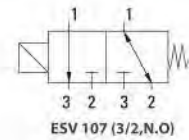
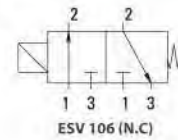


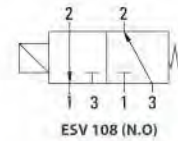
TECHNICAL SPECIFICATIONS, DESCRIPTIONS and GENERAL FEATURES

- **Fluids:** Valves are suitable for water, low viscosity oils etc... non-aggressive liquids (ESV 106 and ESV 108) and Air, Inert Gas etc... gaseous (all models) but is not suitable for hazardous fluids
- **Switching Function:** Normally Closed (N.C, Closed when de-energised) (ESV 106 Series) and Normally Open (N.O, Open when de-energised) (ESV 107-108 Series)
- **Principle of Operation:** Direct Operated
- **Way Number:** 3/2 (Ports / Positions)
- **Connection and Port Sizes:** G1/8" and G1/4"
- **Connection Type:** Thread (Female), G (BSPP / ISO 228-1)
- **Pressure Range:** 0 -16 Bar (ESV 106 Series) , 0-14 Bar (ESV 107 Series) , 0-10 Bar (ESV 108 Series)
- **Fluid Temperature:** -10°C to max. 80°C
- **Ambient Temperature:** -20°C to max. 70°C
- **Opening Time:** 25 ms
- **Closing Time:** 25 ms
- **Max Viscosity:** 38 cSt or mm²/s
- Maximum Allowable Pressure or Design Pressure: 24 bar (ESV 106 Series), 21 Bar (ESV 107 Series), 15 Bar (ESV 108 Series)
- Don't require differential pressure, inlet on the top (ESV 108 Series)
- Compact design
- Valve has sealing o-rings
- Suitable AC and DC voltage, high voltage tolerance
- Coil interchangeable without dismantling the valve (don't matter AC or DC)
- Low flow loss, low power loss
- Various flow rate options, wide range of pressure ratings, wide range of orifice options
- Mounting position, optional any position but preferably solenoid coil vertical on top
- The fluid passing through the valve must be filtered
- Flow rate (Q) can be usually calculated as a function of pressure, density and flow coefficient
- According 97/23/EC Pressure Equipment Directive (PED), 2006/95/EEC Low Voltage Directive (LVD) and 2004/108/EC Electromagnetic Compatibility Directive (EMC)



For ESV 106
1: Inlet
2: Outlet (Body)
3: Exhaust (Enclosing Tube)
De-energised: 2-3 (Exhaust)
Energised: 1-2

For ESV 107
1: Inlet
2: Outlet (Body)
3: Outlet (Enclosing Tube)
De-energised: 1-2
Energised: 1-3



For ESV 108
3: Inlet
2: Outlet (Body)
1: Exhaust (Enclosing Tube)
De-energised: 3-2
Energised: 2-1 (Exhaust)

| | | | |
|-------------------|-------------------------------------|--------------------------|-----------------|
| Low Pressure Loss | Don't Require Differential Pressure | Coil Rotatable 360° | Small Body Size |
| Low Weight | Patented Enclosing Tube Design | Fast Opening and Closing | Long Life |



| Model No | Position | Connection and Port Size | Orifice Size | Flow Factor / Coefficient Kv | | Operating Pressure Differential | | | | Fluid Temperature | | Seal | Approximate Weight | Reference Figure |
|----------------|----------|--------------------------|--------------|------------------------------|------------------------|---------------------------------|---------------|---------------|---------------|-------------------|---------|------|--------------------|------------------|
| | | | | | | Min. (For AC) | Min. (For DC) | Max. (For AC) | Max. (For DC) | Min. °C | Max. °C | | | |
| ESV | | G | mm | L/m | m ³ /h | Bar | Bar | Bar | Bar | °C | °C | | kg | |
| ESV 106.00.010 | N.C | 1/8" | 1 | "1-2:0,5 2-3:1,4" | "1-2:0,03 2-3:0,08" | 0 | 0 | 16 | 16 | -10 | 80 | NBR | 0.4 | Fig.1 |
| ESV 106.00.018 | N.C | 1/8" | 1.8 | "1-2:1,7 2-3:1,4" | "1-2:0,1 2-3:0,08" | 0 | 0 | 10 | 10 | -10 | 80 | NBR | 0.4 | Fig.1 |
| ESV 106.00.025 | N.C | 1/8" | 2.5 | "1-2:3,3 2-3:1,4" | "1-2:0,19 2-3:0,08" | 0 | 0 | 6 | 6 | -10 | 80 | NBR | 0.4 | Fig.1 |
| ESV 106.01.010 | N.C | 1/4" | 1 | "1-2:0,5 2-3:1,4" | "1-2:0,03 2-3:0,08" | 0 | 0 | 16 | 16 | -10 | 80 | NBR | 0.38 | Fig.1 |
| ESV 106.01.018 | N.C | 1/4" | 1.8 | "1-2:1,7 2-3:1,4" | "1-2:0,1 2-3:0,08" | 0 | 0 | 10 | 10 | -10 | 80 | NBR | 0.38 | Fig.1 |
| ESV 106.01.025 | N.C | 1/4" | 2.5 | "1-2:3,3 2-3:1,4" | "1-2:0,19 2-3:0,08" | 0 | 0 | 6 | 6 | -10 | 80 | NBR | 0.38 | Fig.1 |
| ESV 107.00.010 | N.O | 1/8" | 1 | 0.5 | 0.03 | 0 | 0 | 16 | 16 | -10 | 80 | NBR | 0.39 | Fig.1 |
| ESV 107.01.010 | N.O | 1/4" | 1 | 0.5 | 0.03 | 0 | 0 | 16 | 16 | -10 | 80 | NBR | 0.37 | Fig.1 |
| ESV 108.00.010 | N.O | 1/8" | 1 | "1-2:0,5 2-3:1,4" | "1-2:0,03 2-3:0,08" | 0 | 0 | 10 | 10 | -10 | 80 | NBR | 0.4 | Fig.1 |
| ESV 108.00.018 | N.O | 1/8" | 1.8 | "1-2:1,7 2-3:1,4" | "1-2:0,1 2-3:0,08" | 0 | 0 | 4 | 4 | -10 | 80 | NBR | 0.4 | Fig.1 |
| ESV 108.00.025 | N.O | 1/8" | 2.5 | "1-2:3,3 2-3:1,4" | "1-2:0,19 2-3:0,08" | 0 | 0 | 2 | 2 | -10 | 80 | NBR | 0.4 | Fig.1 |
| ESV 108.01.010 | N.O | 1/4" | 1 | "1-2:0,5 2-3:1,4" | "1-2:0,03 2-3:0,08" | 0 | 0 | 10 | 10 | -10 | 80 | NBR | 0.38 | Fig.1 |
| ESV 108.01.018 | N.O | 1/4" | 1.8 | "1-2:1,7 2-3:1,4" | "1-2:0,1 2-3:0,08" | 0 | 0 | 4 | 4 | -10 | 80 | NBR | 0.38 | Fig.1 |
| ESV 108.01.025 | N.O | 1/4" | 2.5 | "1-2:3,3 2-3:1,4" | "1-2:0,19 2-3:0,08" | 0 | 0 | 2 | 2 | -10 | 80 | NBR | 0.38 | Fig.1 |

OPTIONS

- Custom options can be performed for customer's special requests
- On request; NPT (ANSI 1.20.3), R (BSPT / ISO 7-1), W (BSW / Whitworth), M (Metric) etc...
- On request; diaphragm or sealing or o-rings can be FPM (VITON) (-10°C to 160°C), EPDM (-10°C to 140°C)
- On request; various body surface coating, nickel plated body, different body materials, manual override, seat can be stainless steel, filter, other pipe connections, 2 mounting sub-base holes at the bottom of the body
- On request; other special supply voltages, frequencies (60 Hz), other power, coil insulation class : F (155°C), coil duty latching model
- On request; with electronic timer, Explosion-Proof coil for use in zones 1/21-2/22 (Ex em II T4/T5), coil encapsulation material can be fiber glass reinforced (V0 or V1)
- On request; connector with LED or without connector, connector with visual indication and peak voltage suppression, connector with cable length of 2m, Spade plug (Cable Ø 8-10 mm), connector non-flammable
- On request other versions

ELECTRICAL CHARACTERISTICS

- **Protection Degree:** IP 65 (EN 60529) (with connector)
- **Plug Connection:** DIN 46340-3 poles connectors (DIN 43650)
- **Connector Specification:** ISO 4400 / EN 175301-803, Form A, Spade plug (Cable Ø 6-8 mm)
- **Electrical Safety:** IEC 335, EN 60335-1, EN 60204-1
- **Coil Insulation Class:** H (180°C)
- **Coil Impregnation:** Polyester Fiber-Resin Glass
- **Coil Encapsulation Material:** Fiber Glass Reinforced (V2)
- **Supply Voltages:** For AC (-) 12V, 24V, 48V, 110V, 230V
For DC (=) 12V, 24V, 48V, 110V, 230V
- **Voltage Tolerances:** For AC (-) or DC (=) % -10 ; % +10
- **Frequency:** 50 Hz
- **Coil Duty Cycle:** %100 ED, Continuously Rated
- Design according to DIN VDE 0580

POWER CONSUMPTION

| Power Consumption | | | | | | | |
|--------------------------|---------|-------------|--------------|---------------------|---------|----------|---------|
| Alternating Current [AC] | | | | Direct Current [DC] | | | |
| Model No | Voltage | Inrush [VA] | Holding [VA] | Model No | Voltage | Cold [W] | Hot [W] |
| ECO 10.AC.012 | 12V | 30 | 18 | ECO 10.DC.012 | 12V | 16 | 12 |
| ECO 10.AC.024 | 24V | 30 | 18 | ECO 10.DC.024 | 24V | 16 | 12 |
| ECO 10.AC.048 | 48V | 30 | 18 | ECO 10.DC.048 | 48V | 16 | 12 |
| ECO 10.AC.110 | 110V | 30 | 18 | ECO 10.DC.110 | 110V | 16 | 12 |
| ECO 10.AC.230 | 230V | 30 | 18 | ECO 10.DC.230 | 230V | 16 | 12 |

MATERIALS

- **Body:** Brass
- **Plunger Seal:** NBR
- **Enclosing Tube:** Stainless Steel (AISI 430FR and AISI 304)
- **Plunger:** Stainless Steel (AISI 430FR)
- **Springs:** Stainless Steel (AISI 302)
- **Shading Ring:** Copper
- **Seat:** Brass
- **O-rings:** NBR
- **Internal Metal Parts:** Stainless Steel

DIMENSIONS (mm)

