



SOLENOID VALVES

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

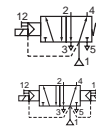
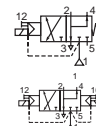
3/2 NC

5/2

3/2-5/2

Series

551



FEATURES

- The monostable spool valves, series 551, have TÜV certified IEC 61508 Functional Safety data and can be used up to SIL 4/AK 7
- 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 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

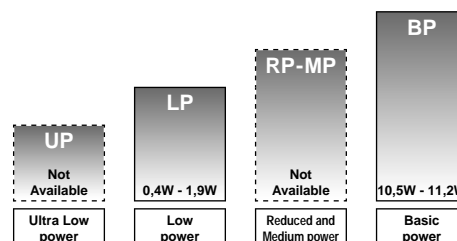
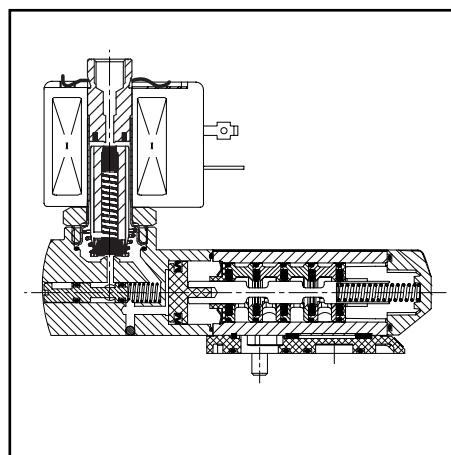
Differential pressure 2 - 10 bar [1 bar = 100 kPa]
Flow (Qv at 6 bar) 700 l/min (ANR)

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
Interface plates	Glass-filled PA
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 ring (Low power)	PTFE



POWER LEVELS - cold electrical holding values (watt)

SPECIFICATIONS

pipe size	orifice size	flow coefficient kv		operating pressure differential (bar)			power level	prefix optional solenoids							basic catalogue number		
								ATEX/CENELEC (gas/dust)					IP65				
				min. ⁽²⁾	max. (PS)			NEMA 7 & 9	EEx d	EEx em	EEx m	EEx i		EEx n		SC	
(*)	(mm)	(m³/h)	(l/min)		air (*)	~	=	~/=	EF	NF	NK	EM	PV	IS	ZN	SC	
Solenoid air pilot operated - spring return (monostable)																	
1/4	6	0,6	10	0 / 2	10	10	BP	-	●	●	●	●	-	●	●		❖551A403 ⁽¹⁾
1/4	6	0,6	10	0 / 2	10	10	BP	●	-	-	-	-	-	-	-		❖551G403 ⁽¹⁾
1/4	6	0,6	10	0 / 2	10	10	LP	-	●	-	●	○	○	○	●		❖551A303 ⁽¹⁾
1/4	6	0,6	10	0 / 2	10	10	LP	○	-	-	-	-	-	-	-		❖551G303 ⁽¹⁾
Solenoid air pilot operated and return (bistable)																	
1/4	6	0,6	10	0 / 2	10	10	BP	-	●	●	●	●	-	●	●		❖551A404
1/4	6	0,6	10	0 / 2	10	10	BP	●	-	-	-	-	-	-	-		❖551G404
1/4	6	0,6	10	0 / 2	10	10	LP	-	●	-	●	○	○	○	●		❖551A304
1/4	6	0,6	10	0 / 2	10	10	LP	○	-	-	-	-	-	-	-		❖551G304

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

⁽¹⁾ Certified IEC 61508 Functional Safety data, use suffix "SL".

⁽²⁾ 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
S	C			D	U		Dustproof ATEX (EN 50281-1-1) *	-	-	-	●
E	F						Explosionproof - NEMA 3, 4, 6, 7, 9	○	-	-	●
E	V						Explosionproof - NEMA 3, 4, 6, 7, 9 - 316 SS	○	-	-	●
E	M						Encapsulated ATEX (EN 50019 & EN 50028) *	●	-	-	●
		E	T				Threaded conduit/hole (M20 x 1.5)	●	-	-	●
I	S				S	C	Intrinsically safe with SC coil ATEX (EN 50020) *	○	-	-	-
N	F						Flameproof - Alum. ATEX (EN 50018) *	●	-	-	●
N	N						Flameproof - Cast Iron ATEX (EN 50018) *	●	-	-	●
N	K						Flameproof - Alum. ATEX (EN 50018) *	-	-	-	●
P	V						Encapsulated ATEX (EN 50028) *	○	-	-	●
S	C						Solenoid with spade plug connector (EN 60730)	●	-	-	●
W	P						Waterproof IP67 - Metal enclosure (EN 60730)	●	-	-	●
W	S						Waterproof IP67 - 316 SS enclosure (EN 60730)	●	-	-	●
W	S	E	M				316 SS "EM" enclosure ATEX (EN 50019 & EN 50020) *	●	-	-	●
W	P			D	U		Dustproof ATEX (EN 50281-1-1) - Metal enclosure *	-	-	-	●
W	S			D	U		Dustproof ATEX (EN 50281-1-1) - 316 SS enclosure *	-	-	-	●
W	P			I	S		I.S. with Metal IP67 enclosure ATEX (EN 50020) *	○	-	-	-
W	S			I	S		I.S. with Metal IP67- 316 SS enclosure ATEX (EN 50020) *	○	-	-	-
W	S	N	F				Flameproof - 316 SS ATEX (EN 50018) *	●	-	-	●
Z	N						Encapsulated Non Sparking ATEX (EN 50021) *	○	-	-	●
						T	Threaded conduit (1/2" NPT)	●	-	-	●
				H	T		Class H - High temperature, +80°C ambient temp.	-	-	-	●
						X	Other special constructions	●	-	-	●

PRODUCT SELECTION GUIDE

STEP 1

Select basic catalogue number, including pipe thread identification letter. Refer to the specifications table on page 1.

Example: G551A403

STEP 2

Select prefix (combination). Refer to the specifications table on page 1 and the prefix table on page 2, respect the indicated power level.

Example: EM

STEP 3

Select suffix (combination) if required. Refer to the suffix table on page 2, respect the indicated power level.

Example: MO

STEP 4

Select voltage. Refer to standard voltages on page 3.

Example: 230V / 50Hz

STEP 5

Final catalogue / ordering number.

Example: EM G551A403MO 230 V / 50 Hz

SUFFIX TABLE

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

OPTIONS & ACCESSORIES

series	pipe size	exhaust protector (stainless steel)
551	G 1/8	34600418 ⁽¹⁾
	NPT 1/8	34600482 ⁽¹⁾

- Available feature
- Available feature in DC only
- Not available
- * ATEX solenoids are also approved to EN 50281-1-1 (dust) and EN 13463-1 (non electrical valves)
- ⁽¹⁾ Provided with "SL" suffix
- ⁽²⁾ Not to use with MO suffix

ORDERING EXAMPLES:

SC	G	551	A	403		230V / 50 Hz
SC	G	551	A	403	SL	230V / 50 Hz
SC	G	551	A	404	MO	230V / 50 Hz
SCHT	8	551	A	404	MO	230V / 50 Hz
ISSC	G	551	A	404	MO	24V / DC
WPIS	G	551	A	303		24V / DC
EM	8	551	A	403	MO	230V / 50 Hz
EF	G	551	H	403	MO	240V / 60 Hz

prefix ⁽³⁾ — pipe thread — basic number ⁽³⁾ — voltage — suffix

⁽³⁾ Prefix EF should always be used with the letter H in the basic number.

ELECTRICAL CHARACTERISTICS

Coil insulation class F

Connector Spade plug (cable Ø 6 - 10 mm)

Connector specification ISO 4400 / EN 175301-803, form A

Electrical safety IEC 335

Standard voltages DC (=) 24V - 48V

AC (~) 24V - 48V - 115V - 230V/50Hz; other voltages and 60Hz are available on request

prefix option	power ratings				operator ambient temperature range (TS) (C°)	safety code	electrical enclosure protection (EN 60529)	replacement coil		type ⁽¹⁾
	inrush ~	holding ~	hot/cold =	=				~	=	
	(VA)	(VA)	(W)							
Basic power (BP)										
SC	55	23	10,5	9/11,2	-40 to +75	EN 60730	moulded IP65	400425-117	400425-142	01
SCDU	55	23	10,5	9/11,2	-40 to +75	II 3D IP65 T 200°C(-)/135°C(=)	moulded IP65	- ⁽³⁾	- ⁽³⁾	01
WP	55	23	10,5	9/11,2	-40 to +75	EN 60730	steel IP67	400405-117	400405-142	04
WPDU	55	23	10,5	9/11,2	-40 to +75	II 3D IP67 T 200°C	steel IP67	- ⁽³⁾	- ⁽³⁾	04
WS	55	23	10,5	9/11,2	-40 to +75	EN 60730	st. steel IP67	400405-117	400405-142	04
WSDU	55	23	10,5	9/11,2	-40 to +75	II 3D IP67 T 200°C	st. steel IP67	- ⁽³⁾	- ⁽³⁾	04
(WS)NF/NL	55	23	10,5	-	-60 to +25/40/60	II 2G/D EEx d IIC T6/T5/T4	alu/steel IP67	400405-117	-	02
(WS)NF/NL	-	-	-	9/11,2	-60 to +40/60/75	II 2G/D EEx d IIC T6/T5/T4	alu/steel IP67	-	400405-142	02
NK	55	23	10,5	9/11,2	-40 to +50/60	II 2G/D EEx d IIB+H ₂ T4(-/=)	aluminium IP65	400405-117	400405-142	03
EM	55	23	10,5	9/11,2	-40 to +40	II 2G/D EEx em II T3	steel IP67	400909-117	400913-142	04
WSEM	55	23	10,5	9/11,2	-40 to +40	II 2G/D EEx em II T3	st. steel IP67	400909-117	400913-142	04
PV	55	23	10,5	9/11,2	-40 to +65	II 2G/D EEx m II T3(-)T4(=)	moulded IP65	- ⁽³⁾	- ⁽³⁾	05
EF	55	23	10,5	9/11,2	-40 to +54/40	NEMA Types 7 and 9	NEMA 4X	238610-058	238710-006	06
EV	55	23	10,5	9/11,2	-40 to +54/40	NEMA Types 7 and 9-316 SS	NEMA 4X	238610-058	238710-006	06
ZN	55	23	10,5	9/11,2	-20 to +50	II 3G/D EEx nA II T3	moulded IP65	- ⁽³⁾	- ⁽³⁾	01
Low power (LP)										
SC	1,5	1,5	1,5	1,7/1,7	-40 to +60	EN 60730	moulded IP65	- ⁽³⁾	- ⁽³⁾	07
WP	1,5	1,5	1,5	1,7/1,7	-40 to +60	EN 60730	steel IP67	- ⁽³⁾	- ⁽³⁾	09
WS	1,5	1,5	1,5	1,7/1,7	-40 to +60	EN 60730	st. steel IP67	- ⁽³⁾	- ⁽³⁾	09
NF	-	-	1,9	-1,9	-40 to +75	II 2G/D EEx d IIC T6	aluminium IP67	- ⁽³⁾	- ⁽³⁾	08
NL	-	-	1,9	-1,9	-40 to +75	II 2G/D EEx d IIC T6	cast iron IP67	- ⁽³⁾	- ⁽³⁾	08
WSNF	-	-	1,9	-1,9	-40 to +75	II 2G/D EEx d IIC T6	st. steel IP67	- ⁽³⁾	- ⁽³⁾	08
EM	1,5	1,5	1,5	1,7/1,7	-40 to +40/55	II 2G/D EEx em II T6/T5	steel IP67	- ⁽³⁾	- ⁽³⁾	09
WSEM	1,5	1,5	1,5	1,7/1,7	-40 to +40/55	II 2G/D EEx em II T6/T5	st. steel IP67	- ⁽³⁾	- ⁽³⁾	09
PV	-	-	-	1,7/1,7	-40 to +60	II 2G/D EEx m II T6	moulded IP65	-	- ⁽³⁾	10
EF	-	-	-	1,7/1,7	-40 to +40	NEMA Types 7 and 9	NEMA 4X	-	- ⁽³⁾	11
EV	-	-	-	1,7/1,7	-40 to +40	NEMA Types 7 and 9-316 SS	NEMA 4X	-	- ⁽³⁾	11
ISSC ⁽²⁾	-	-	-	0,4/0,4	-40 to +60	II 1G/2D EEx ia IIC T6	moulded IP65	-	268976-001	12
WPIS ⁽²⁾	-	-	-	0,4/0,4	-40 to +60	II 1G/2D EEx ia IIC T6	steel IP67	-	268900-001	09
WSIS ⁽²⁾	-	-	-	0,4/0,4	-40 to +60	II 1G/2D EEx ia IIC T6	st. steel IP67	-	268900-001	09
ZN	-	-	-	1,7/1,7	-20 to +50	II 3G/D EEx nA II T3	moulded IP65	-	- ⁽³⁾	07

- Not available

⁽¹⁾ Refer to the dimensional drawings on pages 4 to 6.

⁽²⁾ **Intrinsically safe pilots: Check the electrical characteristics in the corresponding catalogue pages (ISSC/WPIS/WSIS operators).**

⁽³⁾ Multiple coil kits available under ATEX, contact us

prefix option	safety parameters				
	U _i	I _i	P _i	L _i	C _i
	= (DC)	(mA)	(W)	(µF)	(mF)
Low power (LP)					
ISSC	32	500	1,5	0	0
WPIS/WSIS	32	500	1,5	0	0

ADDITIONAL OPTIONS

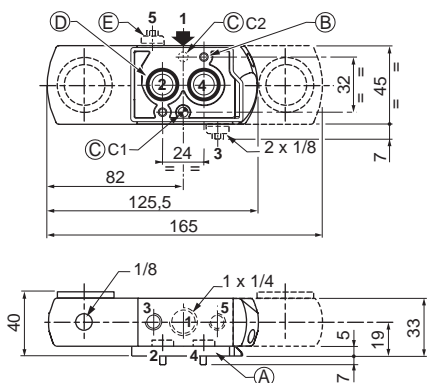
- Valves configured for external pilot air supply, TPL 20547
- Other pipe threads are available on request
- EEx m (prefix "PV") execution can be supplied in various cable lengths
- Compliance with "UL", "CSA" and other local approvals available on request
- 1/2" NPT (prefix "T") and M20 x 1.5 (prefix "ET") conduits (aluminium or 316 SS) available for steel solenoid housing
- Set of stainless steel mounting screws, catalogue number **97802212**

INSTALLATION

- Installation/maintenance instructions are included with each valve
- The solenoid valves can be mounted in any position without affecting operation
- IEC 61508 Functional Safety (Suffix SL), allowable temperature range: -40°C to +60°C. Probability of failure on demand, contact us
- 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
- 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.)
- Threaded pipe connection identifier is: B = NPT (ANSI 1.20.3); G = G (ISO 228/1)
- EEx d (prefix "NF") enclosure is provided with a 1/2" NPT threaded entry hole [optionally, M20 x 1,5 (prefix "ET")] and is supplied without cable gland
- EEx d (prefix "NK") enclosure is provided with a 3/4" NPT threaded entry hole [optionally, 1/2" NPT (prefix "T") or M20 x 1,5 (prefix "ET")] and is supplied without cable gland
- EEx em (prefix "EM") execution: solenoid enclosure has a cable gland with integral strain relief for cables with an o.d. from 7 to 12 mm and is provided with an internal and external connection facility for an earthing or bonding conductor
- Valves with suffix "SL" are provided with a specific exhaust protector

DIMENSIONS (mm), WEIGHT (kg)

All types



- (A) Interface plates
- (B) 2 mounting holes 5.3 mm dia.;
Spotfacing: 9 mm dia., depth 5 mm;
2 screws (CHc M5 x 35), engaged length: 7 mm
- (C) One 5 mm dia. hole for dowel pin
- in position C1: 3/2 NC function plate
- in position C2: 5/2 function plate
- (D) 2 O-ring seals (supplied)



TYPE 01

Prefix "SC", "ZN" and "SCDU" Solenoid
Basic power
Epoxy moulded
IEC 335 / ISO 4400 (SC/SCDU)
EN 50021 (ZN)
IP65 / II 3 D IP65 T 100°C to 200°C / II 3 G/D EEx nA II

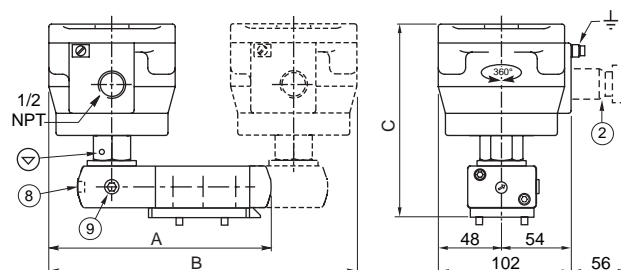
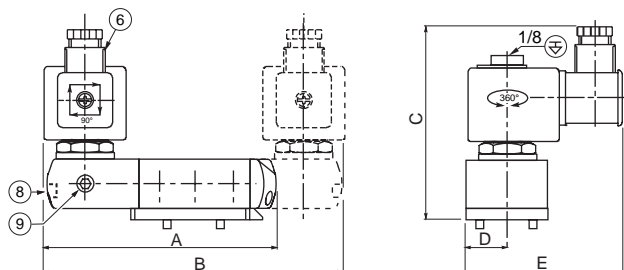
551A403 / 551A404



TYPE 02

Prefix "NF", "NL" and "WSNF" Solenoid
Basic power
Aluminium, steel; epoxy coated (NF and NL)
AISI 316 SS (WSNF)
EN 50018 and EN 50281-1-1
IP67 / II 2 G/D EEx d IIC

551A403 / 551A404



TYPE 03

Prefix "NK" Solenoid
Basic power
Aluminium; epoxy coated
EN 50018 and EN 50281-1-1
IP65 / II 2 G/D EEx d IIB + H2

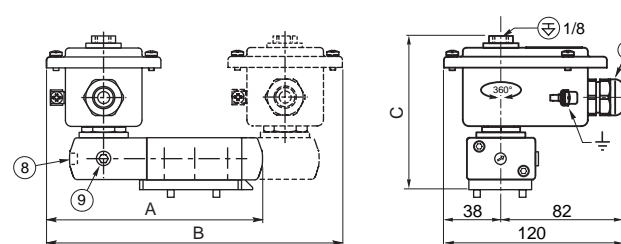
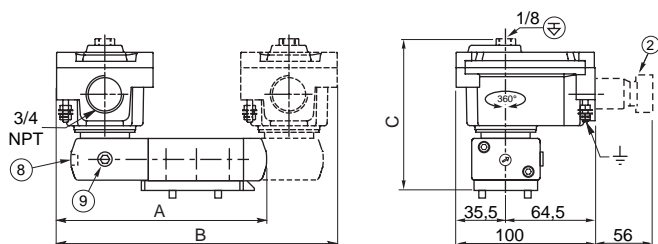
551A403 / 551A404




TYPE 04

Prefix "WP", "WS" / "WPDU", "WSDU" / "EM", "WSEM" Solenoid
Basic power
Steel; epoxy coated (WP, WPDU and EM)
AISI 316 SS (WS, WSDU and WSEM)
IEC 335 / EN 50019 & EN 50028 EN 50281-1-1
IP67 / II 3 D IP65 T 135°C to 200°C / II 2 G/D EEx em II

551A403 / 551A404



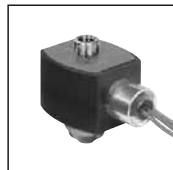
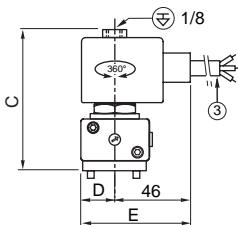
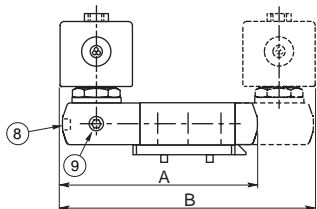
DIMENSIONS (mm), WEIGHT (kg) 



TYPE 05

Prefix "PV" Solenoid
Basic power
Epoxy encapsulated
EN 50028 and EN 50281-1-1
II 2 G/D EEx m II
IP65

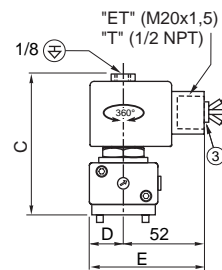
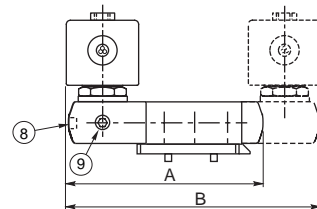
551A403 / 551A404



TYPE 06

Prefix "EF" and "EV" Solenoid
Basic power
Epoxy encapsulated
ICS-6 ANSI / NEMA
Types 7 and 9
Note: applicable to solenoid only

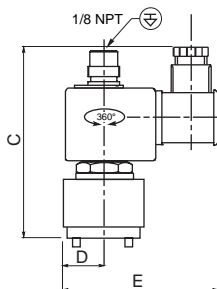
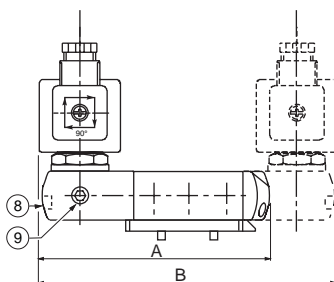
551G403 / 551G404



TYPE 07

Prefix "SC" / "ZN" Solenoid
Low power
Epoxy moulded
IEC 335 / ISO 4400 (SC)
EN 50021 (ZN)
IP65 / II 3 G/D EEx nA II

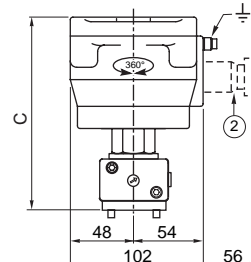
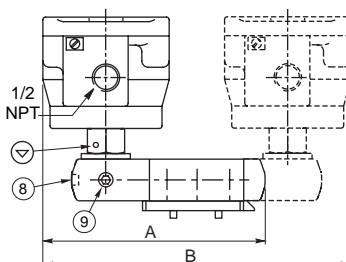
551A303 / 551A304



TYPE 08

Prefix "NF", "NL" and "WSNF" Solenoid
Low power
Aluminium, steel; epoxy coated (NF and NL)
AISI 316 SS (WSNF)
EN 50018 and EN 50281-1-1
IP67 / II 2 G/D EEx d IIC

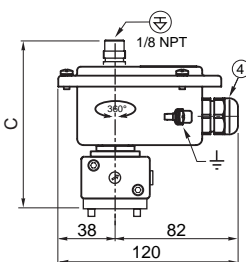
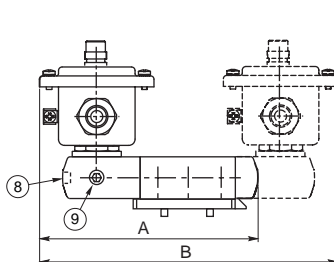
551A303 / 551A304



TYPE 09

Prefix "WP", "WS" / "EM", "WSEM" Solenoid
Prefix "WPIs" / "WSIS" Solenoid
Low power
Metal; epoxy coated / AISI 316 SS
IEC 335 / EN 50019 & EN 50028 / EN 50020 EN 50281-1-1
IP67 / II 2 G/D EEx em II / II 1G/2D EEx ia IIC

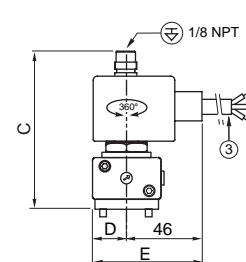
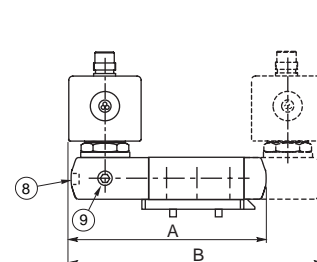
551A303 / 551A304



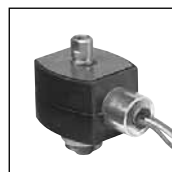
TYPE 10

Prefix "PV" Solenoid
Low power
Epoxy encapsulated
EN 50028 and EN 50281-1-1
II 2 G/D EEx m II
IP65

551A303 / 551A304



DIMENSIONS (mm), WEIGHT (kg)



TYPE 11

Prefix "EF" and "EV" Solenoid
Low power
Epoxy encapsulated
ICS-6 ANSI / NEMA
Types 7 and 9
Note: applicable to solenoid only

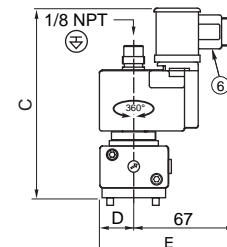
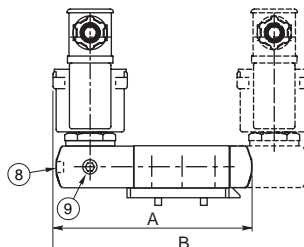
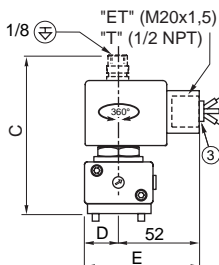
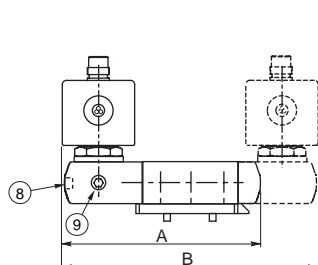
551G303 / 551G304



TYPE 12

Prefix "ISSC" Solenoid
Low power
Polypropylene moulded
EN 50020 and EN 50281-1-1
II 1G/2D EEx ia IIC

551A303 / 551A304

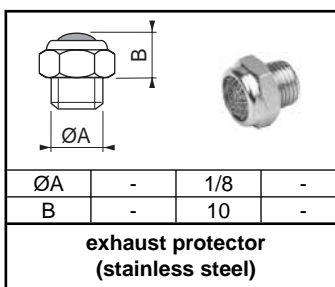
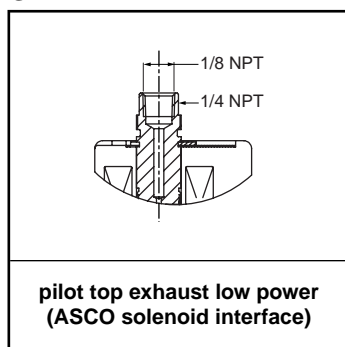
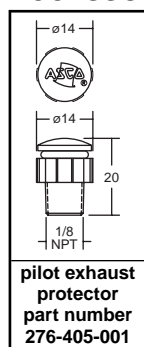


type	prefix option	power level	A	B	C	D	E	weight ⁽¹⁾	
								monostable	bistable
01	SC / SCDU / ZN	basic power	144	182	107,7	22,5	86,5	1,45	1,96
02	NF	basic power	170	236	146,8	-	-	2,49	4,25
02	WSNF	basic power	170	236	146,8	-	-	3,79	5,55
02	NL	basic power	170	236	146,8	-	-	3,59	5,35
03	NK	basic power	155	208	107	-	-	1,69	2,69
04	WP/WPDU/WS/WSDU/EM/WSEM	basic power	160	216	108	-	-	1,62	2,23
05	PV	basic power	144	184	93	22,5	67,5	1,46	2,19
06	EF / EV	basic power	144,5	185	90,5	22,5	74,5	1,47	2,20
07	SC / ZN	low power	144,5	185	106,5	22,5	87,5	1,45	2,41
08	NF	low power	170	236	146,8	-	-	2,49	4,25
08	WSNF	low power	170	236	146,8	-	-	3,79	5,55
08	NL	low power	170	236	146,8	-	-	3,59	5,35
09	WP / WS / EM / WSEM / WPIS / WSIS	low power	160	216	107,2	-	-	1,69	2,23
10	PV	low power	144	184	105,5	22,5	67,5	1,67	2,40
11	EF / EV	low power	144,5	185	105,5	22,5	74,5	1,66	2,39
12	ISSC	low power	134	187	129,5	22,5	89,5	1,70	2,26

⁽¹⁾ Incl. coil(s) and connector(s)

- ② EEx 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 (Ø 6 - 10 mm)
- ⑧ Push type or screw type manual operator, suffix MO
- ⑨ External pilot air supply, 1/8 pipe size
- ⊕ Connectable pilot exhaust port
- ⊖ Non-connectable pilot exhaust port

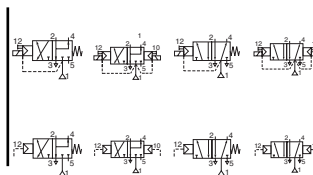
ACCESSORIES





SPOOL VALVES

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



3/2-5/2
Series
551

FEATURES

- The monostable spool valves, series 551, have TÜV certified IEC 61508 Functional Safety data and can be used up to SIL 4/AK 7
- 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 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

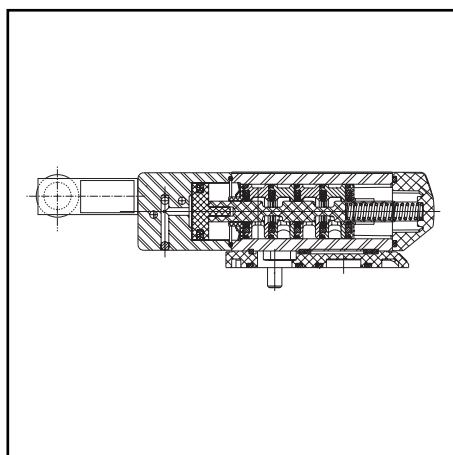
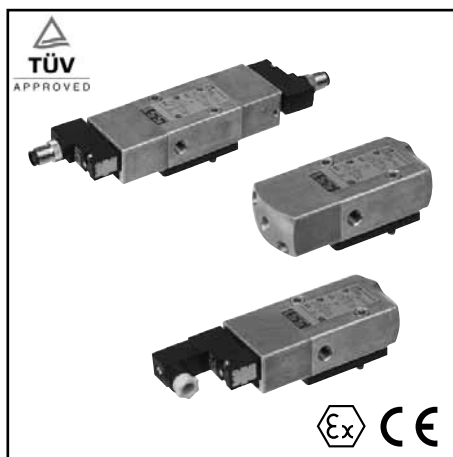
Differential pressure 2 - 10 bar [1 bar =100 kPa]
Flow (Qv at 6 bar) 700 l/min (ANR)

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

MATERIALS IN CONTACT WITH FLUID

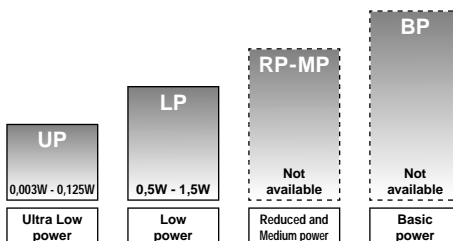
(*) Ensure that the compatibility of the fluids in contact with the materials is verified

	Air operated	CNOMO solenoid (pilot) interface
Body, end covers	Brass, AISI 316L	Brass, AISI 316L
Interface plates	Glass-filled PA	Glass-filled PA
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/CFSD/CFVT/CFL/CFSCIS/CFSDIS/CFVTIS) 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 (*)	
Pilot air operated - spring return (monostable)								
1/4	6	0,75	12,5	2	10	10	-	❖551A103 ⁽¹⁾
Pilot air operated and return (bistable)								
1/4	6	0,75	12,5	2	10	10	-	❖551A104



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/CENELEC				IP65					
(*)	(mm)	(m³/h)	(l/min)		~	=	~/=	CFSCIS	CFSDIS	CFVTIS	PISCIS	CFSC	CFSD	CFVT	CFL	PISC	CNOMO size 15
Solenoid air pilot operated - spring return (monostable)																	
1/4	6	0,6	10	2	10	10	LP	-	-	-	-	●	●	●	●	-	❖551C503 ⁽¹⁾
1/4	6	0,6	10	2	-	8	LP	○	○	○	-	-	-	-	-	-	❖551C503 ⁽¹⁾
1/4	6	0,6	10	2	8	8	UP	-	-	-	○	-	-	-	-	●	❖551C503 ⁽¹⁾
Solenoid air pilot operated and return (bistable)																	
1/4	6	0,6	10	2	10	10	LP	-	-	-	-	●	●	●	●	-	❖551C504
1/4	6	0,6	10	2	-	8	LP	○	○	○	-	-	-	-	-	-	❖551C504
1/4	6	0,6	10	2	8	8	UP	-	-	-	○	-	-	-	-	●	❖551C504

❖ Select 8 for NPT ANSI 1.20.3 or select G for ISO G (228/1) ● Available feature ○ Available feature in DC only.
⁽¹⁾ Certified IEC 61508 Functional Safety data, use suffix "SL".

PREFIX TABLE

prefix							description	power level			
1	2	3	4	5	6	7		UP	LP	RP	BP
C	F	S	C				Solenoid + spade plug DIN 43650, 9,4 mm, industry standard B (EN 60730)	-	●	-	-
C	F	S	D				Solenoid + spade plug ISO 15217/DIN 43650, 8 mm, form C (EN 60730)	-	●	-	-
C	F	V	T				Solenoid with connection M12, LED + protection (EN 60730)	-	○	-	-
C	F	L					Solenoid with cable ends, LED + protection (EN 60730)	-	○	-	-
C	F	S	C	I	S		Intrinsically safe, spade plug DIN 43650, 9,4 mm, industry stand. B, ATEX (EN 50020) *	-	○	-	-
C	F	S	D	I	S		Intrinsically safe, spade plug ISO 15217/DIN 43650, 8 mm, form C, ATEX (EN 50020) *	-	○	-	-
C	F	V	T	I	S		Intrinsically safe, connector M12 (straight), LED + protection, ATEX (EN 50020) *	-	○	-	-
P	I	S	C				Solenoid, spade plug DIN 43650, 9,4 mm, industry stand. B, ATEX (EN 60730)	●	-	-	-
P	I	S	C	I	S		Intrinsically safe, spade plug DIN 43650, 9,4 mm, industry stand. B, ATEX (EN 50020) *	○	-	-	-

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-ATEX (EN 13463-5)	-	-	-	-
			M	S			Screw type manual operator ⁽¹⁾	-	○/●	-	-
			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 1/8	34600418 ⁽²⁾
	NPT 1/8	34600482 ⁽²⁾
	M5	34600484 ⁽²⁾

- Available feature
- Available feature in DC only
- Not available
- * ATEX solenoids are also approved to EN 50281-1-1 (dust) and EN 13463-1 (non electrical valves)
- ⁽¹⁾ Not to use with "SL" suffix
- ⁽²⁾ Provided with "SL" suffix

PRODUCT SELECTION GUIDE

STEP 1

Select basic catalogue number, including pipe thread identification letter. Refer to the specifications table on page 7.

Example: G551C503

STEP 2

Select prefix (combination). Refer to the specifications table on page 7 and the prefix table on page 8, respect the indicated power level.

Air operated version, does not use prefix.

Example: CFSC

STEP 3

Select suffix (combination) if required.

Refer to the suffix table on page 8, respect the indicated power level.

GD suffix available for air operated version only (do not use manual operator suffix)

Example: MO

STEP 4

Select TPL, on page 9, mandatory for the pilot 630 (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 9.

Example: 230V / 50Hz

STEP 6

Final catalogue / ordering number.

Example:

CFSC G551C503MO 230 V / 50 Hz

ORDERING EXAMPLES:

CFSC	G	551	C	503		230V / 50 Hz
CFSC	G	551	C	503	SL	230V / 50 Hz
CFSD	G	551	C	504	MO	230V / 50 Hz
CFVT	8	551	C	504	MO	230V / 50 Hz
CFL	G	551	C	504	MO	24V / DC
PISCIS	G	551	C	503	MO	6V / DC
PISCIS	G	551	C	503	SLMO	6V / DC
PISCIS X	G	551	C	504	MS	TPL20666 24HV / DC
	G	551	A	103		
	G	551	A	103	GD	
	G	551	A	103	GDSL	
	G	551	A	104		

prefix ———

pipe thread ———

basic number ———

————— voltage

————— TPL

————— suffix

CNOMO SOLENOID (PILOT) INTERFACE ELECTRICAL CHARACTERISTICS

Coil insulation class	F
Connector	Spade plug (cable Ø 4 - 6 mm or cable Ø 6 - 7 mm)
Connector specification	DIN 43650, 9,4 mm, industry standard B (CFSC/PISC/PISCIS prefixes) ISO 15217 / DIN 43650, 8 mm, form C (CFSD/CFSDIS prefixes) M12, IEC 60947-5-2/CNOMO E03-62-520N (CFVT/CFVTIS prefixes) M12 (CFVT/CFVTIS prefixes) or cable ends (CFL prefix)
Connection	IEC 335
Electrical safety	DC (=) CFSC/CFSD: 12V - 24V; CFVT/CFL: 24V CFSCIS/CFSDIS/CFVTIS: 12V - 24V PISC: 24V to 70V; PISCIS: 6V, 8V, 12V, 24V
Standard voltages	AC (~) CFSC/CFSD: 24V - 115V - 230V/50Hz; other voltages and 60Hz 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 ⁽¹⁾
	inrush	holding		hot/cold				~	=	
	(VA)	(VA)	(W)	(W)				-	-	
Low power (LP)										
CFSC/CFSD	1,4	1,2	1,1	1/1,12	-25 to +60	EN 60730	moulded IP65	-	-	01
CFSC/CFSD	2,1 ⁽⁶⁾	1,6 ⁽⁶⁾	1,5 ⁽⁶⁾	-	-25 to +60	EN 60730	moulded IP65	-	-	01
CFVT/CFL ⁽⁵⁾	-	-	-	1,15/1,35	-25 to +60	EN 60730	moulded IP67/IP65	-	-	02-03
CFSCIS ⁽³⁾⁽⁴⁾	-	-	-	0,5	-10 to +50	II 1GD EEx ia IIC T5	moulded IP65	-	-	04
CFSDIS ⁽³⁾⁽⁴⁾	-	-	-	0,5	-10 to +50	II 1GD EEx ia IIC T5	moulded IP65	-	-	04
CFVTIS ⁽³⁾⁽⁴⁾	-	-	-	0,5	-10 to +50	II 1GD EEx ia IIC T5	moulded IP67	-	-	05
Ultra low power (UP)										
PISC	-	-	-	0,007	-0 to +60	-	moulded IP65	-	-	06
PISCIS ^{(2)(3)6V}	-	-	-	0,003	-20 to +50	II 1GD EEx ia IIC T6	moulded IP65	-	-	06
PISCIS ^{(2)(3)8V}	-	-	-	0,022	-20 to +50	II 1GD EEx ia IIC T6	moulded IP65	-	-	06
PISCIS ^{(2)(3)12LV}	-	-	-	0,012	-20 to +50	II 1GD EEx ia IIC T6	moulded IP65	-	-	06
PISCIS ^{(2)(3)12HV}	-	-	-	0,032	-20 to +50	II 1GD EEx ia IIC T6	moulded IP65	-	-	06
PISCIS ^{(2)(3)12LV}	-	-	-	0,046	-20 to +50	II 1GD EEx ia IIC T6	moulded IP65	-	-	06
PISCIS ^{(2)(3)12HV}	-	-	-	0,125	-20 to +50	II 1GD EEx ia IIC T6	moulded IP65	-	-	06

- Not available
⁽¹⁾ Refer to the dimensional drawings on pages 10 and 11.
⁽²⁾ Piezotronic standard voltages:

Prefix PISCIS:	6 V DC / 3 mW	8 V DC / 22 mW	12 L V DC / 12 mW	12 H V DC / 32 mW	24 L V DC / 46 mW	24 H V DC / 125 mW
Turn ON voltage U _{ON}	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 _{OFF}	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 _S + R _C)	1200 Ω max.	300 Ω max.	1200 Ω max.	470 Ω max.	1200 Ω max.	470 Ω max.

prefix option	safety parameters				
	U _I	I _I	P _I	L _I	C _I
	= (DC) (V)	(mA)	(W)	(µF)	(mF)
Low power (LP)					
CFSCIS	28	300	1,6	0	0
CFSDIS/CFVTIS	28	300	1,6	0	0
Ultra low power (UP)					
PISCIS	30	200	0,9	0	0

⁽³⁾ Intrinsically safe pilots: Check the electrical characteristics in the corresponding catalogue pages (CFSCIS/CFSDIS/CFVTIS: 302 pilots / PISCIS: 630 pilot).
⁽⁴⁾ CFSCIS/CFSDIS/CFVTIS (302 pilots):
 12 V : I_{ON} min., with LED = 33 mA; U_{ON} min. = 11,9 V; U_(max) recommended = 23 V; U_{OFF} = 3,3 V; I_{OFF} = 10 mA
 24 V : I_{ON} min., with LED = 25 mA; U_{ON} min. = 16,4 V; U_(max) recommended = 28 V; U_{OFF} = 5,7 V; I_{OFF} = 7 mA
⁽⁵⁾ Values for LED + protection. Use with TPL 20674 (CFSC and CFSD prefixes)
⁽⁶⁾ AC: 230 V
 - Not available

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 / CFSD prefixes - Add 0,15 W (DC) and 0,4 W/VA (AC)
Only available in 24 V AC/DC and 115 V AC
- Set of stainless steel mounting screws, catalogue number **97802212**
- Other pipe threads are available on request

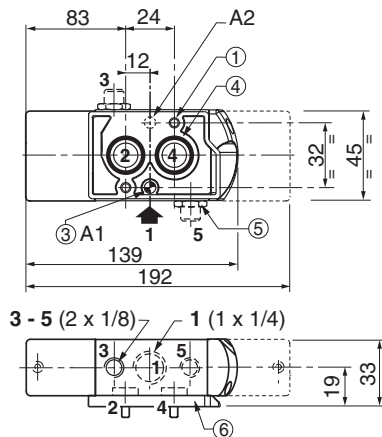
INSTALLATION

- Installation/maintenance instructions are included with each valve
- The solenoid valves and air operated valves can be mounted in any position without affecting operation
- IEC 61508 Functional Safety (Suffix SL), allowable temperature range: -40°C to +60°C. Probability of failure on demand, contact us
- 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
- 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.)
- 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

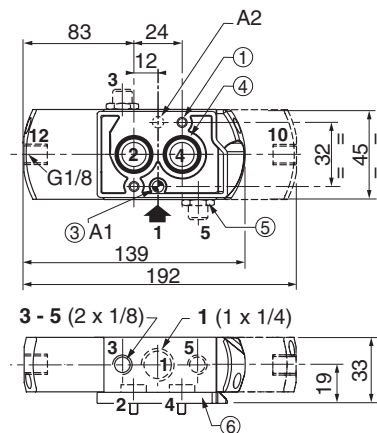
DIMENSIONS (mm), WEIGHT (kg)

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

Type 07: Air operated



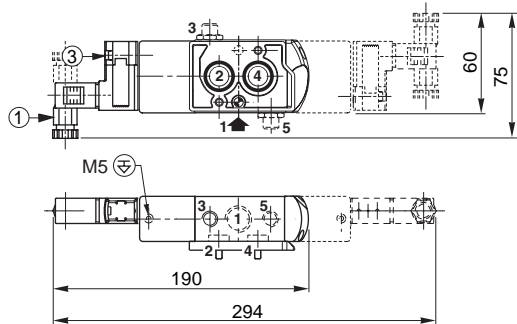
- ① 2 mounting holes: 5,3 mm dia.
(Spotfacing: 9 mm dia., depth 5 mm)
- ③ One 5 mm dia. hole for dowel pin:
- in position A1: 3/2 NC function plate
- in position A2: 5/2 function plate
- ④ 2 O-ring seals (supplied)
- ⑤ Exhaust reducer or exhaust protector
- ⑥ Interface plate



TYPE 01

Prefix "CFSC" and "CFSD" Solenoid
Low power
302 pilot
Polyarylamide
IEC 335 / DIN 43650, 9,4 mm/8 mm (cable 4 - 6 mm)
IP65

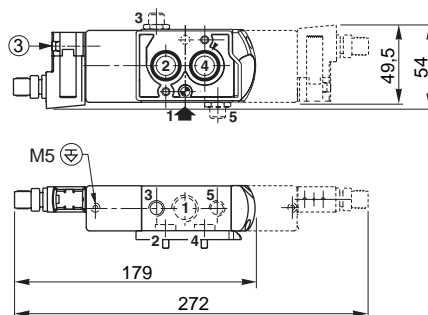
551C503 / 551C504
551C503MS / 551C504MS / 551C503MO / 551C504MO



TYPE 02

Prefix "CFVT" Solenoid
Low power
302 pilot
Polyarylamide
IEC 335 / M12 connection + LED and protection
IP67

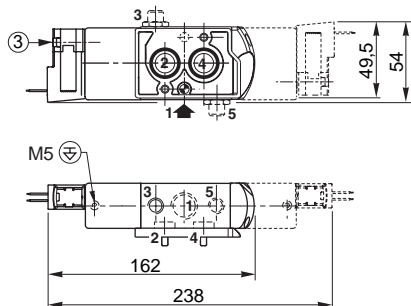
551C503 / 551C504
551C503MS / 551C504MS / 551C503MO / 551C504MO



TYPE 03

Prefix "CFL" Solenoid
Low power
302 pilot
Polyarylamide
IEC 335 / cable ends + LED and protection
IP65

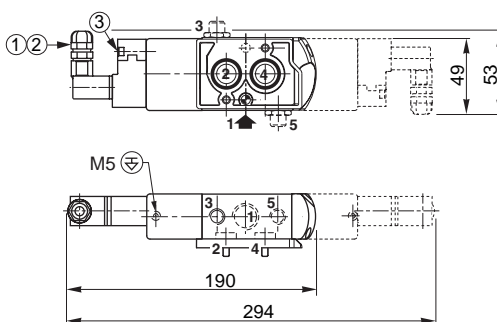
551C503 / 551C504
551C503MS / 551C504MS / 551C503MO / 551C504MO



TYPE 04

Prefix "CFSCIS" and "CFSDIS" Solenoid
Low power
302 pilot
Polyarylamide
IEC 335 / DIN 43650, 9,4 mm/8 mm (cable 6 - 7 mm)
EN 50020 and EN 50281-1-1
IP65 / II 1 GD EEx ia IIC

551C503MO / 551C504MO



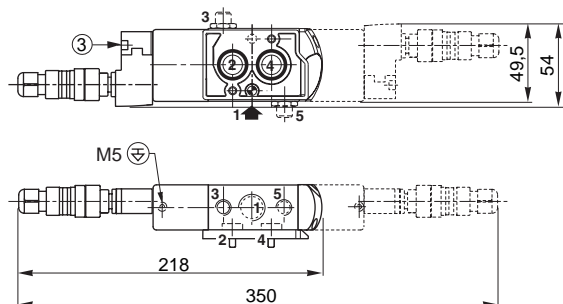
DIMENSIONS (mm), WEIGHT (kg)



TYPE 05

Prefix "CFVTIS" Solenoid
 Low power
 302 pilot
 Polyarylamide
 IEC 335 / connector M12 + LED and protection
 EN 50020 and EN 50281-1-1
 IP67 / II 1 GD EEx ia IIC

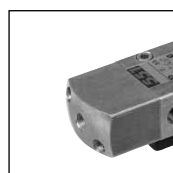
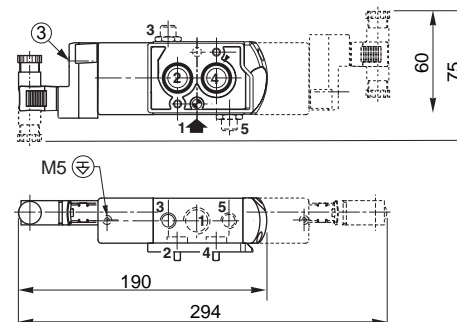
551C503MO / 551C504MO



TYPE 06

Prefix "PISC" and "PISCIS" Solenoid
 Ultra low power
 630 pilot (piezotronic)
 Polyamide, epoxy coated
 IEC 335, DIN 43650, 9,4 mm
 EN 50020 and EN 50281-1-1 (PISCIS)
 IP65 / II 1 GD EEx ia IIC

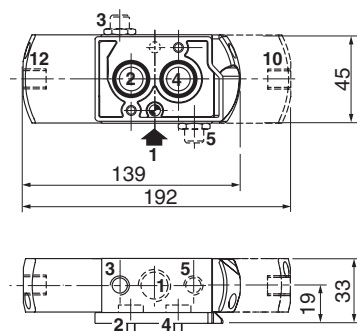
551C503MO / 551C504MO



TYPE 07

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

551A103 / 551A104

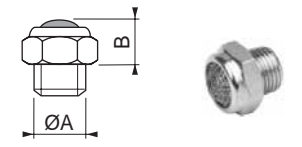


- ① Connector rotatable by 90° increments (cable 4 - 6 mm)
- ② Connector rotatable by 90° increments (cable 6 - 7 mm)
- ③ Manual operator location
- ⊕ Connectable pilot exhaust port

type	prefix option	power level	weight ⁽¹⁾	
			monostable	bistable
01	CFSC / CFSD	low power	0,876	1,092
02	CFVT	low power	0,876	1,092
03	CFL	low power	0,869	1,078
04	CFSCIS / CFSDIS	low power	0,881	1,102
05	CFVTIS	low power	0,903	1,146
06	PISC / PISCIS	ultra low power	0,86	1,06
07	-	-	0,824	0,988

⁽¹⁾ Incl. connector(s), except CFVT.

ACCESSORIES



ØA	M5	1/8	-
B	4,3	10	-

**exhaust protector
(stainless steel)**

