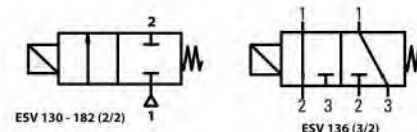


#### TECHNICAL SPECIFICATIONS, DESCRIPTIONS and GENERAL FEATURES

- **Fluids:** Valves are suitable for water, low viscosity oils etc... non-aggressive liquids and Air, Inert Gas etc... gaseous but is not suitable for hazardous fluids
- **Switching Function:** Normally Closed (N.C, Closed when de-energised)
- **Principle of Operation:** Direct Operated
- **Way Number:** 2/2 (Ports / Positions) (ESV 130-182) and 3/2 (Ports / Position) (ESV 136)
- **Connection and Port Sizes:** G1/8" and G1/4"
- **Connection Type:** Thread (Female), G (BSPP / ISO 228-1) ( ESV 130-136 ) and Thread (Male), G (BSPP / ISO 228-1) (ESV 182)
- **Pressure Range:** 0 -16 Bar (ESV 130-182 Series) , 0-12 Bar (ESV 136 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 mm<sup>2</sup>/s
- **Maximum Allowable Pressure or Design Pressure:** 24 bar
- Don't require differential pressure
- 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
- According 97/23/EC Pressure Equipment Directive (PED), 2006/95/EEC Low Voltage Directive (LVD) and 2004/108/EC Electromagnetic Compatibility Directive (EMC)
- Flow rate (Q) can be usually calculated as a function of pressure, density and flow coefficient



For ESV 136  
 1: Inlet  
 2: Outlet (Body)  
 3: Outlet (Enclosing Tube)  
 De-energised: 1-3  
 Energised: 1-2



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



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.	Max.			
ESV		G	mm	L/m    m <sup>3</sup> /h	Bar	Bar	Bar	Bar	°C	°C		kg	
ESV 130.00.018	N.C	1/8"	1.8	1.7    0.10	0	0	16	16	-10	80	NBR	0.21	Fig.1
ESV 130.00.025	N.C	1/8"	2.5	3.3    0.19	0	0	10	10	-10	80	NBR	0.21	Fig.1
ESV 130.00.030	N.C	1/8"	3	4.5    0.27	0	0	6	6	-10	80	NBR	0.21	Fig.1
ESV 130.00.040	N.C	1/8"	4	6.5    0.39	0	0	2.5	2.5	-10	80	NBR	0.21	Fig.1
ESV 130.01.018	N.C	1/4"	1.8	1.7    0.10	0	0	16	16	-10	80	NBR	0.19	Fig.1
ESV 130.01.025	N.C	1/4"	2.5	3.3    0.19	0	0	10	10	-10	80	NBR	0.19	Fig.1
ESV 130.01.030	N.C	1/4"	3	4.5    0.27	0	0	6	6	-10	80	NBR	0.19	Fig.1
ESV 130.01.040	N.C	1/4"	4	6.5    0.39	0	0	2.5	2.5	-10	80	NBR	0.19	Fig.1
ESV 136.00.018	N.C	1/8"	1.8	"1-2:1,4 2-3:0,5"	0	0	12	12	-10	80	NBR	0.23	Fig.2
ESV 136.01.018	N.C	1/4"	1.8	"1-2:1,4 2-3:0,5"	0	0	12	12	-10	80	NBR	0.21	Fig.2
ESV 182.00.018	N.C	1/8"	1.8	1.7    0.10	0	0	16	16	-10	80	NBR	0.24	Fig.3
ESV 182.01.018	N.C	1/4"	1.8	1.7    0.10	0	0	16	16	-10	80	NBR	0.22	Fig.3



## 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 VITON (-10°C to 160°C), EPDM (-10°C to 140°C)
- On request; various body surface coating, nickel plated body, different body materials, seat can be stainless steel, filter, other pipe connections, 2 or 4 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, connector non-flammable
- On request other versions

## 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 25.AC.012	12V	8,5	5	ECO 25.DC.012	12V	5,5	4
ECO 25.AC.024	24V	8,5	5	ECO 25.DC.024	24V	5,5	4
ECO 25.AC.048	48V	8,5	5	ECO 25.DC.048	48V	5,5	4
ECO 25.AC.110	110V	8,5	5	ECO 25.DC.110	110V	5,5	4
ECO 25.AC.230	230V	8,5	5	ECO 25.DC.230	230V	5,5	4

## DIMENSIONS (mm)

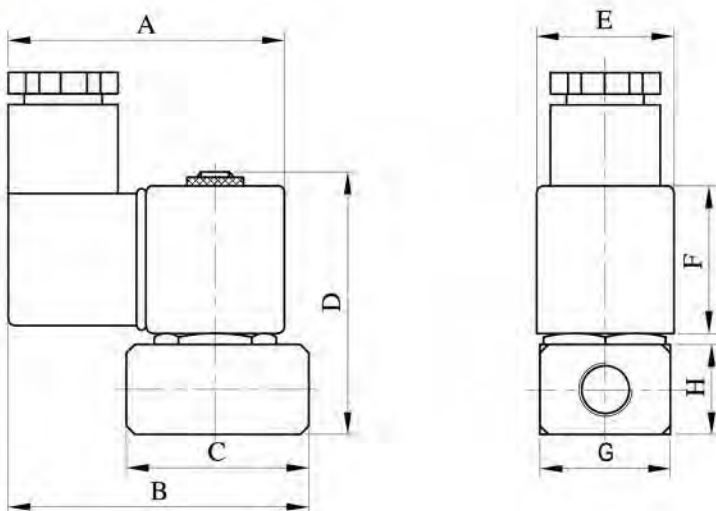


Fig. 1

## ELECTRICAL CHARACTERISTICS

- **Protection Degree:** IP 65 (EN 60529) ( with connector )
- **Plug Connection:** DIN 46340-3 poles connectors (DIN 43650)
- **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, 110 V, 230 V
- **Voltage Tolerances:** For AC (-) or DC (=) %-10 ; %+10.
- **Frequency:** 50 Hz
- **Coil Duty Cycle:** %100 ED, Continuously Rated
- Design according to DIN VDE 0580

## 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

Size	A	B	C	D	E	F	G	H
1/8"	19	68	36	57	21	30	20	19
1/4"	19	68	36	57	21	30	20	19