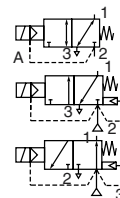


SOLENOID VALVES

internal/external pilot operated
Pressure assisted, balanced poppet
1/4 to 1/2

U
NC
NO



3/2
Series
307

FEATURES

- ASCO/JOUCOMATIC solenoid valves satisfy all relevant EC Directives
- Can be internally piloted, or externally piloted to convert valve to zero minimum operation by applying auxiliary air.
- Universal, Normally Closed, Normally Open pilot valves with high flow capacity (Ø 9 mm) especially suited for heavy duty industrial applications in hostile environments, such as drilling rigs and refineries
- Balanced poppet construction
- Stainless steel or brass bodied valves with stainless steel internal parts
- The use of first class materials and thorough valves testing ensure a high reliability and a long service life

Zero minimum is only achieved if external pressure is applied

GENERAL

Differential pressure 0 / 0,7 - 10 bar [1 bar = 100kPa]
Response times 75 - 100 ms

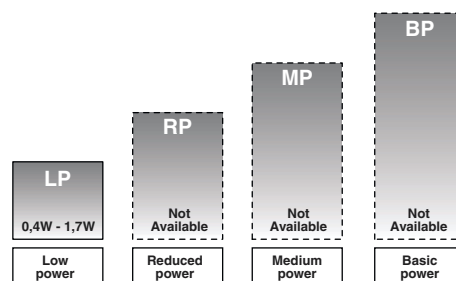
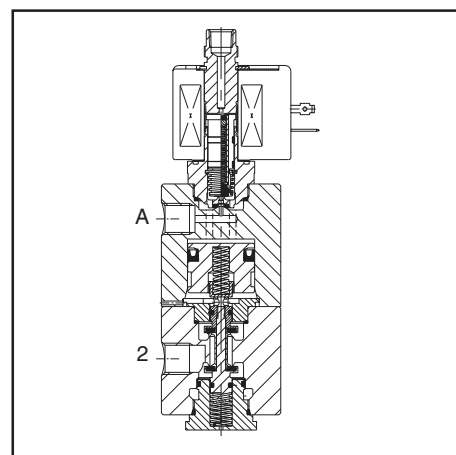
fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas	-20 to + 60°C	NBR (nitrile / buna-n)

MATERIALS IN CONTACT WITH FLUID

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

CONSTRUCTION

	Brass body	Stainless steel body
Body	Brass	AISI 316 SS
Core tube	Stainless Steel	Stainless steel
Core and plugnut	Stainless steel	Stainless steel
Springs	Stainless steel	Stainless steel
Piston	Brass	Stainless steel
Piston ring	NBR	NBR
Poppet stem	Stainless steel	Stainless steel
Sealings	NBR	NBR
Discs and poppets	NBR	NBR
Rider ring	PTFE (teflon)	PTFE (teflon)
Cartridge	Welded, packless AISI 430 SS	Welded, packless AISI 430 SS
Nameplate	Aluminium / Polyester	Aluminium / Polyester
Seats	Brass	Stainless steel



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)			NEMA 7&9	ATEX/CENELEC					IP65			
					air (*)					EEExd	EEExem	EEExm	EEExi		EEExn		
Npt	(mm)	(m³/h)	(l/min)		~	=	~/=	EF	NF	EM	PV	IS	ZN	SC	brass	stainless steel	
U - Universal																	
1/4	9,0	0,7	12	0 ⁽¹⁾	10	8	LP	○	□	●	○	○	○	○	●	B307A315U	B307A305U
3/8	9,0	0,7	12	0 ⁽¹⁾	10	8	LP	○	□	●	○	○	○	○	●	B307A345U	B307A335U
1/2	9,0	0,7	12	0 ⁽¹⁾	10	8	LP	○	□	●	○	○	○	○	●	B307A375U	B307A365U
NC - Normally closed																	
1/4	9,0	0,7	12	0,7	10	8	LP	○	□	●	○	○	○	○	●	B307A315F	B307A305F
3/8	9,0	0,7	12	0,7	10	8	LP	○	□	●	○	○	○	○	●	B307A345F	B307A335F
1/2	9,0	0,7	12	0,7	10	8	LP	○	□	●	○	○	○	○	●	B307A375F	B307A365F
NO - Normally open																	
1/4	9,0	0,7	12	0,7	10	8	LP	○	□	●	○	○	○	○	●	B307A315G	B307A305G
3/8	9,0	0,7	12	0,7	10	8	LP	○	□	●	○	○	○	○	●	B307A345G	B307A335G
1/2	9,0	0,7	12	0,7	10	8	LP	○	□	●	○	○	○	○	●	B307A375G	B307A365G

□ Available on request
● Available feature

○ Available feature in DC only
(1) Min. auxiliary air pressure of 0,7 bar

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						Intrinsically safe with SC coil ATEX (EN 50020) *		○	-	-	-
N	F				S	C	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) *		-	-	-	-
		T					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: B307A345F

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: EM

STEP 3

Select suffix (combination) if required.

Refer to the suffix table on page 2, respect the indicated power level.

Example: V

STEP 4

Select voltage. Refer to standard voltages on page 3.

Example: 115V / 50Hz

STEP 5

Final catalogue / ordering number.

Example:

EM B307A345 V 115V / 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		●	-	-	-
N					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	M	Metering device		-	-	-	-

● Available feature

○ Available feature in DC only

□ Available on request

- 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 B307A305F	-	C132-659F	115-292-001
SC B307A315F	-	C132-659F	115-292-001
SC B307A335F	-	C132-659F	115-292-001
SC B307A345F	-	C132-659F	115-292-001
SC B307A365F	-	C132-659F	115-292-001
SC B307A375F	-	C132-659F	115-292-001
SC B307A305G	-	C132-659G	115-292-001
SC B307A315G	-	C132-659G	115-292-001
SC B307A335G	-	C132-659G	115-292-001
SC B307A345G	-	C132-659G	115-292-001
SC B307A365G	-	C132-659G	115-292-001
SC B307A375G	-	C132-659G	115-292-001
SC B307A305U	-	C132-659U	115-292-001
SC B307A315U	-	C132-659U	115-292-001
SC B307A335U	-	C132-659U	115-292-001
SC B307A345U	-	C132-659U	115-292-001
SC B307A365U	-	C132-659U	115-292-001
SC B307A375U	-	C132-659U	115-292-001

⁽¹⁾ Standard prefixes/suffixes are also applicable to kits

- Not available

ORDERING EXAMPLES:

WSEMT	B 307	A315U	240V / 60 Hz
SC	B 307	A335U V	230V / 50 Hz
ISSC	B 307	A345F MO	24V / DC
WPIS	B 307	A375F MO	24V / DC
WS	B 307	A305G E	24V / DC
EM	B 307	A335F MB	230V / 50 Hz
PV	B 307	A365U MB	24V / DC
EV	B 307	A315U MB	24V / DC

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

ORDERING EXAMPLES KITS:

WSEM	C132-659 F
	C132-659 U V
ISSC	C132-659 G MO
WPIS	C132-659 U MO

prefix basic number⁽³⁾ suffix

⁽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)	safety code	electrical enclosure protection (EN60529)	replacement coil / kit		type ⁽²⁾
	inrush ~	holding ~	hot/cold =					~	=	
	(VA)	(VA)	(W)	(W)				(°C) ⁽¹⁾	230V/50Hz	
Low power (LP)										
SC	1,5	1,5	1,5	1,7/1,7	-40 to +60	EN 60730	moulded IP65	400-925-042	400-925-042	01
WP/WS	1,5	1,5	1,5	1,7/1,7	-40 to +60	EN 60730	steel IP67	400-926-042	400-926-042	02
EM/WSEM	1,5	1,5	1,5	1,7/1,7	-40 to +40/55	II 2 G/D EEx em II T6/T5	steel IP67	400-926-042	400-926-042	03
PV	-	-	-	1,7/1,7	-40 to +60	II 2 G/D EEx m II T6	moulded IP65	-	- ⁽³⁾	04
EF	-	-	-	1,4/1,4	-40 to +40	NEMA type 7 and 9	NEMA 4X	-	238-714-902D	04
ISSC	-	-	-	0,4/0,4	-40 to +60	II 2 G/D EEx ia IIC T6	moulded IP65	-	268-976-001	05
WPIS/WSIS	-	-	-	0,4/0,4	-40 to +60	II 2 G/D EEx ia IIC T6	steel IP67	-	268-900-001	02
ZN	-	-	-	1,7/1,7	-20 to +50	II 3 G/2D EEx nA II T3	moulded IP65	-	- ⁽³⁾	01

⁽¹⁾ Temperature range can be limited by sealings ⁽²⁾ Refer to the dimensional drawings on page 4 and 5

⁽³⁾ Multiple coil kits available under ATEX, consult ASCO/JOUCOMATIC

- Not available

ADDITIONAL OPTIONS

- Other pipe threads are available on request
- EEx m (prefix "PV") execution 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

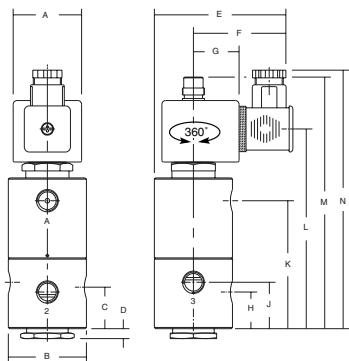
- The solenoid valves have to be mounted vertically and in an upright position for best performance
- Multi language installation/maintenance instructions are included with each valve
- Threaded pipe connection identifier is B = NPT (ANSI 1.20.3)
- Other pipe threads are available on request
- Normally closed contruction (F) and normally open contruction (G) have internal pilot connections and need 0.7 bar min. operating pressure
- Universal contruction (U) needs auxiliary air pressure applied to port connection "A"
- 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

DIMENSIONS (mm), WEIGHT (kg)



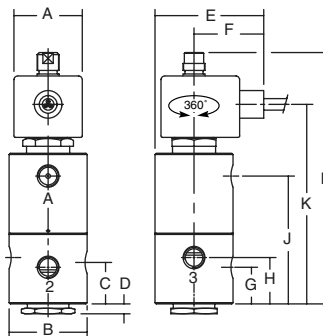
TYPE 01
Prefix "SC" / "ZN" Solenoid
Low power
Epoxy moulded
IEC 335 / ISO 4400 (SC)
EN 50021 (ZN)
IP65 / II 3 G/D EEx nA II

307A305 / A315 / A335 / A345 / A365 / A375



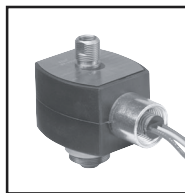
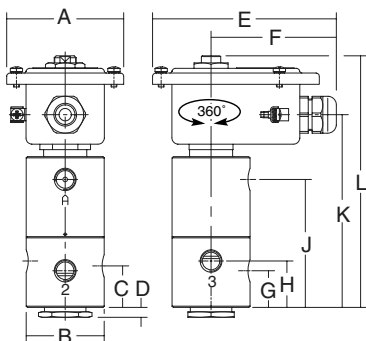
TYPE 03
Prefix "PV" Solenoid
Low power
Epoxy encapsulated
EN 50028 and EN 50281-1-1
II 2 G/D EEx m II
IP65

307A305 / A315 / A335 / A345 / A365 / A375



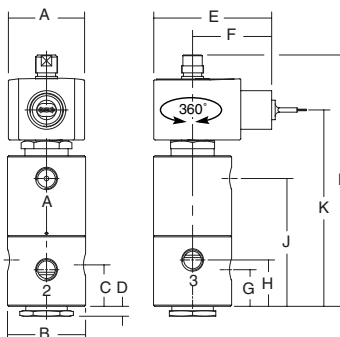
TYPE 02
Prefix "WP", "WS", "EM" and "WSEM" Solenoid
Prefix "WPIS" and "WSIS" Solenoid
Low power
Metal; epoxy coated / AISI 316 SS
IEC 335 / EN 50019 & 50028 / EN 50020 / EN 50281-1-1
IP67 / II 2 G/D EEx em II / II 2 G/D EEx ia IIC

307A305 / A315 / A335 / A345 / A365 / A375



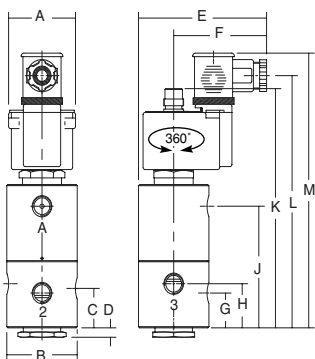
TYPE 04
Prefix "EF" Solenoid
Low power
Epoxy encapsulated
ICS-6 ANSI / NEMA
Type 7 and 9
NOTE: applicable to solenoid only

307A305 / A315 / A335 / A345 / A365 / A375



TYPE 05
Prefix "ISSC" Solenoid
Low power
Polypropylene moulded
EN 50020 and EN 50281-1-1
II 2 G/D EEx ia IIC
IP65

307A305 / A315 / A335 / A345 / A365 / A375



type	prefix option	power level	A	B	C	D	E	F	G	H	J	K	L	M	N	weight
01	SC/ZN	low power	45	51	27	6	85	50	30	24	30	83	130	164	168	1,05
02	WP/WS/(WS)EM	low power	77	51	27	6	120	82	24	30	83	125	164	-	-	1,95
02	WPIS/WSIS	low power	77	51	27	6	120	82	24	30	83	125	164	-	-	1,95
03	PV	low power	45	51	27	6	67	45	24	30	83	130	164	-	-	1,05
04	EF	low power	50	51	27	6	77	52	24	30	83	128	164	-	-	1,05
05	ISSC	low power	48	57	27	6	89	67	24	30	83	164	173	188	-	1,05

SECTIONAL DRAWING

