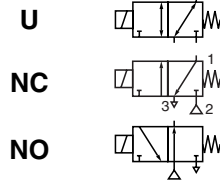




SOLENOID VALVES

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 (mm²/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 |
|-------------------------------------|-----------------|----------------------|
| Body | Brass | AISI 303 SS |
| Core tube | Stainless steel | Stainless steel |
| Core and plugnut | Stainless steel | Stainless steel |
| Springs | Stainless steel | Stainless steel |
| Seat | Brass | Stainless steel |
| Seals | NBR | NBR |
| Disc | NBR or UR | NBR or UR |
| Disc holder & core guide | POM | POM |
| Shading coil | Copper | Silver |

ELECTRICAL CHARACTERISTICS

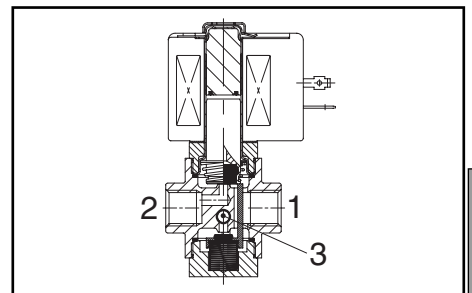
Coil insulation class F
Connector Spade plug (cable Ø 6-10 mm)
Connector specification ISO 4400 / EN 175301-803, form A
Electrical safety IEC 335
Electrical enclosure protection Moulded IP65 (EN 60529)
Standard voltages DC (=) : 24V - 48V
 (Other voltages and 60 Hz on request) AC (~) : 24V - 48V - 115V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

| prefix option | power ratings | | | | operator ambient temperature range (TS) (C°) | replacement coil | | type ⁽¹⁾ |
|---------------|---------------|-----------|------|------------|--|------------------|------------|---------------------|
| | 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 |

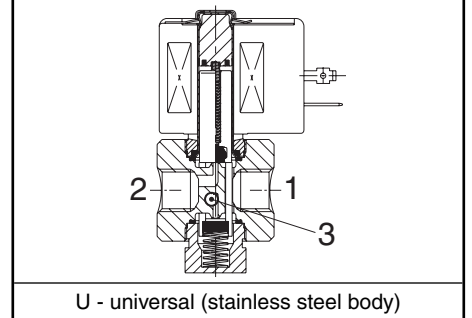
⁽¹⁾ Refer to the dimensional drawings on the following page

SPECIFICATIONS

| pipe size | orifice size (mm) | flow coefficient Kv (m ³ /h) (l/min) | | operating pressure differential (bar) max. (PS) | | | | | | power coil (W) | | catalogue number | | options | | | | | | |
|--|-------------------|---|------|---|-----|-----------|-----|---------|-----|----------------|------|------------------|---------------------|--------------------------|-----------------------|-----|------|----|------|---|
| | | min. | max. | air (*) | | water (*) | | oil (*) | | ~ | = | brass ~/= | stainless steel ~/= | maintained man. operator | impulse man. operator | FPM | EPDM | CR | PTFE | |
| | | | | ~ | = | ~ | = | ~ | = | | | | | | | | | | | |
| U - Universal, NBR seals and UR discs | | | | | | | | | | | | | | | | | | | | |
| 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 |
| U - Universal, NBR seals and discs | | | | | | | | | | | | | | | | | | | | |
| 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)

00070GB-2006/R01 Availability, design and specifications are subject to change without notice. All rights reserved.

SPECIFICATIONS

| pipe size | orifice size (mm) | flow coefficient Kv (m³/h) (l/min) | | operating pressure differential (bar) | | | | | | power coil (W) | | catalogue number | | options | | | | | | | | | |
|---|----------------------|--|------|---------------------------------------|-----------|-----------|---------|-------|-----------------|-------------------|------|------------------|------------|-----------------------------|--------------------------|------------|------------|----|------|---|---|---|---|
| | | | | min. | max. (PS) | | | brass | stainless steel | | | | | maintained man. operator | impulse man. operator | FPM | EPDM | CR | PTFE | | | | |
| | | | | | air (*) | water (*) | oil (*) | | | | | ~/= | ~/= | | | | | | | | | | |
| NC - Normally closed, NBR seals and UR discs | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | |
| NC - Normally closed, NBR seals and disc | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | |
| | | | | | 0,21 | 3,5 | 0 | 6 | 4 | 6 | 4 | 6 | 4 | 10,5 | 11,2 | SCB320A186 | - | MS | MO | V | E | J | T |
| | | | | | 0,27 | 4,5 | 0 | 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 | | | |
| NC - Normally closed, NBR seals and UR disc | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | |
| NO - Normally open, NBR seals and disc | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | |
| | | | | | 0,21 | 3,5 | 0 | 5 | 4 | 5 | 4 | 5 | 4 | 10,5 | 11,2 | SCB320A196 | - | MS | MO | V | E | J | T |
| | | | | | 0,27 | 4,5 | 0 | 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 ⁽¹⁾ | |
| 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 ⁽²⁾ |
| SCB320.093 | C302151 | C302240 | 162950-001 ⁽²⁾ |
| SCB320A184 | C302142 | C302227 | 160800 |
| SCB320A202/A203 | C312191 | C312192 | 162950-001 ⁽²⁾ |
| SCB320A186 | C302143 | C302228 | 160800 |
| SCB320.065 | C302152 | C302241 | 162950-001 ⁽²⁾ |
| SCB320A188 | C302144 | C302229 | 160800 |
| SCB320B138 | C302157 | C302245 | 160800 |
| SCB320A148 | C302163 | C302261 | 162950-001 ⁽²⁾ |
| SCB320A190 | C302182 | C302254 | 160800 |
| SCB320A192 | C302183 | C302255 | 160800 |
| SCB320.067 | C302176 | C302266 | 162950-001 ⁽²⁾ |
| SCB320.095 | C302177 | C302266 | 162950-001 ⁽²⁾ |
| SCB320A194/A196 | C302184 | C302255 | 160800 |
| SCB320A204 | C312193 | C312194 | 162950-001 ⁽²⁾ |
| SCB320A205 | C312193 | - | 162950-001 ⁽²⁾ |
| SCB320.069 | C302178 | C302267 | 162950-001 ⁽²⁾ |
| SCB320A198 | C302185 | C302256 | 160800 |

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

⁽²⁾ Mounting bracket supplied standard with valve.

- Not available

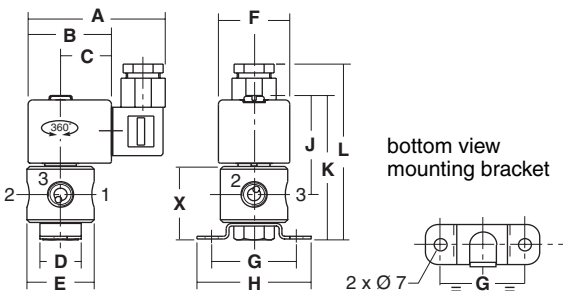
DIMENSIONS (mm), WEIGHT (kg)



TYPE 01

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

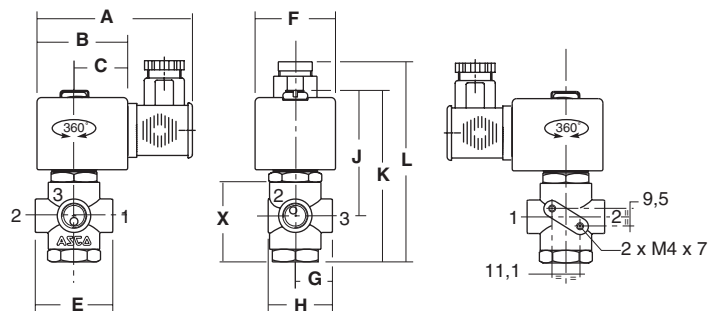
SCB320.057/.059/.061/.063/.093/.065
.067/.095/.069



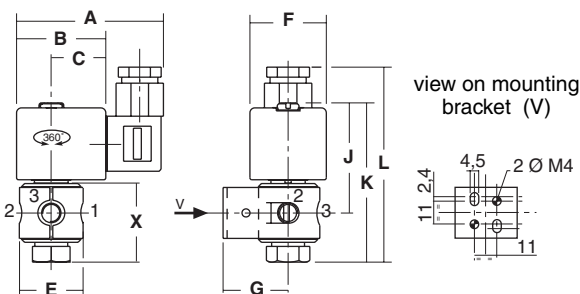
TYPE 02

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

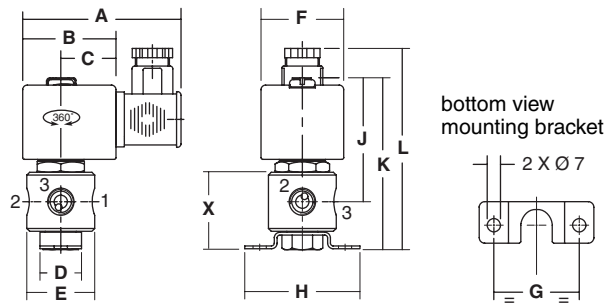
SCB320A170/A172/B174/B176/A178/
A180/A182/A184/A186/A188/A190/A192/
A194/A196/A198



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 ⁽²⁾ |
|------|---------------|--|----|----|----|----|----|----|----|----|----|----|-----|----|-----------------------|
| 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 |

⁽²⁾ Incl. coil(s) and connector(s).

