

MD21 - MD23



DESCRIPTION

N.C. solenoid operated valves. In standard conditions the valve is closed and the fluid cannot pass. When the coil is energized the valve opens allowing flow passing. These valves can be supplied with a flow rate regulation.
Closing time <1 sec.

TECHNICAL SPECIFICATIONS

- ▶ **Body material:** Aluminium
- ▶ **Protection class:** IP 65
- ▶ **Power supply voltage tolerance:** -15% +10%
- ▶ **Coil housing:** class F (155°C)
- ▶ **Ambient temperature:** -20°C + 60°C
- ▶ **Max superficial temperature for:**
MD21-MD22: 85°C
MD23: 90°C
- ▶ **Approval certificate IMQ CE-0051**
- ▶ **EC Certified according EN 161+A3:2013**
- ▶ **According to Directive 2014/34/EU Atex**
- ▶ **Escluse from application to Directive 2014/68/EU (PED)** according to art.1 paragraph 1.

- ▶ **According to Directive 2014/30/EU** (Electromagnetic Compatibility)
- ▶ **According to Directive 2014/35/EU** (Low Voltage)
- ▶ **According to Regulation (EU) 2016/426** (GAR)

AVAILABLE ON REQUEST

- ▶ NPT version
- ▶ Flanged connections version
- ▶ Other options like position indicator switches on the safety shut off.

SIL LEVEL

▶ Level of SIL of solenoid valve stand-alone is SIL 2, when are insalled tow solenoid valves in series level reached is SIL 3, like indicated on standard EN 676:2008. The solenoid valve has level PL d. For further data see the SIL LEVEL table.

REPAIR KIT

▶ These articles cannot be supplied as spare part.

Note

In the column "Power"(see below table, when there are two values, these refer to:
- higher value to the inrush power
- lower value less than power of maintaining

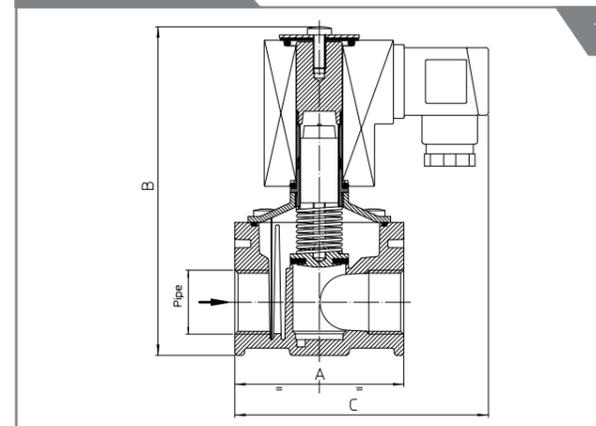
SIL LEVEL	
Parameter	Value
Hardware Failure Tolerance - HFT	0
Common Cause Failure - CCF in points	75
Safe Failure Fraction - SFF in %	65%
Expected Lifetime Cycles - B _{10d}	251278
Expected Lifetime - T _{10d} [years]	87
Probability of Dangerous Failures - PFH _d [1/h]	1,33E-07
PL - Performance Level	d
Safety Integrity Level - SIL	2
Mean Time To Dangerous Failure MTTF _d [years]	860



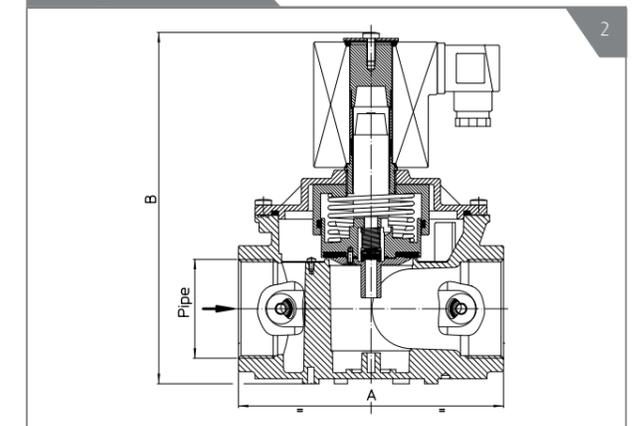
MD21	G04	C4	B	015	
Model valve	G04= G 1/2	C4= N.O.	B= NBR	015	Orifice 10 ⁻¹ mm

Port connections	Ø [mm]	Max. working pressure [mbar]	Gas code	Coil type	Voltage code	Connector options Std included	Dimensions [mm]			Drawing reference
							A	B	C	
Normally Closed in Aluminium										
G 1/2	15	200	MD21G04C4B015	C	(See table)	A - C - D	70	136	103	1
G 3/4	20	200	MD21G05C4B020	C		A - C - D	70	136	103	1
G 1	25	200	MD21G06C4B025	C*		E - F - G - M	70	136	103	1
G 1 1/4	32	200	MD21G07C4B032	D		E - F - G - M	160	187	-	2
G 1 1/2	40	200	MD21G08C4B040	D		E - F - G - M	160	187	-	2
G 2	50	200	MD21G04C4B050	D		E - F - G - M	160	213	-	2

Drawing Reference



Drawing Reference



Connector options	
A	Standard
C	Rectified (12V 50/60 Hz - 24V 50/60 Hz)
D	Rectified (110V 50/60Hz - 230V 50/60Hz)
E	Normal + energy saving (12V DC - 24V DC)
F	Rectified + energy saving (12V 50/60Hz - 24V 50/60Hz)
G	Rectified + energy saving (230V 50/60Hz)
M	Rectified + energy saving (110V 50/60Hz)

WARNING

For the solenoid valves installation and maintenance is recommended to consult the instruction sheet supplied with each product.

Coil type	Voltage [V]	Frequency [DC/Hz]	Power [W/WA]	Connector options
C	04 12	DC	16	A
	14 12 ~	50/60	12	C
	24 24	DC	17	A
	34 24 ~	50/60	14	C
	64 110 ~	50/60	17	D
C*	75 230 ~	50/60	18	D
	05 12	DC	23/6	E
	15 12 ~	50/60	20/6	F
	25 24	DC	27/7	E
	35 24 ~	50/60	24/7	F
C**	65 110 ~	50/60	29/9	M
	76 230 ~	50/60	30/9	G
	06 12	DC	56/16	E
	16 12 ~	50/60	56/16	F
	26 24	DC	56/16	E
D	36 24 ~	50/60	56/16	F
	66 110 ~	50/60	63/20	M
	77 230 ~	50/60	54/18	G
	27 24	DC	68/18	E
	37 24 ~	50/60	68/18	F
	67 110 ~	50/60	77/23	M
	78 230 ~	50/60	89/25	G

The "ODE" reserves the right to carry out technical and aesthetic modifications without prior notice.

