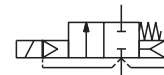




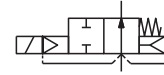
SOLENOID VALVES

pilot operated
built-in pilot, floating diaphragm
3/8 to 2

NC



NO



2/2
Series
238

FEATURES

- Minimum operating pressure differential ΔP 0.3/0.5 bar
- Two way valves for automatic control of water, air and inert gas and other gases/liquids compatible with the sealing materials used
- Interchangeability of magnetic heads, AC and DC
- The solenoid valves satisfy all relevant EC Directives

GENERAL

| | | | | | | | | |
|---------------------------|--|-----|-----|-----|-------|-------|------|--|
| Differential pressure | See «SPECIFICATIONS» [1 bar = 100 kPa] | | | | | | | |
| Ambient temperature range | -10°C to +60°C | | | | | | | |
| Maximum viscosity | 40 cSt (mm ² /s) | | | | | | | |
| Response time | 3/8 | 1/2 | 3/4 | 1 | 1 1/4 | 1 1/2 | 2 | |
| opening time (ms) | 25 | 30 | 55 | 70 | 300 | 300 | 1500 | |
| closing time (ms) | 40 | 90 | 110 | 200 | 1000 | 1000 | 2000 | |

| Fluids (*) | Temperature Ranges (TS) | Sealings (*) |
|---|-------------------------|--|
| DN ≤ 25: air, inert gas and water DN > 25: air and water | -10°C to +85°C | NBR (nitrile) FPM (fluoroelastomer) |

MATERIALS IN CONTACT WITH FLUID

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

| | |
|------------------------|----------------------------------|
| Body | Brass |
| Internal parts | Stainless steel and brass |
| Springs | Stainless steel |
| Diaphragm & valve disc | NBR |
| Seals and pilot disc | FPM (3/8 to 1), NBR (1 1/4 to 2) |
| Shading coil | Copper |

ELECTRICAL CHARACTERISTICS

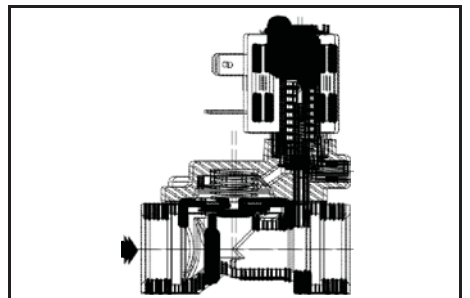
| | |
|---------------------------------------|--|
| Coil insulation class | F |
| Connector | Spade plug (cable Ø 6-8 mm or Ø 6-10 mm) |
| Connector specification | |
| for power coil: 4W/6.9W | DIN 43650, 11 mm, industry standard B |
| for power coil: 5W/6.9W-8W/9W | ISO 4400 / EN 175301-803, form 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 VDC | |
| SC | 12 | 6 | 4 | 5/6.9 | -10 to +60 | 400127-197 | 400127-142 | 01 |
| | 10.4 | 6 | 5 | 5/6.9 | -10 to +60 | 400727-117 | 400727-185 | 02 |
| | 23 | 14 | 8 | 7.5/9 | -10 to +50 | 511239-009 | 511239-002 | 03 |
| | 28 | 20 | 12.5 | 7.5/9 | -10 to +50 | 500705-004 | 511239-002 | 03 |

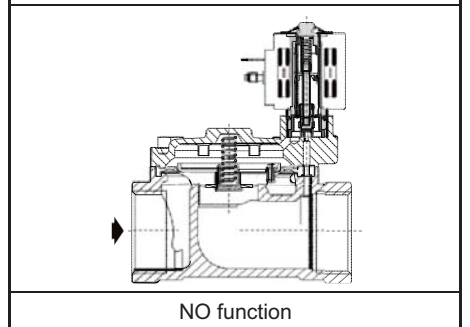
⁽¹⁾ Refer to the dimensional drawings on the following page.

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 |
| | | | | | Air / Water (*) | | | | | | | | | | |
| NC - Normally Closed | | | | | | | | | | | | | | | |
| G* 3/8 | 12 | 2.4 | 40 | 0.3 | 10 | 10 | 4 | 6.9 | SCE238D001 | MO | V | E | | | |
| | | | | | 16 | 16 | 5 | 6.9 | | | | | SCE238D006 | MO | V |
| G* 1/2 | 12 | 2.4 | 40 | 0.3 | 10 | 10 | 4 | 6.9 | SCE238D002 | MO | V | E | | | |
| | | | | | 16 | 16 | 5 | 6.9 | SCE238D007 | MO | V | E | | | |
| | 15 | 4.2 | 70 | 0.3 | 10 | 10 | 4 | 6.9 | SCE238D003 | MO | V | E | | | |
| | | | | | 16 | 16 | 5 | 6.9 | SCE238D008 | MO | V | E | | | |
| G* 3/4 | 20 | 6.6 | 110 | 0.3 | 10 | 10 | 4 | 6.9 | SCE238D004 | MO | V | E | | | |
| | | | | | 16 | 16 | 5 | 6.9 | SCE238D009 | MO | V | E | | | |
| G* 1 | 25 | 9.9 | 165 | 0.3 | 10 | 10 | 4 | 6.9 | SCE238D005 | MO | V | E | | | |
| | | | | | 16 | 16 | 5 | 6.9 | SCE238D010 | MO | V | E | | | |
| G 1 1/4 | 30 | 15 | 250 | 0.5 | 10 | 10 | 8 | 9 | SCG238F016 | MO | V | - | | | |
| G 1 1/2 | 45 | 27 | 450 | 0.5 | 10 | 10 | 8 | 9 | SCG238F017 | MO | V | - | | | |
| G 2 | 45 | 34 | 566 | 0.5 | 10 | 10 | 8 | 9 | SCG238F018 | MO | V | - | | | |



NC function



NO function

SPECIFICATIONS

| Pipe Size | Orifice Size (mm) | Flow Coefficient Kv (m ³ /h) (l/min) | | Operating Pressure Differential (bar) | | Power Coil (W) | | Catalog Number | | Options | | | |
|---------------------------|----------------------|--|-----|---------------------------------------|-----------------|----------------|------|----------------|------------|------------|---------------|-----|------|
| | | | | Min. | Max. (PS) | | | | | Maintained | Man. Operator | FPM | EPDM |
| | | | | | Air / Water (*) | | | | | | | | |
| NO - Normally Open | | | | | | | | | | | | | |
| 3/8 | 13.5 | 1.68 | 28 | 0.35 | 12 | 12 | 5 | 6.9 | SCG238D414 | - | V | - | |
| 1/2 | 13.5 | 2.1 | 35 | 0.35 | 12 | 12 | 5 | 6.9 | SCG238D415 | - | V | - | |
| 3/4 | 18 | 4.98 | 83 | 0.35 | 12 | 12 | 5 | 6.9 | SCG238D416 | - | V | - | |
| 1 | 24 | 10.98 | 183 | 0.35 | 12 | 12 | 5 | 6.9 | SCG238D417 | - | V | - | |
| G 1 1/4 | 30 | 15 | 250 | 0.5 | 10 | 10 | 12.5 | 9 | SCG238E019 | - | V | - | |
| G 1 1/2 | 45 | 27 | 450 | 0.5 | 9 | 9 | 12.5 | 9 | SCG238E020 | - | V | - | |
| G 2 | 45 | 34 | 566 | 0.5 | 9 | 9 | 12.5 | 9 | SCG238E021 | - | V | - | |



OPTIONS

- Valves can also be supplied with FPM (fluorelastomer), EPDM (ethylene-propylene) seals, diaphragm and disc. Use the appropriate optional suffix letter for identification
- Oxygen service, suffix NV, example: SCE238C002NVMO (Except pipe size G 1 1/4, G 1 1/2 and G 2)
- 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
- Pipe connections (G*) have standard combination thread according to ISO 228/1 and ISO 7/1. Pipe connections (G) have standard combination thread according to ISO 228/1
- Installation/maintenance instructions are included with each valve
- Spare parts kits and replacement coils are available
- Other pipe connections are available on request

SPARE PARTS KIT

| Catalog Number | Spare Parts Kit Number ⁽²⁾ | |
|------------------------|---|---|
| |  |  |
| | ~/= | ~/= |
| SCE238D001/002/006/007 | C131600 | C140262V |
| SCE238D003/D008 | C131618 | C140262V |
| SCE238D004/D009 | C131606 | C140262V |
| SCE238D005/D010 | C131609 | C140262V |

⁽²⁾ Standard suffixes are also applicable to kits.

ORDERING EXAMPLES

| | | | | | |
|----|---|-----|---|-----|----------------|
| SC | E | 238 | D | 001 | 230V / 50 Hz |
| SC | E | 238 | D | 008 | V 115V / 50 Hz |
| SC | E | 238 | D | 004 | E 24V / DC |
| SC | G | 238 | F | 016 | 230V / 50 Hz |

prefix — pipe thread — basic number — voltage — suffix

ORDERING EXAMPLES KITS

| | |
|------------------------|---|
| C131600 ⁽²⁾ | |
| C131618 | V |
| C140262 | E |

basic number — suffix

DIMENSIONS(mm), WEIGHT(kg)



TYPE 01
Prefix "SC" Solenoid
Epoxy moulded
IEC 335 / DIN 43650
IP65

SCE238D001/002/004/005
SCE238D003



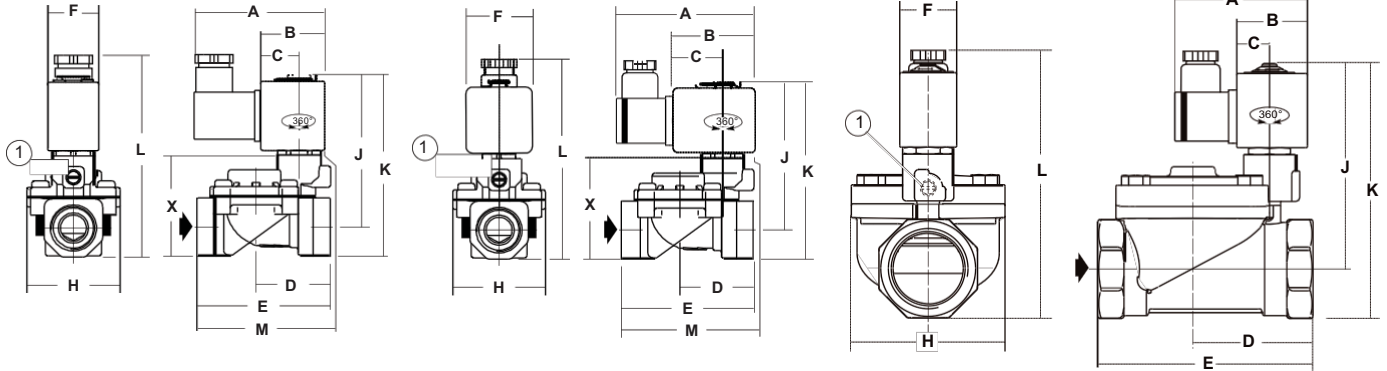
TYPE 02
Prefix "SC" Solenoid
Epoxy moulded
IEC 335 / ISO 4400
IP65

SCE238D006/007/009/010
SCE238D008
SCG238D414/415/416/417



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

SCG238F016/017/018
SCG238E019/020/021



① Manual operator location

| Type | Prefix Option | Catalog Number | A | B | C | D | E | F | H | J | K | L | M | X | Weight ⁽³⁾ |
|------------|---------------|----------------|------|------|------|------|-------|----|-----|-------|------|-------|------|------|-----------------------|
| 01 | SC | SCE238D001/002 | 60.5 | 27.5 | 17 | 34.5 | 62 | 22 | 43 | 68.5 | 81 | 98 | 57.5 | 47 | 0.4 |
| | | SCE238D003 | 60.5 | 27.5 | 17 | 45.5 | 81.5 | 22 | 57 | 71 | 83.5 | 100 | 73.5 | 49.5 | 0.5 |
| | | SCE238D004 | 60.5 | 27.5 | 17 | 53 | 95 | 22 | 68 | 79.5 | 94.5 | 111 | 85.5 | 60.5 | 0.8 |
| | | SCE238D005 | 60.5 | 27.5 | 17 | 58 | 105.5 | 22 | 87 | 84.5 | 104 | 121 | 93 | 70 | 1.0 |
| 02 | SC | SCE238D006/007 | 76 | 38 | 23 | 34.5 | 62 | 30 | 43 | 69.5 | 83 | 100.5 | 61.5 | 47 | 0.5 |
| | | SCE238D008 | 76 | 38 | 23 | 45.5 | 81.5 | 30 | 57 | 72 | 85.5 | 103 | 77.5 | 49.5 | 0.6 |
| | | SCE238D009 | 76 | 38 | 23 | 53 | 95 | 30 | 68 | 80.5 | 96.5 | 114 | 89.5 | 60.5 | 0.9 |
| | | SCE238D010 | 76 | 38 | 23 | 58 | 105.5 | 30 | 87 | 85.5 | 106 | 123.5 | 97 | 70 | 1.1 |
| | | SCG238D414 | 76 | 38 | 23 | 34.5 | 60 | 30 | 40 | 67 | 78 | 95.5 | 60.2 | - | 0.32 |
| | | SCG238D415 | 76 | 38 | 23 | 37 | 66 | 30 | 40 | 69 | 83 | 100.5 | 63.7 | - | 0.38 |
| | | SCG238D416 | 76 | 38 | 23 | 43.5 | 79 | 30 | 50 | 73.5 | 90 | 107.5 | 74.7 | - | 0.52 |
| SCG238D417 | 76 | 38 | 23 | 59 | 105 | 30 | 71 | 86 | 107 | 124.5 | 88.7 | - | 1.08 | | |
| 03 | SC | SCG238F016 | 76 | 41.5 | 21.6 | 63 | 113 | 30 | 81 | 108 | 134 | 150 | - | - | 1.7 |
| | | SCG238F017 | 76 | 41.5 | 21.6 | 76 | 140 | 30 | 110 | 112 | 142 | 157 | - | - | 2.6 |
| | | SCG238F018 | 76 | 41.5 | 21.6 | 85 | 157 | 30 | 110 | 116 | 152 | 168 | - | - | 2.9 |
| | | SCG238E019 | 76 | 41.5 | 21.6 | 63 | 113 | 30 | 81 | 108 | 134 | 150 | - | - | 1.7 |
| | | SCG238E020 | 76 | 41.5 | 21.6 | 76 | 140 | 30 | 110 | 112 | 142 | 157 | - | - | 2.6 |
| | | SCG238E021 | 76 | 41.5 | 21.6 | 85 | 157 | 30 | 110 | 116 | 152 | 168 | - | - | 2.9 |

⁽³⁾ Incl. coil(s) and connector(s).