

# ASCO™ Solenoid Valves

Pilot Operated, Floating Diaphragm/Piston, 3/8" to 1" 1/2

2/2  
Series  
**210**

- Two way shut-off valves for automatic control of air, inert gas, water, oil and other gases/liquids compatible with the seal materials used
- Heavy duty piston design for severe applications
- All products are covered by Pressure Equipment Directive 2014/68/EU and are suitable for group 1 and 2 fluids
- The solenoid valves satisfy all relevant EU directives

## General

**Differential pressure** See «SPECIFICATIONS» [1 bar = 100 kPa]  
**Maximum viscosity** 65 cSt (mm²/s)  
**Response time** 40 - 120 ms

| fluids (*)                 | temperature range (TS) | seal materials (*)   |
|----------------------------|------------------------|----------------------|
| air, inert gas, water, oil | -20°C to +90°C         | NBR (nitrile) / PTFE |

## 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 304 SS          |
| <b>Shading coil</b>        | Copper               | Silver               |
| <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 and core disc</b> | NBR                  | NBR                  |
| <b>Piston</b>              | PPS / brass          | PPS or brass         |
| <b>Piston disc</b>         | NBR or PTFE          | NBR                  |
| <b>Piston rings</b>        | PTFE (carbon filled) | PTFE (carbon filled) |

## Electrical characteristics

**Coil insulation class** F or H  
**Connector** Spade plug (cable Ø 6-10 mm) or cable leads, 0,35 m length (EF)

## Connector specification

**Electrical safety** IEC 335  
**Electrical enclosure protection** Moulded IP65 (EN 60529) or NEMA 3, 7, 9 (EF)  
**Standard voltages** DC (=) : 24V - 48V  
 AC (~) : 24V - 48V - 115V - 230V/50 Hz  
 (Other voltages and 60 Hz on request)

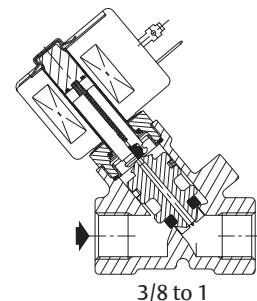
| prefix option | power ratings |           |            |         | operator ambient temperature range (TS) (C°) | replacement coil |             | type <sup>(1)</sup> |
|---------------|---------------|-----------|------------|---------|----------------------------------------------|------------------|-------------|---------------------|
|               | inrush ~      | holding ~ | hot/cold = |         |                                              | ~                | =           |                     |
|               | (VA)          | (VA)      | (W)        | (W)     |                                              | 230 V/50 Hz      | 24 V DC     |                     |
| SC            | 34            | 15,6      | 6          | -       | -20 to +75                                   | 400325-117       | -           | 01                  |
|               | -             | -         | -          | 9/11,2  | -20 to +75                                   | -                | 400425-142  | 02                  |
|               | 78            | 35        | 16,7       | -       | -20 to +50                                   | 400425-217       | -           | 02                  |
|               | 110           | 33,6      | 15,4       | 12/16,8 | -20 to +75                                   | 400525-117       | 400625-142  | 03                  |
|               | 240           | 43        | 20         | -       | -20 to +50                                   | 400525-217       | -           | 03                  |
| EF            | -             | -         | -          | 21/30,6 | -20 to +25                                   | -                | 074073-005D | 04                  |

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

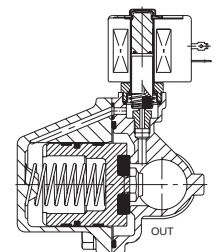
## Specifications

| pipe size                                             | orifice size | flow coefficient Kv |         | operating pressure differential (bar) |           |           |         |   |       |                 |                          | power coil (W) |            | Catalog number |            | options |      |    |      |   |
|-------------------------------------------------------|--------------|---------------------|---------|---------------------------------------|-----------|-----------|---------|---|-------|-----------------|--------------------------|----------------|------------|----------------|------------|---------|------|----|------|---|
|                                                       |              |                     |         | min.                                  | max. (PS) |           |         |   |       |                 | maintained man. operator |                |            |                |            | FPM     | EPDM | CR | PTFE |   |
|                                                       |              |                     |         |                                       | air (*)   | water (*) | oil (*) |   | brass | stainless steel |                          |                |            |                |            |         |      |    |      |   |
|                                                       | (mm)         | (m³/h)              | (l/min) |                                       | ~         | =         | ~       | = | ~     | =               | ~                        | =              |            |                |            |         |      |    |      |   |
| NC - Normally closed, PPS piston, NBR seals and discs |              |                     |         |                                       |           |           |         |   |       |                 |                          |                |            |                |            |         |      |    |      |   |
| Rp 3/8                                                | 9            | 1,3                 | 21,7    | 0,35                                  | 9         | 3         | -       | - | -     | -               | 6                        | 11,2           | SCE210C073 | -              | MO         | V       | E    | J  | -    |   |
| NPT 3/8                                               |              |                     |         | 0,07                                  | -         | -         | 9       | 3 | -     | 9               |                          |                | 3          | -              | SCB210A036 | MO      | V    | E  | J    | - |
| Rp 1/2                                                | 11           | 1,9                 | 31,6    | 0,35                                  | 9         | 3         | -       | - | -     | -               | 6                        | 11,2           | SCE210A015 | -              | MO         | V       | E    | J  | -    |   |
| NPT 1/2                                               |              |                     |         | 0,07                                  | -         | -         | 9       | 3 | -     | 9               |                          |                | 3          | -              | SCB210A037 | MO      | V    | E  | J    | - |

NC



3/8 to 1



1 1/4 to 1 1/2

**Specifications**

| pipe size                                                   | orifice size | flow coefficient Kv |         | operating pressure differential (bar) |           |    |           |    |         |    | power coil (W) |           | Catalog number                          |                 | options                  |        |        |        |        |
|-------------------------------------------------------------|--------------|---------------------|---------|---------------------------------------|-----------|----|-----------|----|---------|----|----------------|-----------|-----------------------------------------|-----------------|--------------------------|--------|--------|--------|--------|
|                                                             |              |                     |         | min.                                  | max. (PS) |    |           |    |         |    |                |           |                                         |                 | maintained man. operator | FPM    | EPDM   | CR     | PTFE   |
|                                                             |              |                     |         |                                       | air (*)   |    | water (*) |    | oil (*) |    |                |           | brass                                   | stainless steel |                          |        |        |        |        |
|                                                             | (mm)         | (m³/h)              | (l/min) |                                       | ~         | =  | ~         | =  | ~       | =  | ~              | =         |                                         |                 |                          |        |        |        |        |
| NC - Normally closed, brass piston, NBR seals and PTFE disc |              |                     |         |                                       |           |    |           |    |         |    |                |           |                                         |                 |                          |        |        |        |        |
| Rp 3/4                                                      | 19           | 5,2                 | 86,7    | 0                                     | 24        | 14 | 14        | 12 | 14      | 12 | 15,4<br>-      | -<br>30,6 | SCE210B026<br>EFE210B026 <sup>(1)</sup> | -<br>-          | MO<br>MO                 | V<br>V | E<br>E | J<br>J | T<br>T |
| Rp 1                                                        | 25           | 11,6                | 193     | 0,7                                   | 20        | 16 | 20        | 14 | 20      | 14 | 16,7           | 16,8      | SCE210B078                              | -               | MO                       | -      | -      | -      | -      |
| Rp 1 1/4                                                    | 28           | 12,8                | 214     | 0,7                                   | 20        | 16 | 20        | 14 | 20      | 14 | 16,7           | 16,8      | SCE210B080                              | -               | MO                       | -      | -      | -      | -      |
| Rp 1 1/2                                                    | 32           | 19,3                | 322     | 0,7                                   | 20        | 16 | 20        | 14 | 20      | 14 | 16,7           | 16,8      | SCE210B082                              | -               | MO                       | -      | -      | -      | -      |
| NC - Normally closed, brass piston, NBR seals and discs     |              |                     |         |                                       |           |    |           |    |         |    |                |           |                                         |                 |                          |        |        |        |        |
| Rp 1                                                        | 25           | 11,6                | 193     | 0                                     | 20        | -  | 8         | -  | 8       | -  | 20             | -         | SCE210B027                              | -               | MO                       | V      | E      | J      | T      |

<sup>(1)</sup> Valve to be mounted with solenoid vertical and upright for DC.

**Options**

- Valves can also be supplied with FPM (fluoroelastomer), EPDM (ethylene-propylene), CR (chloroprene) and PTFE seals and discs. Use the appropriate 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 2014/34/EU <sup>(2)</sup>
- Electrical enclosures according to "NEMA" standards are available
- Compliance with "UL", "CSA" and other local approvals available on request
- Mounting brackets, suffix MB (Except for: SCE210B078/B080/B082/B027)
- Other pipe connections are available on request
- Connector with visual indication and peak voltage suppression or with cable length of 2 m

<sup>(2)</sup> Please consult the quick selection guide on potentially explosive atmospheres on Emerson.com/asco

**Installation**

- The solenoid valves can be mounted in any position without affecting operation, unless indicated otherwise in the specifications table.
- Stainless steel valves are standard supplied with mounting brackets
- Pipe connection identifier is E = Rp (ISO 7/1) or B = NPT (ANSI 1.20.3)
- Installation/maintenance instructions are included with each valve

**Spare parts kit & Accessories**

| Catalog number | spare parts kit no. |         | mounting bracket no. |
|----------------|---------------------|---------|----------------------|
|                | ~                   | =       |                      |
| SCE210C073     | C302271             | C302371 | 093200-001           |
| SCB210A036     | C302327             | C302421 | 093200-001           |
| SCE210A015     | C302275             | C302374 | 100835-001           |
| SCB210A037     | C302326             | C302422 | 100835-001           |
| SCE210B026     | C302278             | -       | 038713-000           |
| EFE210B026     | -                   | C302377 | 038713-000           |
| SCE210B078     | C302281             | C302380 | -                    |
| SCE210B080     | C302281             | C302380 | -                    |
| SCE210B082     | C302285             | C302384 | -                    |
| SCE210B027     | C302282             | -       | -                    |

- Not available

**Ordering examples:**

|    |   |           |                 |
|----|---|-----------|-----------------|
| SC | E | 210 A 015 | 230V / 50 Hz    |
| SC | E | 210 B 026 | MO 115V / 50 Hz |
| SC | B | 210 A 037 | V 24V / DC      |
| SC | E | 210 B 027 | 230V / 50 Hz    |

prefix — pipe thread — basic number — voltage — suffix

**Ordering examples kits:**

|                        |   |
|------------------------|---|
| C302271 <sup>(3)</sup> |   |
| C302374                | V |
| C302278                | E |

basic number — suffix

<sup>(3)</sup> Standard prefixes/suffixes are also applicable to kits.

## Dimensions (mm), Weight (kg)



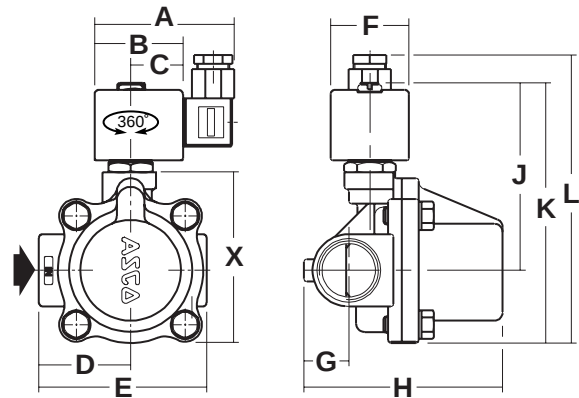
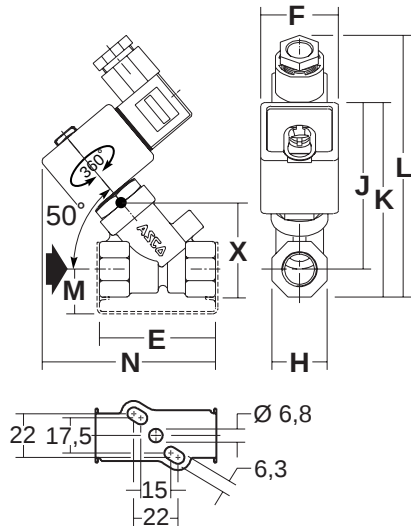
**TYPE 01-02**  
Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65

Type 01, AC: SCE210C073/A015 - SCB210A036/037  
Type 02, DC: SCE210C073/A015 - SCB210A036/037



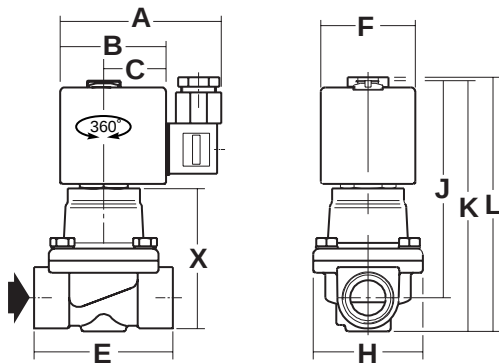
**TYPE 02-03**  
Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65

Type 02, AC: SCE210B078/B080/B082  
Type 03, DC: SCE210B078/B080/B082



**TYPE 03**  
Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65

AC: SCE210B026/027



| type | prefix option | Catalog number  | A  | B  | C  | D  | E   | F  | G  | H   | J   | K   | L   | M  | N  | X   | weight <sup>(1)</sup> |
|------|---------------|-----------------|----|----|----|----|-----|----|----|-----|-----|-----|-----|----|----|-----|-----------------------|
| 01   | SC            | SCE210C073/A036 | -  | -  | -  | -  | 48  | 39 | -  | 22  | 74  | 85  | 124 | 22 | 72 | 41  | 0,6                   |
|      |               | SCE210A015/A037 | -  | -  | -  | -  | 58  | 39 | -  | 28  | 82  | 95  | 128 | 22 | 89 | 47  | 0,6                   |
| 02   | SC            | SCE210C073/A036 | -  | -  | -  | -  | 48  | 45 | -  | 22  | 80  | 91  | 130 | 22 | 80 | 41  | 0,6                   |
|      |               | SCE210A015/A037 | -  | -  | -  | -  | 58  | 45 | -  | 28  | 82  | 95  | 128 | 22 | 93 | 47  | 0,6                   |
|      |               | SCE210B078      | 80 | 50 | 30 | 55 | 95  | 45 | 45 | 108 | 55  | 154 | 149 | -  | -  | 95  | 2,8                   |
|      |               | SCE210B080      | 80 | 50 | 30 | 52 | 95  | 45 | 30 | 119 | 108 | 149 | 166 | -  | -  | 117 | 3,0                   |
|      |               | SCE210B082      | 80 | 50 | 30 | 52 | 111 | 45 | 33 | 148 | 112 | 162 | 179 | -  | -  | 108 | 4,2                   |
| 03   | SC            | SCE210B078      | 86 | 56 | 33 | 55 | 95  | 50 | 50 | 108 | 55  | 154 | 152 | -  | -  | 95  | 2,8                   |
|      |               | SCE210B080      | 86 | 56 | 33 | 52 | 95  | 50 | 30 | 119 | 114 | 156 | 156 | -  | -  | 97  | 3,0                   |
|      |               | SCE210B082      | 86 | 56 | 33 | 52 | 111 | 50 | 33 | 148 | 118 | 165 | 165 | -  | -  | 110 | 4,2                   |
|      |               | SCE210B026      | 86 | 56 | 33 | -  | 74  | 50 | -  | 59  | 117 | 133 | 135 | -  | -  | 76  | 1,3                   |
|      |               | SCE210B027      | 86 | 56 | 33 | -  | 100 | 50 | -  | 33  | 50  | 83  | 143 | -  | -  | 84  | 2,5                   |

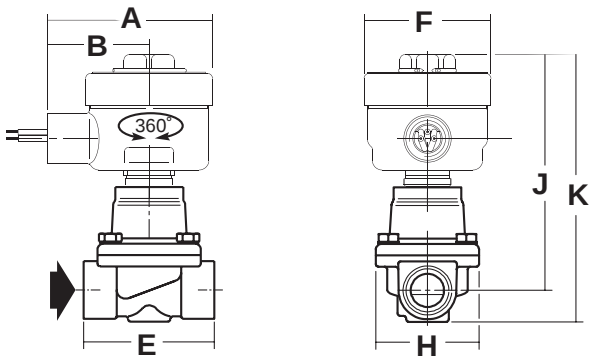
<sup>(1)</sup> Incl. coil(s) and connector(s)

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



**TYPE 04**  
Prefix "EF" Solenoid  
Epoxy encapsulated  
ICS-6 ANSI  
NEMA type 3, 7, 9

DC: EFE210B026



| type | prefix option | Catalog number | A  | B  | C | D | E  | F  | G | H  | J   | K   | weight <sup>(1)</sup> |
|------|---------------|----------------|----|----|---|---|----|----|---|----|-----|-----|-----------------------|
| 04   | EF            | EFE210B026     | 83 | 51 | - | - | 74 | 64 | - | 59 | 117 | 133 | 1,3                   |

<sup>(1)</sup> Incl. coil