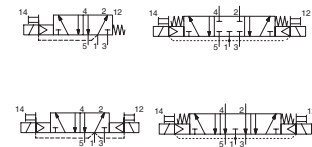




SOLENOID VALVES

pilot operated, spool type
single/dual solenoid
aluminium body, 1/4 - 1/2



5/2-5/3
Series
551
553

FEATURES

- 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)
- Can be externally piloted (external air pilot supply) to convert valve to zero minimum operation by flipping a gasket
- The monostable spool valves in conformity with IEC 61508 Standard (2010 route 2_H version) have TÜV (551 series) and EXIDA (551-553 series) certified with integrity levels: SIL 2 for HFT = 0 / SIL 3 for HFT = 1
- The solenoid valves satisfy all relevant EU directives

GENERAL

Differential pressure	2 - 10 bar [1 bar = 100 kPa]
Flow (Qv at 6 bar)	l/min (ANR)
	1/4 1/2
	860 3800

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
Core tube, core spring	Stainless steel
Core and plugnut	Stainless steel
Top disc	PA
Pilot seals	FPM, NBR
Shading coil	Copper

OTHERS MATERIALS

Solenoid enclosure Zinc plated steel (epoxy coated)

ELECTRICAL CHARACTERISTICS

Coil insulation class	F
Coil connection	Embedded screw terminal (cable ø 7 - 12 mm)
Cable entry	Cable gland, polyamide (PA), M20x1,5
Electrical safety	IEC 335
Electrical enclosure protection	IP67 (EN 60529)
Standard voltages	DC (=) : 24V - 48V
(Other voltages and 60 Hz on request)	AC (~) : 24V - 48V - 115V - 230V / 50 Hz

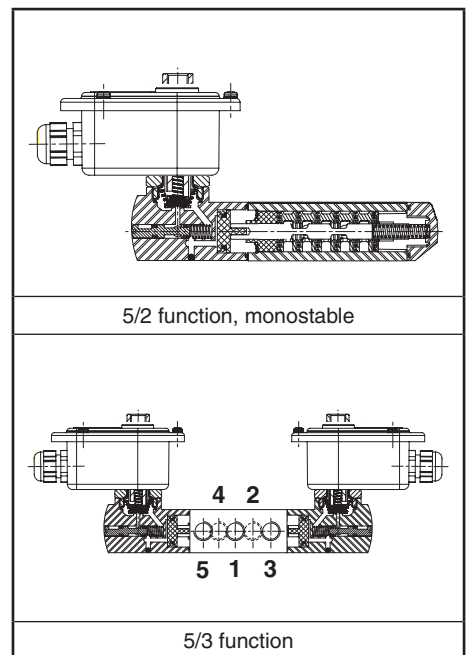
prefix option	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type ⁽¹⁾
	inrush ~ (VA)	holding ~ (VA) (W)		hot/cold = (W)		~ 230 V/50 Hz	= 24 V DC	
		9/11,2	-40 to +75					
WP	55	23	10,5	9/11,2	-40 to +75	400405-117	400405-142	01

⁽¹⁾ 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. ⁽²⁾	max. (PS)		air (*)				impulse / maintained man. operator		
G	(mm)	(m³/h)	(l/min)		~	=		~	=	~/=			
5/2 - Solenoid air pilot operated - spring return (monostable)													
1/4	6	0,75	12,5	0 / 2	10	10	10,5	11,2	WPG551B417	MO	-	-	
1/2	13	3,15	52,5	0 / 2	10	10	10,5	11,2	WPG553A417	MO	-	-	
5/2 - Solenoid air pilot operated and return (bistable)													
1/4	6	0,75	12,5	0 / 2	10	10	10,5	11,2	WPG551B418	MO	-	-	
1/2	13	3,15	52,5	0 / 2	10	10	10,5	11,2	WPG553A418	MO	-	-	
5/3 - W1 - pressure held, solenoid air pilot operated and return													
1/4	6	0,75	12,5	0 / 2	10	10	10,5	11,2	WPG551B467	MO	-	-	
1/2	13	3,15	52,5	0 / 2	10	10	10,5	11,2	WPG553A467	MO	-	-	
5/3 - W3 - pressure release, solenoid air pilot operated and return													
1/4	6	0,75	12,5	0 / 2	10	10	10,5	11,2	WPG551B468	MO	-	-	
1/2	13	3,15	52,5	0 / 2	10	10	10,5	11,2	WPG553A468	MO	-	-	
5/2 - Solenoid air pilot operated - spring return (monostable), certified IEC 61508 Functional Safety data													
1/4	6	0,75	12,5	0 / 2	10	10	10,5	11,2	WPG551B417SL	-	-	-	
1/2	13	3,15	52,5	0 / 2	10	10	10,5	11,2	WPG553A417SL	-	-	-	

⁽²⁾ Zero minimum is only achieved if external pressure is applied.



OPTIONS

- Valves configured for external pilot air supply with ASCO solenoid interface, TPL 20547
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU (www.asco.com)
- Compliance with "UL", "CSA" and other local approvals available on request
- Coil insulation class H for max. ambient temperature +80°C, prefix "WPHT"
- 1/2" NPT (prefix "T") and M20 x 1.5 (prefix "ET") conduits (aluminium or 316 SS) available for steel solenoid enclosure
- Other pipe connections are available on request

INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- 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). Check temperature range of valve body and solenoid for suitability. For probability of failure, contact us
- Threaded pipe connection is standard: G = G (ISO 228/1)
- 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 internal and external grounding terminals
- 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)
551-553	G 1/8	34600418 ⁽¹⁾
551	G 1/4	34600419 ⁽¹⁾
553	G 1/2	34600479 ⁽¹⁾

⁽¹⁾ Supplied with suffix "SL".

ORDERING EXAMPLES:

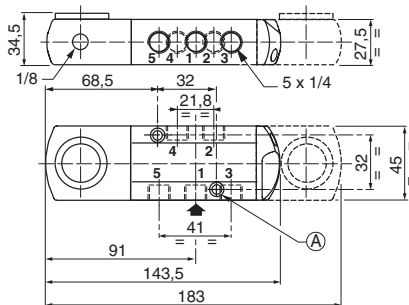
WP	G	551	B	417	230V / 50 Hz
WP	G	551	B	417	SL 230V / 50 Hz
WP	G	553	A	418	MO 24V / DC
WPHT	G	551	B	418	MO 230V / 50 Hz
WP	G	553	A	418	MO 115V / 50 Hz

prefix — pipe thread — basic number — voltage — suffix

DIMENSIONS (mm), WEIGHT (kg)

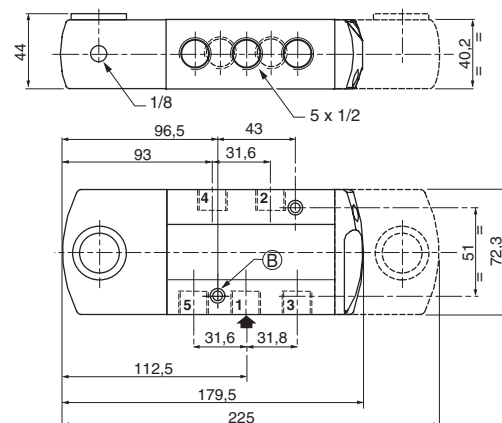


Series 551

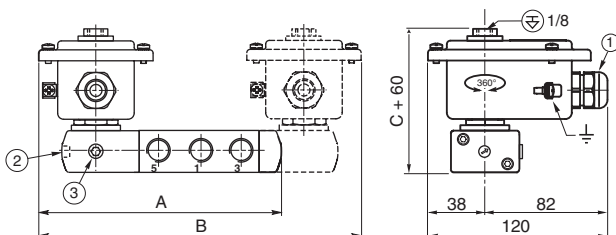


- (A) 2 mounting holes: 5,3 mm dia. (Spotfacing: 9 mm dia., depth 5 mm)
 (B) 2 mounting holes: 6,5 mm dia. (Spotfacing: 11 mm dia., depth 6 mm)

Series 553



TYPE 01
 Prefix "WP" Solenoid
 Metal; epoxy coated
 IEC 335
 IP67



- ① Cable gland for unarmoured cable with 7 to 12 mm dia. sheath
 ② Manual operator location
 ③ External pilot air supply, 1/8 pipe size

type	series	prefix option	A	B	C	weight ⁽²⁾		
						monostable	bistable	W1 - W3
04	551	WP	160	216	103	0,87	1,52	1,52
	553	WP	196,2	256,3	112,5	1,51	2,08	2,08

⁽²⁾ Including coil and cable gland.