (210)	203 (231)	211 (225)	217	223
L	75	90	110	120	150	90	110	120	150	175	200
t	12 (13)	14 (15)	16 (17)	18 (19)	20 (21)	14 (15)	16 (17)	18 (19)	20 (21)	19	22
kg	3,4 (3,5)	4,0 (3,7)	4,2 (4,3)	4,6 (4,5)	5,3 (5,7)	7,7 (7,8)	7,8 (8,2)	8,3 (8,8)	9,1 (9,8)	10,6	12,9

Values in brackets apply to the stainless steel angle seat version

INFORMATION

- It is imperative to observe the installation and safety instructions in our operating and service manuals.
- For information on our GSR ordering code, please refer to our catalogs. If you have any questions, we will be glad to assist you.
- Required ordering information: valve type, function NC/NO, pressure range, connection, nominal width, medium, flow rate, medium and ambient temperatures, connection voltage.
- **Detailed production-specific drawings and other technical information will be made available when an order is placed**

PLEASE NOTE

Each individual application decides which valve type is required, the main factor being the resistance of the materials to the operating medium. The correct selection of materials requires knowledge of the concentration, temperature and degree of contamination of the medium. Other criteria include the operating pressure and max. volumetric flow, since , in addition to high temperatures , high pressures and high flow rates must also be taken into account when selecting the materials.

All materials used for our valves, be it housing, seals or magnets, will be carefully selected in view of the different application areas. Any information given is non-binding and serves for orientation only. No claims under warranty can be derived therefrom.

Heating and power of solenoid coils

The GSR default solenoid valves are designed for continuous operation (100% ED = power-on time) under normal operating conditions. The pulling force of a solenoid coil is basically influenced by three elements:

- The self-heating of the magnetic coil
- The medium temperature
- The ambient temperature

GSR solenoid coils are by default(non-ATEX) designed for a maximum ambient temperature of +35 °C. This specification applies for the maximum allowable operating pressure specified in the data sheet of the corresponding valve, 100% duty cycle and a medium temperature of +80 °C.

A higher ambient temperature is possible, when lower values are applied for the other influencing parameters. When the max. operation pressure and max. ambient temperature of +50 °C is given the medium temperature is not allowed to be higher than max. +50 °C. In addition to that, deviations from the default design temperature range are possible, e.g. when temperature coils or other constructive measures are used. Please contact the GSR headquarters to discuss the specific application.

More precise specifications and technical data with regard to the operating conditions can be found in the data sheets of the solenoid coils and the solenoid valve regarded. Please observe that the surface temperature of a permanently loaded coil can amount up to +120 °C, solely by the self-heating of the coil. The power consumption of our default solenoid valves was calculated to DIN VDE 05820 for a coil temperature of +20 °C.

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