

INDUSTRIAL FITTINGS - valves

AIGNEP solenoid valves

General purpose valves controlled by an electric current intended for fluids and gases. Four valve series are available: 01F, 02F, 03F and 04F. The body of the valve is made of brass, stem and spring of stainless steel, ferrule of stainless steel (NO type - of brass).

The valves are supplied without solenoids and plugs and as a standard - they must be ordered separately. When selecting a valve, consider the following: medium, temperature and viscosity of the medium, ambient temperature, flow rate, maximum working pressure, differential pressure (pressure difference at closed valve). In the case of doubts or questions concerning valve selection, please contact Technical Department of TUBES INTERNATIONAL®.

Application depends on seal material		
material	working temperature	application
NBR	from -10°C up to +90°C	pneumatic installations (air, inert gases), water (max. up to +75°C), mineral oils, diesel and heating oils
FKM (Viton)	from -10°C up to +140°C	mineral oils, petrol, diesel and heating oils
EPDM	from -10°C up to +140°C	hot water, steam (max. up to 2.5 bar)



01F series

Working press.: Up to 40 bar
Ferrule diameter: 10 mm
Flow factor Kv: DN 1.5 - 0.06 m³/h
 DN 2 - 0.09 m³/h
 DN 2.5 - 0.15 m³/h
 DN 3 - 0.20 m³/h
 DN 4 - 0.30 m³/h

Description: Direct acting solenoid valve

Valve code structure e.g.: AI-01F-02-1-15-N-0

series	connection size	no. of connect. and positions	symbol	DN	seal	stem regulation
01F	02 = 1/8" BSP 03 = 1/4" BSP	1 = 2/2NC		15 = 1.5 mm 25 = 2.5 mm 03 = 3 mm 04 = 4 mm	N = NBR E = EPDM V = FKM	0 = no reg.
		2 = 2/2NO				
		3 = 3/2NC*				
		4 = 3/2NO**				

* - connection size no. 3 (stem): M5, Kv = 0.05 m³/h

** - connection size no. 3 (stem): M5, Kv = 0.05 m³/h; DN sizes available: 1.5 mm, 2 mm, 2.5 mm

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02F series

Working press.: Up to 40 bar
Ferrule diameter: 13 mm
Flow factor Kv: DN 4 - 0.35 m³/h
 DN 5 - 0.51 m³/h
Description: Direct acting solenoid valve

Valve code structure e.g.: AI-02F-02-1-04-N-0

02F	03	1		04	N	0
series	connection size	no. of connect. and positions	symbol	DN	seal	stem regulation
02F	03 = 1/4" BSP	1 = 2/2NC		04 = 4 mm 05 = 5 mm	N = NBR E = EPDM V = FKM	0 = no reg.
		2 = 2/2NO				
		3 = 3/2NC*				
		4 = 3/2NO*				

* - connection size no. 3 (stem): M5, Kv = 0.1 m³/h



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03F series

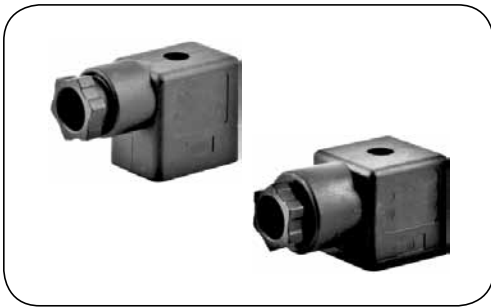
Working press.: Up to 25 bar

Ferrule diameter: 13 mm

Description: Direct acting, membrane solenoid valve

Valve code structure e.g.: AI-03F-04-1-12-N-0

series	connection size	no. of connect. and positions	symbol	DN	Kv [m ³ /h]	seal	stem regulation
03F	03 = 1/4" BSP	1 = 2/2NC		10 = 10 mm	1.58	N = NBR E = EPDM V = FKM	0 = no reg.
	04 = 3/8" BSP			12 = 12 mm	2.34		
	05 = 1/2" BSP			14 = 14 mm	2.73		
	07 = 3/4" BSP			12 = 12 mm	2.36		
	09 = 1" BSP			14 = 14 mm	2.75		
				18 = 18 mm	4.08		
			25 = 25 mm	6.63			



Solenoid valve connectors

Degree of protection: IP67 IEC 60529

series	code	cable Ø [mm]	size [mm]	type	colour
01F / 04F	AI-CON01-000-01	6 ÷ 8	22	2-pin	black
01F / 02F / 03F / 04F	AI-CON31-000-01	6 ÷ 8 / 8 ÷ 11	30 ÷ 36	2-pin	black

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04F series

Working press.: Up to 25 bar

Ferrule diameter: 10 mm

Description: Indirect acting, membrane solenoid valve

Valve code structure e.g.: AI-04F-04-1-12-N-0

series	connection size	no. of connect. and positions	symbol	DN	Kv [m ³ /h]	seal	stem regulation
04F	03 = 1/4" BSP	1 = 2/2NC		10 = 10 mm	1.88	N = NBR E = EPDM V = FKM	0 = no reg. 1 = with reg.*
	04 = 3/8" BSP			12 = 12 mm	2.90		
	05 = 1/2" BSP			14 = 14 mm	3.32		
	07 = 3/4" BSP			12 = 12 mm	3.03		
	09 = 1" BSP			14 = 14 mm	3.53		
	03 = 1/4" BSP	2 = 2/2NO		10 = 10 mm	1.88		
	04 = 3/8" BSP			12 = 12 mm	2.90		
	05 = 1/2" BSP			14 = 14 mm	3.32		
	07 = 3/4" BSP			12 = 12 mm	3.03		
	09 = 1" BSP			14 = 14 mm	3.53		
				18 = 18 mm	5.56		
				25 = 25 mm	10.97		

* - sizes available with stem regulation: 3/4" BSP, 1" BSP

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Solenoids for solenoid valves

Degree of protection: IP67 IEC 60529
Insulation class: H CEI EN 60085
Connection: AMP for 22 mm size
 DIN 43650 for 30 ÷ 36 mm size
Voltage tolerance: ±10%
Working temp.: -10°C ÷ +80°C

series	code	assembly diameter [mm]	size [mm]	nominal voltage [V]	power
01F / 04F	AI-SOL10-012-C-4	10	22	12V DC	6.5 W
01F / 04F	AI-SOL10-024-C-4		22	24V DC	6.5 W
01F / 04F	AI-SOL11-012-C-5		30	12V DC	8 W
01F / 04F	AI-SOL11-024-C-5		30	24V DC	8 W
01F / 04F	AI-SOL10-024-A-8		22	24V AC	7.5 VA
01F / 04F	AI-SOL10-110-A-8		22	110V AC	7.5 VA
01F / 04F	AI-SOL10-220-A-8		22	220V AC	7.5 VA
01F / 04F	AI-SOL11-024-A-9		30	24V AC	11 VA
01F / 04F	AI-SOL11-110-A-9		30	110V AC	11 VA
01F / 04F	AI-SOL11-220-A-9		30	220V AC	11 VA
02F	AI-SOL20-012-C-5		13	30	12V DC
02F	AI-SOL20-024-C-5	30		24V DC	8 W
02F / 03F	AI-SOL20-012-C-6	30		12V DC	14 W
02F / 03F	AI-SOL20-024-C-6	30		24V DC	14 W
02F / 03F	AI-SOL21-012-C-7	36		12V DC	22 W
02F / 03F	AI-SOL21-024-C-7	36		24V DC	22 W
02F / 03F	AI-SOL20-024-A-A	30		24V AC	14 VA
02F / 03F	AI-SOL20-110-A-A	30		110V AC	14 VA
02F / 03F	AI-SOL20-220-A-A	30		220V AC	14 VA
02F / 03F	AI-SOL20-024-A-B	30		24V AC	21 VA
02F / 03F	AI-SOL20-110-A-B	30		110V AC	21 VA
02F / 03F	AI-SOL20-220-A-B	30		220V AC	21 VA
02F / 03F	AI-SOL21-024-A-C	36		24V AC	31 VA
02F / 03F	AI-SOL21-110-A-C	36		110V AC	31 VA
02F / 03F	AI-SOL21-220-A-C	36		220V AC	31 VA