



aerospace
climate control
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pneumatics
process control
sealing & shielding



Process Control 3/2 SOLENOID VALVES

Direct Operated



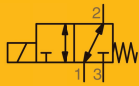
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3/2

DIRECT OPERATED SOLENOID VALVES A03 SERIES

Balanced Poppet, Universal. 1/4" for Process Control Market

II 2G Ex db IIC T6...T4 Gb

II 2D Ex tb IIIC T80°C...T130°C Db

> PRODUCT FEATURES:

- The new Explosion Proof Flameproof "d" coil valve is valid for Zone 1/21 and 2/22 application.
- The solenoid valves are recommended for pilot applications with basic flow, wide pressure ranges and no minimum operating pressure.
- Coils used in metal enclosure have class H insulation materials.
- Compact design, less assembly space requirement.
- Highly resistant to corrosion.
- Peak voltage suppression and AC rectifier included as standard.
- Products comply with IEC/EN61508 system safety specification, TUV safety certification SIL-2, SIL-3 compatibility.



EU type examination certificate No.: LCIE 19 ATEX 3008 X
 IECEx certificate of Conformity No.: IECEx LCIE 19.0008X
 Low Voltage Directive 2014/35/EU, EN 60730-1:2016/A1:2019
 CCC No.: 2021332307001104
 Nepsi No.: GYB19.1708X

> MARKETS

- Chemical
- Petrochemical
- Processing

> APPLICATIONS

- Control of solenoid valves in hazardous areas Zone 1/21 and 2/22.

> MECHANICAL FEATURES

Materials in contact with fluid

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

Body: AISI 316L / Brass

Stem: Stainless steel

Sleeve: Stainless steel

Stopper and plunger: Stainless steel

Springs: Stainless steel

Sealings & poppets: FVMQ

Guide ring: PTFE

> GENERAL PERFORMANCE

Differential pressure: 0 – 10 bar

Response times: ≤ 100 ms

Fluids (*): air, inert gas

Ambient Temperature Range(TS) ⁽¹⁾

-45 to + 100°C

HP	9.0W-11.2W	High power
BP	5.2W-5.7W	Basic power
RP	3.2W-3.6W	Reduced power
LP	1.5W-1.8W	Low power

Power consumption levels: hot - cold electrical holding values(watt)



DIRECT OPERATED SOLENOID VALVES

A03 SERIES

> Specifications

Pipe size	Orifice size	Flow factory KV		Operating pressure differential(bar)		Ambient Temp. ⁽¹⁾		Power level	Power(cold)		Basic part number	
				Min.	Max.	Min	Max		AC	DC	Body	
NPT	mm	m ³ /h	l/min		~/=	°C	°C	~/=	W	W	Brass	AISI 316L.
1/4	5.7	0.45	7.5	0	10	-20	70	HP	11.2	11.2	A03B*22**-H	A03R*22**-H
1/4	5.7	0.45	7.5	0	10	-20	100	BP	5.7	5.7	A03B*22**-B	A03R*22**-B
1/4	5.7	0.45	7.5	0	10	-20	65	RP	3.6	3.6	A03B*22**-R	A03R*22**-R
1/4	5.7	0.45	7.5	0	10	-20	65	LP	-	1.8	A03B*22**-L	A03R*22**-L
1/4	5.7	0.45	7.5	0	10	-45	70	HP	11.2	11.2	A03B*24**-H	A03R*24**-H
1/4	5.7	0.45	7.5	0	10	-45	100	BP	5.7	5.7	A03B*24**-B	A03R*24**-B
1/4	5.7	0.45	7.5	0	10	-45	65	RP	3.6	3.6	A03B*24**-R	A03R*24**-R
1/4	5.7	0.45	7.5	0	10	-45	65	LP	-	1.8	A03B*24**-L	A03R*24**-L

> Coils, Explosion Safety code & Power Consumption

Coil insulation class: H

Electrical safety: EN 60730-1

Standard voltages: DC(=) 24V – 48V; available voltage variation ±10%

AC(~) 24V – 48V – 115V – 230V/50/60Hz, Other voltage are available on request

Coil specification	High Power(HP)		Basic Power(BP)		Reduced Power(RP)		Low Power(LP)	
	hot	cold	hot	cold	hot	cold	hot	cold
	9.0W	11.2W	5.2W	5.7W	3.2W	3.6W	1.5W	1.8W
Safety code	II2G Ex d IIC Gb T6/T5 II2D Ex t IIIC Db T80/T95		II2G Ex d IIC Gb T6/T5/T4 II2D Ex t IIIC Db T80/T95/T130		II2G Ex d IIC Gb T6 II2D Ex t IIIC Db T80		II2G Ex d IIC Gb T6 II2D Ex t IIIC Db T80	
Electrical enclosure protection (EN 60529)	IP66/67 , AI./SS		IP66/67 , AI./SS		IP66/67 , AI./SS		IP66/67 , AI./SS	
Operator ambient temperature range(°C) ⁽²⁾	-60 to +55/70		-60 to +65/80/110		-60 to +65		-60 to +65	

> Explanation of Temperature Ranges of Solenoid Valves

(1) 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.

(2) 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.

DIRECT OPERATED SOLENOID VALVES A03 SERIES

> How to Order

A 03 R N2 4 MO - L RDN C 2

Body material	
B	Brass
R	AISI 316L

Body pipe size	
N2	1/4" NPT
G2	1/4" BSPP

Min temp.	
2	-20°C
4	-45°C

Manual operator selection	
MN	None manual operator function
MO	Manual operator function
MS	Manual reset function
ML	Manual operator & lock function

Coil power level	
H	High power, 9.0-11.2W
B	Basic power, 5.2-5.7W
R	Reduced power, 3.2-3.6W
L	Low power, 1.5-1.8W


Coil voltage		
C1	12VDC	HP, BP, RP, LP Available
C2	24VDC	HP, BP, RP, LP Available
C4	48VDC	HP, BP, RP, LP Available
C5	110VDC	HP, BP, RP, LP Available
3N	125VDC	HP, BP, RP Available
B1	24V / 50Hz	HP, BP, RP Available
B2	24V / 60Hz	HP, BP, RP Available
E6	100V / 50Hz	HP, BP, RP Available
0A	110-120V / 50Hz	HP, BP, RP Available
F2	200 V / 50Hz	HP, BP, RP Available
3D	220-230V / 50Hz	HP, BP, RP Available
K7	110V / 60Hz	HP, BP, RP Available
3K	110-120 V / 60Hz	HP, BP, RP Available
J2	200 V / 60Hz	HP, BP, RP Available
7J	220-230V / 60Hz	HP, BP, RP Available

Coil type and cable thread		
ADN	NPT1/2	Flameproof – Aluminum, "d" type Ex housing (EN/IEC 60079-1, 60079-31)
ADM	M20X1.5	
RDN	NPT1/2	Flameproof – 316L SS, "d" type Ex housing (EN/IEC 60079-1, 60079-31)
RDM	M20X1.5	

Note: For MS type, High power and Low power aren't available

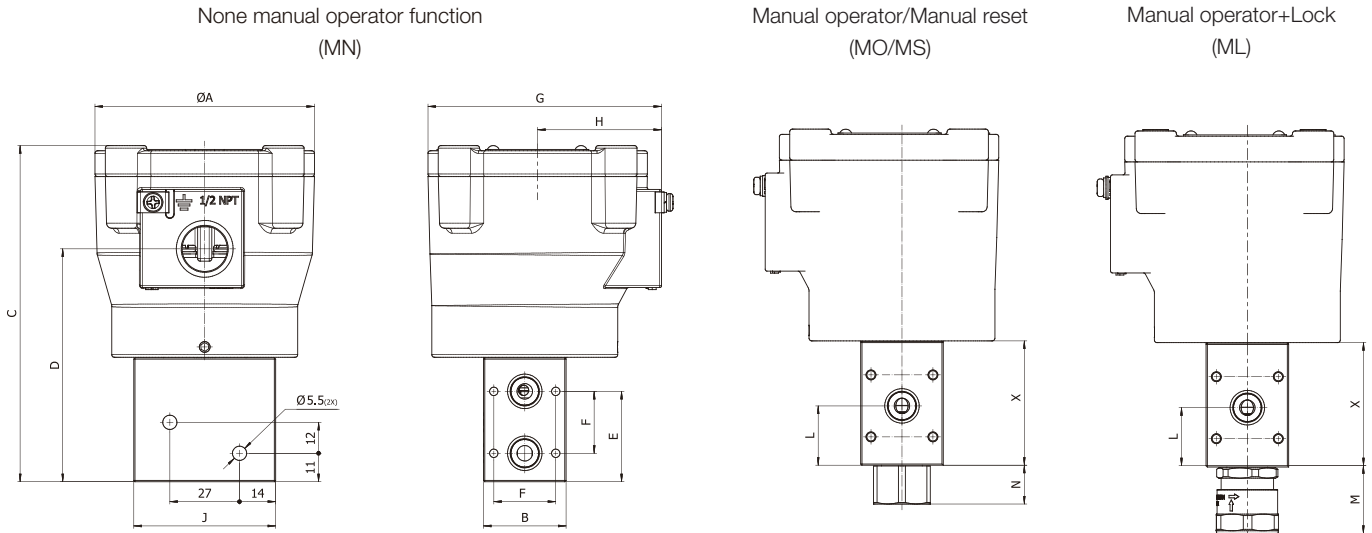
> Spare Parts Kit

Exhaust protector

	Part Number	Thread	Pipe Size	Material	Mesh/Filtering	Wrench Size
	0683 00 14	NPT	1/4	316L	100-200 μ m	16mm

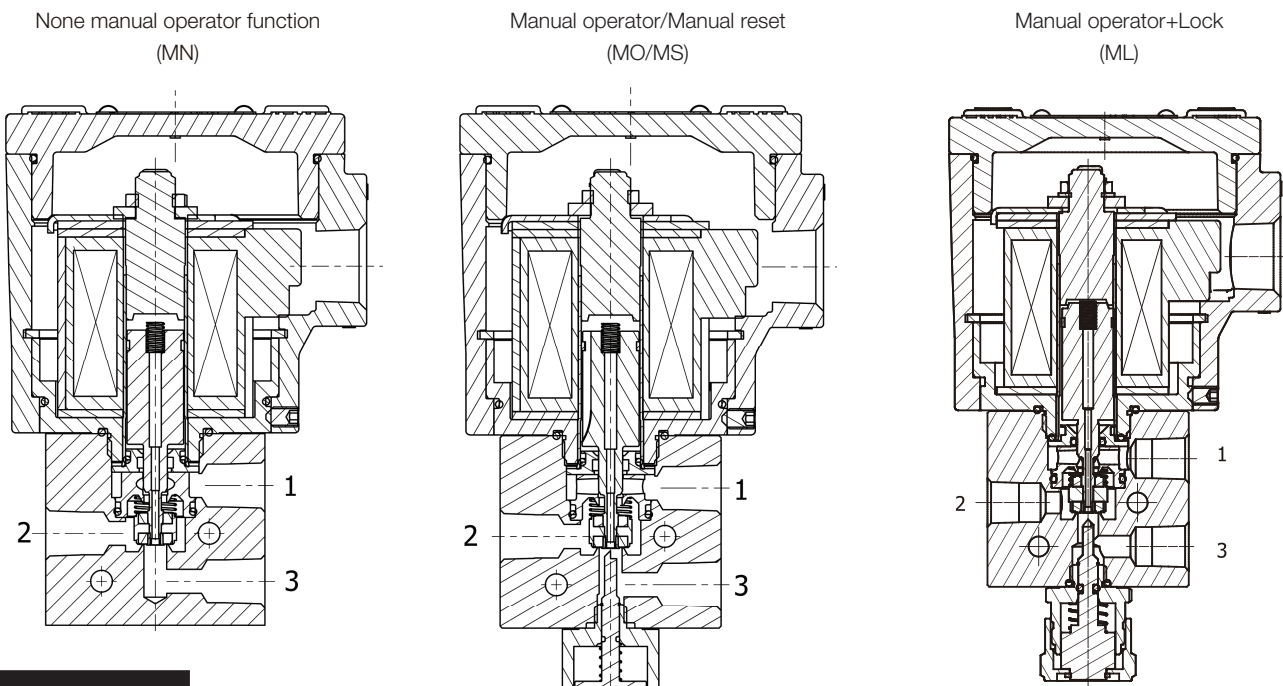
DIRECT OPERATED SOLENOID VALVES A03 SERIES

> Dimensions(mm), Weight(Kg)



Power Level	Coil Type	A	B	C	D	E	F	G	H	J	L	X	N		M		Weight (kg)	
													MO	MS	ML	MN/MO/MS	ML	
L	RDN, RDM	85	32	140	100	35	24	90.5	48	55	23	58.2	15	-	26	2.85	2.92	
	ADN, ADM	85	32	140	100	35	24	90.5	48	55	23	58.2	15	-	26	1.82	1.88	
R/B/H	RDN, RDM	85	32	130	90	35	24	90.5	48	55	23	48.2	15	15	26	2.78	2.85	
	ADN, ADM	85	32	130	90	35	24	90.5	48	55	23	48.2	15	15	26	1.75	1.81	

> Sectional Drawings



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