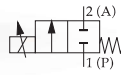


21A - 21L - 21AP -T0 -T3 -T4 SERIES

Solenoid valves, 2-way

Proportional solenoid valve are designed to provide a flowrate output proportional to current change. The valves have elastomeric sealing that ensure tight closure up to the maximum pressure. Minimum operational pressure is not required. Material used and frictionless plunger construction ensure reliability and long life time.

The valves can be controlled through the duty cycle of a 24 VDC PWM signal or directly by regulating the current applied to the coil.



TECHNICAL DATA

PORT CONNECTION	G1/8 ÷ G1/4, PUSH-IN connections	
SEALING MATERIALS	FKM	EPDM
FLUID TEMPERATURE	-10°C +140°C	-10°C +140°C
FLUIDS	air, water, inert gases, mineral oils	air, water, inert gases
VISCOSITY	12 cSt up to orifice 1.5 mm, 37 cSt for orifice 2.0 mm, 53 cSt for orifice 2.5 mm and above	
TUBE Ø - COIL WIDTH - SERIES	ø 13 mm - 30 mm	BDA08, BVA08 (CLASS F), BDV08 (CLASS H)
	ø 13 mm - 36 mm	UDV16 (CLASS H)
	ø 13 mm - 52 mm	GDV14 (CLASS H)
PROTECTION DEGREE	IP65 EN 60529 (DIN 40050) with plug connector	
VOLTAGE REGULATION	24 V DC pulse width modulation (600 ÷ 800 Hz)	
HYSTERESIS	< 5%	
REPEATABILITY	< 3%	
SENSITIVITY	< 2%	

MATERIALS

BODY, ORIFICE	Brass UNI EN 12165 CW617N or stainless steel AISI 316 or PPS
ARMATURE TUBE	Stainless steel AISI 316
FIXED CORE	Stainless steel AISI Series 400
PLUNGER	Stainless steel AISI Series 400
PHASE DISPLACEMENT RING	-
SPRING	Stainless steel AISI Series 300
SEALING	V=FKM, E=EPDM

■ CE

- 2014/35/EU (LVD)
- 2014/30/EU (EMC)
- 2014/68/EU (PED) art. 4.3 up to 1",
cat. I module A above 1"

■ INDUSTRIAL OXYGEN

Special versions suitable for contact with industrial oxygen are available. Please refer to codification options.

■ UL recognized and VDE

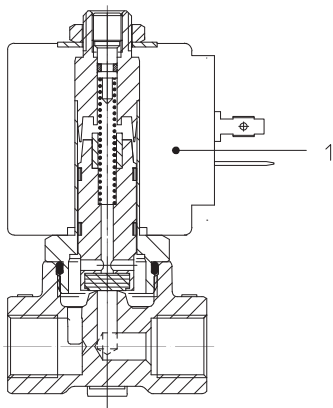
approved coils are available for this series, please refer to coil section.

■ NSF/ANSI 169 certification

(Special Food Equipment and Devices) is available for this series, Please find the correspondend symbol in the next pages. Valves with NSF approval are in compliance with CE regulation 1935/2004.

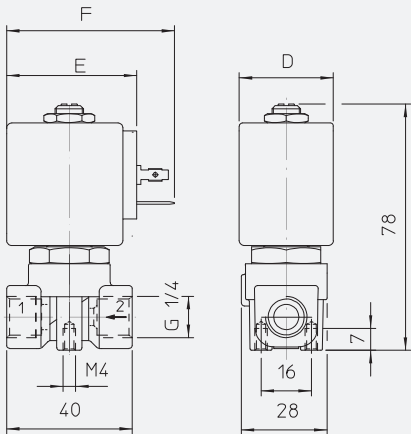
- The fluids listed in the "technical data" tables should be considered as a recommendation. Please check the chemical compatibility of the fluids with the materials of the valve at RFQ stage.
- Please check the engineering information for further details on viscosity.
- These solenoid valves are not suitable for stagnating fluids, or for fluids that being subject to evaporation may deposit solid, calcareous or similar residues.
- For control options please refer to +SMART chapter.

BRASS, G1/4

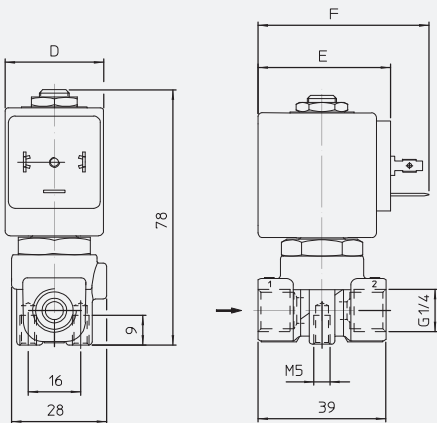


Proportional technology ■ Solenoid valves ■ 2-way ■ 21A - 21L - 21AP -TO SERIES

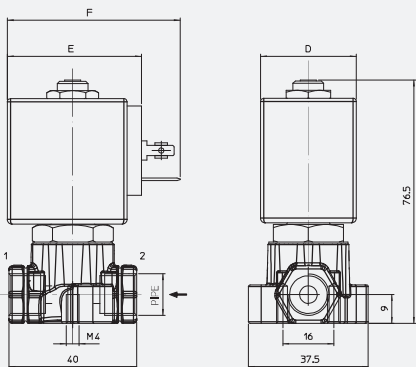
DRAWING 1



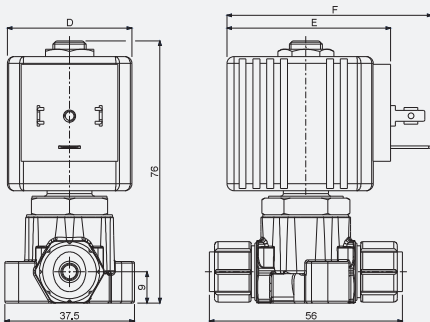
DRAWING 2



DRAWING 3



DRAWING 4



COILS SERIES	DIMENSIONS [mm]		
	D	E	F
B**O8	30	42	54
UDV16	36	48	60

■ The valves can be maintained in a stable position only if the current circulating in the coil is kept constants. If the valve is controlled through voltage variation, it is necessary to compensate the power decrease due to heating effect by increasing the voltage, so to re-establish the initial current value.

2/2 PROPORTIONAL BRASS AND STAINLESS STEEL BODY

PIPE ISO 228/1	ORIFICE SIZE Ø [mm]	Kv [l/min]	COIL SERIES	PRESSURE [bar]		CODE		DRAWING REFERENCE
				MIN	MOPD (DC)	BRASS	STAINLESS STEEL	
G1/4	1,0	1,4	B**08	0	4	21A2KCV10-04	-	1
			UDV16	0	4	21A2KCV10-04	-	1
		0,45	B**08	0	10	21A2KCV10-10	-	1
			UDV16	0	10	21A2KCV10-10	-	1
	1,5	1,4	B**08	0	10	21A2KCV15-10	-	1
			UDV16	0	10	21A2KCV15-10	-	1
	2,0	2	B**08	0	4	21A2KCV20-04	-	1
			UDV16	0	4	21A2KCV20-04	-	1
		2	B**08	0	6	21A2KCV20-06	-	1
			UDV16	0	-	-	-	-
		2	B**08	0	10	21A2KCV20-10	21L2KCV20-10	1 (brass), 2 (StSt)
			UDV16	0	10	21A2KCV20-10	-	1
		2	B**08	0	12	21A2KCV20-12	-	1
			UDV16	0	-	-	-	-
	2,5	2,5	B**08	0	8	21A2KCV25-08	-	1
			UDV16	0	8	21A2KCV25-08	-	1
	3,0	4	B**08	0	5	21A2KCV30-05	-	1
			UDV16	0	5	21A2KCV30-05	-	1
		4	B**08	0	6,5	21A2KCV30-6X	21L2KCV30-6X	1 (brass), 2 (StSt)
			UDV16	0	6,5	21A2KCV30-6X	-	1
	4,5	6,5	B**08	0	1,5	21A2KCV45-1X	21L2KCV45-1X	1 (brass), 2 (StSt)
			UDV16	0	1,5	21A2KCV45-1X	21L2KCV45-1X	1 (brass), 2 (StSt)
		6,4	UDV16	0	2	21A2KCV45-02	-	1
			GDV14	0	2	21A2KCV45-02	-	1
		6,5	UDV16	0	2,5	21A2KCV45-2X	-	1
			GDV14	0	2,5	21A2KCV45-2X	21L2KCV45-2X	1 (brass), 2 (StSt)
	5,5	9	UDV16	0	1	21A2KCV55-01	-	1
			GDV14	0	1	21A2KCV55-01	-	1

■ For sealing different from FKM, replace the letter "V" with the ones corresponding to the other materials.
V= FKM, E=EPDM.

PIPE ISO 228/1	ORIFICE SIZE Ø [mm]	Kv [l/min]	COIL SERIES	PRESSURE [bar]		CODE PPS	DRAWING REFERENCE
				MIN	MOPD (DC)		
G1/8	1,5	1,1	B**08	0	10	21AP1KCV15-10	3
	2,5	2,5	UDV16	0	5	21AP1KC4V25-1FT0 	3
	3,0	3,4	B**08	0	5	21AP1KC4V30-1BT0 	3
			UDV16	0	5	21AP1KC4V30-1BT0 	3
			B**08	0	1	21AP1KC4V30-1CT0 	3
			UDV16	0	1	21AP1KC4V30-1CT0 	3
G1/4	1,5	1,4	B**08	0	8	21AP2KC4V15-1Q	3
			B**08	0	8	21AP2KC4V15-1QT0 	3
	2	1,8	UDV16	0	10	21AP2KCV20-10	3
	3,0	3,4	B**08	0	5	21AP2KCV30-05	3
		3,4	UDV16	0	5	21AP2KCV30-05	3
PUSH-IN Ø6 mm	3,0	3,4	UDV16	0	2,6	21AP6KC4V30-1IT0 	4

I	II	III	IV	V	VI	VII	VIII		IX	X
2	1	A	2	KC		V	15	-	10	

I. NUMBER OF WAYS

2 - 2-way

II. NUMBER OF ELEMENTS

1 - 1 element

III. SERIES

A - brass body, Ø13 mm core tube
 AP - PPS body, Ø13 mm core tube
 L - StSt body, Ø13 mm core tube

IV. CONNECTIONS

2 - G1/4
 3 - G1/8
 6 - PUSH IN for OD 6 mm
 (only for AP series)

V. CORE TUBE TYPE

KC - for 2/2 proportional valves

VI. PHASE DISP. RING MATERIAL

blank - without
 4 - without (for NSF approved valves)

VII. SEALING MATERIAL

V - FKM
 E - EPDM

VIII. ORIFICE Ø [mm] MULTIPLIED BY 10**IX. MAXIMUM PRESSURE**

12 - 12 bar
 10 - 10 bar
 08 - 8 bar
 6X - 6.5 bar
 05 - 5 bar
 04 - 4 bar
 2X - 2.5 bar
 02 - 2 bar
 1X - 1.5 bar
 01 - 1 bar
For NSF approved valves
 1Q - 8 bar
 1F - 5 bar
 1B - 5 bar
 1I - 2.6 bar
 1C - 1 bar

X. NSF CERTIFICATION

T0 - PPS body
 T3 - Low lead brass body
 T4 - StSt body

+SMART 

+SMART 

■ For control options please refer to +SMART chapter.

