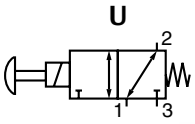
ASCO™ Solenoid Valves

no voltage release, manual reset construction, 1/4" to 1/2"

3/2 SERIES 327

Features

- *The solenoid valves are recommended for pilot applications with high flow, wide pressure ranges and no minimum operating pressure*
- *Compact Manual Reset function which means that the valve has to be energized as well as manually operated before it stays in the "latched" position.*
- *The No Voltage release (NVR) function will make sure that the valve trips when de-energized*
- *Special rider rings eliminate sticking and provide exceptional service life*
- *Pressure can be applied at any port*
- *Coils used in metal enclosures have class H insulation materials*
- *316 stainless steel construction for highly corrosive atmospheres*
- *The solenoid valves satisfy all relevant EC Directives*

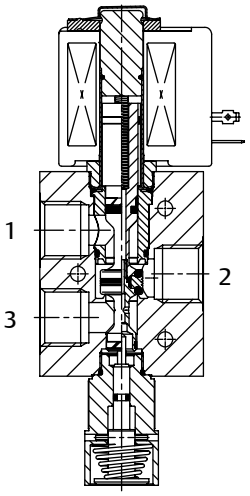


General

Differential pressure 0 - 10 bar [1 bar = 100kPa]
Response times < 100 ms

Fluids (∗)	Temperature range (TS)(1)	Seal materials (∗)
air, inert gas	-10 to +90°C -25 to +60°C -40 to +40°C	FPM (fluoroelastomer) NBR (nitrile) VMQ (silicone)

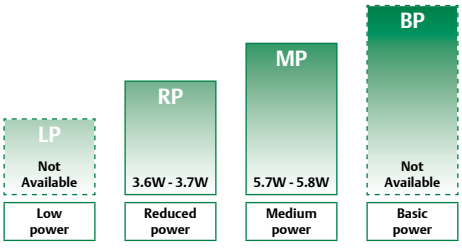
(1) Can be limited by the operator ambient temperature range for explosion proof solenoids



Materials in contact with fluid

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

	Brass body	Stainless steel body
Body	Brass	AISI 316L SS
Stem	Stainless steel	Stainless steel
Core tube	Stainless steel	Stainless steel
Core and plugnut	Stainless steel	Stainless steel
Springs	Stainless steel	Stainless steel
Seals	FPM, NBR, VMQ	FPM, NBR, VMQ



POWER LEVELS - cold electrical holding values (watt)

Specifications

Pipe size	Orifice size	Flow coefficient Kv		Operating pressure differential (bar)		Power level	Prefix optional solenoids					Basic catalogue number	
				Min.	Max. (PS) Air (∗)		NEMA 7&9	ATEX/IECEx			IP65		
								Ex db	Ex eb mb	Ex mb			
❖	(mm)	(m^3/h)	(l/min)		~/=	~/=	EF	NF	EM	PV	SC	Brass	Stainless steel
U - Universal, FPM sealings and poppets, manual reset													
1/4	12	1.6	27.0	0	10	MP	-	●	-	-	●	❖ 327A659	❖ 327A660
1/2	12	1.8	30.0	0	10	MP	-	●	-	-	●	❖ 327A619	❖ 327A620
U - Universal, NBR sealings and poppets, manual reset													
1/4	12	1.6	27.0	0	10	RP	-	●	●	-	●	❖ 327A657	❖ 327A658
1/2	12	1.8	30.0	0	10	RP	-	●	●	-	●	❖ 327A617	❖ 327A618
U - Universal, VMQ sealings and poppets, manual reset													
1/4	12	1.6	27.0	0	10	RP	-	●	●	-	●	❖ 327A655	❖ 327A656
1/2	12	1.8	30.0	0	10	RP	-	●	●	-	●	❖ 327A615	❖ 327A616

❖ Select 8 for NPT ANSI 1.20.3 or Select G for ISO G(228/1) ● Available feature - Not available

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Prefix table

Prefix							Description	Power level			
1	2	3	4	5	6	7		LP	RP	MP	BP
E	M						Waterproof IP66/67 - Metal enclosure (EN/IEC 60079-7,-18 and -31)*	-	●	●	-
		E	T				Threaded conduit/hole (M20 x 1.5)	-	●	●	-
N	F						Flameproof - Aluminium (EN/IEC 60079-1, 60079-31)*	-	●	●	-
S	C						Solenoid with spade plug connector (EN/IEC 60730)	-	●	●	-
W	P						Waterproof IP67 - Metal enclosure	-	●	●	-
W	S						Waterproof IP67 - 316 SS enclosure	-	●	●	-
W	S	E	M				Waterproof IP66/67 - 316 SS enclosure (EN/IEC 60079-7,-18 and -31)*	-	●	●	-
W	S	N	F				Flameproof 316L SS (EN/IEC 60079-1, 60079-31)*	-	●	●	-
		T					Threaded conduit (1/2" NPT)	-	●	●	-
						X	Other special constructions	-	●	●	-

* ATEX/IECEx valves using these solenoids are approved according to EN 13463-1 (non electrical)

Suffix table

Suffix					Description	Power level			
1	2	3	4	5		LP	RP	MP	BP
	C	O			Epoxy coating on all external surfaces	-	●	●	-

● Available feature ❍ Available feature in DC only - Not available

Product selection guide

STEP 1
Select the fluid temperature range and seal material from the general table on page 1. Select, based on the selected seal material (if applicable), the basic catalogue number. Also select the pipe thread identification letter.
Example: G327A617

STEP 2
Select prefix (combination): Select the appropriate operator from the prefix table on the left. Select for this operator in the electrical characteristics table on page 3: the power level (BP) the type of electrical enclosure protection and the desired temperature class.
Warning: the ambient temperature range of your application may not exceed the temperature range of your operator (see also on page 3 the section: Explanation of temperature ranges of solenoid valves).
Example: SC G327A617

STEP 3
Select suffix (combination) if required. Refer to the suffix table on the left.
Example: CO

STEP 4
Select voltage. Refer to standard voltages on page 3..
Example: 230V / 50/60Hz

STEP 5
Final catalogue / ordering number.
Example:
SC G327A617 CO 230V / 50/60 Hz

Options and Accessories

Catalogue number	Spare part kit no.(1) ~ / =	Mounting bracket
SC ❖327A615	C117639	■
SC ❖327A616	C117639	■
SC ❖327A617	C117641	■
SC ❖327A617V	C117641V	■
SC ❖327A618	C117641	■
SC ❖327A618V	C117641V	■
SC ❖327A619	C117641V	■
SC ❖327A620	C117641V	■
SC ❖327A655	C117639	■
SC ❖327A656	C117639	■
SC ❖327A657	C117641	■
SC ❖327A657V	C117641V	■
SC ❖327A658	C117641	■
SC ❖327A658V	C117641V	■
SC ❖327A659	C117641V	■
SC ❖327A660	C117641V	■

❖ Select 8 for NPT ANSI 1.20.3 or select G for ISO G(228/1)
(1) Standard prefixes/suffixes are also applicable to kits
■ Mounting holes in body

Ordering Examples Valves:

SC	8	327A617		24V / DC
WSEMT	G	327A618	**CO**	24V / DC
NFET	G	327A657		230V / 50/60 Hz
WSEM	G	327A658	**CO**	24V / DC

prefix
pipe thread
basic number
voltage
suffix

Ordering Examples Kits:

	C117641	
WSEM	C117641 (2)	
NF	C117641	
WSEM	C117641	**V**

prefix
basic number
suffix

(2) Basic kit number applies to SC coil construction

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Explanation of temperature ranges of solenoid valves

Valve temperature range	The valve temperature range (TS) is determined by the selected seal material, the temperature range for proper operation of the valve and sometimes by the fluid (e.g. steam)
Operator ambient temperature range	The operator ambient temperature range is determined by the selected power level and the safety code
Total temperature range	The temperature range of the complete solenoid valve is determined by the limitations of both temperature ranges above

Electrical characteristics

Coil insulation class H(1)/ F(2)
Electrical safety IEC 60335-1
Standard voltages DC (=) 24V - 48V; Allowable voltage variation ± 10%
AC (~) 24V - 48V - 115V - 230V/50/60Hz; Other voltages are available on request

Prefix option	Power ratings				Operator ambient temperature range	Safety code	Electrical enclosure protection (EN 60529)	Replacement coil / kit		Type(4)
	Inrush	Holding		Hot/Cold				~	=	
	~	~		=						
	(VA)	(VA)	(W)	(W)	(C°)(3)			230V/50/60Hz	24V/DC	
Medium Power (MP)										
SC	5.8	5.8	5.8	5.2/5.7	-40 to +90	EN 60730	IP65, moulded	400924-297	400923-442	01
WP/WS	5.8	5.8	5.8	5.2/5.7	-40 to +90	EN 60730	IP67, steel /SS	400921-297	400914-442	02
NF/WSNF	5.8	5.8	5.8	5.2/5.7	-60 to +60/75/90	II2G Ex db IIC Gb T6/T5/T4, II2D Ex tb IIIC Db	IP66/67, alu./SS	400921-297	400914-442	03
EM/WSEM	5.8	5.8	5.8	5.2/5.7	-40 to +40/75	II2G Ex eb mb IIC Gb T5/T4, II2D Ex tb IIIC Db	IP66/67, steel /SS	400921-297	400914-442	02
Reduced Power (RP)(5)										
SC	3.7	3.7	3.7	3.2/3.6	-40 to +55	EN 60730	IP65, moulded	- (5)	400923-042	01
WP/WS	3.7	3.7	3.7	3.2/3.6	-40 to +55	EN 60730	IP67, steel /SS	- (5)	400914-242	02
NF/WSNF	3.7	3.7	3.7	3.2/3.6	-60 to +60	II2G Ex db IIC Gb T6, II2D Ex tb IIIC Db	IP66/67, alu./SS	- (5)	400914-242	03
EM/WSEM	3.7	3.7	3.7	3.2/3.6	-40 to +40/55	II2G Ex eb mb IIC Gb T6/T5, II2D Ex tb IIIC Db	IP66/67, steel /SS	- (5)	400914-242	02

(1) Coils used in metal enclosures have class H insulation materials
(2) Encapsulated (open) coils have class F insulation standard
(3) Temperature range can be limited by sealings
- Not available
(4) Refer to the dimensional drawings on page 4
(5) AC limited to 127V/50/60Hz or 125V/DC

Electrical connections

Prefix	Connection
SC	Spade plug connector with cable gland EN175301-803A (ISO 4400) for cables with an outer diameter from 6 to 10 mm
WP, WS, EM, WSEM	M20 plastics cable gland for cables with an outer diameter from 7 to 12 mm. With an internal and external facility for an earthing or bonding conductor
NF, WSNF	1/2" NPT threaded cable entry. Enclosures are supplied without cable gland
NFET, WSNFET	M20 x 1.5 threaded cable entry. Enclosures are supplied without cable gland

Additional options

- 3/8" pipe thread execution
- 1/2" NPT (prefix "T") and M20 x 1.5 (prefix "ET") conduits (aluminium or 316 SS) available for steel solenoid housing
- Solid state components for peak voltage suppression and/or rectification
- Class H insulation for encapsulated coils
- Material certification like EN 10204 3.1 on the 316L Stainless Steel bodies are available on request

Installation

- Multi language installation/maintenance instructions are included with each valve
- The solenoid valves can be mounted in any position without affecting operation
- The mounting holes are provided in the valve body
- Threaded pipe connection identifier is 8 = NPT (ANSI 1.20.3); G = G (ISO 228/1)
- Declarations of conformity are available on request

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Dimensions (mm), **Weight** (kg)

TYPE 01:
Epoxy moulded
SC: IEC 60335-1 / ISO 4400

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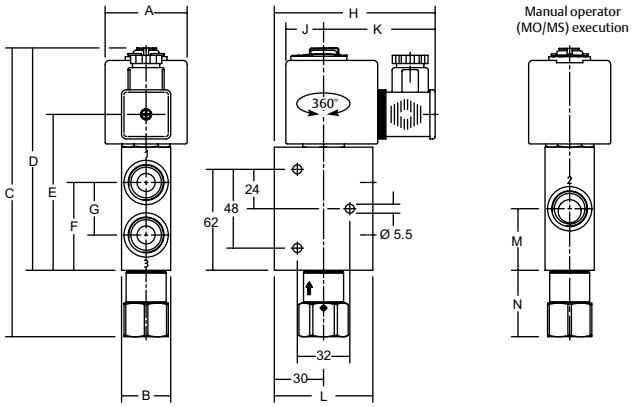
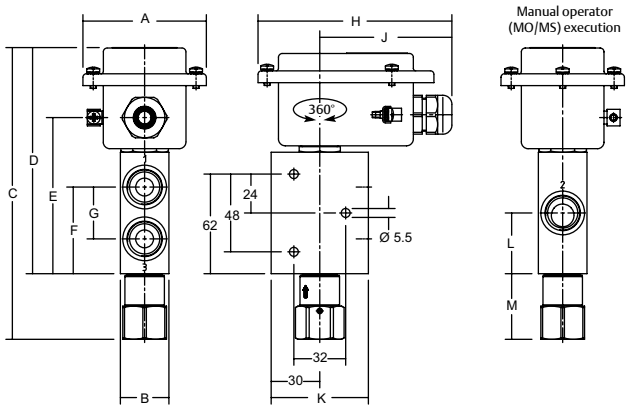
327A655 | A656 | A657 | A658 | A659 | A660



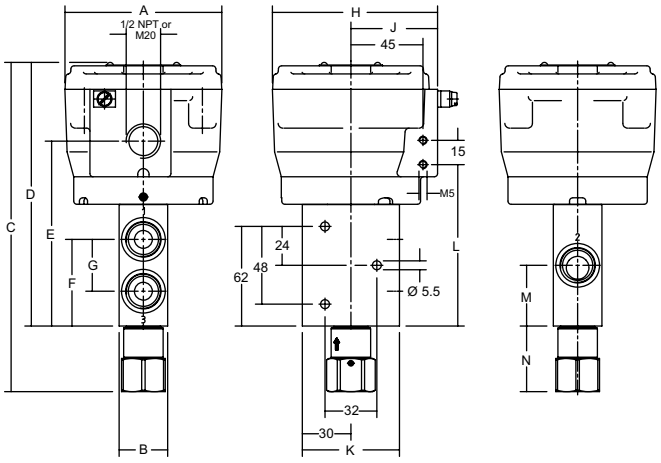
TYPE 02:
Metal, epoxy coated / AISI 316 SS
WP / WS: IEC 60335-1
EM / WSEM: EN/IEC 60079-7+18+31

327A615 | A616 | A617 | A618 |
327A655 | A656 | A657 | A658



TYPE 03:
Aluminium, epoxy coated / AISI 316L SS
NF / WSNF: EN/IEC 60079-1, 60079-31

327A615 | A616 | A617 | A618 | A619 | A620 |
327A655 | A656 | A657 | A658 | A659 | A660



Type	Prefix/option	Power level	A	B	C	D	E	F	G	H	J	K	L	M	N	Weight
01	SC	RP/MP	50	30	176	135	95	54	32	100	23	70	60	38	40	1.6 kg
02	WP, WS, EM, WSEM	RP/MP	75	30	180	140	95	54	32	120	80	60	38	40	-	1.6 kg
03	NF	RP/MP	100	30	203	165	115	54	32	105	55	60	100	38	40	2.4 kg
	WSNF	RP/MP	100	30	203	165	115	54	32	105	55	60	100	38	40	3.8 kg