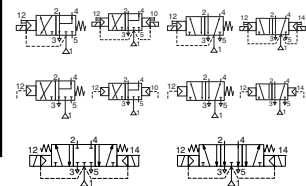




# SPOOL VALVES

pilot operated or air operated, spool type  
single/dual solenoid or air  
aluminium body, "NAMUR" style, 1/4 to 1/2



3/2-5/2  
5/3  
Series  
551-552  
553

## FEATURES

- The solenoid operated spool valves have threaded port connections and NAMUR interface
- The same spool valve can be adapted for 3/2 NC or 5/2 functions for controlling double-acting and single-acting actuators
- All the exhaust ports of the spool valve are connectable, providing better environmental protection. Particularly recommended for sensitive areas, such as clean rooms, and applications in the pharmaceutical and food processing sectors
- The valves offer environmental protection against the ingress of liquids, dusts or other foreign matter (environmentally-protected construction)
- The monostable spool valves have TÜV certified IEC 61508 Functional Safety data and can be used up to SIL 4/AK 7
- The solenoid valves satisfy all relevant EC directives

## GENERAL

Differential pressure  
Flow (Qv at 6 bar)

2 - 10 bar [1 bar = 100 kPa]  
l/min (ANR)

1/4	3/8	1/2
700	3000	3000

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas, filtered	- 25°C to + 60°C	NBR (nitrile) + PUR (polyurethane)

## MATERIALS IN CONTACT WITH FLUID

(\*) Ensure that the compatibility of the fluids in contact with the materials is verified

Body, end cover	Aluminium, black anodized
End cover (spring return)	Glass fibre filled PA
Spool valve internal parts	Zamak, stainless steel, POM, aluminium
Seals	NBR + PUR
Core and core tube	Stainless steel
Shading coil	Copper

## ELECTRICAL CHARACTERISTICS

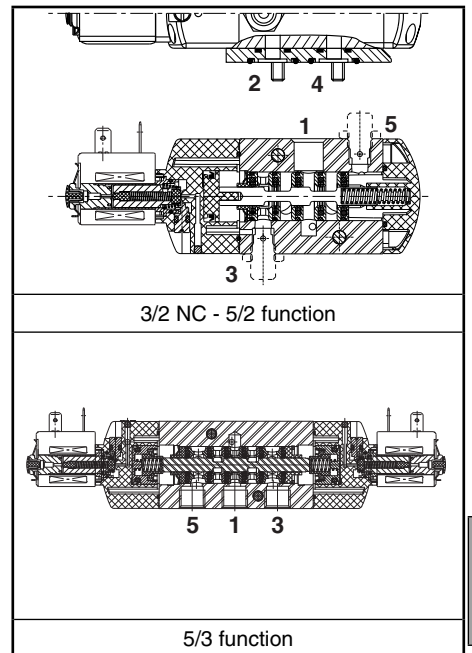
Coil insulation class	F
Connector	Spade plug (cable Ø 6-8 mm or Ø 6-10 mm)
Connector specification	DIN 43650, 11 mm, industry standard B (type 01) or ISO 4400 / EN 175301-803, form A (type 02)
Electrical safety	IEC 335
Electrical enclosure protection	Moulded IP65 (EN 60529)
Standard voltages	DC (=): 24V - 48V AC (-): 24V - 48V - 115V - 230V / 50 Hz

prefix option	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type <sup>(1)</sup>
	inrush ~		holding ~			~	=	
	(VA)	(VA)	(W)	(W)		230 V/50 Hz	24 V DC	
SC	6	3,5	2,5	2,5/3	-25 to + 60	43004886	43004869	01
SC	15	7	5	2,5/6,9	-25 to + 60	43004649	43004647	02

<sup>(1)</sup> Refer to the dimensional drawings on the following page

## SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)			power coil (W)		catalogue number	options		
				min.	max. (PS)					maintained man. operator		
(mm)	(m³/h)	(l/min)	air (*)		~	=	~/=					
<b>3/2 NC - 5/2 - Solenoid air pilot operated - spring return (monostable)</b>												
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A001	MS	-	-
3/8	12	2,49	41,5	2	10	10	5	6,9	SCG552A001	MS	-	-
1/2	13	2,49	41,5	2	10	10	5	6,9	SCG553A001	MS	-	-
<b>3/2 NC - 5/2 - Solenoid air pilot operated and return (bistable)</b>												
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A002	MS	-	-
3/8	12	2,49	41,5	2	10	10	5	6,9	SCG552A002	MS	-	-
1/2	13	2,49	41,5	2	10	10	5	6,9	SCG553A002	MS	-	-
<b>5/3 - W1 - pressure held, solenoid air pilot operated and return</b>												
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A065	MS	-	-
3/8	12	2,49	41,5	2	10	10	5	6,9	SCG552A065	MS	-	-
1/2	13	2,49	41,5	2	10	10	5	6,9	SCG553A065	MS	-	-
<b>5/3 - W3 - pressure release, solenoid air pilot operated and return</b>												
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A066	MS	-	-
3/8	12	2,49	41,5	2	10	10	5	6,9	SCG552A066	MS	-	-
1/2	13	2,49	41,5	2	10	10	5	6,9	SCG553A066	MS	-	-
<b>3/2 NC - 5/2 - Solenoid air pilot operated - spring return (monostable), certified IEC 61508 Functional Safety data</b>												
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A001SL	-	-	-



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### AIR OPERATED AND OPTIONS

- Versions: - pilot air operated, spring return, catalogue numbers: **G551A101** (1/4); **G552A101** (3/8); **G553A101** (1/2)  
- pilot air operated and return, catalogue numbers: **G551A102** (1/4); **G552A102** (3/8); **G553A102** (1/2)
- Suffix "MF" (air operated only, low temperature version, -40°C)
- Suffix "GD" (air operated only, ATEX 2GD c)
- Compliance with "UL" standard is available on request
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 94/9/EC (see "Explosionproof solenoids" section)
- Valves equipped with exhaust reducers G 1/8 (3/2 NC-5/2, series 551), suffix M
- Set of stainless steel mounting screws (series 551), catalogue number **97802212**
- Set of two G 1/8 exhaust reducers (series 551), catalogue number **88100344**
- Other pipe connections are available on request
- Plug with visual indication and peak voltage suppression or with cable length of 2 m (see Solenoids, Coils & Accessories section)

### INSTALLATION

- The valves can be mounted in any position without affecting operation
- 3/2 NC-5/2 spool valve supplied with two interface plates with NAMUR mating surfaces. Depending on function (3/2 NC or 5/2), position one of the two plates on the spool valve body before installing on actuator
- Do not connect the pressure supply to the exhaust port 3. The "environmentally-protected" construction is not adapted for NO function. Contact us for function available in specific version
- Dowel pin (if necessary), bolts and gaskets are standard supplied
- It is necessary to connect pipes or fittings to the exhaust ports to protect the internal parts of the spool valve and its pneumatic operator if used outside or in harsh environments (dusts, liquids etc.)
- IEC 61508 Functional Safety (suffix SL), allowable temperature range: -40°C to +60°C. For probability of failure, contact us
- Threaded pipe connection is standard: G = G (ISO 228/1)
- Valves with suffix "SL" are supplied with specific exhaust protectors
- Installation/maintenance instructions are included with each valve

### ACCESSORIES

series	pipe size	exhaust protector (stainless steel)
551	G 1/8	<b>34600418</b> <sup>(1)</sup>
551 (W1/W3)	G 1/4	<b>34600419</b>
552	G 3/8	<b>34600478</b>
553	G 1/2	<b>34600479</b>
551-552-553	M5	<b>34600484</b> <sup>(1)</sup>

<sup>(1)</sup> Supplied with suffix "SL"

### ORDERING EXAMPLES:

SC	G	551	A	001	MS	230V / 50 Hz
SC	G	551	A	001	SL	24V / DC
SC	G	552	A	002		115V / 50 Hz
	G	551	A	101	SL	

prefix      pipe thread      basic number      voltage      suffix

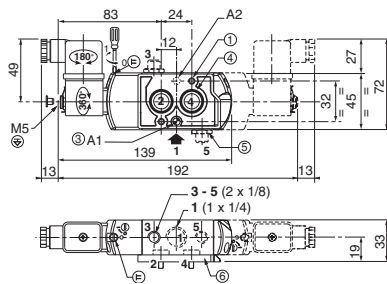
### DIMENSIONS (mm), WEIGHT (kg)



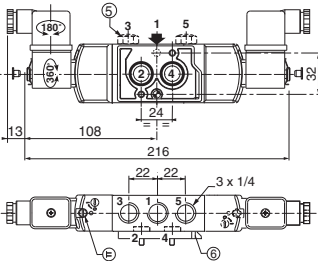
#### TYPE 01

Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / DIN 43650  
IP65

**551A001/A001MS/A001SL/A002/A002MS**



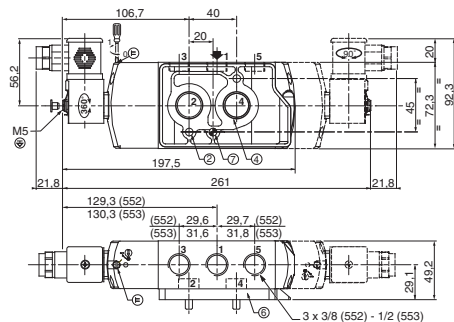
**551A065/A065MS/A066/A066MS  
(W1 - W3)**



#### TYPE 02

Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65

**552A001/A001MS/A002/A002MS/  
552A065/A065MS/A066/A066MS  
553A001/A001MS/A002/A002MS/  
553A065/A065MS/A066/A066MS**

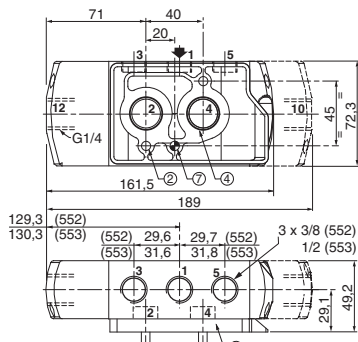
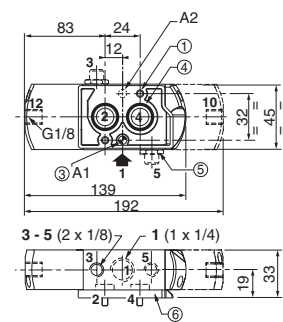


#### TYPE 03

No prefix  
Air operated version

**G551A101/A102**

**G552A101/A102 /G553A101/A102**



- 1 2 mounting holes: 5,3 mm dia. (Spotfacing: 9 mm dia., depth 5 mm)
- 2 2 mounting holes: 6,5 mm dia. (Spotfacing: 11 mm dia., depth 6 mm)
- 3 One 5 mm dia. hole for dowel pin:  
- in position A1: 3/2 NC function plate  
- in position A2: 5/2 function plate
- 4 2 O-ring seals (supplied)
- 5 Exhaust reducer (G 1/8, 3/2 NC-5/2, series 551) or exhaust protector
- 6 Interface plate

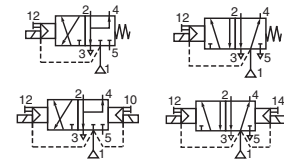
weight <sup>(2)</sup> (kg)	type 01 3/2-5/2	5/3	type 02 552	553	type 03 551	552	553
monost.	0,34	-	0,91	0,90	0,31	0,86	0,85
bistable	0,46	0,45	1,21	1,20	0,41	1,12	1,11

<sup>(2)</sup> Incl. coil(s) and connector(s).



# SOLENOID VALVES

pilot operated, spool type  
single/dual solenoid (mono/bistable function)  
aluminium body, "NAMUR" style, 1/4 to 1/2



3/2-5/2

Series  
551-552  
553

## FEATURES

- The solenoid operated spool valves have threaded port connections and NAMUR interface
- The same spool valve can be adapted for 3/2 NC or 5/2 functions for controlling double-acting and single-acting actuators
- All the exhaust ports of the spool valve are connectable, providing better environmental protection. Particularly recommended for sensitive areas, such as clean rooms, and applications in the pharmaceutical and food processing sectors
- The valves offer environmental protection against the ingress of liquids, dusts or other foreign matter (environmentally-protected construction)
- Solenoid pilot valve with spade-plug connector type DIN 43650, industry standard, form B with 9,4 mm spacing, or to ISO 15217/DIN 43650 form C with 8 mm spacing. Versions with M12 connector and cable ends
- Solenoid pilot valve, CNOMO size 15 interface, with or without integral LED and electrical protection. LED indicator visible from 3 sides
- The monostable spool valves have TÜV certified IEC 61508 Functional Safety data and can be used up to SIL 4/AK 7
- The solenoid valves satisfy all relevant EC directives

## GENERAL

Differential pressure  
Flow (Qv at 6 bar)

2 - 10 bar [1 bar = 100 kPa]  
l/min (ANR)

1/4	3/8	1/2
700	3000	3000

Pilot mounting interface surface ISO 15218 (CNOMO E06.36.120N, size 15)

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas, filtered	- 25°C to + 40°C	NBR (nitrile) + PUR (polyurethane)

## MATERIALS IN CONTACT WITH FLUID

(\*) Ensure that the compatibility of the fluids in contact with the materials is verified  
CNOMO size 15 solenoid (pilot) interface

Body	Aluminium, black anodized
End cover (spring)	Glass fibre filled PA
Interface plates	Glass fibre filled PA
Spool valve internal parts	Zamak, stainless steel, POM, aluminium
Pilot body	PAA
Pilot internal parts	POM, PET, stainless steel and brass
Pneumatic interface seal	TPE

## ELECTRICAL CHARACTERISTICS

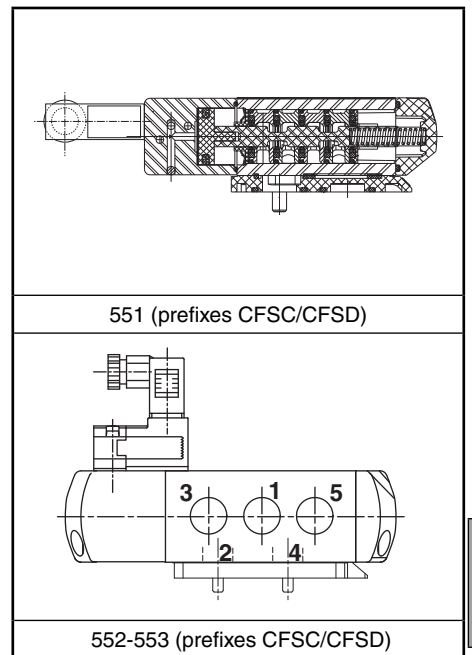
Coil insulation class	F
Connector (type 05/06)	Spade plug (cable Ø 6-7 mm)
Connector specification	Type 05: DIN 43650, 9,4 mm, industry standard B Type 06: ISO 15217 / DIN 43650, 8 mm, form C Type 07: M12 (CNOMO E03.62.520.N) Type 08: cable ends (length 0,3 m), EN 60730 IEC 335
Connection	
Electrical safety	
Electrical enclosure protection	Moulded IP65 [05/06] or IP67 [07/08] (EN 60529)
Standard voltages	DC (=): 24V AC (~): 24V-115V-230V / 50 Hz (prefixes CFSC/CFSD)
(Other voltages and 60 Hz on request)	

prefix option	power ratings				operator ambient temperature range (TS) (C°)	voltage		type <sup>(1)</sup>
	inrush ~ (VA)	holding ~ (VA) (W)		hot/cold = (W)		~ (V)	= (V)	
		1,4	1,2					
CFSC	2,1	1,6	1,5	-	-25 to + 60	230	-	05-06
CFSD	1,8 <sup>(2)</sup>	1,6 <sup>(2)</sup>	1,5 <sup>(2)</sup>	1,15/1,35 <sup>(2)</sup>	-25 to + 60	24-115	24	
	2,5 <sup>(2)</sup>	2 <sup>(2)</sup>	1,9 <sup>(2)</sup>	-	-25 to + 50	230	-	
CFVT <sup>(3)</sup>	-	-	-	1,15/1,35	-25 to + 60	-	24	
CFL <sup>(3)</sup>	-	-	-	-	-	-	24	07 08

- (1) Refer to the dimensional drawings on the following page.  
(2) Values with LED indicator and protection, use TPL 20674.  
(3) Supplied with LED indicator and protection.

## SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv	operating pressure differential (bar)			power coil (W)	catalogue number				options			
			min.	max. (PS) air (*)			connector DIN 43650, 9,4 mm (type 05)	connector DIN 43650, 8 mm (type 06)	M12 (type 07)	cable ends (type 08)	maintained man. operator	impulse man. operator		
G	(mm)	(m³/h)/(l/min)	~	=		~	=	~/=	~/=	=	=			
<b>3/2 NC - 5/2 - Solenoid air pilot operated - spring return (monostable)</b>														
1/4	6	0,6	10	2	10	10	1,1..1,9	1,2/1,35	CFSCG551C501	CFSDG551C501	-	-	MS/MO	-
							-	1,35	-	-	CFVTG551C501	CFLG551C501	MS/MO	-
3/8	12	2,49	41,5	2	10	10	1,1..1,9	1,2/1,35	CFSCG552A501	CFSDG552A501	-	-	MS/MO	-
							-	1,35	-	-	CFVTG552A501	CFLG552A501	MS/MO	-
1/2	13	2,49	41,5	2	10	10	1,1..1,9	1,2/1,35	CFSCG553A501	CFSDG553A501	-	-	MS/MO	-
							-	1,35	-	-	CFVTG553A501	CFLG553A501	MS/MO	-



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