

### FEATURES

- Solenoid valves satisfy all relevant EC directives
- All products are covered by the Pressure Equipment Directive 97/23/EC and are suitable for group 1 and 2 fluids
- Valves do not require a minimum operating pressure

### GENERAL

|                       |                                        |
|-----------------------|----------------------------------------|
| Differential pressure | See "SPECIFICATIONS" [1 bar = 100 kPa] |
| Maximum viscosity     | 65 cSt (mm²/s)                         |
| Response times        | 15 - 120 ms                            |

| fluids (*)                 | temperature range (TS) | sealings (*)           |
|----------------------------|------------------------|------------------------|
| air, inert gas, water, oil | -20 to +85°C           | NBR (nitrile / buna-n) |

### MATERIALS IN CONTACT WITH FLUID

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

|                           |                 |                                          |
|---------------------------|-----------------|------------------------------------------|
| Body                      | Brass           | Stainless steel, AISI 304 <sup>(1)</sup> |
| Core tube                 | Stainless steel | Stainless steel                          |
| Core and plugnut          | Stainless steel | Stainless steel                          |
| Springs                   | Stainless steel | Stainless steel                          |
| Seat                      | Brass           | Stainless steel                          |
| Sealing, diaphragm & disc | NBR             | NBR                                      |
| Shading coil              | Copper          | Silver                                   |

### ELECTRICAL CHARACTERISTICS

|                                       |                                   |
|---------------------------------------|-----------------------------------|
| Coil insulation class                 | F or H                            |
| Connector                             | Spade plug (Pg 11P)               |
| Connector specification               | ISO 4400                          |
| Electrical safety                     | IEC 335                           |
| Standard voltages                     | DC (=): 24V                       |
| (Other voltages and 60 Hz on request) | AC (~): 24V - 115V - 230V / 50 Hz |

| coil type | power ratings |         |      | hot/cold<br>= | ambient temperature ranges (TS) | protection   |
|-----------|---------------|---------|------|---------------|---------------------------------|--------------|
|           | inrush        | holding |      |               |                                 |              |
|           | ~             | ~       |      |               |                                 |              |
|           | (VA)          | (VA)    | (W)  | (W)           | (°C)                            |              |
| CMXX-FT   | 55            | 23,0    | 10,5 | 9 / 11,2      | -20 to +75                      | moulded IP65 |
| CMXX-FB   | 78            | 35,0    | 16,7 | -             | -20 to +50                      | moulded IP65 |
| MLXX-HP   | -             | -       | -    | 21 / 30,6     | -20 to +25                      | NEMA 3, 7, 9 |
| CM12-FT   | 110           | 33,6    | 15,4 | -             | -20 to +75                      | moulded IP65 |
| CM12-FB   | -             | -       | -    | 16,8 / 23     | -20 to +50                      | moulded IP65 |

### SPECIFICATIONS

| pipe size                                        | orifice size | flow coefficient Kv |         | operating pressure differential (bar) |              |   |           |   |         |   | coil type |         | catalogue number |             | OPTIONAL |      |    |      |
|--------------------------------------------------|--------------|---------------------|---------|---------------------------------------|--------------|---|-----------|---|---------|---|-----------|---------|------------------|-------------|----------|------|----|------|
|                                                  |              |                     |         | min.                                  | maximum (PS) |   |           |   |         |   |           |         |                  |             | FPM      | EPDM | CR | PTFE |
|                                                  |              |                     |         |                                       | air (*)      |   | water (*) |   | oil (*) |   |           |         |                  |             |          |      |    |      |
|                                                  | (mm)         | (m³/h)              | (l/min) | ~                                     | =            | ~ | =         | ~ | =       | ~ | =         | ~       | =                |             |          |      |    |      |
| Rp Brass body, NBR sealings and discs            |              |                     |         |                                       |              |   |           |   |         |   |           |         |                  |             |          |      |    |      |
| 3/8                                              | 16           | 2,6                 | 43      | 0                                     | 9            | 3 | 9         | 3 | -       | - | CMXX-FT   | CMXX-FT | SC E210C093      | SC E210C093 | V        | E    | J  |      |
| 1/2                                              | 16           | 3,4                 | 57      | 0                                     | 9            | 3 | 9         | 3 | -       | - | CMXX-FT   | CMXX-FT | SC E210C094      | SC E210C094 | V        | E    | J  |      |
| 3/4                                              | 19           | 4,3                 | 72      | 0                                     | 9            | 3 | 9         | 3 | -       | - | CMXX-FT   | CMXX-FT | SC E210D095      | SC E210D095 | V        | E    | J  |      |
| 1                                                | 25           | 11,1                | 185     | 0                                     | 9            | 6 | 9         | 6 | 9       | 6 | CM12-FT   | CM12-FB | SC E210B154      | SC E210B154 | V        | E    | J  |      |
| 1 1/4                                            | 28           | 12,8                | 213     | 0                                     | 9            | 6 | 9         | 6 | 9       | 6 | CM12-FT   | CM12-FB | SC E210B155      | SC E210B155 | V        | E    | J  |      |
| 1 1/2                                            | 32           | 19,3                | 322     | 0                                     | 9            | 5 | 9         | 5 | 9       | 5 | CM12-FT   | CM12-FB | SC E210B156      | SC E210B156 | V        | E    | J  |      |
| NPT Stainless steel body, NBR sealings and discs |              |                     |         |                                       |              |   |           |   |         |   |           |         |                  |             |          |      |    |      |
| 1/2                                              | 16           | 3,4                 | 57      | 0                                     | 9            | 3 | 9         | 3 | 9       | - | CMXX-FB   | CMXX-FT | SC B210C087      | SC B210C087 | V        | E    | J  |      |
| 3/4                                              | 16           | 3,9                 | 65      | 0                                     | 9            | 3 | 9         | 3 | 9       | - | CMXX-FB   | CMXX-FT | SC B210C088      | SC B210C088 | V        | E    | J  |      |
| 1                                                | 25           | 9,6                 | 160     | 0                                     | 9            | 7 | 9         | 7 | 9       | 5 | CM12-FT   | MLXX-HP | SC B210D089      | EF B210D089 | V        | E    | J  |      |

<sup>(1)</sup> Stainless steel 316L body material on request.

### OPTIONS

- Valves can also be supplied with FPM (fluorelastomer / viton), EPDM (ethylene-propylene) and CR (chloroprene / neoprene) sealings, diaphragms and discs. Use the appropriate optional suffix letter for identification
- Explosionproof enclosure with embedded screw terminal coil and Pg 13,5 cable gland to meet CEE-10 (IP67)
- Flameproof enclosures for hazardous locations according to "CENELEC" and national standards (see section 10)
- Explosionproof and watertight enclosures according to "NEMA" standards (see section 10)
- Compliance with "UL" and "CSA" standards
- For protection against corrosion caused by the environment or the fluid, consult us
- Mounting brackets for valves with brass bodies 210C093, C094, D095
- Manual operator (except: 210D089)
- Plug with visual indication and/or with peak voltage suppression or with cable length of 2m (see section 11)

### INSTALLATION

- The valves can be mounted in any position without affecting operation. **The versions with MLXX-HP coil in DC service should be mounted vertical and upright only**
- Stainless steel valves are standard supplied with mounting brackets
- Pipe connection identifiers are: B = NPT (ANSI 1.20.3); E = Rp (ISO 7/1)
- The third digit in the catalogue number indicates the standard pipe connection
- Other pipe threads are available on request
- Installation/maintenance instructions are included with each valve
- Spare Parts Kit and replacement coils are available (see section 11)

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



Fig. 1

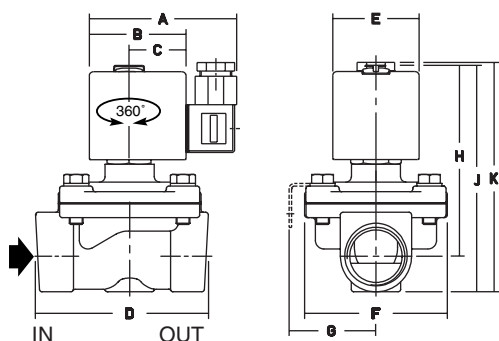
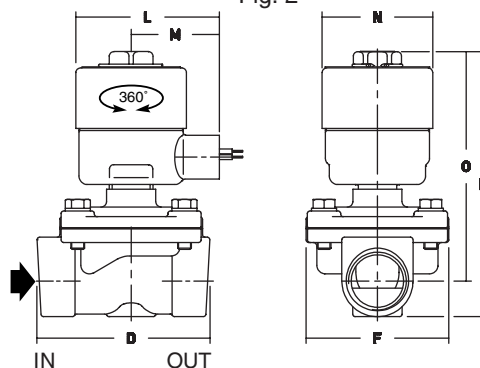


Fig. 2



#### DC construction only

|                 | L  | M  | N  | O   | P   | (C)    |
|-----------------|----|----|----|-----|-----|--------|
| SC B210D089 (=) | 83 | 51 | 64 | 135 | 157 | fig. 2 |

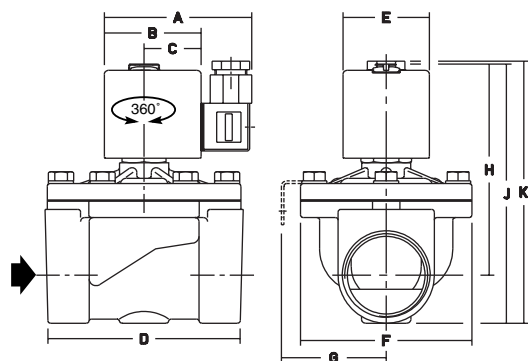


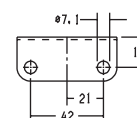
Fig. 3

| catalogue number   | A  | B  | C  | D   | E  | F  | G  | H   | J   | K   | weight (1) | (C)    |
|--------------------|----|----|----|-----|----|----|----|-----|-----|-----|------------|--------|
| SC E210C093 - C094 | 80 | 50 | 30 | 70  | 45 | 58 | 41 | 85  | 99  | 114 | 0,8        | fig. 1 |
| D095               | 80 | 50 | 30 | 71  | 45 | 58 | 41 | 89  | 106 | 121 | 1,0        |        |
| B154               | 86 | 56 | 33 | 95  | 50 | 83 | -  | 112 | 132 | 137 | 1,9        |        |
| B155               | 86 | 56 | 33 | 95  | 50 | 83 | -  | 112 | 143 | 148 | 2,0        |        |
| SC E210B156        | 86 | 56 | 33 | 111 | 50 | 99 | -  | 125 | 153 | 158 | 2,8        | fig. 3 |
| SC B210C087 - C088 | 80 | 50 | 30 | 71  | 45 | 61 | 41 | 87  | 105 | 122 | 1,0        | fig. 1 |
| D089               | 86 | 56 | 33 | 95  | 50 | 98 | 56 | 113 | 136 | 141 | 2,5        |        |

(1) incl. coil and connector

(C) Construction type

Mounting brackets for valves  
SC E210C093, C094, D095  
SC B210C087, C088, D089



ASCO/JOUCOMATIC reserves the right to alter the availability, design and specifications without notice.