

ASCO™ Solenoid Valves

3 way, NC/NO/U, Direct Operated, 1/8" or 1/4" Tapped

3/2
Series
356

Features & Benefits

- Wide range of flow and pressure ratings
- Quick disassembly of core tube for easy maintenance of internal parts
- Standard disc seal made of FPM, EPDM, NBR suitable for a wide range of operating temperatures and compatible with many fluids
- Standard manual operator allows an easy installation (1/8" version only)
- AC/DC interchangeability of the solenoid without disassembly of the valve (1/8" version only)
- UL429 and EN 60335 certified
- NSF 169 and EC 1935 / 2004 certified see "15-DIGIT PRODUCT CODE"
- Compact and low weight valve
- The solenoid valves satisfy all relevant EU and EAC directives

General

Differential pressure	See «SPECIFICATIONS» [1 bar = 100 kPa]
Ambient temperature range	-10°C to +60°C (14°F to 140°F)
Maximum viscosity	40 cSt (mm²/s)
Response time	10 - 30 ms

fluids (*)	temperature range (TS) ⁽¹⁾	seal materials (*)
air, inert gas, water, oil hot water and steam ⁽²⁾	0°C to +130°C (32°F to 266°F)	FPM (fluoroelastomer)
air, inert gas, water hot water and steam ⁽²⁾	-10°C to +140°C (14°F to 284°F)	EPDM (ethylene propylene diene monomer)
air, inert gas, water, oil	-10°C to +90°C (14°F to 194°F)	NBR (nitrile)

Materials in contact with fluid

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

Body	Brass or stainless steel, AISI 316
Shading coil	Copper
Core tube	Stainless steel
Core and plugnut	Stainless steel
Springs	Stainless steel
Seal & Disc	FPM or EPDM or NBR
Seat	Brass or Stainless Steel AISI 303

Electrical characteristics

Coil insulation class	F (H - approval pending)
Connector	Spade plug (cable Ø 6-8 mm or Ø 6-10 mm)
Connector specification	DIN 43650, 11 mm, industry standard B (type 01) or ISO 4400 / EN 175301-803, form A (type 02)
Electrical safety	IEC 335
Electrical enclosure protection	Moulded IP67 (EN 60529) with plug-connector
Standard voltages	DC (=) : 12 - 24V (+10% -5%) AC (~) : 24V/50-60 Hz - 110V/50 Hz (120 V/60Hz) 230V/50-60 Hz (+10% -15%)

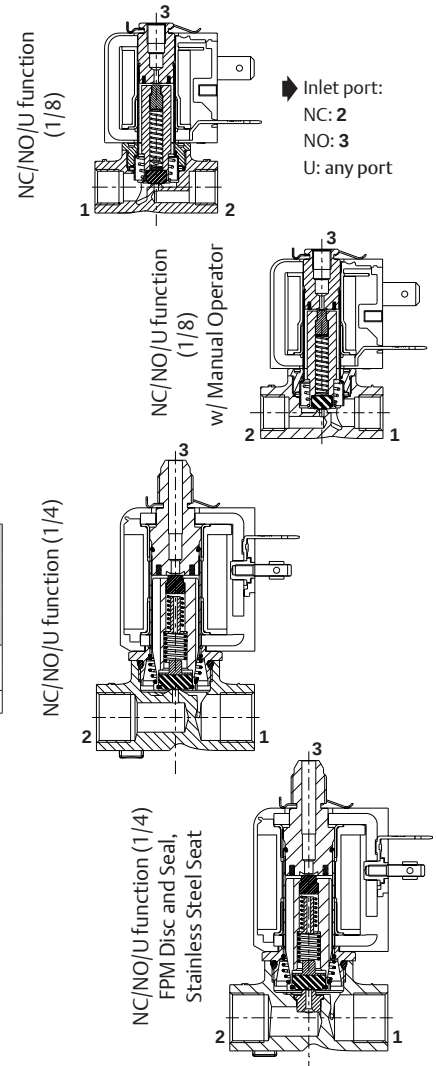
operator ambient temperature range (TS)	power ratings			replacement coil			Type
	holding		hot/cold	~		=	
	~		=	120 V/60 Hz, 110 V/50 Hz	230 V /50-60 Hz	24 V DC	
	(VA)	(W)	(W)				
-10 to +60 (14 to 140)	4.5	3	-	533534-024	533534-003	-	01
	-	-	5	-	-	533534-002	
	14	9	9	533593-020	533593-003	533593-002	02

Options

- NSF 169, EC 1935 / 2004 approval, EPDM/FPM disc and seal (Food Grade)

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

- ⁽¹⁾ The minimum ambient temperature of the solenoid valve is determined by the limitations of minimum temperature indicated.
- ⁽²⁾ Steam only for 1/4" version with stainless steel seat or body.



Specifications ⁽¹⁾

Specifications ⁽¹⁾															15-DIGIT PRODUCT CODE											
pipe size	orifice size	flow coefficient Kv		operating pressure differential bar (psi)						power coil (W)		thread type	dimensions / type ⁽¹⁾	brass	stainless steel	options		voltage code								
				min.	max. (PS)											without manual operator	with manual operator	230 V/50-60 Hz	110 V/50 Hz (120 V / 60 Hz)	24 V/50-60 Hz	12 V/DC	24 V/DC				
					air (*)			water (*)															oil (*)			
	mm (in)	m³/h (Cv)	(l/min)		~	=	~	=	~	=	~												=			
NC - Normally closed, FPM disc and seal																										
1/8	1.2 (3/64)	0.05 (0.06)	0.83	0	15 (218)	-	15 (218)	-	15 (218)	-	3	-	G	01	G356C134S1	G356C144S1	V00	V01	FH	F0	FQ	F3	F1			
					5	-	15 (218)	-	15 (218)	-	15 (218)	-	-	NPT	01	8356C149S1								G356C159S1		
						NPT	01	8356C149S1	8356C159S1																	
							-	10 (145)	-	10 (145)	-	10 (145)	-	3	-	G								01	G356C135S1	G356C145S1
				5	-	10 (145)		-	10 (145)	-	10 (145)	-	-	NPT	01	8356C150S1								G356C160S1		
					NPT	01		8356C150S1	8356C160S1																	
						-		6 (87)	-	6 (87)	-	6 (87)	-	3	-	G								01	G356C136S1	G356C146S1
				5	-		6 (87)	-	6 (87)	-	6 (87)	-	-	NPT	01	8356C151S1								G356C161S1		
	2 (5/64)	0.1 (0.12)	1.67		0		4 (58)	-	4 (58)	-	4 (58)	-	3	-	G	01								G356C137S1	G356C147S1	
							5	-	4 (58)	-	4 (58)	-	4 (58)	-	-	NPT								01	8356C152S1	G356C162S1
				NPT		01		8356C152S1	8356C162S1																	
						-		13 (189)	-	13 (189)	-	13 (189)	-	9	9	G*								02	G356C119S1	G356C127S1
				9	-		8 (116)	-	8 (116)	-	8 (116)	-	9	9	G*	02								G356C121S1	G356C129S1	
					NPT		02	8356C121S1	8356C129S1																	
							-	3 (44)	5 (72)	3 (44)	5 (72)	3 (44)	5 (72)	9	9	G*								02	G356C123S1	G356C131S1
				9	-	2.5 (36)		3 (43)	2.5 (36)	3 (43)	2.5 (36)	3 (43)	9	9	G*	02								G356C124S1	G356C132S1	
NPT	02	8356C124S1	8356C132S1																							
	NO - Normally open, FPM disc and seal																									
1/8	1.6 (1/16)	0.07 (0.08)	1.17	0	8.5 (123)	-	8.5 (123)	-	8.5 (123)	-	3	-	G	01	G356C223S1	G356C235S1	V00	V01	FH	F0	FQ	F3	F1			
					5	-	8.5 (123)	-	8.5 (123)	-	8.5 (123)	-	-	NPT	01	8356C227S1								G356C239S1		
						NPT	01	8356C227S1	8356C239S1																	
							1/4 ⁽³⁾	2.4 (3/32)	0.15 (0.17)	2.50	0	9 (130)	9 (130)	9 (130)	9 (130)	9 (130)								9 (130)	9	9
NPT	02	8356C214S1	8356C219S1																							

⁽¹⁾ All performances are referred to Ambient Temperature = +60°C.

⁽²⁾ For dimensions, see drawing(s) for each construction type on the following page(s).

⁽³⁾ Steam: . EPDM Sealing PS max. 4 bar (max. temperature of fluid 140°C)

. FPM Sealing PS max. 2.8 bar (max. temperature of fluid 130°C)

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

Specifications ⁽¹⁾

Specifications ⁽¹⁾													15-DIGIT PRODUCT CODE													
pipe size	orifice size	flow coefficient Kv		operating pressure differential bar (psi)						power coil (W)		thread type	dimensions / type ⁽²⁾	brass	stainless steel	options		voltage code								
				min.	max. (PS)											without manual operator	with manual operator	230 V/50-60 Hz	110 V/50 Hz (120 V / 60 Hz)	24 V/50-60 Hz	12 V/DC	24 V/DC				
					air (*)	=	water (*)	=	oil (*)														=			
	mm (in)	m³/h (Cv)	(l/min)	~	=	~	=	~	=	~	=															
U - Universal, FPM disc and seal																										
1/8	1.2 (3/64)	0.05 (0.06)	0.83	0	7 (102)	-	7 (102)	-	7 (102)	-	3	-	G 01	G356C312S1	G356C316S1	V00	V01	FH	F0	FQ	F3	F1				
					-	7 (102)	-	7 (102)	-	7 (102)	-	5	NPT 01	8356C312S1	8356C316S1											
					-	7 (102)	-	7 (102)	-	7 (102)	-	5	G 01	G356C320S1	G356C324S1											
					-	7 (102)	-	7 (102)	-	7 (102)	-	5	NPT 01	8356C320S1	8356C324S1											
	1.6 (1/16)	0.08 (0.09)	1.33	0	4.5 (65)	-	4.5 (65)	-	4.5 (65)	-	3	-	G 01	G356C313S1	G356C317S1											
					-	4.5 (65)	-	4.5 (65)	-	4.5 (65)	-	5	NPT 01	8356C313S1	8356C317S1											
					-	4.5 (65)	-	4.5 (65)	-	4.5 (65)	-	5	G 01	G356C321S1	G356C325S1											
					-	4.5 (65)	-	4.5 (65)	-	4.5 (65)	-	5	NPT 01	8356C321S1	8356C325S1											
	2 (5/64)	0.1 (0.12)	0.83	0	3 (44)	-	3 (44)	-	3 (44)	-	3	-	G 01	G356C314S1	G356C318S1											
					-	3 (44)	-	3 (44)	-	3 (44)	-	5	NPT 01	8356C314S1	8356C318S1											
					-	3 (44)	-	3 (44)	-	3 (44)	-	5	G 01	G356C322S1	G356C326S1											
					-	3 (44)	-	3 (44)	-	3 (44)	-	5	NPT 01	8356C322S1	8356C326S1											
	2.4 (3/32)	0.13 (0.15)	2.17	0	2 (29)	-	2 (29)	-	2 (29)	-	3	-	G 01	G356C315S1	G356C319S1											
					-	2 (29)	-	2 (29)	-	2 (29)	-	5	NPT 01	8356C315S1	8356C319S1											
					-	2 (29)	-	2 (29)	-	2 (29)	-	5	G 01	G356C323S1	G356C327S1											
					-	2 (29)	-	2 (29)	-	2 (29)	-	5	NPT 01	8356C323S1	8356C327S1											
1/4 ⁽³⁾	2.4 (3/32)	0.15 (0.17)	2.50	0	5 (72.5)	5 (73)	5 (72.5)	5 (73)	5 (72.5)	5 (73)	9	9	G 02	G356C303S1	G356C309S1	V00	-	FH	F0	FQ	F3	F1				
					-	-	-	-	-	-	-	-	NPT 02	8356C303S1	8356C309S1											

⁽¹⁾ All performances are referred to Ambient Temperature = +60°C.

⁽²⁾ For dimensions, see drawing(s) for each construction type on the following page(s).

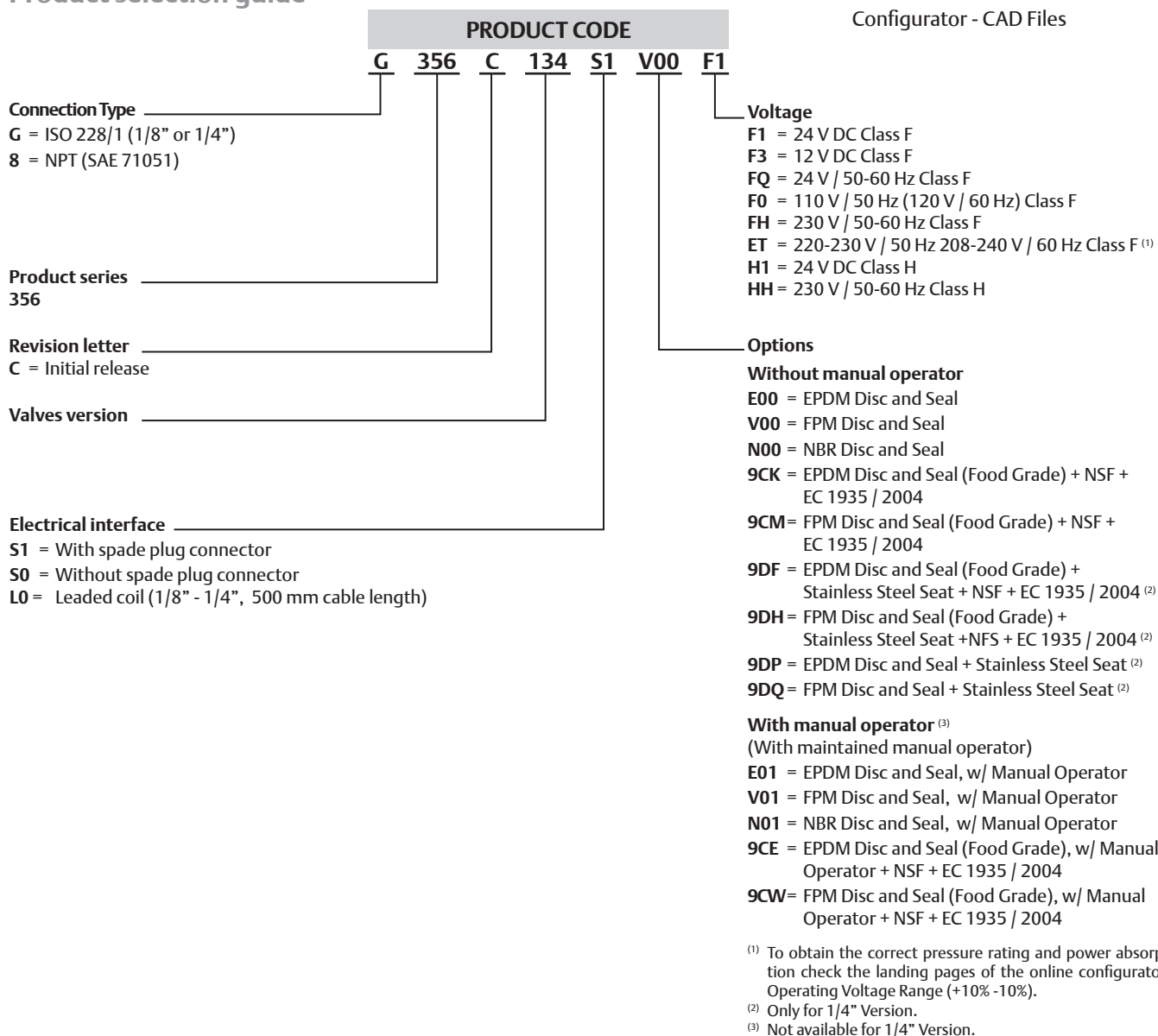
⁽³⁾ Steam: . EPDM Sealing PS max. 4 bar (max. temperature of fluid 140°C)

. FPM Sealing PS max. 2.8 bar (max. temperature of fluid 130°C)

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

Product selection guide

Configurator - CAD Files



Repair Kits and Service Parts - Spare Parts Kits

Spare parts kits no. (*)								
		EPDM Disc and Seal	FPM Disc and Seal	NBR Disc and Seal	-	-	-	-
NC - Normally closed - 1/4" - AC (~) / DC (=)								
356C119/121/123/124/ 127/129/131/132	M200708	E00	V00	N00	-	-	-	-
NO - Normally open - 1/4" - AC (~) / DC (=)								
356C214/219	M200710	E00	V00	N00	-	-	-	-
U - Universal - 1/4" - AC (~) / DC (=)								
356C301/303/305/ 307/309/311	M200712	E00	V00	N00	-	-	-	-
		EPDM Disc and Seal (Food Grade) + NSF + EC 1935 / 2004 + Stainless Steel Seat	FPM Disc and Seal (Food Grade) + NSF + EC 1935 / 2004 + Stainless Steel Seat	EPDM Disc and Seal (Food Grade) + NSF + EC 1935 / 2004	FPM Disc and Seal (Food Grade) + NSF + EC 1935 / 2004	EPDM Disc and Seal + Stainless Steel Seat	FPM Disc and Seal + Stainless Steel Seat	
NC - Normally closed - 1/4" - AC (~) / DC (=)								
356C119/121/123/124/ 127/129/131/132	M200708	9DF	9DH	9CK	9CM	9DP	9DQ	
NO - Normally open - 1/4" - AC (~) / DC (=)								
356C214/219	M200710	9DF	9DH	9CK	9CM	9DP	9DQ	
U - Universal - 1/4" - AC (~) / DC (=)								
356C301/303/305/ 307/309/311	M200712	9DF	9DH	9CK	9CM	9DP	9DQ	

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Installation

- The solenoid valves can be mounted in any position without affecting operation
- Solenoid valves have 2 mounting holes in body
- Thread connection “G” applicable for 1/8, have standard thread according to ISO 228/1
- Thread connection “8” have standard thread = NPT (SAE 71051)
- Installation/maintenance instructions are included with each valve

Dimensions mm (inches), Weight kg (Lbs)

Configurator - CAD Files



TYPE 01

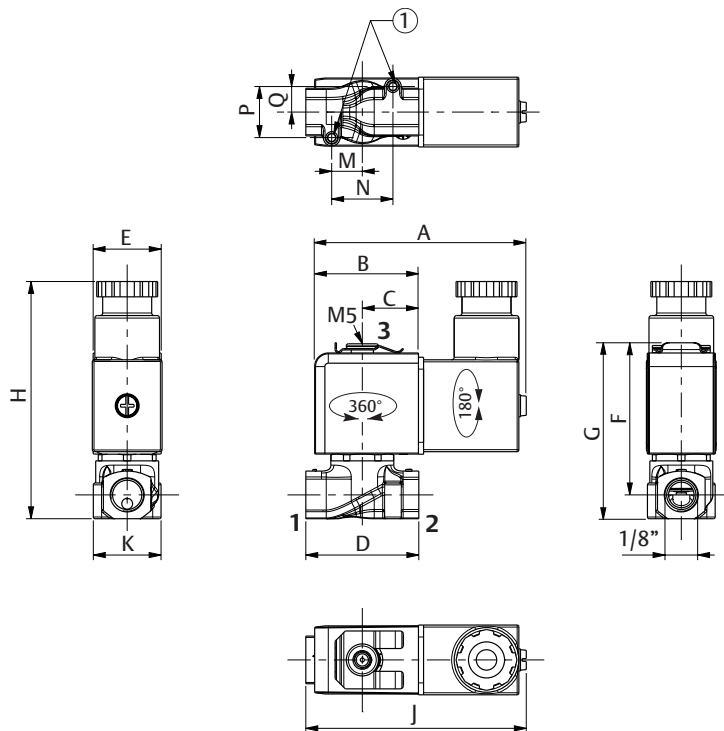
Electrical interface “S1”

Coil size 20 mm - Thermoplastic moulded

IEC 335 / DIN 43650

IP67

NC (1/8”) - Without manual operator (V0)



➤ Inlet port:
NC: 2
NO: 3
U: any port

① 2 mounting holes:
M3 dia., through holes (0.12 inch dia.)

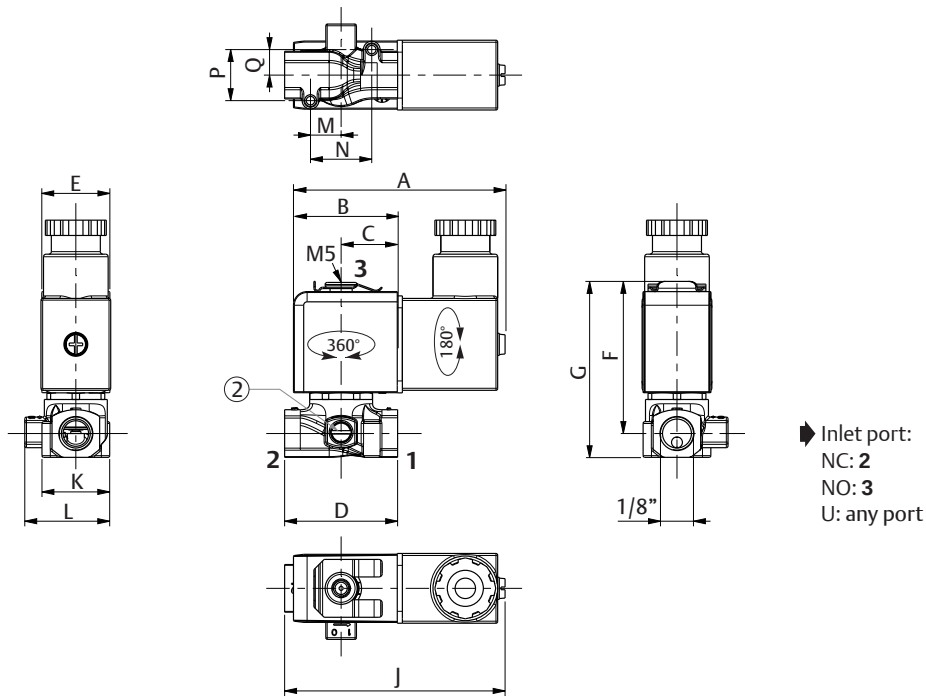
size 20		A	B	C	D	E	F	G	H	J	K	M	N	P	Q	weight ⁽¹⁾	
G356C134..G356C162	mm	61.9	30.5	16.5	33.2	20	44.7	51.7	69.7	64.8	19.9	9	18	15	7.5	0.155	kg
G356C223..G356C239																	
G356C312..G356C323																	
8356C134..8356C162	(in)	2.44	1.20	0.65	1.31	0.79	1.76	2.03	2.74	2.55	0.78	0.35	0.71	0.59	0.30	0.34	(Lbs)
8356C223..8356C239																	
8356C312..8356C323																	

⁽¹⁾ Incl. coil(s) and connector(s).

Dimensions mm (inches), Weight kg (Lbs)

Configurator - CAD Files

NC (1/8") - With manual operator (V1)



- ① 2 mounting holes:
 M3 dia., through holes (0.12 inch dia.)
 ② Manual operator location

size 20		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	weight ⁽¹⁾	
G356C134..G356C162	mm	61.9	30.5	16.5	33.2	20	44.7	51.7	69.7	64.8	19.9	24.95	9	18	15	7.5	0.155	kg
G356C223..G356C239																		
G356C312..G356C323																		
8356C134..8356C162	(in)	2.44	1.20	0.65	1.31	0.79	1.76	2.03	2.74	2.55	0.78	0.98	0.35	0.71	0.59	0.30	0.34	(Lbs)
8356C223..8356C239																		
8356C312..8356C323																		

(1) Incl. coil(s) and connector(s).

Dimensions mm (inches), Weight kg (Lbs)

Configurator - CAD Files



TYPE 02

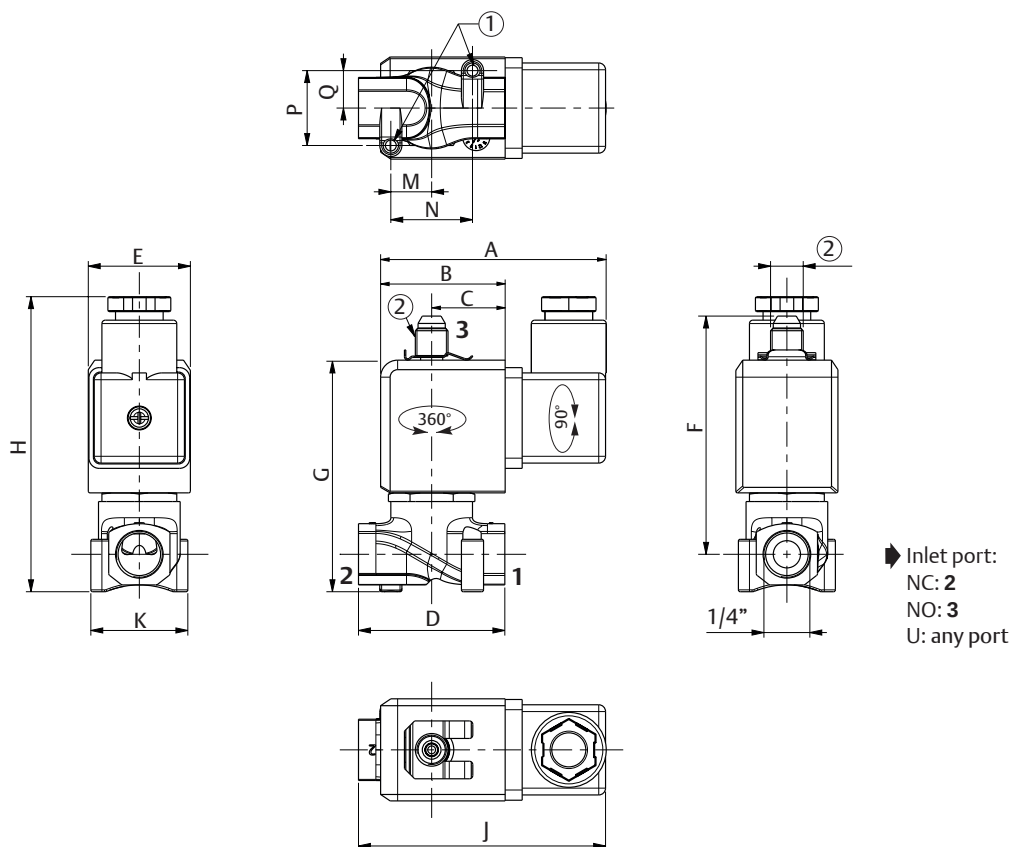
Electrical interface "S1"

Coil size 30 mm - Thermoplastic moulded

IEC 335 / ISO 4400

IP67

NC (1/4") - Without manual operator (V0)



- ① 2 mounting holes:
M4 dia., through holes (0.16 inch dia.)
- ② 1/8" threaded

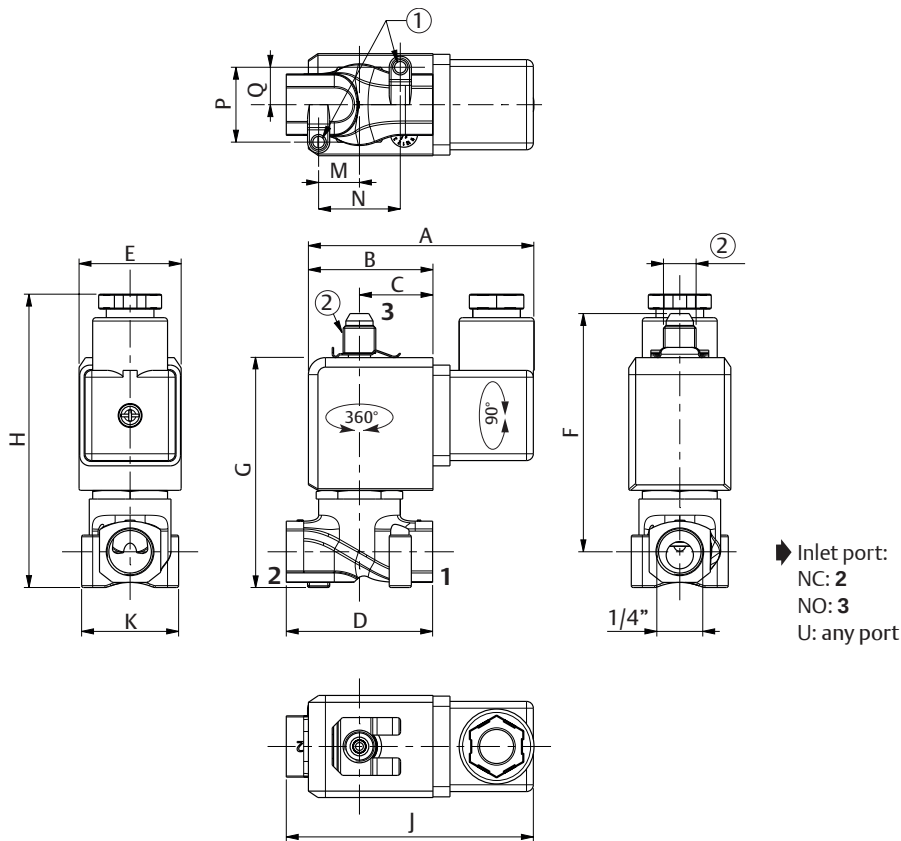
size 30		A	B	C	D	E	F	G	H	J	K	M	N	P	Q	weight ⁽¹⁾	
G356C119..G356C132 G356C214 / G356C219 G356C303 / G356C309	mm	66.3	36.6	21.6	43	30	70	81	86.7	72.6	28.5	12	24	22	11	0.3	kg
8356C119..8356C132 8356C214 / 8356C219 8356C303 / 8356C309	(in)	2.61	1.44	0.85	1.69	1.18	2.75	3.18	3.41	2.86	1.12	0.47	0.94	0.87	0.43	0.66	(Lbs)

⁽¹⁾ Incl. coil(s) and connector(s).

Dimensions mm (inches), Weight kg (Lbs)

Configurator - CAD Files

NC (1/4") - Without manual operator (V0) - Stainless Steel Seat (9DF/9DG/9DH/9DJ/9DP/9DQ)



- ① 2 mounting holes:
 M4 dia., through holes (0.16 inch dia.)
 ② 1/8" threaded

size 30		A	B	C	D	E	F	G	H	J	K	M	N	P	Q	weight ⁽¹⁾	
G356C119..G356C132	mm	66.3	36.6	21.6	43	30	70	81	86.7	72.6	28.5	12	24	22	11	0.3	kg
G356C214 / G356C219																	
G356C301..G356C311																	
8356C119..8356C132	(in)	2.61	1.44	0.85	1.69	1.18	2.75	3.18	3.41	2.86	1.12	0.47	0.94	0.87	0.43	0.66	(Lbs)
8356C214 / 8356C219																	
8356C303 / 8356C309																	

(1) Incl. coil(s) and connector(s).

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