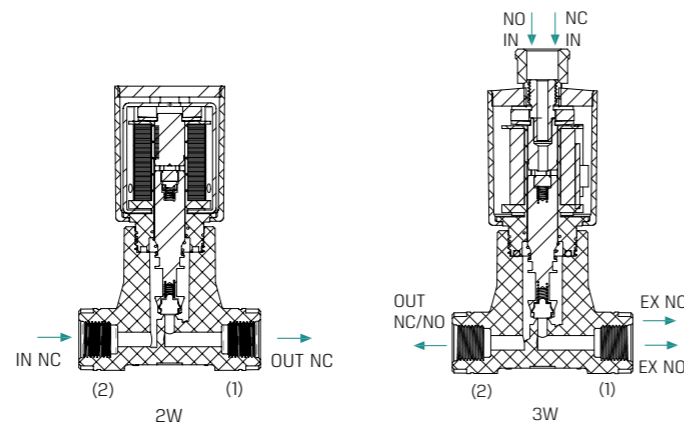


# SOLENOID VALVES

G75-A3P | 1/8" Latch 2 Way, 3 Way NC, NO



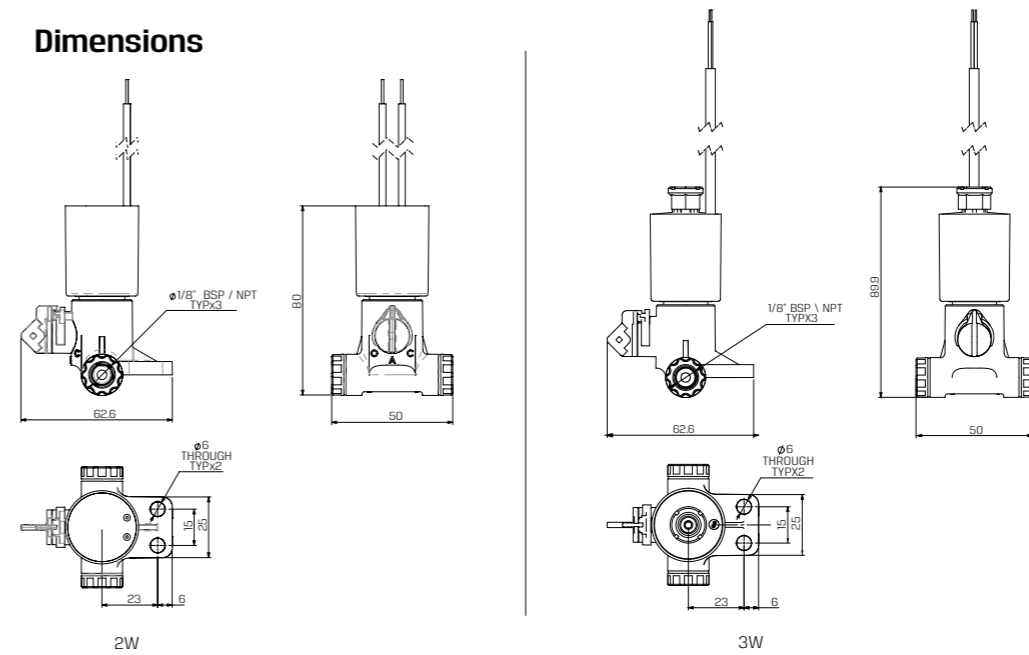
## Technical Data

Function	2 Way NC, 3 Way NC, NO
Ports size	1/8" BSP & NPT
Orifice size	2.6 mm
Pressure range	<b>NC</b> (2 Way, 3 Way) : 10 bar <b>NO</b> (3 Way) : 10 bar
Temperature range	<b>Fluid</b> : 5°C to 50°C (no freezing) <b>Ambient</b> : 10°C to 50°C
Materials in contact with media	<b>Manual override:</b> Plastic <b>Main Valve:</b> UV Stabilized - Reinforced Nylon 6 30% GF <b>Solenoid Operator:</b> Stainless Steel AISI 300 & 400 series <b>Seals:</b> NBR
Mounting	2 x Ø6 mm holes
Manual override	3 positions (Open/Auto/Close)
Media	Air, water
Coil voltage	Latch
Switching time	40-60 msec
Electric connection	22AWG cable
Standard protection class	IP66

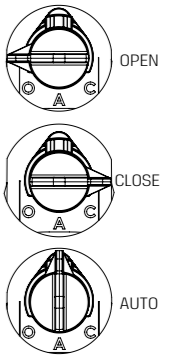
\* Can **only** be operated with supplied coil

G75-A3P | 1/8" Latch 2 Way, 3 Way NC, NO

## Dimensions



Manual Override Operation



To manually open the valve :  
turn selector switch to OPEN

**NO** : To change from OPEN to AUTO:  
turn the selector switch to AUTO

**NC** : To change from OPEN to AUTO:  
turn the selector switch to CLOSE,  
and then to AUTO

## How to Order

G75-A3P	-	TYPE	PORT	FUNCTION	ORIFICE	-	LATCH TYPE <sup>(1)</sup>	WIRES					
		with flange	1	1/8" BSP	10	2W NC	1	2.6	5a	1Ω	PA	two	Null
				1/8" NPT	11	3W NC	3			4Ω	PB	three	a
						3W NO	4						

## Coil resistance vs input voltage range

Resistance [Ω]	Suitable input voltage range [V]
1	8 - 12
4	12 - 18

Example : G75-A3P-11015a-PA

G75-A3P, with flange, 1/8" BSP, 2W NC, 2.6 orifice, 1Ω latch with two wires

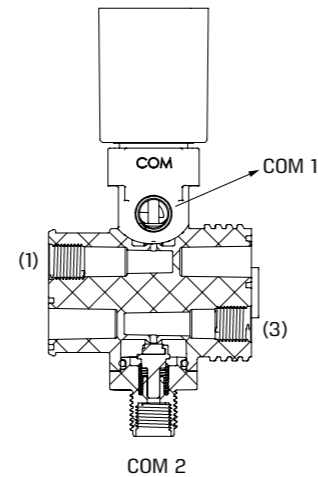
G75-A3P - 1 10 1 5a - PA

(1) Refer to coil resistance vs input voltage table

\* To order valves manufactured according to your specific requirements, please contact our technical sales department

# SOLENOID VALVES

G75-VSA | Stand-alone solenoid 3 Way NC, NO



## Technical Data

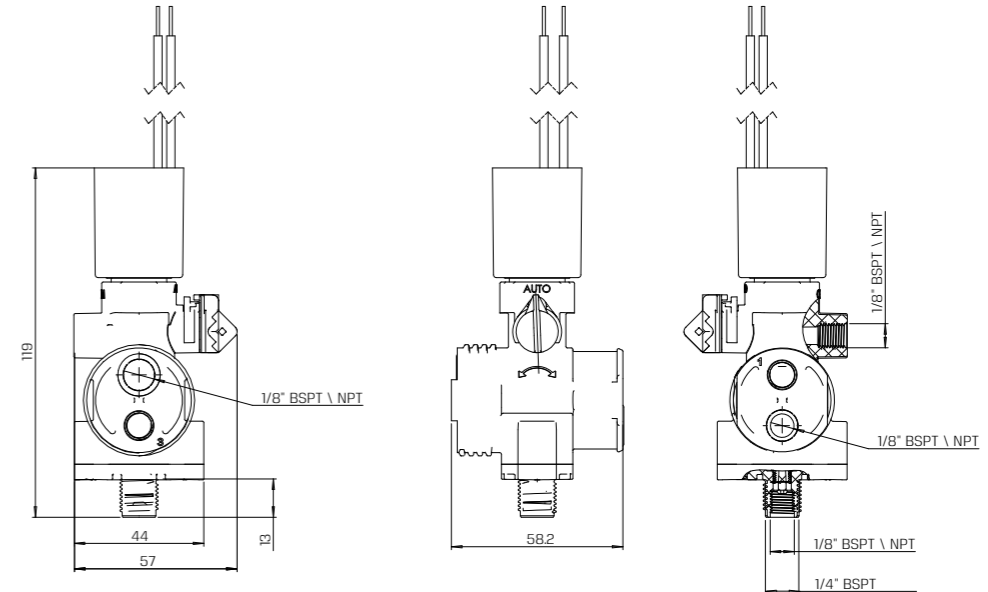
Function	3 Way NC, NO
Ports size	1/8" BSPT & NPT
Orifice size	1.8 mm
Pressure range	0 to 8 bar
Switching time	30-50 ms
Temperature range	<b>Fluid :</b> 0°C to 50°C (no freezing) <b>Ambient :</b> -10°C to 50°C
Materials in contact with media	<b>Manual override:</b> Plastic (Reinforced Nylon) <b>Main Valve:</b> Plastic (Reinforced Nylon & POM) <b>Solenoid Operator:</b> Stainless Steel AISI 300 & 400 series <b>Seals:</b> EPDM
Mounting	Lock nut on the bottom COM port
Manual override	3 positions latch : Auto, Close, Open
Media	Air, water
Coil voltage	Latch
Standard protection class	IP66

PORT	NO	NC
1	Exhaust	Pressure
3	Pressure	Exhaust
COM	Out	Out

\* Can **only** be operated with supplied coil

G75-VSA | Stand-alone solenoid 3 Way NC, NO

## Dimensions



## How to Order

G75-VSA	BODY	PORT	FUNCTION	MANUAL OVERRIDE	ORIFICE	SEALS	LATCH TYPE <sup>(1)</sup>	OUTLET <sup>(2)</sup>	WIRES
	Plastic 4	1/8" BSPT 10 1/8" NPT 11	3W NC 3 3W NO 4	Plastic 1	1.8 3a	EPDM E	4Ω SB 9Ω SC 12Ω SD 23Ω S6	COM 1 1 COM 2 2	two Null three a

## Coil resistance vs input voltage range

Resistance [Ω]	Suitable input voltage range [V]
4	6 - 9
9	12 - 14
12	14 - 16
23	18 - 21

Example : G75-VSA-410313aE-SB1

G75-A stand-alone solenoid, plastic, 1/8" BSPT, 3W NC, plastic manual override, 1.8 orifice, EPDM seals, 4Ω latch, COM 1 outlet, two wires

G75-VSA	-	4	10	3	1	3a	E	-	SB	1
---------	---	---	----	---	---	----	---	---	----	---

(1) Refer to coil resistance vs input voltage table  
(2) A plug will be fitted on the other outlet port

\* To order valves manufactured according to your specific requirements, please contact our technical sales department

# SOLENOID VALVES

G75-A | 1/8", 1/4" 2 Way, 3 Way NC, NO



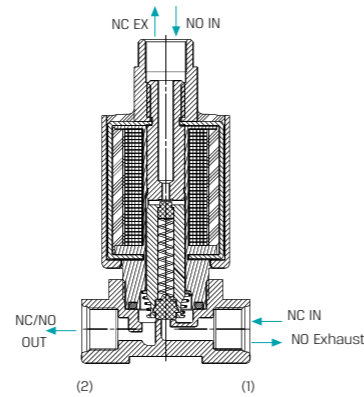
G75-A Brass



G75-A | 2W | Plastic



G75-A | 3W | Plastic



## Technical Data

Function	2 Way, 3 Way NC, NO
Ports size	1/8" and 1/4" BSP & NPT
Orifice size	See table
Pressure range	See table
Temperature range	<b>Fluid</b> : 5°C to 50°C (no freezing) <b>Ambient</b> : -10°C to 50°C
Materials in contact with media	<b>Manual override:</b> Reinforced Nylon <b>Main Valve:</b> Brass or Reinforced Nylon <b>Solenoid Operator:</b> Stainless Steel AISI 300 & 400 series <b>Seals:</b> EPDM
Coil voltage	• Voltage and power consumption - see table
Standard protection class	IP66

• Available with brass adaptor upon request

## Max. Pressure (bar) table

Function	Orifice (mm)	AC	DC	DC Latch
2W NC	up to 2.0	12	12	12
3W NC	1	16	12	16
	1.2	11	9	11
	1.6	6	5	6
3W NO	1.0	16	16	16
	1.2	12	12	12
	1.6	10	10	10

## Voltage & Current table

Solenoid	Voltage	Inrush [A]	Holding [A]
2W 50 Hz	V +10%	0.3	0.19
2W 60 Hz		0.2	0.14
3W 50/60 Hz *		n-20%	0.125
DC	4.5W		

\* Except 24V AC without Diode

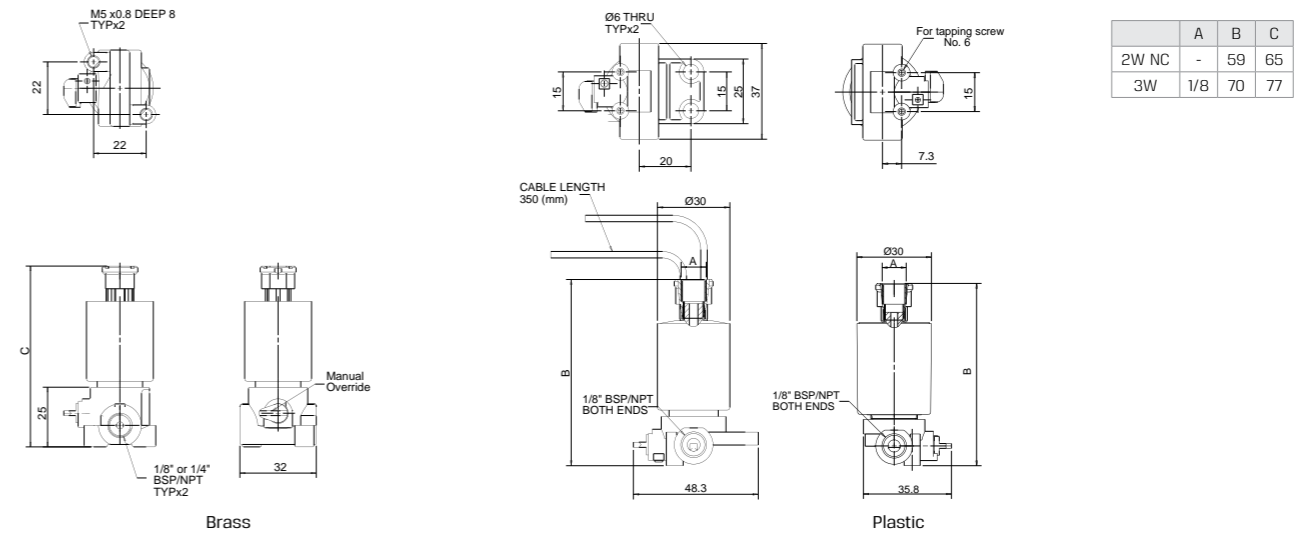
## Voltage & Power Consumption

V	AC (W)	DC (W)
	50 Hz	
24	•	•
110	• 2W only	

• Available options

G75-A | 1/8", 1/4" 2 Way, 3 Way NC, NO

## Dimensions



	A	B	C
2W NC	-	59	65
3W	1/8	70	77

## How to Order

G75-A	-	TYPE	PORT	FUNCTION	MANUAL OVERRIDE	ORIFICE	-	VOLTAGE <sup>(3)</sup>	WIRES
		with flange	1 1/8" BSP	10 2W NC	1 None	0 1.0	1	24V AC	1 two null
		without flange	2 1/8" NPT	11 3W NC	3 Plastic <sup>(2)</sup>	1 1.2	2	24V AC w/out Diode <sup>(4)</sup>	1R three <sup>(5)</sup> a
		Brass	3 1/4" BSP <sup>(1)</sup>	20 3W NO	4	1.6	3	12V AC	3
			1/4" NPT <sup>(1)</sup>	21		2.0	4	12V DC	4
								24V DC	5
								23Ω	6
								110V AC	7
								4Ω	B
								9Ω	C
								12Ω	D

## Coil resistance vs input voltage range

Resistance [Ω]	Suitable input voltage range [V]
4	6 - 9
9	12 - 14
12	14 - 16
23	18 - 21

Example : G75-A-110302-1

G75 with flange, 1/8" BSP, 3W NC, no manual override, 1.2 orifice, 24V AC coil, two wires

G75-A - 1 10 3 0 2 - 1

(1) Brass only

(2) Recommended for AC and continuous DC only

(3) For Latch : Refer to coil resistance vs input voltage table

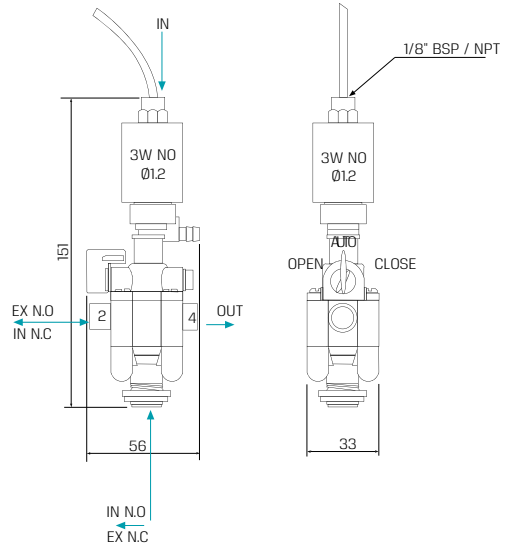
(4) 3W NO 1.6 mm : Max pressure is 8 bars

(5) For Latch only

\* To order valves manufactured according to your specific requirements, please contact our technical sales department

# SOLENOID VALVES

GALIT | 3 Way pilot operated NC, NO



## Technical Data

Function	3 Way NC, NO
Ports size	1/8" BSP & NPT
Orifice size	5mm
Pressure range	1 to 10 bar
Temperature range	<b>Fluid</b> : 5°C to 50°C (no freezing) <b>Ambient</b> : -10°C to 50°C
Materials in contact with media	<b>Main Valve:</b> Reinforced Nylon <b>Solenoid Operator:</b> Stainless Steel 300 & 400 series <b>Seals:</b> NBR <b>Spring:</b> Stainless Steel AISI 300 series
Manual override	Manual override with 3 positions : • <b>AUTO</b> - for automatic operation (valve is open when solenoid is energized) • <b>MANUAL</b> - valve is kept open • <b>CLOSE</b> - valve is kept closed
Solenoid	Assembled with 3W NO 1.2mm G75 operator
Coil voltage	• Voltage and power consumption - see table
Standard protection class	IP66

## Voltage & Current table

Solenoid	Voltage	Inrush [A]	Holding [A]
2W 50 Hz	V <sup>+10%</sup> n <sup>-20%</sup>	0.3	0.19
2W 60 Hz		0.2	0.14
3W 50/60 Hz *		0.125	0.125
DC		4.5W	

\* Except 24V AC without Diode

## Voltage & Power Consumption

V	AC (W)	DC (W)
	50 Hz	
12	•	•
24	•	•

• Available options

\* To order valves manufactured according to your specific requirements, please contact our technical sales department

## How to Order

GALIT	-	PORT	VOLTAGE <sup>(1)</sup>		MOUNTING BRACKET	WIRES	
		1/8" BSP	10	24V AC 1	without 0	two	null
		1/8" NPT	11	24V AC w/out Diode	with 1	three <sup>(2)</sup>	a
				12V AC 3			
				12V DC 4			
				24V DC 5			
				23Ω 6			
				4Ω B			
				9Ω C			
				12Ω D			

## Coil resistance vs input voltage range

Resistance [Ω]	Suitable input voltage range [V]
4	6 - 9
9	12 - 14
12	14 - 16
23	18 - 21

Example : GALIT-1011

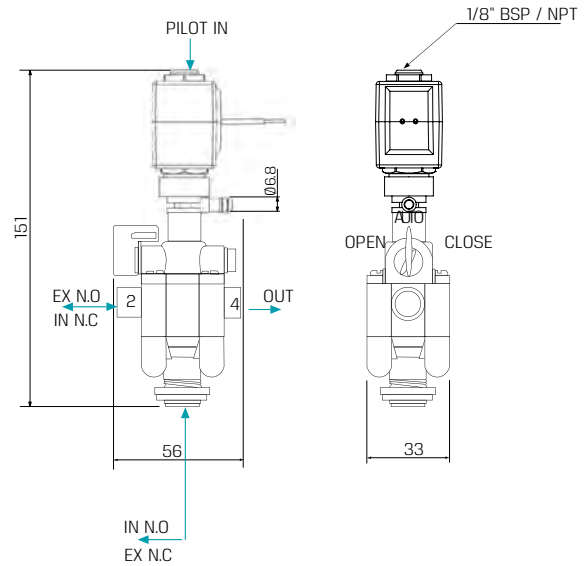
GALIT pilot operated, 1/8" BSP, 24V AC with mounting bracket, two wires

GALIT - 10 1 1

(1) For Latch : Refer to coil resistance vs input voltage table  
(2) For Latch only

# SOLENOID VALVES

## GEM-GALIT | 3 Way pilot operated NC, NO



### Technical Data

Function	3 Way NC, NO
Ports size	1/8" BSP & NPT
Orifice size	5mm
Pressure range	1 to 10 bar
Temperature range	<b>Fluid :</b> 5°C to 50°C (no freezing) <b>Ambient :</b> -10°C to 50°C
Materials in contact with media	<b>Main Valve:</b> Reinforced Nylon <b>Solenoid Operator:</b> Stainless Steel 300 & 400 series <b>Seals:</b> NBR <b>Spring:</b> Stainless Steel AISI 300 series
Manual override	Manual override with 3 positions : • <b>AUTO</b> - for automatic operation (valve is open when solenoid is energized) • <b>MANUAL</b> - valve is kept open • <b>CLOSE</b> - valve is kept closed
Solenoid	Assembled with 3W NO GEM-OG operator, 1.6
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP66

### Voltage & Power Consumption

V	AC (W)						DC (W)		
	50 Hz		60 Hz				10	5.5	3.5
6							•	•	•
12	•			•			•	•	•
24	•	•	•	•	•	•	•	•	•
48	•			•			•		
110	•			•	•		•		
120	•			•					
220	•	•	•	•			•		
230	•	•		•					
240	•			•			•		

• Available options

### How to Order

GEM-GALIT	PORT	VOLTAGE	POWER	CONNECTOR	MOUNTING BRACKET
	1/8" BSP 10	w/out coil 0	No coil 0	w/out 0	w/out 0
	1/8" NPT 11	6 1	AC8W 50Hz 1	with 1	with <sup>(2)</sup> 1
		12 2	AC8W 60Hz 2	with LED 2	
		24 3	DC10W 3	with bi-color LED 3	
		48 4	AC5.5W 50Hz 4	flying leads coil 4	
		110 5	AC5.5W 60Hz 5	with 1/2" Hub 5	
		120 6	AC2.5W 50/60Hz 6	surge protection with LED 6	
		220 7A	DC5.5W 7	connector with moulded cable 7	
		230 7	DC3.5W 8	other 9	
		240 8			
		Latch/other <sup>(1)</sup> 9			

Example : GEM-GALIT-10-3110

GEM-GALIT pilot operated, 1/8" BSP, 24V AC8W 50Hz, with connector, without mounting bracket

GEM-GALIT - 10 - 3 - 1 - 1 - 0

(1) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table

(2) For Latch only

\* To order valves manufactured according to your specific requirements, please contact our technical sales department

# SOLENOID VALVES

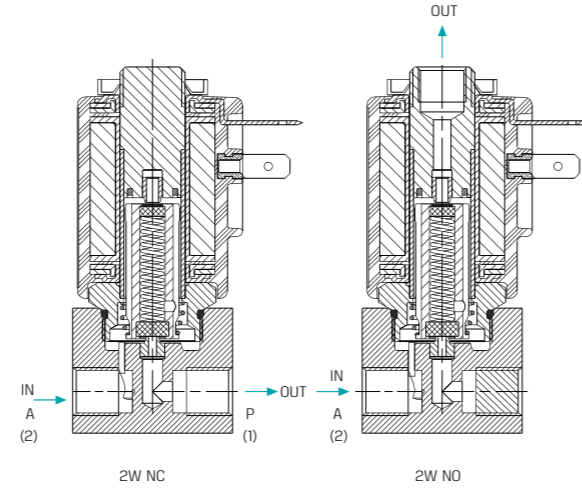
GEM-A | 1/8", 1/4" 2 Way NC, NO



GEM-A | 2W | Stainless Steel



GEM-A | 2W | Brass



## Technical Data

Function	2 Way NC, NO
Ports size	1/8" and 1/4" BSP & NPT
Orifice size	See table
Pressure range	<ul style="list-style-type: none"> <li>See table</li> <li>Valves for pressure higher than 25 bar cannot be supplied with manual override</li> </ul>
Kv (l/min)	See table
Temperature range	<b>Fluid</b> : -10°C to 80°C (no freezing) <b>Ambient</b> : -10°C to 50°C
Materials in contact with media	<b>Manual override:</b> Plastic, Brass screw or Brass finger knob, Stainless Steel for Stainless Steel valves (1) Plastic manual override : Maximum pressure : 16 bar (2) Manual override is unavailable in 2W NO through base applications <b>Main Valve:</b> Brass or Stainless Steel AISI 316 <b>Solenoid Operator:</b> Stainless Steel AISI 300 & 400 series <b>Seals:</b> NBR, FPM (Viton®), EPDM, FFKM (Kalrez®), PTFE
Media	Air, water, oil
Coil voltage	<ul style="list-style-type: none"> <li>Voltage and power consumption - see table</li> <li>All Baccara coil voltages are ± 10% of nominal</li> </ul>
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

• Latch valves are available upon request

## Max. Pressure (bar) 2W NC table

Coil Current/Power	Orifice (mm)						
	0.8	1.2	1.6	2.0	2.4	3.0	4.0
ADC *	60	50	35	20	15	10	5
AC8W, DC/10W	80	80	60	38	30	18	10
AC5.5W	80	60	40	28	20	15	6
AC2.5W	60	50	35	20	15	9	5
DC5.5W	60	30	18	12	9	6	3
DC3.5W	40	20	12	8	6	4	2
Flow factor Kv(l/min)	0.5	1.1	1.7	2.5	3.5	4.5	5

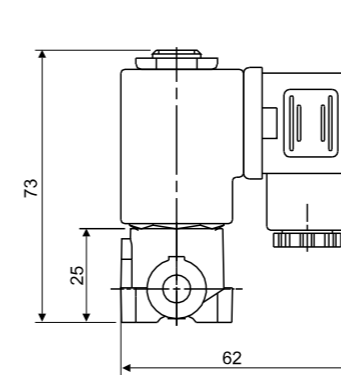
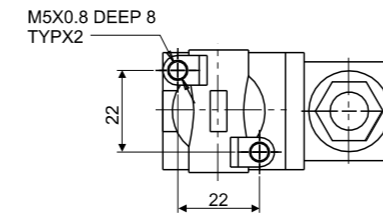
## Max. Pressure (bar) 2W NO table

Coil Current/Power	Orifice (mm)					
	0.8	1.2	1.6	2.0	2.4	3.0
ADC *	25	25	25	20	15	10
Flow factor Kv(l/min)	0.5	1.1	1.4	2.5	3.0	3.5

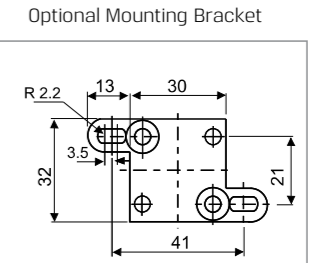
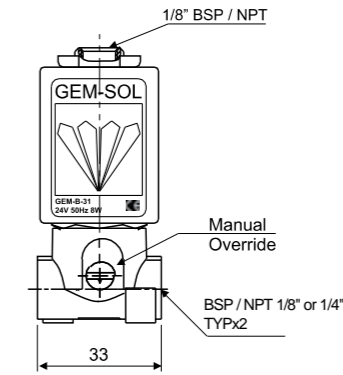
\* ADC valves are only suitable for use with AC8W or DC10W coils

GEM-A | 1/8", 1/4" 2 Way NC, NO

## Dimensions



Brass / Stainless Steel



# SOLENOID VALVES

GEM-A | 1/8", 1/4" 2 Way NC, NO

## Three Product Ordering Categories available

- STANDARD** | Reduced lead times, No MOQ
- SEMI-STANDARD** | Normal lead times, No MOQ
- SPECIAL** | Extended lead times, Non-stock items, MOQ may be applicable

## Ordering Chart

**STANDARD ITEMS** | Reduced lead times, No MOQ  
ADC operator only

MODEL	PORT	FUNCTION	ORIFICE (mm)	SEAL MATERIAL	MANUAL OVERRIDE	CONNECTOR	MOQD (bar)	PART NO. PER VOLTAGE & POWER			
								24VDC 10W	24VAC 8W 50Hz	110VAC 8W 60Hz	230VAC 8W 50Hz
GEM-A BRASS	1/8" BSP	2W NC	1.6	NBR	Slot	with	35	1253820062 GEM-A-21013N2-331 ADC	1253820063 GEM-A-21013N2-311 ADC	1253820064 GEM-A-21013N2-521 ADC	1253820065 GEM-A-21013N2-711 ADC
			20				1253820218 GEM-A-21014N2-331 ADC	1253820203 GEM-A-21014N2-311 ADC	1253820219 GEM-A-21014N2-521 ADC	1253820220 GEM-A-21014N2-711 ADC	
			2.4				1253830041 GEM-A-21015N2-331 ADC	1253830048 GEM-A-21015N2-311 ADC	1253830049 GEM-A-21015N2-521 ADC	1253830050 GEM-A-21015N2-711 ADC	
			1.6				35	1253820066 GEM-A-21113N2-331 ADC	1253820067 GEM-A-21113N2-311 ADC	1253820068 GEM-A-21113N2-521 ADC	1253820069 GEM-A-21113N2-711 ADC
			2.0				20	1253820221 GEM-A-21114N2-331 ADC	1253820222 GEM-A-21114N2-311 ADC	1253820223 GEM-A-21114N2-521 ADC	1253820224 GEM-A-21114N2-711 ADC
			2.4				15	1253830051 GEM-A-21115N2-331 ADC	1253830052 GEM-A-21115N2-311 ADC	1253830053 GEM-A-21115N2-521 ADC	1253830054 GEM-A-21115N2-711 ADC
	1/4" BSP	2W NC	1.6	NBR	Slot	with	35	1255820108 GEM-A-22013N2-331 ADC	1255820031 GEM-A-22013N2-311 ADC	1255820109 GEM-A-22013N2-521 ADC	1255820110 GEM-A-22013N2-711 ADC
			2.0				20	1255820301 GEM-A-22014N2-331 ADC	1255820302 GEM-A-22014N2-311 ADC	1255820303 GEM-A-22014N2-521 ADC	1255820304 GEM-A-22014N2-711 ADC
			2.4				15	1255830201 GEM-A-22015N2-331 ADC	1255830202 GEM-A-22015N2-311 ADC	1255830203 GEM-A-22015N2-521 ADC	1255830580 GEM-A-22015N2-711 ADC
			1.6				35	1255820111 GEM-A-22113N2-331 ADC	1255820112 GEM-A-22113N2-311 ADC	1255820113 GEM-A-22113N2-521 ADC	1255820114 GEM-A-22113N2-711 ADC
			2.0				20	1255820305 GEM-A-22114N2-331 ADC	1255820306 GEM-A-22114N2-311 ADC	1255820307 GEM-A-22114N2-521 ADC	1255820308 GEM-A-22114N2-711 ADC
			2.4				15	1255830205 GEM-A-22115N2-331 ADC	1255830206 GEM-A-22115N2-311 ADC	1255830207 GEM-A-22115N2-521 ADC	1255830208 GEM-A-22115N2-711 ADC

**PART NO. PER VOLTAGE & POWER**  
\*Standard coils are not vacuum impregnated

GEM-A SST	1/4" BSP	2W NC	1.6	FPM (Viton®)	Slot	with	35	1255820311 GEM-A-32013V2-331 ADC	1255820312 GEM-A-32013V2-311 ADC	1255820313 GEM-A-32013V2-521 ADC	1255820314 GEM-A-32013V2-711 ADC
			2.0				20	1255820315 GEM-A-32014V2-331 ADC	1255820316 GEM-A-32014V2-311 ADC	1255820317 GEM-A-32014V2-521 ADC	1255820318 GEM-A-32014V2-711 ADC
			2.4				15	1255830211 GEM-A-32015V2-331 ADC	1255830531 GEM-A-32015V2-311 ADC	1255830213 GEM-A-32015V2-521 ADC	1255830214 GEM-A-32015V2-711 ADC
	1/4" NPT	2W NC	1.6	FPM (Viton®)	Slot	with	35	1255820321 GEM-A-32113V2-331 ADC	1255820322 GEM-A-32113V2-311 ADC	1255820323 GEM-A-32113V2-521 ADC	1255820324 GEM-A-32113V2-711 ADC
			2.0				20	1255820325 GEM-A-32114V2-331 ADC	1255820326 GEM-A-32114V2-311 ADC	1255820327 GEM-A-32114V2-521 ADC	1255820328 GEM-A-32114V2-711 ADC
			2.4				15	1255830215 GEM-A-32115V2-331 ADC	1255830216 GEM-A-32115V2-311 ADC	1255830217 GEM-A-32115V2-521 ADC	1255830218 GEM-A-32115V2-711 ADC

GEM-A | 1/8", 1/4" 2 Way NC, NO

## Model Selection

- STANDARD** | Reduced lead times, No MOQ. Please refer to **Standard Items Ordering Chart**
- SEMI-STANDARD** | Normal lead times, No MOQ
- SPECIAL** | Extended lead times, Non-stock items, MOQ may be applicable  
For a quote, please contact our sales department

GEM-A	BODY	PORT	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE		
Brass	2	1/8" BSP	2W NC	10	0.8 1	NBR	N None 0	
				11	1.2 2	FPM(Viton®)	V Plastic (3) 1	
				20	1.6 3	EPDM	E Slot 2	
		1/4" BSP		21	2WNO (1) through 2a base	2.0 4	FFKM(Kalrez®) (2) K	Knob 3
					2.4 5	PTFE	T	
					3.0 6			
	1/4" NPT	20	2W NO	11	1.2 2	FPM(Viton®)	V Plastic (3) 1	
				15	1.6 3	EPDM	E Slot 2	
				21	2.0 4	FFKM(Kalrez®) (2) K	Knob 3	
		24		21	2.4 5	PTFE	T	
					3.0 6			
					4.0 7			

\* For available options, please refer to **VOLTAGE & POWER CONSUMPTION** table below

VOLTAGE	POWER	CONNECTOR
No coil 0	No coil 0	None 0
6 1	AC8W 50Hz 1	with 1
12 2	AC8W 60Hz 2	with LED 2
24 3	DC10W 3	with bi-color LED 3
48 4	AC5.5W50Hz 4	flying leads coil 4
110 5	AC5.5W60Hz 5	with 1/2" Hub 5
120 6	AC2.5W 50/60Hz 6	surge protection with LED 6
220 7A	DC5.5W 7	connector with moulded cable 7
230 7	DC3.5W 8	other 9
240 8		
Latch/ other (4) 9		

## Voltage & Power Consumption

V	AC (W)						DC (W)		
	8	5.5	2.5	8	5.5	2.5	10	5.5	3.5
6							●	●	●
12	●			●			●	●	●
24	▲	●	●	●	●	●	▲		
48	●			●			●		
110				▲	●		●		
120	●			●					
220	●	●	●	●			●		
230	▲	●							
240	●			●			●		

Available options :  
▲ STANDARD  
● SEMI-STANDARD  
■ SPECIAL

Example : GEM-A-21015N2-311

GEM-SOL direct operated brass, 1/8"BSP, 2W NC, 2.4 orifice, NBR, slot manual override, 24V AC8W 50Hz with connector

GEM-A - 2 10 1 5 N 2 - 3 1 1

- (1) Option 2a : manual override is not available
- (2) FFKM (Kalrez®) O-ring is available only upon request. When ordering FFKM (Kalrez®) seals, please consult with our technical sales department about O-ring compound
- (3) Maximum pressure : 16 bar
- (4) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table

\* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied

\* To order valves manufactured according to your specific requirements, please contact our technical sales department

# SOLENOID VALVES

GEM-A | 1/8", 1/4" 3 Way NC, NO



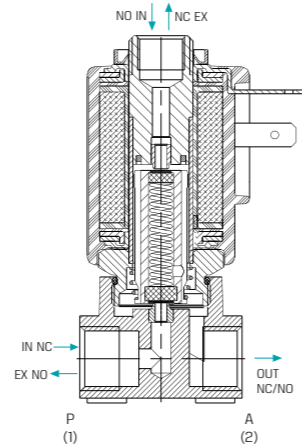
GEM-A | 3W | Stainless Steel



GEM-A | 3W | Brass



\* Available on selected models only

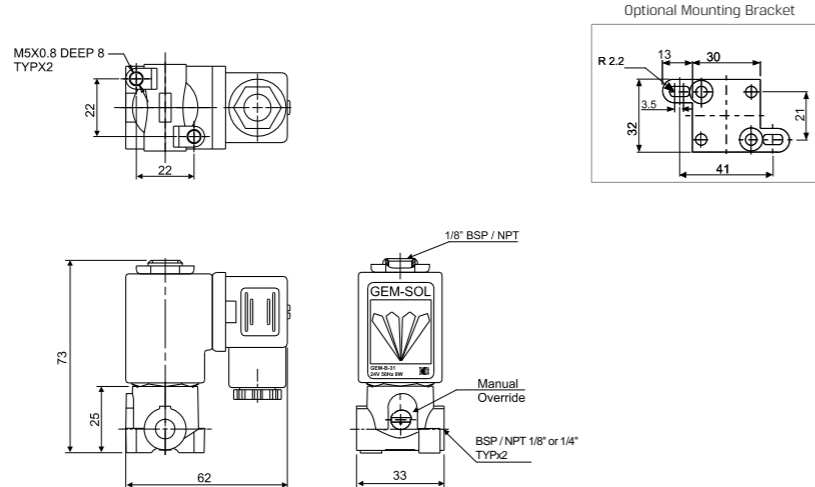


## Technical Data

Function	3 Way NC, NO
Ports size	1/8" and 1/4" BSP & NPT
Orifice size	See table
Pressure range	• See table • Valves for pressure higher than 25 bar cannot be supplied with manual override
Kv (l/min)	See table
Temperature range	<b>Fluid</b> : -10°C to 80°C (no freezing) <b>Ambient</b> : -10°C to 50°C
Materials in contact with media	<b>Manual override:</b> Plastic, Brass screw or Brass finger knob, Stainless Steel for Stainless Steel valves (1) Plastic manual override : Maximum pressure : 16 bar (2) Manual override is unavailable in 3W NO through base applications <b>Main Valve:</b> Brass or Stainless Steel AISI 316 <b>Solenoid Operator:</b> Stainless Steel AISI 300 & 400 series <b>Seals:</b> NBR, FPM (Viton®), EPDM, FFKM (Kalrez®), PTFE
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard / Certification	• UL 429 * Available on selected models only. Contact our technical sales department for details.
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

• Latch valves are available upon request

## Dimensions



## Max. Pressure (bar) 3W NC table

Coil Current/Power	Orifice (mm)					
	0.8	1.2	1.6	2.0	2.4	3.0
ADC *	23	20	15	10	8	5.5
AC8W, DC10W	35	30	17	14	10	6
AC5.5W	23	20	15	10	8	5.5
AC2.5W	20	16	10	9	5	4
DC5.5W						
DC3.5W						
Flow factor Kv(l/min)	0.6	1.1	1.7	2.5	3.5	4.5

## Max. Pressure (bar) 3W NO table

Coil Current/Power	Orifice (mm)					
	0.8	1.2	1.6	2.0	2.4	3.0
ADC *	25	20	15	11	8	6
AC/8W DC/10W	30	22	17	12	10	7
AC/5.5W,DC/5.5W	25	20	15	11	8	6
AC/2.5W,DC/3.5W	20	18	12	8	6	4
Flow factor Kv(l/min)	0.6	1	1.4	2.2	3.0	3.5

\* ADC valves are only suitable for use with AC8W or DC10W coils.

GEM-A | 1/8", 1/4" 3 Way NC, NO

## Three Product Ordering Categories available

- STANDARD** | Reduced lead times, No MOQ
- SEMI-STANDARD** | Normal lead times, No MOQ
- SPECIAL** | Extended lead times, Non-stock items, MOQ may be applicable

## Ordering Chart

**STANDARD ITEMS** | Reduced lead times, No MOQ  
ADC operator only

MODEL	PORT	FUNCTION	ORIFICE (mm)	SEAL MATERIAL	MANUAL OVERRIDE CONNECTOR	MOPD (bar)	PART NO. PER VOLTAGE & POWER				
							24VDC 10W	24VAC 8W 50Hz	110VAC 8W 60Hz	230VAC 8W 50Hz	
GEM-A BRASS	1/8" BSP	3W NC	1.6	NBR	Slot	with	15	1253088030 GEM-A-21033N2-331 ADC	1253088201 GEM-A-21033N2-311 ADC	1253088202 GEM-A-21033N2-521 ADC	1253088203 GEM-A-21033N2-711 ADC
			2.0				10	1253090201 GEM-A-21034N2-331 ADC	1253090202 GEM-A-21034N2-311 ADC	1253090203 GEM-A-21034N2-521 ADC	1253090204 GEM-A-21034N2-711 ADC
			2.4				8	1253093201 GEM-A-21035N2-331 ADC	1253093202 GEM-A-21035N2-311 ADC	1253093203 GEM-A-21035N2-521 ADC	1253093204 GEM-A-21035N2-711 ADC
			1.6				15	1253088204 GEM-A-21133N2-331 ADC	1253088205 GEM-A-21133N2-311 ADC	1253088206 GEM-A-21133N2-521 ADC	1253088207 GEM-A-21133N2-711 ADC
			2.0				10	1253090205 GEM-A-21134N2-331 ADC	1253090206 GEM-A-21134N2-311 ADC	1253090632 GEM-A-21134N2-521 ADC	1253090207 GEM-A-21134N2-711 ADC
			2.4				8	1253093205 GEM-A-21135N2-331 ADC	1253093206 GEM-A-21135N2-311 ADC	1253093207 GEM-A-21135N2-521 ADC	1253093208 GEM-A-21135N2-711 ADC
		1/8" NPT	1.6				15	1253127251 GEM-A-21043N2-331 ADC	1253127536 GEM-A-21043N2-311 ADC	1253127252 GEM-A-21043N2-521 ADC	1253127587 GEM-A-21043N2-711 ADC
			2.0				11	1253130201 GEM-A-21044N2-331 ADC	1253130202 GEM-A-21044N2-311 ADC	1253130203 GEM-A-21044N2-521 ADC	1253130204 GEM-A-21044N2-711 ADC
			2.4				8	1253138201 GEM-A-21045N2-331 ADC	1253138202 GEM-A-21045N2-311 ADC	1253138203 GEM-A-21045N2-521 ADC	1253138204 GEM-A-21045N2-711 ADC
			1.6				15	1253127253 GEM-A-21143N2-331 ADC	1253127254 GEM-A-21143N2-311 ADC	1253127556 GEM-A-21143N2-521 ADC	1253127255 GEM-A-21143N2-711 ADC
			2.0				11	1253130205 GEM-A-21144N2-331 ADC	1253130206 GEM-A-21144N2-311 ADC	1253130207 GEM-A-21144N2-521 ADC	1253130208 GEM-A-21044N2-711 ADC
			2.4				8	1253138042 GEM-A-21145N2-331 ADC	1253138205 GEM-A-21145N2-311 ADC	1253138206 GEM-A-21145N2-521 ADC	1253138207 GEM-A-21145N2-711 ADC
	1/4" BSP	3W NC	1.6	15	1255088333 GEM-A-22033N2-331 ADC	1255088202 GEM-A-22033N2-311 ADC	1255088203 GEM-A-22033N2-521 ADC	1255088204 GEM-A-22033N2-711 ADC			
			2.0	10	1255091030 GEM-A-22034N2-331 ADC	1255091202 GEM-A-22034N2-311 ADC	1255091203 GEM-A-22034N2-521 ADC	1255091204 GEM-A-22034N2-711 ADC			
			2.4	8	1255093030 GEM-A-22035N2-331 ADC	1255093202 GEM-A-22035N2-311 ADC	1255093203 GEM-A-22035N2-521 ADC	1255093204 GEM-A-22035N2-711 ADC			
			1.6	15	1255088032 GEM-A-22133N2-331 ADC	1255088352 GEM-A-22133N2-311 ADC	1255088205 GEM-A-22133N2-521 ADC	1255088382 GEM-A-22133N2-711 ADC			
			2.0	10	1255091205 GEM-A-22134N2-331 ADC	1255091206 GEM-A-22134N2-311 ADC	1255091207 GEM-A-22134N2-521 ADC	1255091208 GEM-A-22134N2-711 ADC			
			2.4	8	1255093205 GEM-A-22135N2-331 ADC	1255093206 GEM-A-22135N2-311 ADC	1255093207 GEM-A-22135N2-521 ADC	1255093208 GEM-A-22135N2-711 ADC			
		1/4" NPT	1.6	15	1255127201 GEM-A-22043N2-331 ADC	1255127530 GEM-A-22043N2-311 ADC	1255127203 GEM-A-22043N2-521 ADC	1255127580 GEM-A-22043N2-711 ADC			
			2.0	11	1255130030 GEM-A-22044N2-331 ADC	1255130530 GEM-A-22044N2-311 ADC	1255130203 GEM-A-22044N2-521 ADC	1255130581 GEM-A-22044N2-711 ADC			
			2.4	8	1255138201 GEM-A-22045N2-331 ADC	1255138202 GEM-A-22045N2-311 ADC	1255138203 GEM-A-22045N2-521 ADC	1255138204 GEM-A-22045N2-711 ADC			
			1.6	15	1255127032 GEM-A-22143N2-331 ADC	1255127534 GEM-A-22143N2-311 ADC	1255127207 GEM-A-22143N2-521 ADC	1255127584 GEM-A-22143N2-711 ADC			
			2.0	11	1255130205 GEM-A-22144N2-331 ADC	1255130533 GEM-A-22144N2-311 ADC	1255130207 GEM-A-22144N2-521 ADC	1255130208 GEM-A-22144N2-711 ADC			
			2.4	8	1255138205 GEM-A-22145N2-331 ADC	1255138206 GEM-A-22145N2-311 ADC	1255138207 GEM-A-22145N2-521 ADC	1255138208 GEM-A-22145N2-711 ADC			

(continued on next page)



# SOLENOID VALVES

## GEM-A | 1/8", 1/4" 3 Way NC, NO

### Ordering Chart

**STANDARD ITEMS** | Reduced lead times, No MOQ  
ADC operator only

MODEL	PORT	FUNCTION	ORIFICE (mm)	SEAL MATERIAL	MANUAL OVERRIDE	CONNECTOR	MOQ (bar)	PART NO. PER VOLTAGE & POWER			
								24VDC 10W	24VAC 8W 50Hz	110VAC 8W 60Hz	230VAC 8W 50Hz
GEM-A	1/4" BSP	3W NC	1.6	FPM (Viton®)	Slot	with	15	1255088211 GEM-A-32033V2-331 ADC	1255088212 GEM-A-32033V2-311 ADC	1255088213 GEM-A-32033V2-521 ADC	1255088214 GEM-A-32033V2-711 ADC
			2.0				10	1255091211 GEM-A-32034V2-331 ADC	1255091212 GEM-A-32034V2-311 ADC	1255091213 GEM-A-32034V2-521 ADC	1255091214 GEM-A-32034V2-711 ADC
			2.4				8	1255093211 GEM-A-32035V2-331 ADC	1255093212 GEM-A-32035V2-311 ADC	1255093213 GEM-A-32035V2-521 ADC	1255093214 GEM-A-32035V2-711 ADC
			1.6				15	1255088215 GEM-A-32133V2-331 ADC	1255088216 GEM-A-32133V2-311 ADC	1255088217 GEM-A-32133V2-521 ADC	1255088218 GEM-A-32133V2-711 ADC
			2.0				10	1255091215 GEM-A-32134V2-331 ADC	1255091216 GEM-A-32134V2-311 ADC	1255091217 GEM-A-32134V2-521 ADC	1255091218 GEM-A-32134V2-711 ADC
			2.4				8	1255093215 GEM-A-32135V2-331 ADC	1255093216 GEM-A-32135V2-311 ADC	1255093217 GEM-A-32135V2-521 ADC	1255093218 GEM-A-32135V2-711 ADC
	1/4" NPT	3W NO	1.6	15	1255127211 GEM-A-32043V2-331 ADC	1255127074 GEM-A-32043V2-311 ADC	1255127213 GEM-A-32043V2-521 ADC	1255127214 GEM-A-32043V2-711 ADC			
			2.0	11	1255130211 GEM-A-32044V2-331 ADC	1255130212 GEM-A-32044V2-311 ADC	1255130213 GEM-A-32044V2-521 ADC	1255130214 GEM-A-32044V2-711 ADC			
			2.4	8	1255138049 GEM-A-32045V2-331 ADC	1255138212 GEM-A-32045V2-311 ADC	1255138213 GEM-A-32045V2-521 ADC	1255138214 GEM-A-32045V2-711 ADC			
			1.6	15	1255127149 GEM-A-32143V2-331 ADC	1255127215 GEM-A-32143V2-311 ADC	1255127216 GEM-A-32143V2-521 ADC	1255127217 GEM-A-32143V2-711 ADC			
			2.0	11	1255130215 GEM-A-32144V2-331 ADC	1255130216 GEM-A-32144V2-311 ADC	1255130217 GEM-A-32144V2-521 ADC	1255130218 GEM-A-32144V2-711 ADC			
			2.4	8	1255138215 GEM-A-32145V2-331 ADC	1255138216 GEM-A-32145V2-311 ADC	1255138217 GEM-A-32145V2-521 ADC	1255138218 GEM-A-32145V2-711 ADC			

**PART NO. PER VOLTAGE & POWER**  
\*Standard coils are not vacuum impregnated

## GEM-A | 1/8", 1/4" 3 Way NC, NO

### Model Selection

**STANDARD** | Reduced lead times, No MOQ. Please refer to **Standard Items Ordering Chart**  
**SEMI-STANDARD** | Normal lead times, No MOQ  
**SPECIAL** | Extended lead times, Non-stock items, MOQ may be applicable.  
 For a quote, please contact our sales department

GEM-A	BODY	PORT	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE		
Brass	2	1/8" BSP	10	3W NC	3	0.8 1 NBR	N None 0	
		1/8" NPT	11	3W NO	4	1.2 2 FPM(Viton®)	V Plastic (3) 1	
		1/4" BSP	20	3WNO (1) through 4a base	1.6	3	EPDM	E Slot 2
					2.0	4	FFKM(Kalrez®)(2)	K Knob 3
					2.4	5	PTFE	T
					3.0	6		

GEM-A	BODY	PORT	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE		
SST	3	1/8" BSP	10	3W NC	3	0.8 1 NBR	N None 0	
		1/8" NPT	11	3W NO	4	1.2 2 FPM(Viton®)	V Plastic (3) 1	
		1/4" BSP	20	3WNO (1) through 4a base	1.6	3	EPDM	E Slot 2
					2.0	4	FFKM(Kalrez®)(2)	K Knob 3
					2.4	5	PTFE	T
					3.0	6		

\* For available options, please refer to **VOLTAGE & POWER CONSUMPTION** table below

VOLTAGE	POWER	CONNECTOR		
No coil	0	None	0	
6	1	AC8W 50Hz	1 with	1
12	2	AC8W 60Hz	2 with LED	2
24	3	DC10W	3 with bi-color LED	3
48	4	AC5.5W50Hz	4 flying leads coil	4
110	5	AC5.5W60Hz	5 with 1/2" Hub	5
120	6	AC2.5W 50/60Hz	6 surge protection with LED	6
220	7A	DC5.5W	7 connector with moulded cable	7
230	7	DC3.5W	8 other	9
240	8			
Latch/other(4)	9			

### Voltage & Power Consumption

V	AC (W)						DC (W)		
	8	5.5	2.5	8	5.5	2.5	10	5.5	3.5
6							●	●	●
12	●			●			●	●	●
24	▲	●	●	●	●	●	▲		
48	●			●			●		
110	●			▲	●		●		
120	●			●			●		
220	●	●	●	●			●		
230	▲	●							
240	●			●			●		

Available options :  
 ▲ STANDARD  
 ● SEMI-STANDARD  
 ■ SPECIAL

Example : GEM-A-21035N2-311

GEM-SOL direct operated brass, 1/8" BSP, 3W NC, 2.4 orifice, NBR, slot manual override, 24V AC8W 50Hz with connector

GEM-A	-	2	10	3	5	N	2	3	1	1
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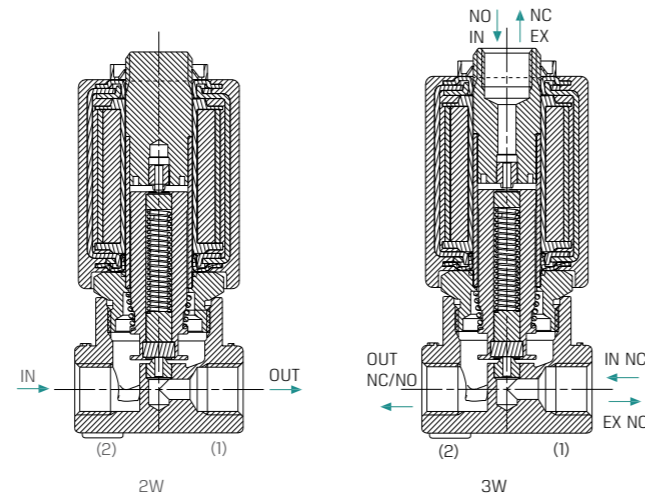
- (1) Option 4a : manual override is not available
- (2) FFKM (Kalrez®) O-ring is available only upon request. When ordering FFKM (Kalrez®) seals, please consult with our technical sales department about O-ring compound
- (3) Maximum pressure : 16 bar
- (4) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table

\* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied

\* To order valves manufactured according to your specific requirements, please contact our technical sales department

# SOLENOID VALVES

**GEM-A3P** | Latch 3 positioning manual override  
2 Way, 3 Way NC, NO



## Technical Data

Function	2/2, 3 Way NC, NO
Ports size	1/8" and 1/4" BSP & NPT
Orifice size	See table
Pressure range	See table
Kv (l/min)	See table
Temperature range	<b>Fluid</b> : -10°C to 80°C (no freezing) <b>Ambient</b> : -10°C to 50°C
Materials in contact with media	<b>Manual override:</b> Plastic <b>Main Valve:</b> Brass <b>Solenoid Operator:</b> Stainless Steel AISI 300 & 400 series <b>Seals:</b> NBR, FPM (Viton®), EPDM, FFKM (Kalrez®) or PTFE
Media	Air, water, oil
Coil type	Latch
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

## Max. Pressure (bar) 2W NC table

Orifice (mm)	0.8	1.2	1.6	2.0	2.4	3.0	4.0
Pressure (bar)	16	16	16	16	16	16	8
Flow factor Kv(l/min)	0.5	1.1	1.7	2.5	3.5	4.5	5

## Max. Pressure (bar) 2W NO table

Orifice (mm)	0.8	1.2	1.6	2.0	2.4	3.0
Pressure (bar)	16	16	16	16	15	10
Flow factor Kv(l/min)	0.5	1.1	1.7	2.5	3.5	4.5

## Max. Pressure (bar) 3W NC table

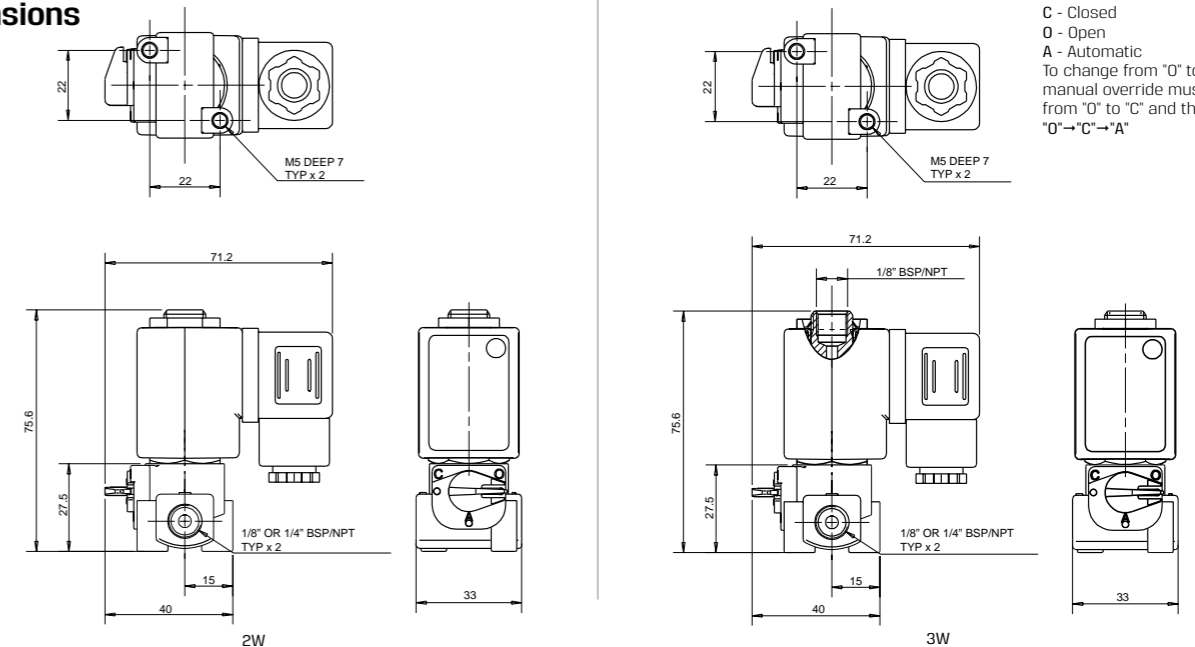
Orifice (mm)	0.8	1.2	1.6	2.0	2.4	3.0
Pressure (bar)	16	16	16	14	10	6
Flow factor Kv(l/min)	0.5	1.1	1.7	2.5	3.5	4.5

## Max. Pressure (bar) 3W NO table

Orifice (mm)	0.8	1.2	1.6	2.0	2.4	3.0
Pressure (bar)	16	16	16	12	10	7
Flow factor Kv(l/min)	0.5	1.1	1.7	2.5	3.5	4.5

**GEM-A3P** | Latch 3 positioning manual override  
2 Way, 3 Way NC, NO

## Dimensions



Note :  
C - Closed  
O - Open  
A - Automatic  
To change from "O" to "A", the manual override must be turned from "O" to "C" and then to "A" : "O"→"C"→"A"

## How to Order

GEM-A3P	BODY	PORT	FUNCTION	ORIFICE	SEALS	LATCH TYPE <sup>(1)</sup>	CONNECTOR						
Brass	2	1/8" BSP	10	2W NC	1	0.8	1	NBR	N	2Ω	LDO	without	0
		1/8" NPT	11	2W NO	2	1.2	2	FPM (Viton®)	V	5Ω	IL	with	1
		1/4" BSP	20	3W NC	3	1.6	3	EPDM	E	13Ω	EL	flying leads coil	4
		1/4" NPT	21	3W NO	4	2.0	4	FFKM (Kalrez®)	K	20Ω	OL	with 1/2" Hub	5
						2.4	5	PTFE	T	53Ω	DL	connector with moulded cable	7
						3.0	6					other	9
						4.0	7						

Example : GEM-A3P-21015N-LD01

GEM-SOL latch 3 positioning manual override, brass, 1/8"BSP, 2W NC, 2.4 orifice, NBR, 2Ω latch with connector

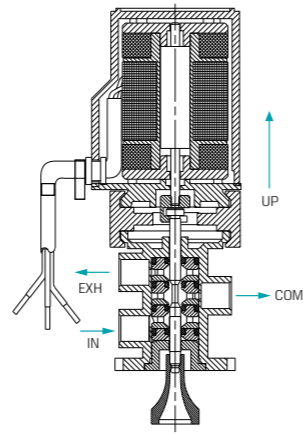
GEM-A3P - 2 10 1 5 N - LDO 1

(1) Choose latch type according to which latch system you have

\* To order valves manufactured according to your specific requirements, please contact our technical sales department

# SOLENOID VALVES

G60 | 1/8" Latch, pulse operated 3 Way

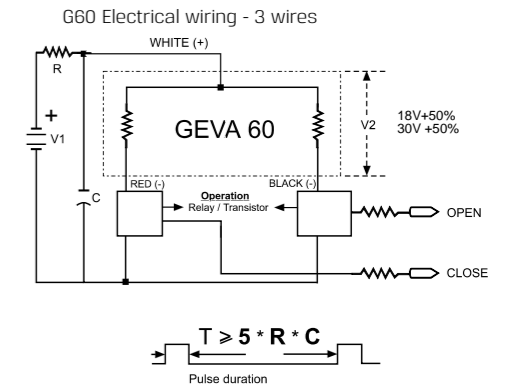
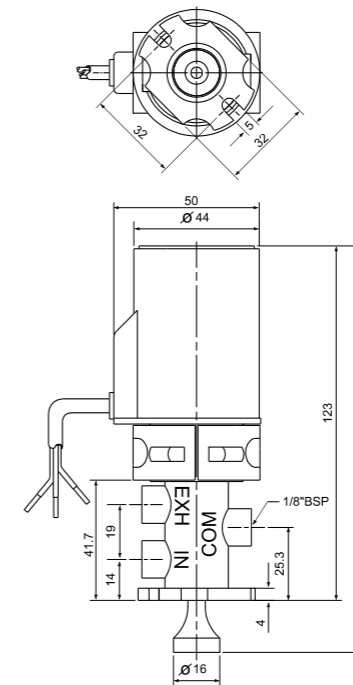


## Technical Data

Function	3 Way
Ports size	1/8" BSP & NPT
Orifice size	3mm
Pressure range	0 to 10 bar max.
Kv (l/min)	3.2 l/min
Temperature range	<b>Fluid :</b> 5°C to 50°C (no freezing) <b>Ambient :</b> -10°C to 50°C
Materials in contact with media	<b>Manual override:</b> Push/pull - plastic <b>Main Valve:</b> Plastic <b>Seals:</b> NBR <b>Spool:</b> Stainless Steel AISI 303
Media	Water
Min. pulse duration	30 ms
Max. pulse duration	100 ms
Electric connection	Cable embedded in plastic
Coil resistance	• 5.6 - 24V • 2.5 - 12V • 5 - 24V • 3.4 - 12V
Assembly	• <b>Valve assembly:</b> In upright position only, with coil facing upwards and valve below. The cable exiting from the coil must face downwards. • <b>Tube assembly:</b> Only as marked on valve body. • <b>Filtering:</b> The fluid must be filtered at level of 120 mesh at least.
Coil voltage	• All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65

G60 | 1/8" Latch, pulse operated 3 Way

## Dimensions



- Voltage V2 is the voltage drop on the coil.
- R must be calculated so that the valve will not be operational when capacitor C is not fully charged. Minimal time between operations T must meet the following conditions :  $T \geq 5 * R * C$
- Voltage value V2 and capacitor C are represented in the following table, minimum values :

		C(µF)	V2(V)
2 & 3 wires	G60 12V	4700	18
2 & 3 wires	G60 24V	2200	30

The G60 latch operates correctly only when activated according to the above scheme.

Please note : Driving the open and close coils of the G60 valve by switches which are connected between red or black to positive supply, or connecting free wheeling diode between red or black wire to white wire, reduces the magnetic force of the valve.

## How to Order

G60	-	BASE	PORT	VOLTAGE	ELECTRIC CONNECTOR
Plastic	4	1/8" BSP	10	12V DC	2 2 wires 1
		1/8" NPT	11	24V DC	3 3 wires 2

Example : G60-41031

G60 latch solenoid valve, plastic, 1/8"BSP, 24V DC with 2 wires



\* To order valves manufactured according to your specific requirements, please contact our technical sales department