

### FEATURES

- The monostable spool valves have TÜV certified IEC 61508 Functional Safety data and can be used up to SIL 4
- All the exhaust ports of this 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 valve offers environmental protection against the ingress of liquids, dusts or any other foreign matter (environmentally-protected construction)
- Can be externally piloted (external air pilot supply) to convert valve to zero minimum operation by flipping a gasket
- The solenoid valves satisfy all relevant EC Directives

### GENERAL

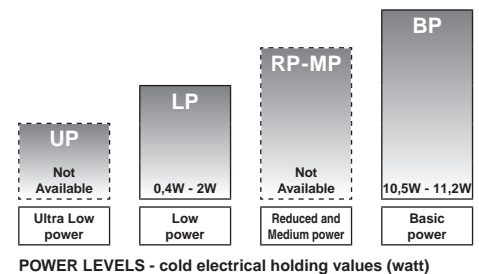
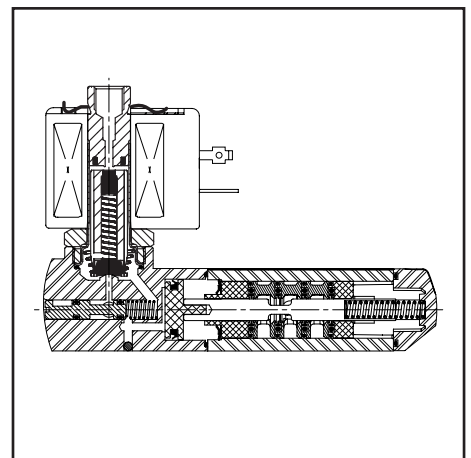
Differential pressure 2 - 10 bar [1 bar =100 kPa]  
Flow (Qv at 6 bar) 860 l/min (ANR)

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas, filtered	- 40°C to + 60°C	VMQ (silicone) + PUR (polyurethane)

### MATERIALS IN CONTACT WITH FLUID

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

Body, end covers	Brass
Spool valve internal parts	Brass, stainless steel, POM
Core tube	Stainless steel
Core and plugnut	Stainless steel
Core spring	Stainless steel
Seals & discs	NBR
Top disc	PA
Disc holder	POM
Cartridge (low power)	Welded, packless AISI 430
Seat	Brass
Seat insert	POM
Shading coil	Copper
Rider rings (low power)	PTFE



### SPECIFICATIONS

pipe size	orifice size	flow coefficient kv		operating pressure differential (bar)			power level	prefix optional solenoids										basic catalogue number
								max. (PS)		ATEX / IECEx						IP65		
				min. <sup>(2)</sup>	air (*)	~		=	~/=	NEMA 7 & 9	Ex d	Ex e mb	Ex mb	Ex ia	Ex ia		-	
(*)	(mm)	(m³/h)	(l/min)					EF	LPKF	NF	EM	PV	LI	IS	-	SC		
<b>Solenoid air pilot operated - spring return (monostable)</b>																		
1/4	6	0,75	12,5	0 / 2	10	10	BP	-	-	●	●	●	-	-	-	●	❖551A407 <sup>(1)</sup>	
1/4	6	0,75	12,5	0 / 2	10	10	BP	●	-	-	-	-	-	-	-	-	❖551G407 <sup>(1)</sup>	
1/4	6	0,75	12,5	0 / 2	10	10	LP	-	●	●	○	○	○	-	-	-	❖551A307 <sup>(1)</sup>	
1/4	6	0,75	12,5	0 / 2	10	10	LP	○	-	-	-	-	-	-	-	-	❖551G307 <sup>(1)</sup>	
<b>Solenoid air pilot operated and return (bistable)</b>																		
1/4	6	0,75	12,5	0 / 2	10	10	BP	-	-	●	●	●	-	-	-	●	❖551A408	
1/4	6	0,75	12,5	0 / 2	10	10	BP	●	-	-	-	-	-	-	-	-	❖551G408	
1/4	6	0,75	12,5	0 / 2	10	10	LP	-	●	●	○	○	○	-	-	●	❖551A308	
1/4	6	0,75	12,5	0 / 2	10	10	LP	○	-	-	-	-	-	-	-	-	❖551G308	

❖ Select 8 for NPT ANSI 1.20.3 or select G for ISO G (228/1) ● Available feature ○ Available feature in DC only.

<sup>(1)</sup> Certified IEC 61508 Functional Safety data, use suffix "SL".

<sup>(2)</sup> Zero minimum is only achieved if external pressure is applied.

### PREFIX TABLE

prefix							description	power level			
1	2	3	4	5	6	7		LP	RP	MP	BP
E	F						Explosionproof - NEMA 7, 9 - Zinc plated steel conduit	○	-	-	●
E	V						Explosionproof - NEMA 7, 9 - 316 SS conduit	○	-	-	●
E	M						Waterproof IP67 - Metal enclosure (EN/IEC 60079-7+18, 61241-1)*	●	-	-	●
		E	T				Threaded conduit/hole (M20 x 1,5)	●	-	-	●
I	S			S	C		Intrinsically safe with SC coil (EN/IEC 60079-11+26, 61241-11)*	○	-	-	-
L	P	K	F				Flameproof - Aluminium (EN/IEC 60079-1, 61241-1)*	●	-	-	-
N	F						Flameproof - Aluminium (EN/IEC 60079-1, 60079-31)*	●	-	-	●
P	V						Encapsulated epoxy moulded (EN/IEC 60079-18, 61241-18)*	○	-	-	●
S	C						Solenoid with spade plug connector (EN/IEC 60730)	●	-	-	●
W	P						Waterproof IP67 - Metal enclosure	●	-	-	●
L	I						I.S. with Aluminium IP67 enclosure (EN/IEC 60079-11 / 61241-1)*	○	-	-	-
W	S						Waterproof IP67 - 316 SS enclosure	●	-	-	●
W	S	L	P	K	F		Flameproof - 316 SS (EN/IEC 60079-1, 61241-1)*	●	-	-	-
W	S	E	M				Waterproof IP67 - 316 SS enclosure (EN/IEC 60079-7+18, 61241-1)*	●	-	-	●
W	S			L	I		I.S. with 316L SS IP67 enclosure (EN/IEC 60079-11, 61241-1)*	○	-	-	-
W	S	N	F				Flameproof - 316 SS (EN/IEC 60079-1, 60079-31)*	●	-	-	●
		T					Threaded conduit (1/2" NPT)	●	-	-	●
				H	T		Class H - High temperature, +80°C ambient temp.	-	-	-	●
						X	Other special constructions	●	-	-	●

### SUFFIX TABLE

suffix							description	power level			
1	2	3	4	5	6	7		LP	RP	MP	BP
			M	O			Push type manual operator	○/●	-	-	●
S	L						Certified IEC 61508 Functional Safety data <sup>(2)</sup>	○/●	-	-	●

### OPTIONS & ACCESSORIES

series	pipe size	exhaust protector (stainless steel)
551	G 1/8	34600418 <sup>(1)</sup>
	NPT 1/8	34600482 <sup>(1)</sup>
	G 1/4	34600419 <sup>(1)</sup>
	NPT 1/4	34600483 <sup>(1)</sup>
	M5	34600484 <sup>(1)</sup>

- Available feature
- Available feature in DC only
- Not available
- \* ATEX solenoids are also approved according to EN 13463-1 (non electrical valves)
- <sup>(1)</sup> Provided with "SL" suffix
- <sup>(2)</sup> Not to use with MO suffix

### ORDERING EXAMPLES:

	SC	G	551	A	407		230V / 50 Hz	
	SC	G	551	A	407	SL	230V / 50 Hz	
	SC	G	551	A	408	MO	230V / 50 Hz	
	SCHT	8	551	A	408	MO	230V / 50 Hz	
	ISSC	G	551	A	308	MO	24V / DC	
	WSL	PKF	G	551	A	307	MO	24V / DC
	LPKF	G	551	A	307	MO	24V / DC	
	LPKF	G	551	A	307	MO	230V / 50 Hz	
	LI	G	551	A	307		24V / DC	
	WSLI	G	551	A	308	MO	24V / DC	
	EM	8	551	A	407	MO	230V / 50 Hz	
	EF	G	551	G	407	MS	240V / 60 Hz	

prefix <sup>(3)</sup> — pipe thread — basic number <sup>(3)</sup> — voltage — suffix

<sup>(3)</sup> Prefixes EF and EV should always be used with the letter G in the basic number.

### PRODUCT SELECTION GUIDE

#### STEP 1

Select the fluid temperature range and seal material from the general table on page 1. Select basic catalogue number, including pipe thread identification letter. Refer to the specifications table above.

**Example : G551A407**

#### STEP 2

Select prefix (combination). Select the appropriate operator from the specifications table on page 1 and the prefix table on page 2. Select for this operator in the electrical characteristics table on page 3: the power level (LP, BP), the type of electrical enclosure protection and the desired temperature class.

**Warning:** The ambient temperature range of your application may not exceed the temperature range of your operator.

**Example : EM**

#### STEP 3

Select suffix (combination) if required.

**Example : MO**

#### STEP 4

Select voltage. Refer to standard voltages on page 3.

**Example : 230V / 50Hz**

#### STEP 5

Final catalogue / ordering number.

**Example :**

**EM G551A407MO 230 V / 50 Hz**

## EXPLANATION OF TEMPERATURE RANGES OF SOLENOID VALVES

Valve temperature range	The valve temperature range (TS) is determined by the selected seal material, the temperature range for proper operation of the valve and sometimes by the fluid (e.g. steam)
Operator ambient temperature range	The operator ambient temperature range is determined by the selected power level and the safety code
Total temperature range	The temperature range of the complete solenoid valve is determined by the limitations of both temperature ranges above

## ELECTRICAL CHARACTERISTICS

Coil insulation class	F
Electrical safety	IEC 335
Standard voltages	DC (=) 24V - 48V AC (-) 24V - 48V - 115V - 230V <sup>(6)</sup> /50Hz; other voltages and 60Hz are available on request

prefix option	power ratings				operator ambient temperature range (TS) (C°) <sup>(1)</sup>	safety code	electrical enclosure protection (EN 60529)	replacement coil / kit		type <sup>(2)</sup>
	inrush	holding	hot/cold	=				~	=	
	(VA)	(VA)	(W)							
<b>Basic power (BP)</b>										
SC	55	23	10,5	9/11,2	-40 to +75	EN 60730	IP65 moulded	400425-117	400425-142	01
WP/WS	55	23	10,5	9/11,2	-40 to +75	EN 60730	IP67 steel/SS	400405-117	400405-142	04
NF/WSNF	55	23	10,5	-	(-60) <sup>(7)</sup> -40 to +25/40/60	II2G Ex d IIC T6/T5/T4, II2D Ex t	IP67 alu./SS	400405-117	-	02
NF/WSNF	-	-	-	9/11,2	(-60) <sup>(7)</sup> -40 to +40/60/75	II2G Ex d IIC T6/T5/T4, II2D Ex t	IP67 alu./SS	-	400405-142	02
EM/WSEM	55	23	10,5	9/11,2	-40 to +40	II2G Ex e mb II T3, II2D Ex tD	IP67 steel/SS	400909-117	400913-142	04
PV	55	23	10,5	9/11,2	-40 to +65	II2G Ex mb II T3(-)/T4(=), II2D Ex mD 21	IP67 moulded	- <sup>(4)</sup>	- <sup>(4)</sup>	05
EF/EV	55	23	10,5	9/11,2	-40 to +54/40	NEMA type 7 and 9	NEMA 4X	238614-058	238714-006	06
<b>Low power (LP)</b>										
SC	1,5	1,5	1,5	1,7/1,7	-40 to +60	EN 60730	IP65 moulded	400925-097	400925-042	07
WP/WS	1,5	1,5	1,5	1,7/1,7	-40 to +60	EN 60730	IP67 steel/SS	400926-097	400926-042	09
LPKF/WSLPKF <sup>(8)</sup>	2,4	2,4	2,4	0,5/0,5 <sup>(8)</sup>	-40 to +80/60	II2G Ex d IIB+H2 Gb T4/T6, II2D Ex tDb	IP67 alu./SS	- <sup>(4)</sup>	- <sup>(4)</sup>	13
NF/WSNF	-	-	1,9	- /1,9	(-60) <sup>(7)</sup> -40 to +75/80	II2G Ex d IIC T6/T5, II2D Ex t	IP67 alu./SS	- <sup>(4)</sup> <sup>(5)</sup>	- <sup>(4)</sup>	08
EM/WSEM	1,5	1,5	1,5	1,7/1,7	-40 to +40/55	II2G Ex e mb II T6/T5, II2D Ex tD	IP67 steel/SS	- <sup>(4)</sup>	- <sup>(4)</sup>	09
PV	-	-	-	1,7/1,7	-40 to +65	II2G Ex mb II T6 / II2D Ex mD 21	IP67 moulded	-	- <sup>(4)</sup>	10
EF/EV	-	-	-	1,7/1,7	-40 to +60	NEMA type 7 and 9	NEMA 4X	-	- <sup>(4)</sup>	11
ISSC <sup>(3)</sup>	-	-	-	0,4/0,4	-40 to +60	II1G Ex ia IIC T6, II2D Ex iaD 21	IP65 moulded	-	268976-001	12
LI <sup>(3)</sup> <sup>(6)</sup>	-	-	-	0,5/0,5	-40 to +60	II1G Ex ia IIC T6 Ga, II2D Ex t IIC Db <sup>(6)</sup>	IP67 alu.	-	- <sup>(4)</sup>	14
WSLI <sup>(3)</sup> <sup>(6)</sup>	-	-	-	0,5/0,5	-40 to +60	II1G Ex ia IIC Ga T6, II2D Ex t IIC Db	IP67 SS	-	- <sup>(4)</sup>	14

prefix option	safety parameters				
	U <sub>i</sub> = (DC) (V)	I <sub>i</sub> (mA)	P <sub>i</sub> (W)	L <sub>i</sub> (H)	C <sub>i</sub> (µF)
<b>Low power (LP)</b>					
ISSC	32	500	1,5	0	0
LI/WSLI	32	500	1,5	0	0

- <sup>(1)</sup> Temperature range can be limited by sealings
- <sup>(2)</sup> Refer to the dimensional drawings on pages: 4 to 7
- <sup>(3)</sup> ISSC/LI/WSLI: Check the electrical characteristics in the corresponding catalogue pages
- <sup>(4)</sup> Multiple coil kits are available under ATEX/IECEx, contact us
- <sup>(5)</sup> (WSNF: Low Power, 230 V AC does not exist. Maximum voltage in AC is 115 V
- <sup>(6)</sup> LI/WSLI: Low Power, 24 V DC only (LI: For use in zone 0 locations, see the installation conditions given in the I&M instructions)
- <sup>(7)</sup> The certified minimum temperature of this operator
- <sup>(8)</sup> LPKF/WSLPKF: 24 V DC, max. ambient temp. +80°C, contact us (48 V DC = 2,1 W)
- Not available

## ELECTRICAL CONNECTIONS

prefix	connection
SC, ISSC	Spade plug connector with cable gland EN175301-803A (ISO 4400) for cables with an outer diameter from 6 to 10 mm
WP, WS, EM, WSEM	M20 cable gland for cables with an outer diameter from 7 to 12 mm. With an internal and external facility for an earthing or bonding conductor
NF, WSNF, LPKF, WSLPKF	1/2" NPT threaded cable entry. Enclosures are supplied without cable gland
PV	Moulded-in cable, standard length 2 m
LI, WSLI	1/2" NPT cable gland for cables with an outer diameter from 7 to 12 mm. With an internal and external facility for an earthing or bonding conductor
EF, EV	1/2" NPT conduits, standard length 35 cm

## ADDITIONAL OPTIONS

- Valves configured for external pilot air supply, TPL 20547
- Other pipe threads are available on request
- Ex mb/mD (prefix "PV") solenoid can be supplied with various cable lengths
- Compliance with "UL", "CSA" and other local approvals available on request
- 1/2" NPT (prefix "T") and M20 x 1.5 (prefix "ET") conduits (aluminium or 316 SS) available for steel solenoid housing

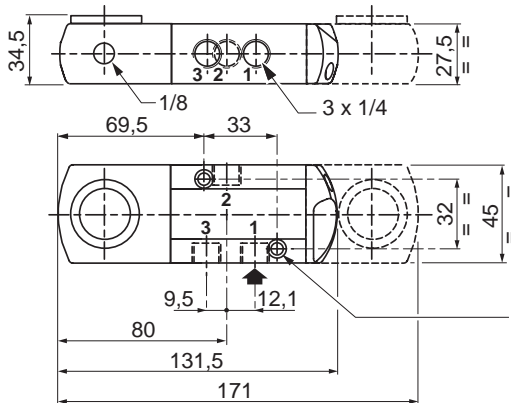
## INSTALLATION

- Multi language installation/maintenance instructions are included with each valve
- The solenoid valves can be mounted in any position without affecting operation
- Do not connect the pressure supply to the exhaust port 3. The "environmentally-protected" construction is not adapted for a "distributing" function or use in NO function. Contact us for functions available in specific versions
- IEC 61508 Functional Safety (suffix SL), allowable temperature range: -40°C to +60°C. For probability of failure, contact us
- 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.)
- Threaded pipe connection identifier is: 8 = NPT (ANSI 1.20.3); G = G (ISO 228/1)
- Prefix "NF/WSNF" enclosure is provided with a 1/2" NPT threaded entry hole, M20 x 1,5 (prefix "ET") is optional. Both are supplied without cable gland

All leaflets are available on: [www.asconumatics.eu](http://www.asconumatics.eu)

**DIMENSIONS (mm), WEIGHT (kg)**

**All types**

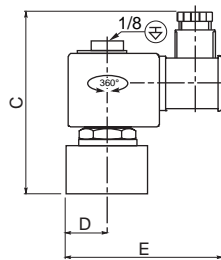
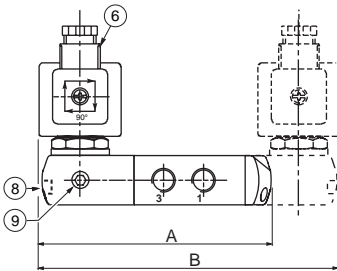


2 mounting holes 5.3 mm dia.;  
Spotfacing: 9 mm dia., depth 5 mm



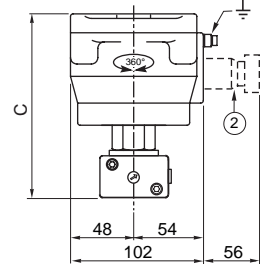
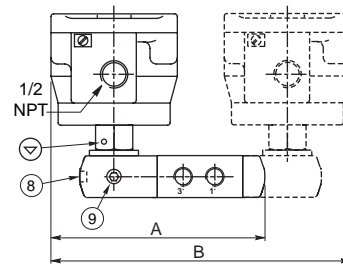
**TYPE 01:**  
SC  
Epoxy moulded  
IEC 335 / ISO 440

551A407 / 551A408



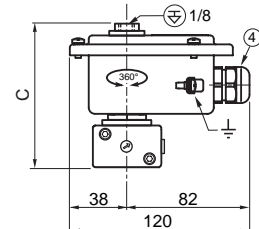
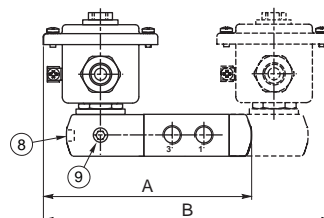
**TYPE 02:**  
NF / WSNF  
Aluminium; epoxy coated / AISI 316 SS  
EN/IEC 60079-1 and EN/IEC 60079-31

551A407 / 551A408



**TYPE 04:**  
WP / WS  
EM / WSEM  
Steel; epoxy coated / AISI 316 SS  
IEC 335 / EN 60079-7/18 and EN 61241-1

551A407 / 551A408

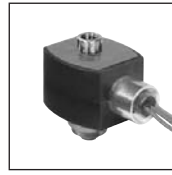
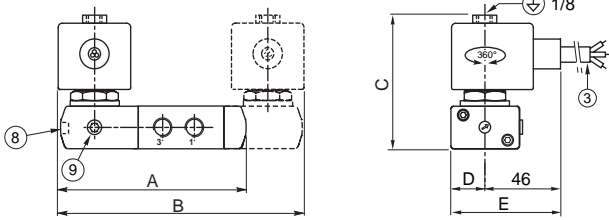


## DIMENSIONS (mm), WEIGHT (kg)



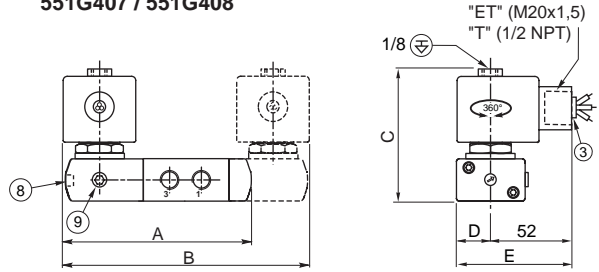
**TYPE 05:**  
PV  
Epoxy encapsulated  
EN/IEC 60079-18 and EN/IEC 61241-18

551A407 / 551A408



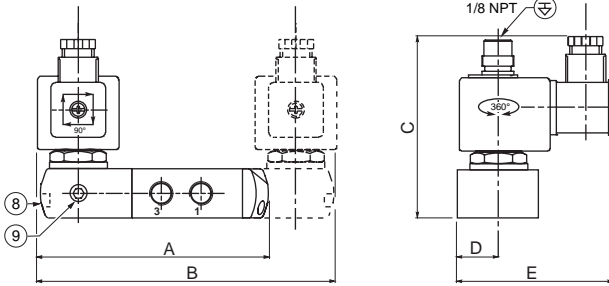
**TYPE 06:**  
EF and EV: NEMA type 7 and 9  
Epoxy encapsulated  
ICS-6 ANSI  
NOTE: applicable to solenoid only

551G407 / 551G408



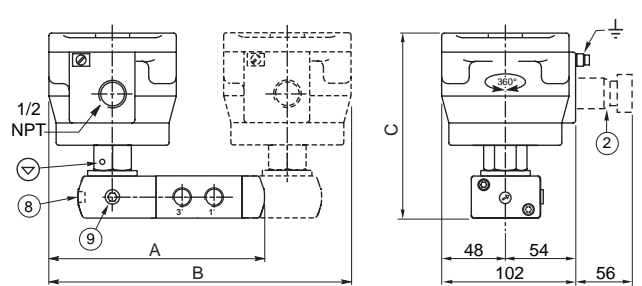
**TYPE 07:**  
SC  
Epoxy moulded  
IEC 335 / ISO 4400

551A307 / 551A308



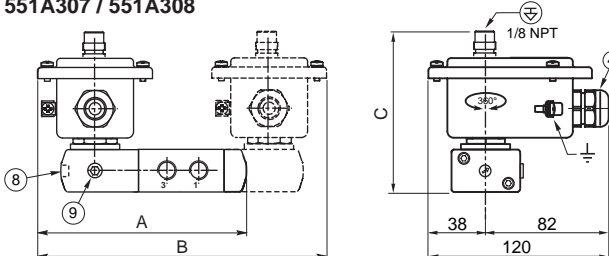
**TYPE 08:**  
NF / WSNF  
Aluminium; epoxy coated / AISI 316 SS  
EN/IEC 60079-1 and EN/IEC 60079-31

551A307 / 551A308



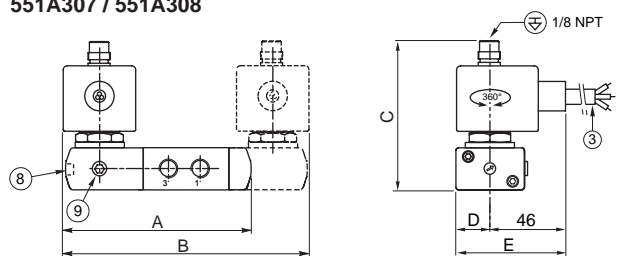
**TYPE 09:**  
WP / WS  
EM / WSEM  
Steel; epoxy coated / AISI 316 SS  
IEC 335 / EN 60079-7/18 and EN 61241-1

551A307 / 551A308



**TYPE 10:**  
PV  
Epoxy encapsulated  
EN/IEC 60079-18 and EN/IEC 61241-18

551A307 / 551A308

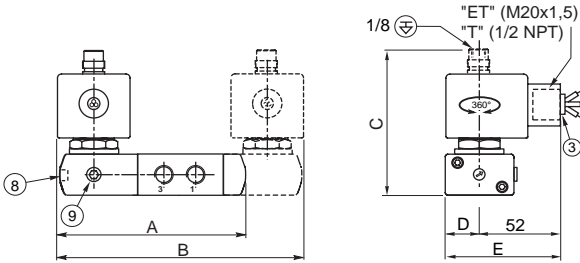


### DIMENSIONS (mm), WEIGHT (kg)



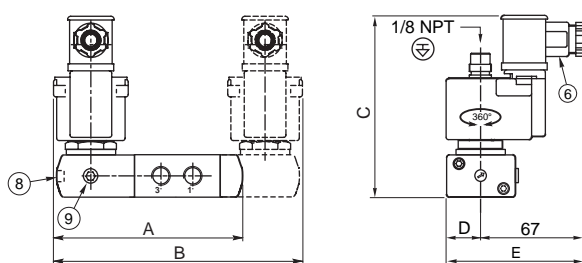
**TYPE 11:** Prefixes EF/EV: ICS-6 ANSI / NEMA EF and EV: NEMA type 7 and 9  
Epoxy encapsulated  
ICS-6 ANSI  
NOTE: applicable to solenoid only

551G307 / 551G308



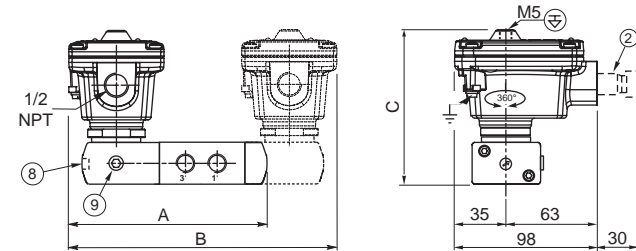
**TYPE 12:**  
Low power  
Polypropylene moulded  
IEC 335 / ISO 4400  
EN 50020 and EN 50281-1-1

551A307 / 551A308



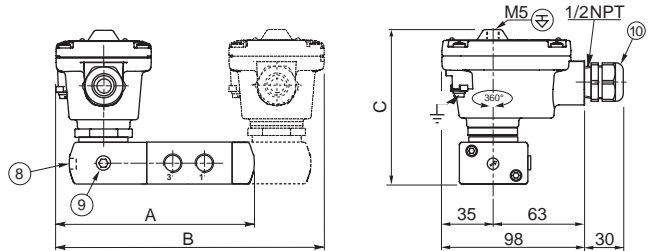
**TYPE 13:**  
LPKF / WSLPKF  
Aluminium, cataphoresis black painting / AISI 316L SS  
EN/IEC 60079-1 and EN/IEC 61241-1

551A307 / A308 / A307MO / A308MO



**TYPE 14:**  
LI / WSLI  
Aluminium, cataphoresis black painting / AISI 316L SS  
IEC and EN: 60079-11, 61241-1

551A307 / A308 / A307MO / A308MO





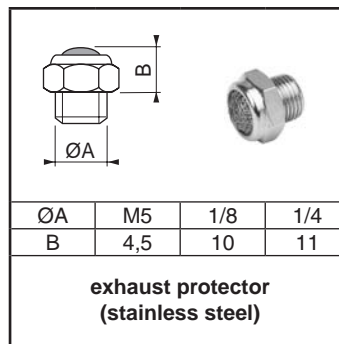
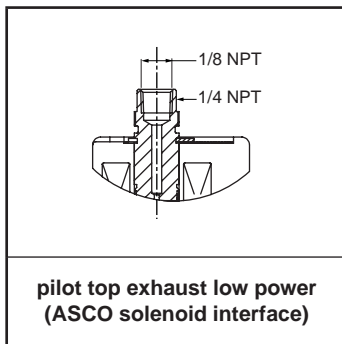
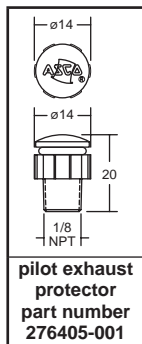
### DIMENSIONS (mm), WEIGHT (kg)

type	prefix option	power level	A	B	C	D	E	weight <sup>(1)</sup>	
								monostable	bistable
01	SC	basic power	132	170	102,7	22,5	86,5	0,76	1,34
02	NF	basic power	158	224	141,8	-	-	1,85	3,51
02	WSNF	basic power	158	224	141,8	-	-	3,15	4,81
04	WP / WS / EM / WSEM	basic power	148	204	103	-	-	1,62	2,22
05	PV	basic power	132	172	88	22,5	67,5	0,82	1,45
06	EF / EV	basic power	132,5	173	85,5	22,5	74,5	0,64	1,29
07	SC	low power	132,5	173	101,5	22,5	87,5	0,97	1,55
08	NF	low power	158	224	141,8	-	-	1,85	3,51
08	WSNF	low power	158	224	141,8	-	-	3,15	4,81
09	WP / WS / EM / WSEM	low power	148	204	102,2	-	-	1,05	1,70
10	PV	low power	132	172	100,5	22,5	67,5	1,03	1,67
11	EF/EV	low power	132,5	173	100,5	22,5	74,5	0,85	1,50
12	ISSC	low power	122	175	124,5	22,5	89,5	0,80	1,41
13	LPKF	low power	141	192	113	-	-	0,90	1,62
13	WSLPKF	low power	141	192	113	-	-	1,51	2,82
14	LI	low power	141	192	113	-	-	0,91	1,63
14	WSLI	low power	141	192	113	-	-	1,52	2,83

<sup>(1)</sup> Incl. coil(s) and connector(s)

- ② Ex d certified cable gland (on request)
- ③ Three-core cable, length 2 m
- ④ Cable gland for unarmoured cable with 7 to 12 mm dia. sheath
- ⑥ Connector rotatable by 90° increments (cable Ø 6 - 10 mm)
- ⑧ Push type or screw type manual operator, suffix MO
- ⑨ External pilot air supply, 1/8 pipe size
- ⑩ Cable gland for unarmoured cable with 7 to 12 mm dia. sheath
- ⊖ Connectable pilot exhaust port
- ⊕ Non-connectable pilot exhaust port

### ACCESSORIES



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All leaflets are available on: [www.asconumatics.eu](http://www.asconumatics.eu)

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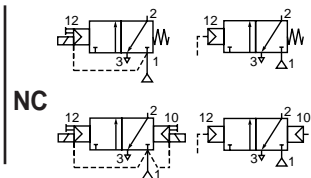
传真：(86-532)585-10-365  
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# SPOOL VALVES

pilot operated or air operated, spool type  
single/dual solenoid (mono/bistable function)  
brass body, 1/4



**3/2**  
Series  
**551**

## FEATURES

- The monostable spool valves have TÜV certified IEC 61508 Functional Safety data and can be used up to SIL 4
- All the exhaust ports of this 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 valve offers environmental protection against the ingress of liquids, dusts or any other foreign matter (environmentally-protected construction)
- The solenoid valves satisfy all relevant EC Directives

## GENERAL

Differential pressure 2 - 10 bar [1 bar = 100 kPa]  
Flow (Qv at 6 bar) 860 l/min (ANR)

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas, filtered	- 25°C to + 40°C <sup>(2)</sup>	VMQ (silicone) + PUR (polyurethane)

<sup>(2)</sup> -40°C for air operated versions.

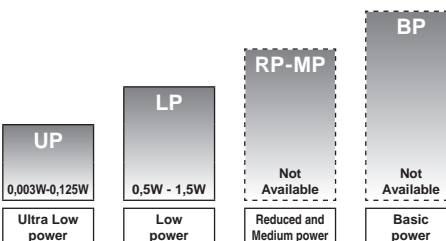
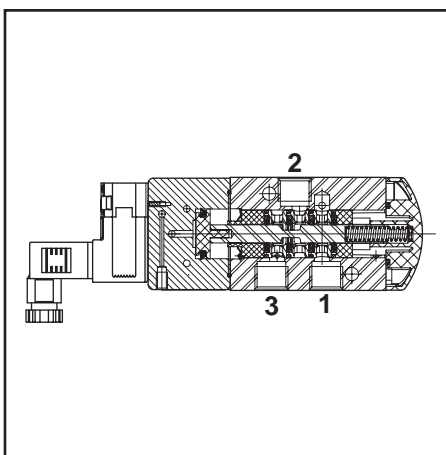
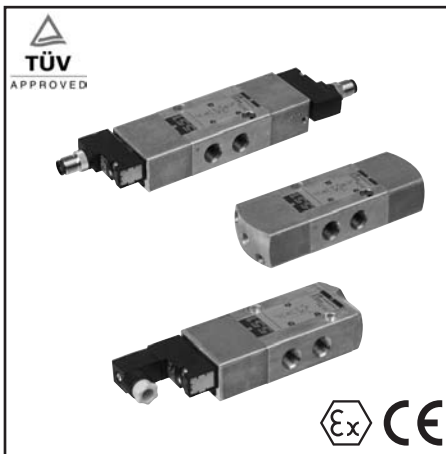
## MATERIALS IN CONTACT WITH FLUID

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

	Air operated	CNOMO solenoid (pilot) interface
Body, end covers	Brass, AISI 316L	Brass, AISI 316L
Spool valve internal parts	Brass, stainless steel, POM	Brass, stainless steel, POM
Seals	NBR	NBR
Pilot internal parts	-	Size 15 (E06.36.120N), refer to catalogue pages: 302 pilot (CFSC/CFVT/CFSCIS) and 630 piezotronic pilot (PISC/PISCIS)

## AIR OPERATED SPECIFICATIONS

pipe size	orifice size	flow coefficient kv		operating pressure differential (bar)			prefix optional	basic catalogue number
				min.	max. (PS)			
(*)	(mm)	(m³/h)	(l/min)		air (*)			
					~	=		
<b>Pilot air operated - spring return (monostable)</b>								
1/4	6	0,75	12,5	2	10	10	-	❖551A107 <sup>(1)</sup>
<b>Pilot air operated and return (bistable)</b>								
1/4	6	0,75	12,5	2	10	10	-	❖551A108



POWER LEVELS - cold electrical holding values (watt)

## CNOMO SOLENOID (PILOT) INTERFACE SPECIFICATIONS

pipe size	orifice size	flow coefficient kv		operating pressure differential (bar)			power level	prefix optional solenoids					basic catalogue number
				min.	max. (PS)			ATEX / IECEx		IP65			
(*)	(mm)	(m³/h)	(l/min)		air (*)		~/=	CFSCIS	PISCIS	CFSC	CFVT	PISC	CNOMO size 15
					~	=							
<b>Solenoid air pilot operated - spring return (monostable)</b>													
1/4	6	0,75	12,5	2	10	10	LP	-	-	●	●	-	❖551C507 <sup>(1)</sup>
1/4	6	0,75	12,5	2	-	8	LP	○	-	-	-	-	❖551C507 <sup>(1)</sup>
1/4	6	0,75	12,5	2	8	8	UP	-	○	-	-	●	❖551C507 <sup>(1)</sup>
<b>Solenoid air pilot operated and return (bistable)</b>													
1/4	6	0,75	12,5	2	10	10	LP	-	-	●	●	-	❖551C508
1/4	6	0,75	12,5	2	-	8	LP	○	-	-	-	-	❖551C508
1/4	6	0,75	12,5	2	8	8	UP	-	○	-	-	●	❖551C508

❖ Select 8 for NPT ANSI 1.20.3 or select G for ISO G (228/1) ● Available feature ○ Available feature in DC only.

<sup>(1)</sup> Certified IEC 61508 Functional Safety data, use suffix "SL".

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## PREFIX TABLE

prefix							description	power level			
1	2	3	4	5	6	7		UP	LP	RP	BP
C	F	S	C				Solenoid + spade plug AMP 2,5x0,5, 9,4 mm, (EN 60730), 302 pilot	-	●	-	-
C	F	V	T				Solenoid with M12 connection, LED + protection (EN 60730), 302 pilot	-	○	-	-
C	F	S	C	I	S		Intrinsically safe, 9,4 mm, pilot 302; ATEX (EN 60079 / 61241)*	-	○	-	-
P	I	S	C				Solenoid with spade plug connector (EN 60730), 630 piezotronic pilot	●	-	-	-
P	I	S	C	I	S		Intrinsically safe, piezotronic 630 pilot, ATEX (EN 60079 / 61241)*	○	-	-	-

## SUFFIX TABLE

suffix							description	power level			
1	2	3	4	5	6	7		UP	LP	RP	BP
	G	D					Non-electrical, 1 GD c, construction safety, gas/dust (EN 13463-5)	-	-	-	-
			M	S			Screw type manual operator <sup>(1)</sup>	-	○/●	-	-
			M	O			Push type manual operator	○/●	○/●	-	-
	S	L					Certified IEC 61508 Functional Safety data	○/●	○/●	-	-

## OPTIONS & ACCESSORIES

series	pipe size	exhaust protector (stainless steel)
551	G 1/4	<b>34600419</b> <sup>(2)</sup>
	NPT 1/4	<b>34600483</b> <sup>(2)</sup>
	M5	<b>34600484</b> <sup>(2)</sup>

- Available feature
- Available feature in DC only
- Not available
- \* ATEX solenoids are also approved according to EN 13463-1 (non electrical valves)
- <sup>(1)</sup> Not to use with "SL" suffix
- <sup>(2)</sup> Provided with "SL" suffix

## PRODUCT SELECTION GUIDE

### STEP 1

Select the fluid temperature range and seal material from the general table on page 9. Select basic catalogue number, including pipe thread identification letter. Refer to the specifications tables on page 9.

**Example: G551C507**

### STEP 2

Select prefix (combination). Select the appropriate operator from the tables on pages 9 and 10. Select for this operator in the electrical characteristics table on page 11: the power level (UP, LP), the type of electrical enclosure protection and the desired temperature class.

**Warning:** The ambient temperature range of your application may not exceed the temperature range of your operator.

**Example : CFSC**

### STEP 3

Select suffix. Suffix **MO** mandatory for the pilot 302 (CFSCIS). Refer to the suffix table on page 10, respect the indicated power level.

**Example : MO**

### STEP 4

Selection of TPL, on page 11, is mandatory for the 630 pilot (PISCIS), 12 HV DC (32 mW) and 24 HV DC (125 mW). Add "X" between the prefix "PISCIS" and the basic catalogue number.

### STEP 5

Select voltage. Refer to standard voltages on page 11.

**Example : 230V / 50Hz**

### STEP 6

Final catalogue / ordering number.

**Example :**

**CFSC G551C507MO 230 V / 50 Hz**

## ORDERING EXAMPLES:

CFSC	G	551	C	507		230V / 50 Hz
CFSC	G	551	C	507	SL	230V / 50 Hz
CFVT	8	551	C	508	MO	230V / 50 Hz
PISCIS	G	551	C	507	MO	6V / DC
PISCIS	G	551	C	507	SLMO	6V / DC
PISCIS X	G	551	C	508	MS	TPL20666 24HV / DC
				G 551 A 107		
				G 551 A 107	GD	
				G 551 A 107	GDSL	
				G 551 A 108		

prefix — pipe thread — basic number — voltage — TPL — suffix

## EXPLANATION OF TEMPERATURE RANGES OF SOLENOID VALVES

- Valve temperature range The valve temperature range (TS) is determined by the selected seal material, the temperature range for proper operation of the valve and sometimes by the fluid (e.g. steam)
- Operator ambient temperature range The operator ambient temperature range is determined by the selected power level and the safety code
- Total temperature range The temperature range of the complete solenoid valve is determined by the limitations of both temperature ranges above

## ELECTRICAL CHARACTERISTICS

- Coil insulation class F
- Electrical safety IEC 335
- Standard voltages DC (=) CFSC/CFVT: 24V  
CFSCIS: 12V - 24V ; PISC: 24V à 70V ; PISCIS: 6V, 8V, 12V, 24V  
AC (~) CFSC: 24V - 115V - 230V/50Hz - Other voltages are available on request  
PISC: 24V to 70V

prefix option	power ratings				operator ambient temperature range (TS) (C°)	safety code	electrical enclosure protection (EN 60529)	replacement coil		type <sup>(1)</sup>
	inrush ~ (VA)	holding ~ (VA)	hot/cold = (W)	hot/cold = (W)				~ -	= -	
<b>Low power (LP)</b>										
CFSC	1,4	1,2	1,1	1/1,12	-25 to +60	EN 60730	moulded IP65	-	-	01
CFSC	2,1 <sup>(6)</sup>	1,6 <sup>(6)</sup>	1,5 <sup>(6)</sup>	-	-25 to +60	EN 60730	moulded IP65	-	-	01
CFVT <sup>(5)</sup>	-	-	-	1,15/1,35	-25 to +60	EN 60730	moulded IP67/IP65	-	-	02
CFSCIS <sup>(3)(4)</sup>	-	-	-	0,5	-10 to +40/60	II 1G Ex ia IIC T6/T4, II 1D Ex iaD 20	moulded IP65	-	-	04
<b>Ultra low power (UP)</b>										
PISC	-	-	-	0,007	-0 to +60	-	moulded IP65	-	-	06
PISCIS <sup>(2)(3)6V</sup>	-	-	-	0,003	-20 to +50	II 1G Ex ia IIC T6, II 1D Ex iaD 20	moulded IP65	-	-	06
PISCIS <sup>(2)(3)8V</sup>	-	-	-	0,022	-20 to +50	II 1G Ex ia IIC T6, II 1D Ex iaD 20	moulded IP65	-	-	06
PISCIS <sup>(2)(3)12LV</sup>	-	-	-	0,012	-20 to +50	II 1G Ex ia IIC T6, II 1D Ex iaD 20	moulded IP65	-	-	06
PISCIS <sup>(2)(3)12HV</sup>	-	-	-	0,032	-20 to +50	II 1G Ex ia IIC T6, II 1D Ex iaD 20	moulded IP65	-	-	06
PISCIS <sup>(2)(3)12LV</sup>	-	-	-	0,046	-20 to +50	II 1G Ex ia IIC T6, II 1D Ex iaD 20	moulded IP65	-	-	06
PISCIS <sup>(2)(3)12HV</sup>	-	-	-	0,125	-20 to +50	II 1G Ex ia IIC T6, II 1D Ex iaD 20	moulded IP65	-	-	06

- Not available

<sup>(1)</sup> Refer to the dimensional drawings on pages 12 and 13.

<sup>(2)</sup> Piezotronic standards voltages:

Prefix PISCIS:	6 V DC / 3 mW	8 V DC / 22 mW	12L V DC / 12 mW	12H V DC / 32 mW	24L V DC / 46 mW	24H V DC / 125 mW
Turn ON voltage U <sub>ON</sub>	6 .. 9 V	7,2 .. 12 V	10,8 .. 16 V	10,8 .. 16 V	21,6 .. 28 V	21,6 .. 28 V
Turn OFF voltage U <sub>OFF</sub>	3 V	3,2 V	3,3 V	3,3 V	5 V	5 V
Peak current	6 mA	10 mA	6,8 mA	8,1 mA	10 mA	14 mA
Holding current	0,5 mA	2,8 mA	1 mA	2,7 mA	1,9 mA	5,2 mA
Cable + max. barrier resistances (R <sub>S</sub> + R <sub>C</sub> )	1200 Ω max.	300 Ω max.	1200 Ω max.	470 Ω max.	1200 Ω max.	470 Ω max.

prefix option	safety parameters				
	U <sub>I</sub> = (DC) (V)	I <sub>I</sub> (mA)	P <sub>I</sub> (W)	L <sub>I</sub> (H)	C <sub>I</sub> (µF)
<b>Low power (LP)</b>					
CFSCIS	28	300	1,6	0	0
<b>Ultra low power (UP)</b>					
PISCIS	30	200	0,9	0	0

<sup>(3)</sup> Intrinsically safe pilots: Check the electrical characteristics in the corresponding catalogue pages (CFSCIS: 302 pilot / PISCIS: 630 pilot).

<sup>(4)</sup> CFSCIS (302 pilot):

12 V : I<sub>ON</sub> min., with LED = 33 mA; U<sub>ON</sub> min. = 11,9 V; U<sub>max</sub> recommended = 23 V; U<sub>OFF</sub> = 3,3 V; I<sub>OFF</sub> = 10 mA  
24 V : I<sub>ON</sub> min., with LED = 25 mA; U<sub>ON</sub> min. = 16,4 V; U<sub>max</sub> recommended = 28 V; U<sub>OFF</sub> = 5,7 V; I<sub>OFF</sub> = 7 mA

<sup>(5)</sup> Values for LED + protection.

<sup>(6)</sup> AC: 230 V

- Not available

## ELECTRICAL CONNECTIONS

prefix	connection
CFSC, CFSCIS, PISC, PISCIS	Spade plug connector with cable gland DIN 43650, 9,4 mm, industry standard B, for cables with an outer diameter from 4 to 6 mm
CFVT	M12 connection for M12 connector

## ADDITIONAL OPTIONS

- TPL numbers: TPL **20665**: Piezotronic, PISCIS prefix, 12 HV (32 mW)  
TPL **20666**: Piezotronic, PISCIS prefix, 24 HV (125 mW)
- TPL numbers: TPL **20674**: LED and protection, CFSC prefix - Add 0,15 W (DC) and 0,4 W/VA (AC)  
Only available in 24 V AC/DC and 115 V AC
- Mounting on aluminium supply rail, 1/4 or 1/2
- Other pipe threads are available on request

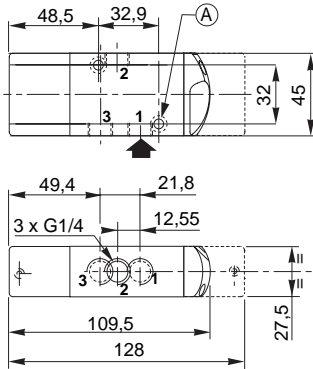
## INSTALLATION

- Installation/maintenance instructions are included with each valve
- The solenoid valves and air operated valves can be mounted in any position without affecting operation
- Do not connect the pressure supply to the exhaust port 3. The "environmentally-protected" construction is not adapted for a "distributing" function
- IEC 61508 Functional Safety (Suffix SL), allowable temperature range: -40°C to +60°C. Probability of failure on demand, contact us
- 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.)
- Threaded pipe connection identifier is: 8 = NPT (ANSI 1.20.3); G = G (ISO 228/1)
- Valves with suffix "SL" are provided with a specific exhaust protector

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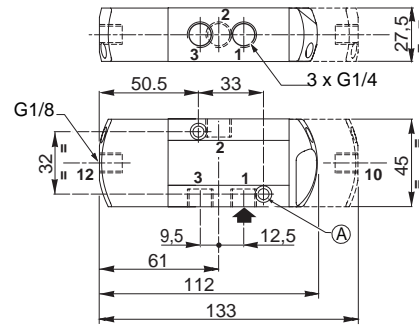
## DIMENSIONS (mm), WEIGHT (kg)

### Type 01..06: CNOMO size 15 (E06.36.120N)



(A) 2 mounting holes 5.3 mm dia.;  
Spotfacing: 9 mm dia., depth 5 mm

### Type 07: Air operated



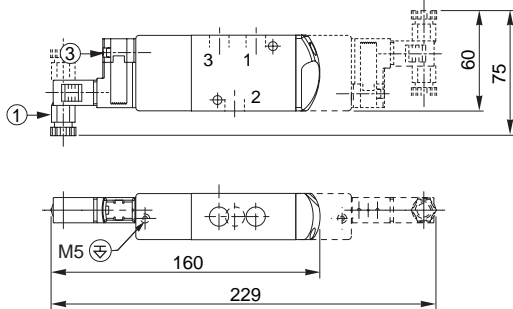
**TYPE 01:**  
CFSC  
302 pilot  
Polyarylamide  
IEC 335 / DIN 43650

551C507 / 551C508  
551C507MS / 551C508MS / 551C507MO / 551C508MO



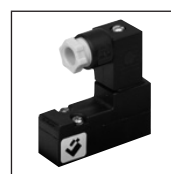
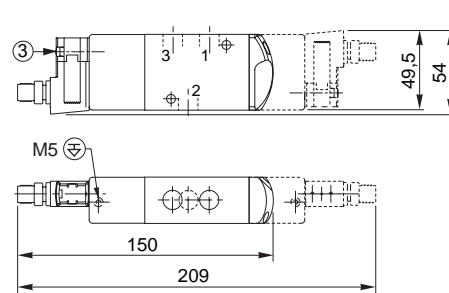
**TYPE 02:**  
CFVT  
302 pilot  
Polyarylamide  
IEC 335 / connection M12 + LED and protection

551C507 / 551C508  
551C507MS / 551C508MS / 551C507MO / 551C508MO



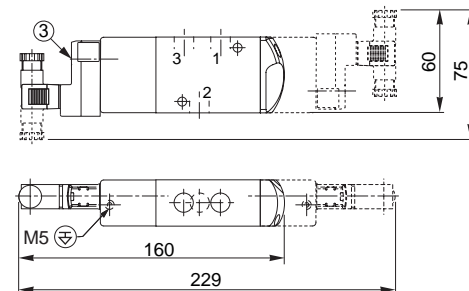
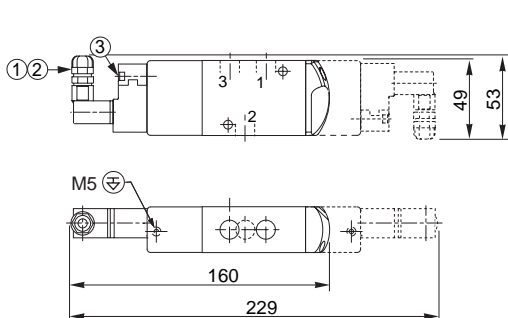
**TYPE 04:**  
CFSCIS  
302 pilot  
Polyarylamide  
IEC 335 / DIN 43650  
EN/IEC 60079-11/26 and EN/IEC 61241-11

551C507MO / 551C508MO

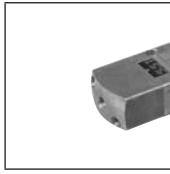


**TYPE 06:**  
PICS / PISCIS  
Piezotronic pilot  
Polyamide  
IEC 335 / DIN 43650  
EN 60079-11/26 and EN 61241-11

551C507MO / 551C508MO

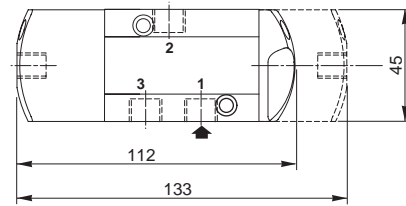
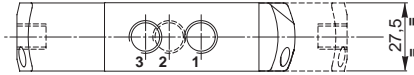


### DIMENSIONS (mm), WEIGHT (kg)



**TYPE 07:**  
 Air operated version  
 No prefix  
 Use "SL", "GD" or "GDSL" suffix  
 IP65 / II 1 GD c

551A107 / 551A108

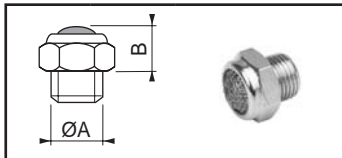


- ① Connector rotatable by 90° increments (cable 4 - 6 mm)
- ② Connector rotatable by 90° increments (cable 6 - 7 mm)
- ③ Manual operator location
- ⊕ Connectable pilot exhaust port

type	prefix option	power level	weight <sup>(1)</sup>	
			monostable	bistable
01	CFSC	low power	0,883	1,091
02	CFVT	low power	0,883	1,091
04	CFSCIS	low power	0,888	1,101
06	PISC / PISCIS	ultra low power	0,867	1,059
07	-	-	0,831	0,987

<sup>(1)</sup> Incl. connector(s), except CFVT.

### ACCESSORIES



ØA	M5	-	1/4
B	4,3	-	11
<b>exhaust protector (stainless steel)</b>			

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4-43-14



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