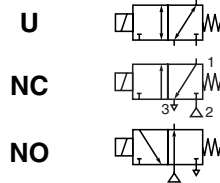




# SOLENOID VALVES

direct operated  
in-line  
1/8-1/4



**3/2**  
Series  
**320**

## FEATURES

- Compact three way solenoid valves with orifice and pipe connection in valve body
- Valves are designed to handle relatively high pressure 3-way applications
- Valves do not require a minimum operating pressure
- The solenoid valves satisfy all relevant EC directives

## GENERAL

**Differential pressure** See «SPECIFICATIONS» [1 bar =100 kPa]  
**Maximum viscosity** 65 cSt (mm<sup>2</sup>/s)  
**Response time** 5 - 25 ms

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas, water, oil	- 20°C to + 90°C - 20°C to + 40°C	NBR (nitrile) UR (cast urethane)

## MATERIALS IN CONTACT WITH FLUID

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

	Brass body	Stainless steel body
<b>Body</b>	Brass	AISI 303 SS
<b>Core tube</b>	Stainless steel	Stainless steel
<b>Core and plugnut</b>	Stainless steel	Stainless steel
<b>Springs</b>	Stainless steel	Stainless steel
<b>Seat</b>	Brass	Stainless steel
<b>Seals</b>	NBR	NBR
<b>Disc</b>	NBR or UR	NBR or UR
<b>Disc holder &amp; core guide</b>	POM	POM
<b>Shading coil</b>	Copper	Silver

## ELECTRICAL CHARACTERISTICS

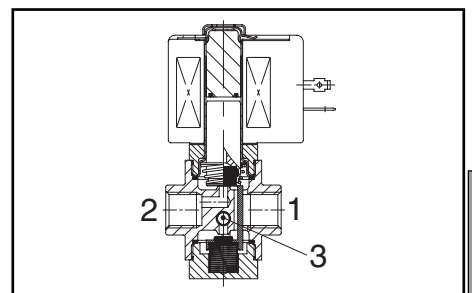
**Coil insulation class** F  
**Connector** Spade plug (cable Ø 6-10 mm)  
**Connector specification** ISO 4400 / EN 175301-803, form A  
**Electrical safety** IEC 335  
**Electrical enclosure protection** Moulded IP65 (EN 60529)  
**Standard voltages** DC (=) : 24V - 48V  
 (Other voltages and 60 Hz on request) AC (~) : 24V - 48V - 115V - 230V / 50 Hz

prefix option	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type <sup>(1)</sup>
	inrush ~	holding ~		hot/cold =		~	=	
	(VA)	(VA)	(W)	(W)		230 V/50 Hz	24 V DC	
SC	34	15,6	6	7 / 9,7	-20 to + 75	400325-117	400325-142	01
	30	22,5	9	-	-20 to + 50	400325-217	-	01
	55	23	10,5	9/11,2	-20 to + 75	400425-117	400425-142	02
	78	35	16,7	-	-20 to + 50	400425-217	-	02

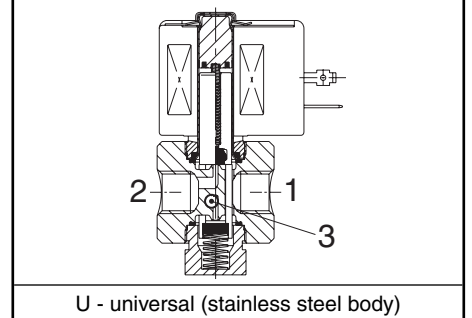
<sup>(1)</sup> Refer to the dimensional drawings on the following page

## SPECIFICATIONS

pipe size	orifice size (mm)	flow coefficient Kv (m <sup>3</sup> /h) (l/min)		operating pressure differential (bar) max. (PS)						power coil (W)		catalogue number		options						
		min.	air (*)			water (*)			oil (*)			brass ~/=	stainless steel ~/=	maintained man. operator	impulse man. operator	FPM	EPDM	CR	PTFE	
			~	=	~	=	~	=	~	=										
<b>U - Universal, NBR seals and UR discs</b>																				
1/8	1,2	0,05	0,83	0	12	9	12	9	12	9	9	9,7	SCB320B130	-	MS	MO	V	E	-	T
					-	-	-	-	-	-	-	-	SCB320A140	MS	MO	-	-	-	-	T
1/4	0,8	0,02	0,33	0	27	19	28	21	28	21	16,7	11,2	SCB320A170	-	MS	MO	-	-	-	T
<b>U - Universal, NBR seals and discs</b>																				
1/4	1,6	0,08	1,3	0	7	4	7	4	7	4	10,5	11,2	SCB320A172	-	MS	MO	V	E	J	T
					7	4,5	7	4,5	7	4,5	9	9,7	-	SCB320.057	MS	MO	V	E	J	T
	2,4	0,1	1,7	0	7	4	7	4	7	4	16,7	11,2	SCB320B174	-	MS	MO	V	E	J	T
					7	4,5	7	4,5	7	4,5	16,7	11,2	-	SCB320A200	MS	MO	V	E	J	T
					3	3	3	3	3	3	6	9,7	-	SCB320.059	MS	MO	V	E	J	T
	3,2	0,18	3	0	3,5	1,7	3,5	1,7	3,5	1,7	16,7	11,2	-	SCB320A201	MS	MO	V	E	J	T
					3,5	1,7	3,5	1,7	3,5	1,7	16,7	11,2	SCB320B176	-	MS	MO	V	E	J	T
					2	1,5	2	1,5	2	1,5	9	9,7	-	SCB320.061	MS	MO	V	E	J	T
	4,4	0,3	5	0	1,5	0,8	1,5	0,8	1,5	0,8	10,5	11,2	SCB320A178	-	MS	MO	V	E	J	T



U - universal (brass body)



U - universal (stainless steel body)

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### SPECIFICATIONS

pipe size	orifice size (mm)	flow coefficient Kv (m³/h) (l/min)		operating pressure differential (bar)						power coil (W)		catalogue number brass      stainless steel		options													
				min.	max. (PS)									maintained man. operator	impulse man. operator	FPM	EPDM	CR	PTFE								
					air (*)	water (*)		oil (*)												~	=						
<b>NC - Normally closed, NBR seals and UR discs</b>																											
1/8	1,2	0,05	0,83	0	20	17	20	17	20	17	9,0	9,7	SCB320B134	SCB320A144	MS	MO	-	-	-	T							
1/4	0,8	0,02	0,33	0	50	35	50	35	50	35	16,7	11,2	SCB320A180	-	MS	MO	V	-	-	T							
<b>NC - Normally closed, NBR seals and disc</b>																											
1/4	1,6	0,08	1,3	0	15	11	15	11	15	11	16,7	11,2	SCB320A182	-	MS	MO	V	E	J	T							
					9	9	9	9	9	9	6,0	9,7	-	SCB320.063	MS	MO	V	E	J	T							
	2,4	0,10	1,7	0	8	4,5	8	4,5	8	4,5	9,0	9,7	-	SCB320.093	MS	MO	V	E	J	T							
					10	8	10	8	10	8	10,5	11,2	SCB320A184	SCB320A202	MS	MO	V	E	J	T							
	3,2	0,18	3,0	0	6	4,5	6	4,5	6	4,5	10,5	11,2	-	SCB320A203	MS	MO	V	E	J	T							
					6	4	6	4	6	4	10,5	11,2	SCB320A186	-	MS	MO	V	E	J	T							
					3	3	3	3	3	3	6,0	9,7	-	SCB320.065	MS	MO	V	E	J	T							
	4,4	0,30	5,0	0	3	1,7	3	1,7	3	1,7	10,5	11,2	SCB320A188	-	MS	MO	V	E	J	T							
	<b>NC - Normally closed, NBR seals and UR disc</b>																										
	1/8	1,2	0,05	0,83	0	20	17	20	17	20	17	9,0	9,7	SCB320B138	SCB320A148	MS	MO	-	-	-	T						
1/4	0,8	0,02	0,33	0	55	40	55	40	55	40	16,7	11,2	SCB320A190	-	MS	MO	-	-	-	T							
<b>NO - Normally open, NBR seals and disc</b>																											
1/4	1,6	0,08	1,3	0	16	11	17	11	17	11	16,7	11,2	SCB320A192	-	MS	MO	V	E	J	T							
					9	9	9	9	9	9	6,0	9,7	-	SCB320.067	MS	MO	V	E	J	T							
	2,4	0,10	1,7	0	8	4,5	8	4,5	8	4,5	9,0	9,7	-	SCB320.095	MS	MO	V	E	J	T							
					10	7	10	7	10	7	10,5	11,2	SCB320A194	SCB320A204	MS	MO	V	E	J	T							
	3,2	0,18	3,0	0	5	4	5	4	5	4	10,5	11,2	-	SCB320A205	MS	MO	V	E	J	T							
					5	4	5	4	5	4	10,5	11,2	SCB320A196	-	MS	MO	V	E	J	T							
					3	3	3	3	3	3	6,0	9,7	-	SCB320.069	MS	MO	V	E	J	T							
	4,4	0,30	5,0	0	3	2	3	2	3	2	10,5	11,2	SCB320A198	-	MS	MO	V	E	J	T							

### OPTIONS

- Valves can also be supplied with FPM (fluoroelastomer), EPDM (ethylene-propylene), CR (chloroprene) and PTFE seals and discs. Use the appropriate optional suffix letter for identification
- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE-10
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 94/9/EC (see "Explosionproof solenoids" section)
- Electrical enclosures according to "NEMA" standards are available
- Compliance with "UL", "CSA" and other local approvals available on request
- Mounting brackets for brass body valves, suffix MB
- Other pipe connections are available on request
- Plug with visual indication and peak voltage suppression or with cable length of 2 m (see Solenoids, Coils & Accessories section)

### INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- Brass valves have 2 mounting holes in body
- Stainless steel valves are standard supply with mounting brackets
- Pipe connection identifier is B = NPT (ANSI 1.20.3)
- Installation/maintenance instructions are included with each valve

### SPARE PARTS KIT & ACCESSORIES

catalogue number	spare parts kit no.		mounting bracket no.
	~	=	
SCB320B130	C302084	C302190	160800
SCB320A140	C302086	C302206	(2)
SCB320A170	C302112	C302200	160800
SCB320A172	C302114	C302201	160800
SCB320.057	C302102	C302212	(2)
SCB320B174/B176	C302116	C302201	160800
SCB320A200	C302189	C302190	(2)
SCB320.059	C302106	C302212	(2)
SCB320A201	C312189	C312190	(2)
SCB320.061	C302110	C302213	(2)
SCB320A178	C302118	C302202	160800
SCB320B134	C302124	C302217	160800
SCB320A144	C302126	C302235	(2)
SCB320A180	C302140	C302226	160800
SCB320A182	C302141	C302227	160800

### ORDERING EXAMPLES:

SC	B	320	A	170	230V / 50 Hz
SC	B	320	A	194	MS 115V / 50 Hz
SC	B	320	A	184	V 24V / DC
SC	B	320	A	144	T 230V / 50 Hz

prefix — pipe thread — basic number — voltage — suffix

### ORDERING EXAMPLES KITS:

C302183 <sup>(1)</sup>	
C302142	V
C302192	E

basic number — suffix

### SPARE PARTS KIT & ACCESSORIES

catalogue number	spare parts kit no.		mounting bracket no.
	~	=	
SCB320.063	C302150	C302240	162950-001 <sup>(2)</sup>
SCB320.093	C302151	C302240	162950-001 <sup>(2)</sup>
SCB320A184	C302142	C302227	160800
SCB320A202/A203	C312191	C312192	162950-001 <sup>(2)</sup>
SCB320A186	C302143	C302228	160800
SCB320.065	C302152	C302241	162950-001 <sup>(2)</sup>
SCB320A188	C302144	C302229	160800
SCB320B138	C302157	C302245	160800
SCB320A148	C302163	C302261	162950-001 <sup>(2)</sup>
SCB320A190	C302182	C302254	160800
SCB320A192	C302183	C302255	160800
SCB320.067	C302176	C302266	162950-001 <sup>(2)</sup>
SCB320.095	C302177	C302266	162950-001 <sup>(2)</sup>
SCB320A194/A196	C302184	C302255	160800
SCB320A204	C312193	C312194	162950-001 <sup>(2)</sup>
SCB320A205	C312193	-	162950-001 <sup>(2)</sup>
SCB320.069	C302178	C302267	162950-001 <sup>(2)</sup>
SCB320A198	C302185	C302256	160800

<sup>(1)</sup> Standard prefixes/suffixes are also applicable to kits.

<sup>(2)</sup> Mounting bracket supplied standard with valve.

- Not available

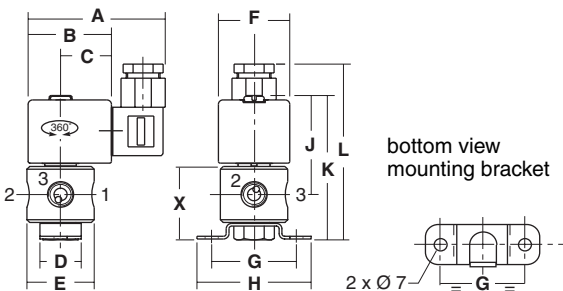
### DIMENSIONS (mm), WEIGHT (kg)



#### TYPE 01

Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65

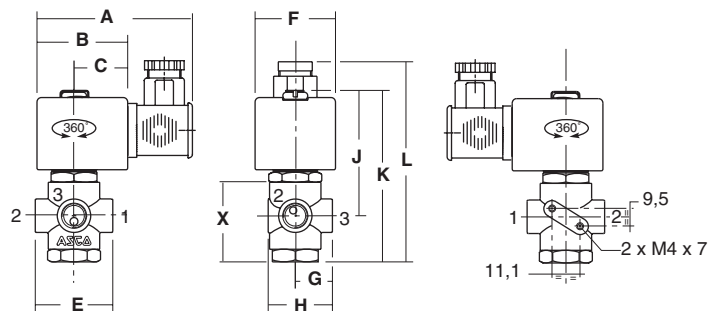
SCB320.057/.059/.061/.063/.093/.065  
.067/.095/.069



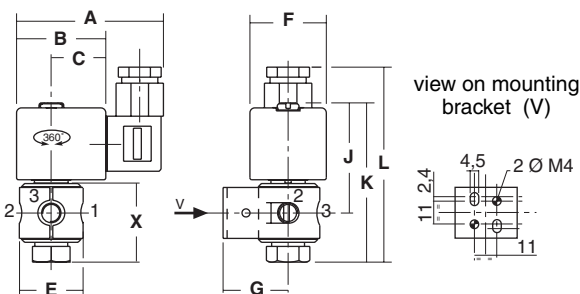
#### TYPE 02

Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65

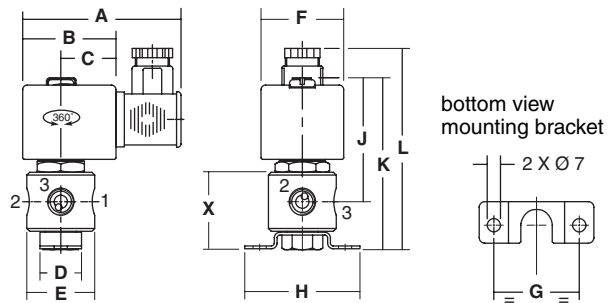
SCB320A170/A172/B174/B176/A178/  
A180/A182/A184/A186/A188/A190/A192/  
A194/A196/A198



#### SCB320130/B134/B138/A140/A144/A148



#### SCB320A200/A201/A202/A203/A204/A205



type	prefix option	catalogue number	A	B	C	D	E	F	G	H	J	K	L	X	weight <sup>(2)</sup>
01	SC	SCB320.057/.059/.061/.063/.093/.065/.067/.095/.069	75	45	27	22	36	39	46	62	58	82	96	42	0,54
		SCB320B130/B134/B138/A140/A144/A148	75	45	27	-	39	39	33	-	56	79	95	34	0,40
02	SC	SCB320A170/A172/B174/B176/A178/A180/A182/A184/A186/A188/ A190/A192/A194/A196/A198	80	50	30	-	43	45	21	36	70	96	108	45	0,57
		SCB320A200/A201/A202/A203/A204/A205	80	50	30	22	40	45	46	62	69	94	111	45	0,67

<sup>(2)</sup> Incl. coil(s) and connector(s).

