

FEATURES

- ASCO/JOUCOMATIC solenoid valves satisfy all relevant EC Directives
- The valves have TÜV certified IEC 61508 Functional Safety data and can be used up to SIL-4/AK-7
- The solenoid valves with NAMUR interface are recommended for quarter turn single acting actuators with high flow, wide pressure ranges and no minimum operating pressure
- The core is guided by means of a riderring and special low friction seal with a modified PTFE sealing surface in order to accomplish a balanced construction of the valve at the full specified temperature and pressure range with a minimum consumption of electrical power
- No minimum operating pressure is required
- Special execution for extreme low ambient temperatures

GENERAL

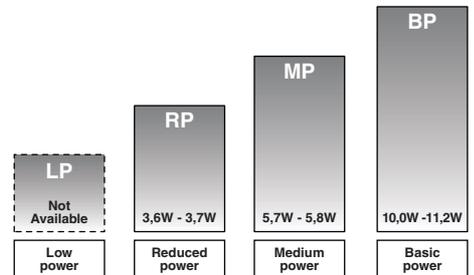
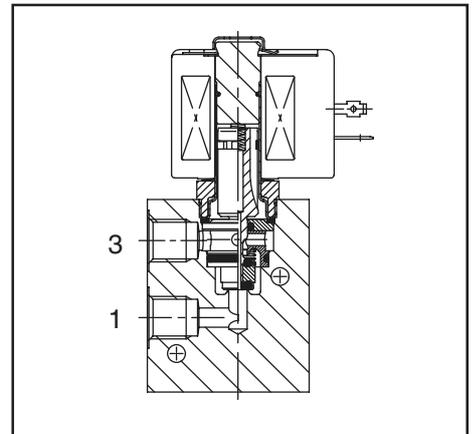
Differential pressure 0 - 10 bar [1 bar = 100kPa]
 Maximum viscosity 65cST (mm²/s)
 Response times 75 - 100 ms

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas, water, oil	-20 to + 80°C -20 to +120°C -40 to + 40°C	NBR (nitrile / buna-n) FPM (fluoroelastomer / viton) VMQ (silicone)

MATERIALS IN CONTACT WITH FLUID

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

	Aluminium body	Stainless steel body
Body	Hard anodized aluminium	AISI 316 SS
Stem	Stainless steel	Stainless steel
Core tube	Stainless steel	Stainless steel
Core and plugnut	Stainless steel	Stainless steel
Springs	Stainless steel	Stainless steel
Sealings & poppets	NBR or VMQ	FPM or VMQ
Riderring	PTFE (teflon)	PTFE (teflon)



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		
		port				min.	max. (PS)		ATEX/CENELEC				IP65	aluminium	stainless st.	
		1 → 2	2 → 3	1 → 2	2 → 3				NEMA 7&9	EExd	EExem	EExm				EExn
◆	(mm)	(m ³ /h)				(l/min)		~\=	EF	NF	EM	PV	ZN	SC		
NC - Normally closed, NBR or FPM sealings and poppets																
1/4	5,7	0,45	0,79	7,50	13,20	0	10	BP	●	●	●	○	○	●	◆ 327A003	◆ 327A005
1/4	5,7	0,45	0,79	7,50	13,20	0	10	MP	-	●	●	-	-	●	◆ 327A203	◆ 327A205
1/4	5,7	0,45	0,79	7,50	13,20	0	10	RP	-	●	●	-	-	●	◆ 327A103	◆ 327A105
NC - Normally closed, VMQ sealings and poppets																
1/4	5,7	0,45	0,79	7,50	13,20	0	10	BP	●	●	●	○	○	●	◆ 327A013	◆ 327A015
1/4	5,7	0,45	0,79	7,50	13,20	0	10	MP	-	●	●	-	-	●	◆ 327A213	◆ 327A215
1/4	5,7	0,45	0,79	7,50	13,20	0	10	RP	-	●	●	-	-	●	◆ 327A113	◆ 327A115

◆ Select B for NPT ANSI 1.20.3
 Select G for ISO G(228/1)

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

PREFIX TABLE

prefix							description	power level			
1	2	3	4	5	6	7		LP	RP	MP	BP
S	C			D	U		Dustproof ATEX (EN 50281-1-1) *	-	●	●	●
E	F						Explosionproof - NEMA 3, 4, 6, 7, 9	-	-	-	●
E	V						Explosionproof - NEMA 3, 4, 6, 7, 9 - 316 SS	-	-	-	●
E	M						Encapsulated ATEX (EN 50019 & EN 50028) *	-	●	●	●
		E	T				Threaded conduit/hole (M20 x 1.5)	-	●	●	●
I	S			S	C		Intrinsically safe with SC coil ATEX (EN 50020) *	-	-	-	-
N	F						Flameproof - Alum. ATEX (EN 50018) *	-	●	●	●
N	L						Flameproof - Cast Iron ATEX (EN 50018) *	-	●	●	●
P	V						Encapsulated ATEX (EN 50028) *	-	-	-	○
S	C						Solenoid with spade plug connector (EN 60730)	-	●	●	●
W	P						Waterproof IP67 - Metal enclosure (EN 60730)	-	●	●	●
W	P			D	U		Dustproof ATEX (EN 50281-1-1) - Metal enclosure *	-	●	●	●
W	P			I	S		I.S. with Metal IP67 enclosure ATEX (EN 50020) *	-	-	-	-
W	S						Waterproof IP67 - 316 SS enclosure	-	●	●	●
W	S			D	U		Dustproof ATEX (EN 50281-1-1) - 316 SS enclosure *	-	●	●	●
W	S	E	M				316 SS "EM" enclosure ATEX (EN 50019 & EN 50020) *	-	●	●	●
W	S			I	S		I.S. with 316 SS IP67 enclosure ATEX (EN 50020) *	-	-	-	-
W	S	N	F				Flameproof - 316 SS ATEX (EN 50018) *	-	●	●	●
							Threaded conduit (1/2" NPT)	-	●	●	●
				H	C		Class H - Battery charging circuit	-	-	-	●
				H	T		Class H - High temperature	-	-	-	●
Z	N						Encapsulated Non Sparking ATEX (EN 50021) *	-	-	-	○
						X	Other special constructions	-	●	●	●

PRODUCT SELECTION GUIDE

STEP 1

Select basic catalogue number, including pipe thread identification letter. Refer to the specifications table on page 1.

Example: B327A003

STEP 2

Select prefix (combination). Refer to the specifications table on page 1 and the prefix table on page 2, respect the indicated power level.

Example: SC

STEP 3

Select suffix (combination) if required. Refer to the suffix table on page 2, respect the indicated power level.

Example: VMS

STEP 4

Select voltage. Refer to standard voltages on page 3.

Example: 230V / 50Hz

STEP 5

Final catalogue / ordering number.

Example:

SC B327A003 VMS 230V / 50 Hz

SUFFIX TABLE

suffix					description	power level			
1	2	3	4	5		LP	RP	MP	BP
E					Ethylene - Propylene (EPDM)	-	-	-	-
J					Neoprene (CR)	-	-	-	-
N					Oxygen service (Neoprene (CR))	-	-	-	-
N	V				Viton (FPM) parts cleaned for oxygen service	-	●	●	●
V					Viton (FPM)	-	●	●	●
	C	O			Epoxy coating all external surfaces	-	●	●	●
	M	B			Mounting bracket	-	-	-	-
		P			Dry gas, non-lubricated air construction	-	-	-	-
		Q			Long life, quiet operation construction	-	-	-	-
			M	O	Manual operator	-	-	-	-
			M	S	Screw type manual operator	-	●	●	●
				M	Metering device	-	-	-	-
S	L				Certified IEC 61508 Functional Safety data	-	●	●	●

● Available feature

○ Available feature in DC only

- Not available

* ATEX solenoids are also approved according to EN 50281-1-1 (dust) and EN 13463-1 (non electrical valves)

OPTIONS & ACCESSORIES

catalogue number	spare parts kit no. ⁽¹⁾		mounting bracket no.
	~	=	
SC ♦327A003	C123-669	C123-669	■
SC ♦327A005	C123-670	C123-670	■
SC ♦327A013	C131-236	C131-236	■
SC ♦327A015	C131-237	C131-237	■
SC ♦327A103	C132-250	C132-250	■
SC ♦327A105	C132-251	C132-251	■
SC ♦327A113	C132-252	C132-252	■
SC ♦327A115	C132-253	C132-253	■
SC ♦327A203	C132-250	C132-250	■
SC ♦327A205	C132-251	C132-251	■
SC ♦327A213	C132-252	C132-252	■
SC ♦327A215	C132-253	C132-253	■

♦ Select **B** 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:

SCHT B	327A003	24V / DC
WSEMT G	327A005 MS	24V / DC
NFET G	327A003 V	230V / 50 Hz
WSEM G	327A005 MS	24V / DC
NFB	327A213 MS	24V / DC
WSG	327A003 MS	24V / DC
EM B	327A203 V	230V / 50 Hz
PV B	327A015 MS	24V / DC
EFG	327G105 SL	240V / 60 Hz

prefix⁽²⁾ voltage
pipe thread suffix
basic number⁽²⁾

ORDERING EXAMPLES KITS:

C123-669 ⁽³⁾
EF C123-670 MS
NF C123-669 V
WSEM C123-670 MS

prefix suffix
basic number

⁽²⁾ Prefix EF and EV should always be used in conjunction with change letter G in the basic number

⁽³⁾ Basic kit number applies to SC coil construction

ELECTRICAL CHARACTERISTICS

Coil insulation class F
Connector Spade plug
Connector specification ISO 4400 (cable Ø 6-10 mm)
Electrical safety IEC 335

Standard voltages: DC (=) 24V - 48V
 AC (~) 24V - 48V - 115V - 230V/50Hz; Other voltages and 60Hz are available on request

prefix option	power ratings				operator amb. temp. range (TS) (°C) ⁽¹⁾	safety code	electrical enclosure protection (EN 60529)	replacement coil / kit		type ⁽²⁾
	inrush		holding					~	=	
	(VA)	(VA)	(W)	(W)				230V/50Hz	24V/DC	
Basic power (BP)										
SC	10,0	10,0	10,0	9,0/11,2	-40 to +55	EN 60730	moulded IP65	123-664-017	400-425-142	01
WP/WS	10,0	10,0	10,0	9,0/11,2	-40 to +55	EN 60730	steel IP67	400-915-017	400-405-142	03
(WS)NF/NL	10,0	10,0	10,0	9,0/11,2	-60 to +40/60	II 2 G/DEEx d IIC T6/T5	alu/steel IP67	400-915-017	400-405-142	05
EM/WSEM	10,0	10,0	10,0	9,0/11,2	-40 to +40	II 2 G/D EEx em II T3	steel IP67	400-915-017	400-913-142	03
PV	-	-	-	9,0/11,2	-40 to +65	II 2 G/D EEx m II T3(-)/T4(=)	moulded IP65	-	- ⁽⁴⁾	06
EF	10,0	10,0	10,0	9,0/11,2	-40 to +55	NEMA type 7 and 9	NEMA 4X	-	238-714-006D	07
ZN	-	-	-	9,0/11,2	-20 to +50	II 3 G/D EEx nA II T3	moulded IP65	-	- ⁽⁴⁾	01
Medium power (MP)										
SC	5,8	5,8	5,8	5,2/5,7	-40 to +90	EN 60730	moulded IP65	400-924-297	400-923-442	02
WP/WS	5,8	5,8	5,8	5,2/5,7	-40 to +90	EN 60730	metal IP67	400-911-297	400-911-442	04
(WS)NF/NL	5,8	5,8	5,8	5,2/5,7	-60 to +60/75/90	II 2 G/D EEx d IIC T6/T5/T4	alu/steel IP67	400-921-297	400-911-442	05
EM/WSEM	5,8	5,8	5,8	5,2/5,7	-40 to +40/75/90	II 2 G/D EEx em II T5/T4/T3	metal IP67	400-921-297	400-914-442	04
Reduced power (RP)										
SC	3,7	3,7	3,7	3,5/3,6	-40 to +55	EN 60730	moulded IP65	400-924-098 ⁽³⁾	400-923-042	02
WP/WS	3,7	3,7	3,7	3,5/3,6	-40 to +55	EN 60730	metal IP67	400-921-098 ⁽³⁾	400-911-242	04
(WS)NF/NL	3,7	3,7	3,7	3,5/3,6	-60 to +60	II 2 G/D EEx d IIC T6	alu/steel IP67	400-921-098 ⁽³⁾	400-911-242	05
EM/WSEM	3,7	3,7	3,7	3,5/3,6	-40 to +40/55/60	II 2 G/D EEx em II T6/T5/T4	metal IP67	400-921-098 ⁽³⁾	400-914-242	04

⁽¹⁾ Temperature range can be limited by sealings ⁽²⁾ Refer to the dimensional drawings on page 4 and 5 ⁽³⁾ AC (~) limited to 115V/50Hz - Not available

⁽⁴⁾ Multiple coil-kits available under ATEX, consult ASCO/JOUCOMATIC

ADDITIONAL OPTIONS

- EEx m (prefix "PV") solenoid can be supplied in various cable lengths
- Compliance with "UL", "CSA" and other local approvals available on request
- 1/2" NPT (prefix "T") and M20 x 1,5 (prefix "ET") conduits (aluminium or 316 SS) available for steel solenoid housing
- Special moulded-in solid state components for peak voltage suppression and/or rectification (four diode bridge)

INSTALLATION

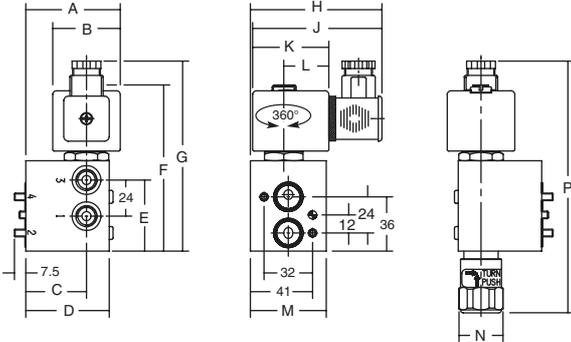
- Multi language installation/maintenance instructions are included with each valve
- The solenoid valves can be mounted in any position without affecting operation
- Mounting according to NAMUR recommendations
- Dowel pin, bolts and gaskets are standard supplied (remove if necessary)
- The mounting holes are provided in the valve body
- Threaded pipe connection identifier is B = NPT (ANSI 1.20.3); G = G (ISO 228/1)
- Declarations of conformity are available on request
- EEx em (prefix "EM") execution: solenoid enclosure has a cable gland with integral strain relief for cables with an o.d. from 7 to 12 mm and is provided with an internal and external connection facility for an earthing or bonding conductor
- EEx d (prefix "NF") enclosure is provided with a 1/2" NPT (prefix "T") threaded entry hole M20 x 1,5 (prefix "ET") optional and is supplied without cable gland
- Valves with suffix "SL" should be provided with a specific exhaust protector

DIMENSIONS (mm), WEIGHT (kg)



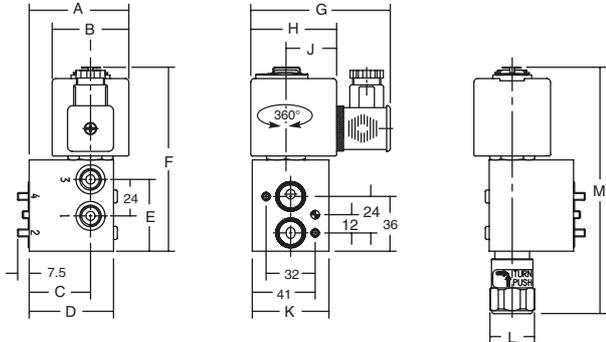
TYPE 01:
Prefix "SC" / "ZN" Solenoid
Basic power
Epoxy moulded
IEC 335 / ISO 4400 (SC)
EN 50021 (ZN)
IP65 / II 3 G/D EEx nA II

327A003 / A005 / A013 / A015



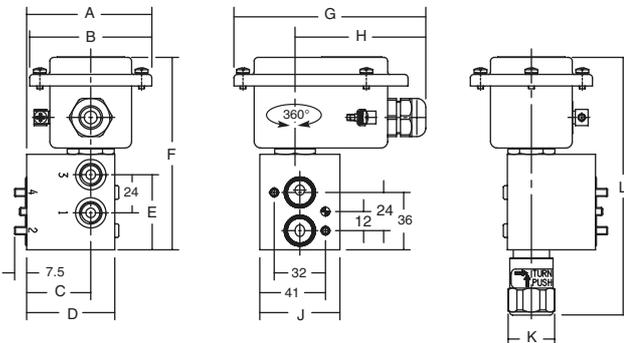
TYPE 02:
Prefix "SC" Solenoid
Reduced and medium power
Epoxy moulded
IEC 335 / ISO 4400
IP65

327A103 / A105 / A113 / A115 / A203 / A205 / A213 / A215



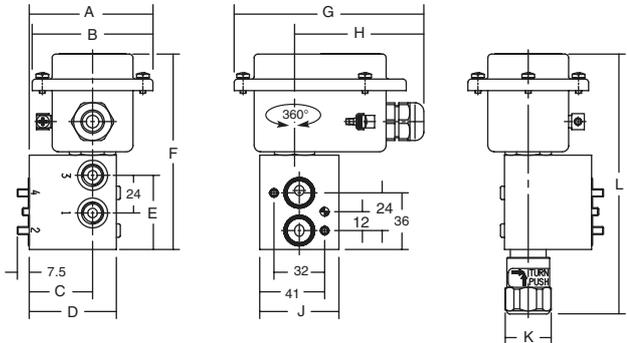
TYPE 03:
Prefix "WP", "WS" / "EM", "WSEM" Solenoid
Basic power
Steel; epoxy coated (WP and EM)
AISI 316 SS (WS and WSEM)
IEC 335 / EN 50019, EN 50028 and 50281-1-1
IP67 / II 2 G/D EEx em II

327A003 / A005 / A013 / A015



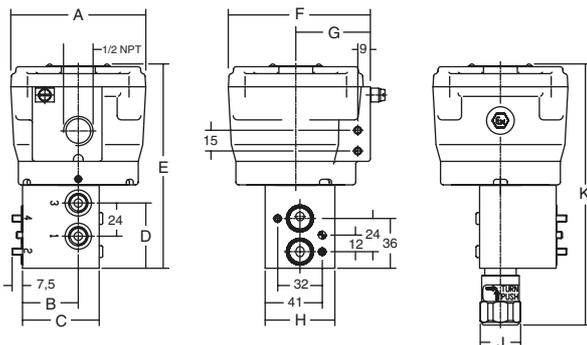
TYPE 04:
Prefix "WP", "WS" / "EM", "WSEM" Solenoid
Medium and reduced power
Steel; epoxy coated (WP and EM)
AISI 316 SS (WS and WSEM)
IEC 335 / EN 50019, EN 50028 and 50281-1-1
IP67 / II 2 G/D EEx em II

327A103 / A105 / A113 / A115 / A203 / A205 / A213 / A215



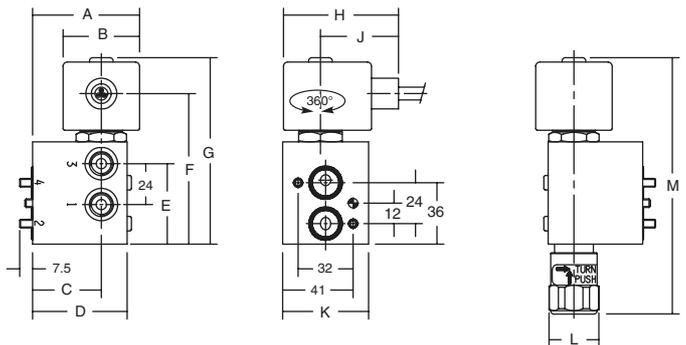
TYPE 05:
Prefix "NF", "NL" and "WSNF" Solenoid
Basic, medium and reduced power
Aluminium, steel; epoxy coated (NF and NL)
AISI 316 SS (WSNF)
EN 50018 and EN 50281-1-1
IP67 / II 2 G/D EEx d IIC

327A003 / A005 / A013 / A015 / A103 / A105 /
A113 / A115 / A203 / A205 / A213 / A215



TYPE 06:
Prefix "PV" Solenoid
Basic power
Epoxy encapsulated
EN 50028 and EN 50281-1-1
II 2 G/D EEx m II
IP65

327A003 / A005 / A013 / A015

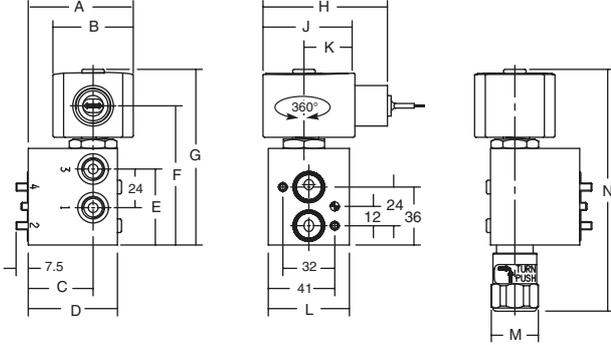


DIMENSIONS (mm), WEIGHT (kg)



TYPE 07:
 Prefix "EF" Solenoid
 Basic power
 Epoxy encapsulated
 ICS-6 ANSI / NEMA
 Type 7 and 9
 NOTE: applicable to solenoid only

327G003 / G005 / G013 / G015



type	prefix option	power level	A	B	C	D	E	F	G	H	J	K	L	M	N	P	weight
01	SC/ZN	basic power	62	45	40	55	47	110	126	80	85	50	30	50	29	167	0,95 kg
02	SC	medium/reduced power	65	50	40	55	47	121	87	56	33	50	29	162	-	-	1,05 kg
03	WP/WS/(WS)EM	basic power	79	77	40	55	47	121	120	81	50	29	162	-	-	-	1,00 kg
04	WP/WS/(WS)EM	medium/reduced power	79	77	40	55	47	124	120	81	50	29	165	-	-	-	1,10 kg
05	NF	basic/medium/reduced power	97	40	55	47	148	102	54	50	29	189	-	-	-	-	2,60 kg
06	PV	basic power	62	45	40	55	47	76	97	67	45	50	29	150	-	-	1,05 kg
07	EF	basic power	65	50	40	55	47	79	100	77	51	26	50	151	-	-	1,05 kg

SECTIONAL DRAWING

