



SOLENOID VALVES



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SOLENOID VALVES

INTRODUCTION

DOROT CONTROL VALVES is proud to present the new catalogue of its solenoid operators.

In this catalogue, users will find technical specifications of the new solenoid operators, designed by DOROT for highest performance in irrigation systems.

This catalogue is aimed to:

- Present the benefits of the DOROT new solenoid operators and solenoid valves.
- Supply the required technical data for selecting the adequate solenoid operator or solenoid valve.
- Guiding the user in the precise ordering procedure

The catalogue contains information regarding the new DOROT solenoid operators, solenoid base and solenoid valve.



2/2 CONTINUOUS CURRENT OPERATOR

S80-2

The new DOROT S80-2 operator is designed for electric activation of automatic control valves in irrigation systems controlled by continuous current controllers.

The S80-2 operator offers the highest hydraulic performance, low power consumption and long-life service.

The S80-2 operator is assembled directly into the valve bonnet (integral solenoid assembly), or assembled on a 2-way base, allowing electric activation of various control circuits.

The S80-2 offers low sensitivity to dirt and voltage fluctuations and is compatible to most continuous current controllers available.

Applications

- On / Off activation of irrigation valves.
- Remote control of pressure and flow regulating valves.

Benefits

- Low sensitivity to dirt.
- Exceptional hydraulic performance (up to 10 bar with 2.4mm orifice)
- Low sensitivity to voltage fluctuations.
- High quality materials for maximum mechanical durability.
- High reliability and low maintenance.
- Compatible with most continuous current controllers available.



SOLENOID VALVES

2/2 CONTINUOUS CURRENT OPERATOR

TECHNICAL DATA

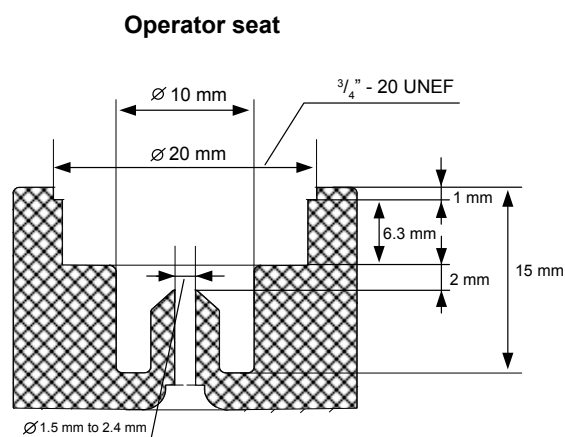
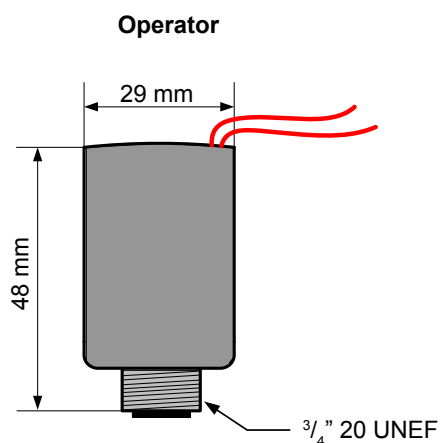
Operator type	Wires color	Operator mark	Operator type	Frequency	Current (Amp)		Cat. No.
					Inrush	Holding	
2w 24 VAC	Red	S80-2 24VAC N.C	2w N.C. 24 VAC	50 Hz	0.25	0.11	YDD00003024A51Y
				60 Hz	0.22	0.095	
2w 24 VDC	Black	S80-2 24VDC N.C	2w N.C. 24 VDC		0.12	0.12	YDD00003024D00Y
2w 12 VDC	Blue	S80-2 12VDC N.C	2w N.C. 12 VDC		0.28	0.28	YDD00003012D00Y

Voltage:	24 VAC, 24 VDC, 12 VDC
Allowed deviation from voltage:	± 10%
Connecting wires:	2 wires, cross-section - 0.32 mm ² length - 50 cm
Operating pressure range:	0-10 bar (up to 2.4mm orifice)
Base connection:	3/4" 20 UNEF male threaded
Manual override (optional):	knob (in the valve bonnet) or selector (turn)

Materials:

Body	Coated Steel
Seals	NBR
Internals	SST

Dimensions:



2/2 Latch OPERATOR

S92-2

The new DOROT S92-2 Latch operator is a 2-way latching operator, designed for electric activation of automatic control valves of irrigation systems, which are activated by battery- operated controllers.

The S92-2 -Latch operator switches position due to short electric pulses. This feature extends the battery life as the power consumption is minimal.

The S92-2-Latch operator is assembled into the valve bonnet (integral solenoid assembly), with rotating on/off override, or with a 2-way base, allowing electric activation of various control circuits.

The S92-2-Latch operator offers low sensitivity to dirt and is compatible to most battery- powered controllers.

Applications

- On / Off activation of irrigation valves.
- Remote control of pressure and flow regulating valves.
- Actuation by battery- powered controller.

Benefits

- Low sensitivity to dirty water.
- Exceptional hydraulic performance (up to 10 bar with 2.4mm orifice)
- Requires very short pulse for activation.
- Requires low operating voltage.
- Wide range of operating voltages.
- High quality materials for maximum mechanical durability.
- Compatible with most pulse-signal controllers.
- Applicable with solar- charged controllers.
- High reliability and low maintenance.



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2/2 Latch OPERATOR

TECHNICAL DATA

Operator type	Wire color	Operator mark	Cat. No.
2w Latch 7.5-30 VDC	Red/ Black	S92-2 7.5-30 VDC Latch	YDD00003930L00Y

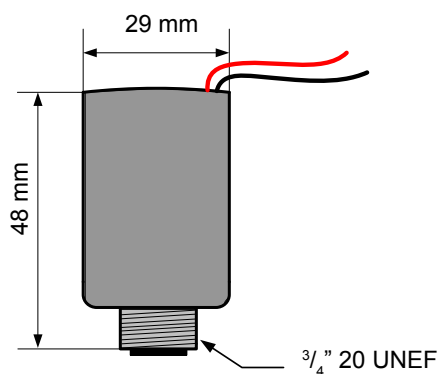
Voltage:	7.5- 30 VDC (requires capacitor of 4700µf)
Connecting wires:	2 wires, cross-section - 0.32 mm ² length - 50 cm
Operating pressure range:	0-10 bar (up to 2.4mm orifice)
Assembly connection:	3/4" 20 UNEF male threaded
Manual override (optional):	selector (turn)
Minimal pulse width:	15 ms
Maximal pulse width:	100 ms
Coil resistance:	5.1Ω (other resistances on request)

Materials:

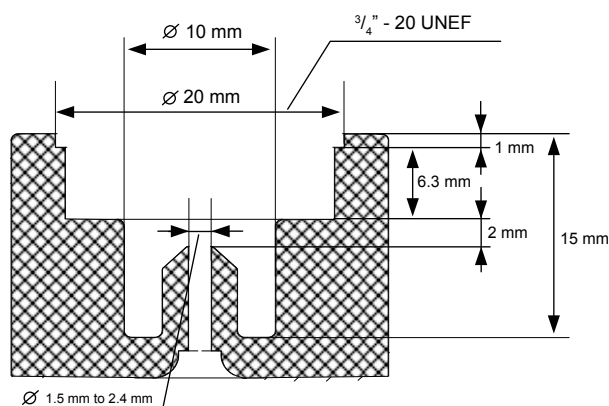
Body	Coated Steel
Seals	NBR
Internals	SST

Dimensions:

Operator



Operator seat

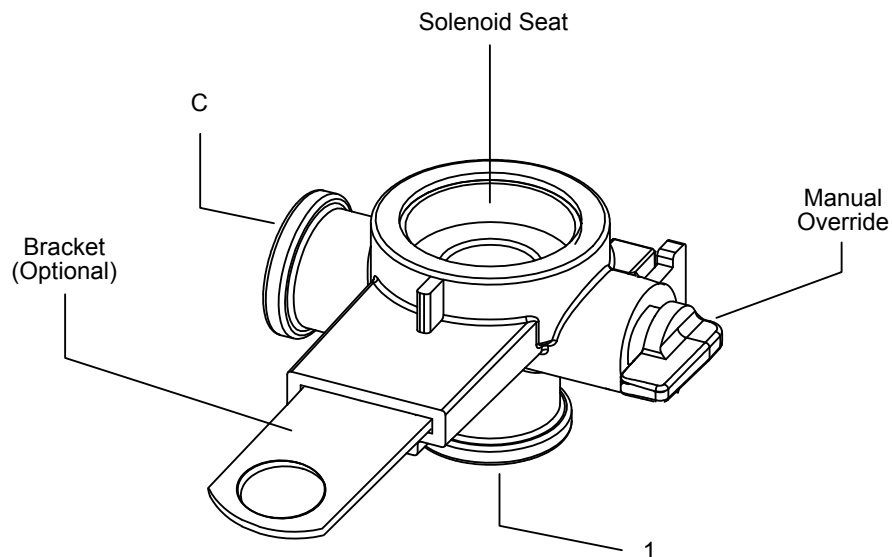


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DOROT SOLENOID VALVE BASE

The DOROT solenoid valve base enables 2-way or 3-way solenoid valves be added to various control circuits. The base is designed to allow maximal through flow and to withstand rough environmental conditions.

Stainless steel bracket, for installation on the hydraulic valve or on solenoids manifold, is supplied on request.



Materials:

Body	Glass Reinforced Polyamide
Seals	Rubber
Override	Polybutylene
Bracket	SST

Connections:

Port connections	1/8" BSP F
Operator connection	3/4" 20 UNEF
Orifice diameter	1.5 mm

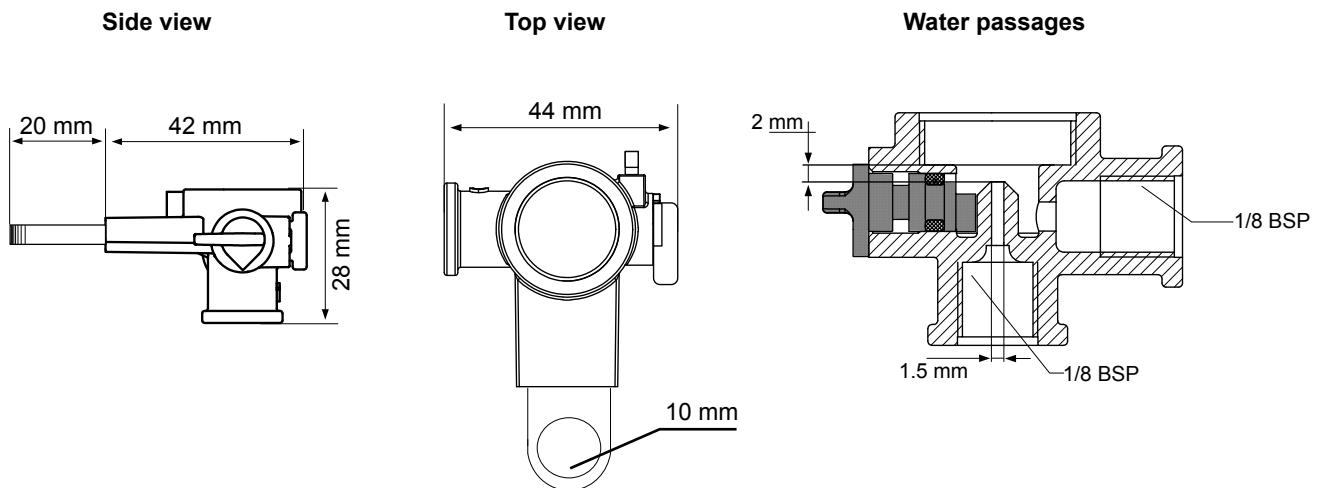
Cat. No:

Base:	775437200D
Base with bracket:	775437201D

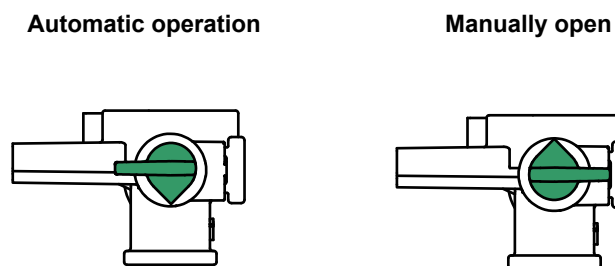
SOLENOID VALVES

DOROT SOLENOID VALVE BASE

Dimensions:



Manual override operating:



3/2 CONTINUOUS CURRENT SOLENOID VALVE

S80-3 / S80-3-D / S80-3-R

The DOROT S80-3, S80-3-D and S80-3-R are 3-way solenoid valves, designed for electric activation of various control circuits of irrigation valves, which are controlled by continuous or alternating current controllers.

The DOROT S80-3 / S80-3-D / S80-3-R 3-way operator is assembled on the DOROT solenoid base, forming an independent control device.

The solenoid valve allows electric remote- control of On/Off, Pressure and Flow regulating valves, while assuring the highest hydraulic performance, low power consumption and long service life.

The S80-3 and S80-3-D solenoid valves are compatible to most controllers' types found in the market.

Applications

- On / Off activation of irrigation valves.
- Electric remote control of hydraulic and pneumatic systems.
- Electric activation of flow and pressure regulation systems.

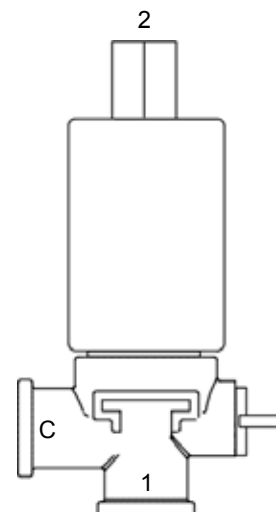
Benefits

- Low power consumption.
- Low sensitivity to dirty water.
- Exceptional hydraulic performance.
- Low sensitivity to voltage fluctuations.
- High quality materials for maximum durability.
- High reliability and low maintenance.
- Compatible with most controllers.
- High flow rate, causing fast valve reaction.
- S80-3 offers exceptional resistance to lightning related voltage spikes.



Base connections:

Port	C	1	2
3-way N.C	Command	pressure	Vent
3-way N.O	Command	Vent	pressure



3/2 CONTINUOUS CURRENT SOLENOID VALVE

TECHNICAL DATA

Operator type	Wires color	Operator mark	Frequency	Current (Amp)		Cat. No. Solenoid Valve (base+operator)	Cat. No. Solenoid operator
				Holding	Inrush		
3w N.O. 24 VAC	Red / Brown	S80-3-D 24VAC N.O.	50 Hz	0.115	0.115	775720243A	YD-DD0002024A50Y
			60 Hz	0.111	0.111		
3w N.C. 24 VAC	Red / Blue	S80-3-D 24VAC N.C.	50 Hz	0.17	0.17	77572C243A	YD-DD0004024A50Y
			60 Hz	0.16	0.16		
3w-R-N.O. 24 VAC	Red	S80-3-R 24VAC N.O.	50 Hz	0.25	0.5	7756202474A	YD-DR0002024A50Y
			60 Hz	0.18	0.42		
3w N.O. 24 VDC	Black	S80-3 24VDC N.O.		0.12	0.12	775720243D	YDD-00002024D00Y
3w N.O. 12 VDC	Blue	S80-3 12VDC N.O.		0.28	0.28	775720123D	YDD-00002012D00Y

Voltage: 24 VAC, 24 VDC, 12 VDC

Allowed deviation from voltage: $\pm 10\%$

Connecting wires: 2 wires, **cross-section** - 0.32 mm² **length** - 50 cm

Operating pressure range: 0-10 bar

Assembly connection: 3/4" 20 UNEF

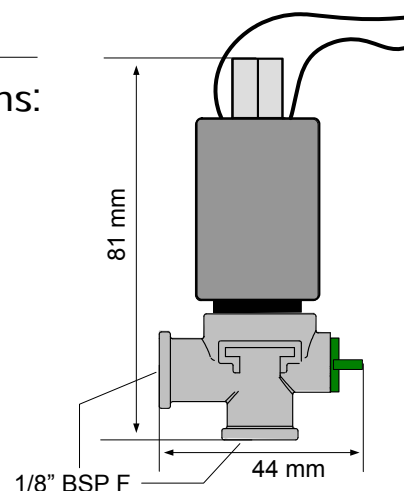
Manual override: knob

Orifice diameter: 1.5 mm

Materials:

Body	Coated Steel
Seals	NBR
Internals	SST
Base	Glass Reinforced Polyamide

Dimensions:

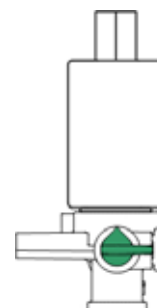


Manual override operating:

Automatic operation



Manually open



3/2 Latch SOLENOID VALVE

S92-3 / S93-3

The new DOROT S92-3 / S93-3 Latch 3-way solenoid valves are designed for electric activation of automatic control valves of irrigation systems, which are activated by battery-operated controllers.

The S92-3 / S93-3 Latch operator switches position due to short electric pulses. This feature extends the battery life as the power consumption is minimal.

The Dorot S92-3 / S93-3 Latch operators are assembled on the Dorot solenoid base, forming an independent control device.

The solenoid valve allows electric remote- control of On/Off, Pressure and Flow regulating valves, while assuring the highest hydraulic performance, minimal power consumption and long service life.

The S92-3 / S93-3 Latch operators offer low sensitivity to dirt and are compatible to most battery- powered controllers.

Applications

- On / Off activation of irrigation valves.
- Remote control of pressure and flow regulating valves.
- Actuation by battery- powered controller.

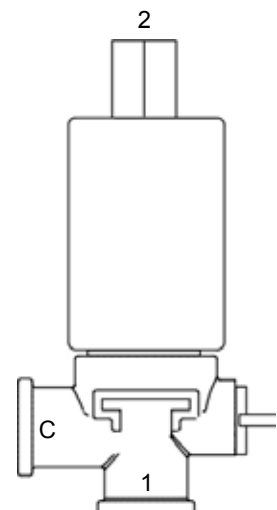
Benefits

- Low sensitivity to dirty water.
- Exceptional hydraulic performance (up to 10 bar with 2.4mm orifice)
- Requires very short pulse for activation.
- Requires low operating voltage.
- Wide range of operating voltages.
- High quality materials for maximum mechanical durability.
- Compatible with most pulse-signal controllers.
- Applicable with solar- charged controllers.
- High reliability and low maintenance.



Base connections:

Port	C	1	2
3-way	Command	Vent	pressure



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3/2 Latch SOLENOID VALVE

TECHNICAL DATA

Operator type	Wires	Wire color	Operator mark	Cat. No.
3w Latch 7.5-30 VDC	2	Red/ Black	S92-3 7.5-30 VDC Latch	775722932L
3w Latch 7.5-30 VDC	3	Red/ Black/ White	S93-3 7.5-30 VDC Latch	775722933L

Voltage:	7.5- 30 VDC (requires capacitor of 4700µf)
Connecting wires:	2 or 3 wires, cross-section - 0.32 mm ² length - 50 cm
Operating pressure range:	0-10 bar (up to 2.4mm orifice)
Assembly connection:	3/4" 20 UNEF male threaded
Minimal pulse width:	15 ms
Maximal pulse width:	100 ms
Coil resistance:	9Ω (other resistances on request)

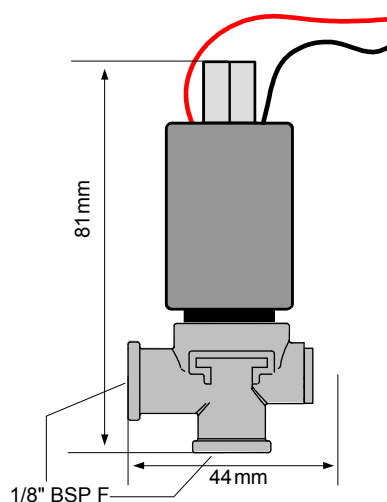
Materials:

Body	Coated Steel
Seals	NBR
Internals	SST

Electric Connections:

White (+)	Common
Red (-)	Latch
Black (-)	Release

Dimensions:



DOROT AUTOMATIC CONTROL VALVES

Founded in 1946, DOROT is a leading developer, manufacturer and marketer of a wide range of superior quality automatic control valves. DOROT's experienced Research & Development Dept. has a long tradition of generating innovative solutions for the application of water control systems. These include, waterworks distribution networks, sewage and effluent disposal, fire protection, mining and irrigation systems.

DOROT's commitment to excellence begins with using the highest quality materials. The company's engineering experts are constantly working to provide customers with a broad range of valve patterns and sizes in a wide variety of metals and grades including: Cast Iron, Ductile Iron, Cast Steel, SST, Bronze, Marine Bronze, Polyamide and P.V.C.

The experts at DOROT custom-design each valve application according to specific control requirements. Most of the production process, which includes machining and coating, takes place in modern in-house facilities. Before leaving the factory, each product is hydraulically tested. An advanced testing laboratory simulates the anticipated field conditions.

With distribution in more than 70 countries world-wide, a key component of the DOROT difference is its outstanding customer service. This includes field assistance, technical advice, training programs and follow-up consultations.

It is all of these factors that make DOROT a leader in fluid control technology and customer satisfaction.

