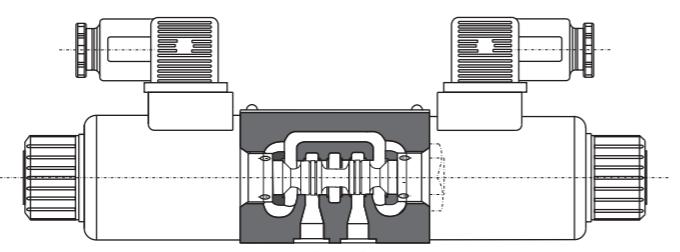


2 Solenoid directional valves DEO

 Size 06 Spool Type

■ DEO-0C11 The mounting interface conforms to ISO/CETOP 03 dimensions

Two-position or three-position direct-acting solenoid spool valves;
Wet-type solenoid valve design featuring low noise, long service life, high pressure resistance and fast switching speed;
Optimized valve core design for low pressure loss;
Five-chamber valve body design resistant to high pressure and high back pressure;
Verified by 10 million cycles of durability testing to ensure product quality stability.



Size	06	Max pressure	350 bar
Max flow	60L/min		

■ Model Code

DEO-0 - B3 1/2 /A -J -LE /A /V /L -D -24DC -S1

0 = Standard Plug
Version1 = Junction Box Version

Valve configuration, see configuration and spools

B* = single solenoid
B1 = single solenoid, center plus external position, spring centered
B3 = single solenoid, 2 external positions, spring offset
B7 = single solenoid, center plus external position, spring offset
C* = double solenoid
C1 = double solenoid, 3 positions, spring centered
C5 = double solenoid, 2 external positions, with detent

Spool type, see configuration and spools

Options:

A: Solenoid mounted on port B end (for single solenoid only).
Standard (no option): Solenoid mounted on port A end, standard type.

*For 110AC/220AC, use AC full-wave rectified coil.

Inductive proximity switch:
Not provided = Without displacement sensor
S1 = With displacement sensor

12DC=DC12V 110AC=AC110V
24DC=DC24V 220AC=AC220V

No marking = Standard coil + plug
D = Deutsch connector + plug

L = Lever mounted on left side
Standard (no option) = Standard type (typically lever on right side or as per default design)

V = Lever perpendicular to mounting surface in neutral position
Standard (no option) = Standard type, lever inclined in neutral position
R = Lever mounted in reverse orientation

A = Lever mounted on port B end
Standard (no option) = Standard type, lever mounted on port A end

LE = With emergency manual override (standard lever)
LES = With emergency manual override (short lever)

J = With spool speed control, refer to the "Product Dimensions" section for details.

 Standard Valve

 Standard Valve

■ Configurations and Spools

Configurations	Spools	Configurations	Spools
B1	1 0 2	1 0 2	1 0 2
0	0	1	1
B7	0 2	B1/A	1 0 2
14	14	5	5
B7/A	1 0	90	90
22	22	09	09
C1	1 0 2	11	11
49	49	12	12
1/9	1/9	40	40

■ Performance Data

Overview	DEO	DEO***-J
Max. pressure at P,A,B	Mpa	32
Max. pressure at T	Mpa	16.25
Max. flow rate	L/min	60 l/min
Max. switching frequency	Hz	3 Hz
Duty cycle	%ED	100% ED
Fluid viscosity	cSt	10-500 mm ² /s
Fluid temperature	°C	0°C-75°C
Ambient temperature	°C	-25°C-60°C
DC single solenoid weight	Kg	1.65 Kg
DC double solenoid weight	Kg	2 Kg
AC single solenoid weight		1.25 Kg
AC double solenoid weight		1.55 Kg
Max. contamination class		NAS 1638, Class 10 Recommend using

filter with 23 > 75

■ Performance Data

Test conditions are: solenoid operating temperature 40°C, input voltage less than 10% of the rated value, fluid temperature 40°C, fluid viscosity 46 mm²/s (at 40°C). The values shown in the chart are for both channels conducting simultaneously (e.g., from P to A and from B to T at the same time) with T = 0.2 MPa.

When a 4/2-way or 4/3-way valve operates with fluid flowing in only one direction, the operating limits may change or even become negative.

The data shown is influenced by the following factors: hydraulic circuit, operating medium, pressure, flow rate, and temperature.

Catalog

Proportional Valve

Standard Valve

Threaded Cartridge Valve

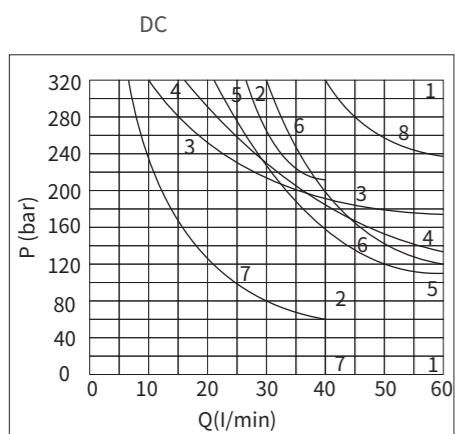
Two-way Cartridge Valve

Electrical Control

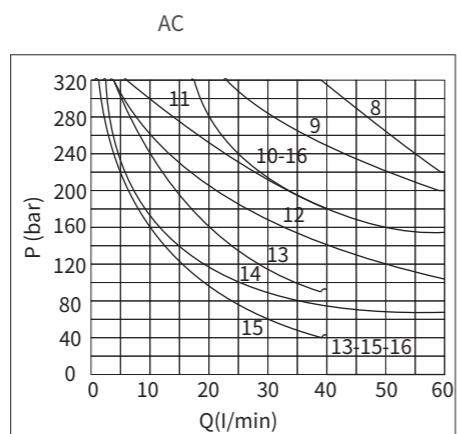
**SUNWAY**

Specialized Integrated Solutions for Electro-Hydraulic Servo Systems

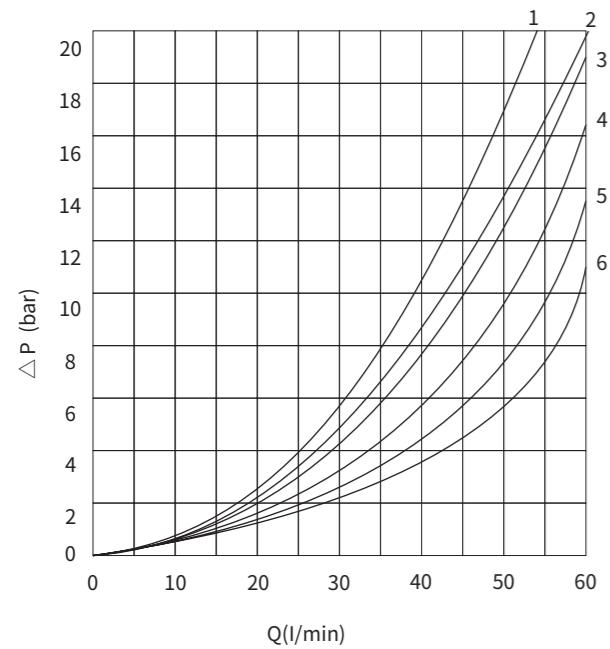
DC: Power supply 30 - 50 ms
Power off 10 - 30 ms.



AC: Power supply 8 - 30 ms.
Power off 15 - 55 ms.



■ Pressure Drop - Flow Curve



The figure shows the pressure drop curve when the spool is operating normally. Test conditions: fluid viscosity is 46 mm²/s (at 40°C), fluid temperature is 40°C. For flow rate values exceeding the range of the chart, calculate using the following formula:

$$\Delta p_1 = \Delta p^* (Q_1/Q_2)$$

Δp and Q are obtained from the chart, and Δp_1 is the pressure drop corresponding to the actual flow rate Q_1 .

► Standard Valve

► Standard Valve

■ Solenoid Performance

Electromagnet	Voltage code	Rated Voltage (V)	Frequency (Hz)	Starting Current (A)	Holding Current (A)	Power Consumption (W)	Allowable Variation Range (%)
AC	A110	AC110V	50	2.76	0.66	35	+10, -15
		60	2.4	0.48	25	25	+10, -15
	A220	AC120V	60	2.68	0.56	30	+10, -15
		AC220V	50	1.38	0.33	34.1	+10, -15
	A240	AC230V	60	1.03	0.2	24.3	+10, -15
		AC240V	6	1.07	0.21	25.8	+10, -15
DC	DC12	AC12V	—	—	2.4	29	+10, -10
	DC24	AC24V	—	—	1.16	28	+10, -10
RF	R110	AC110V, 50/60Hz ↓ DC99V	—	—	0.33	30	+10, -10
	R220	AC220V, 50/60Hz ↓ DC198V	—	—	0.16	60	+10, -10

Catalog

Proportional Valve

Standard Valve

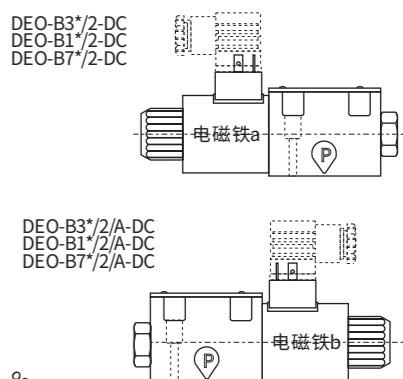
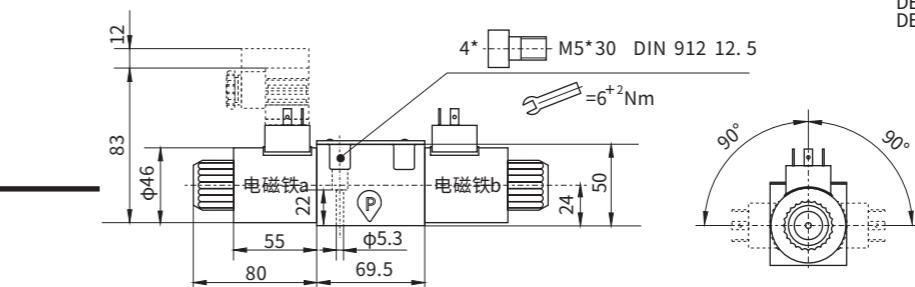
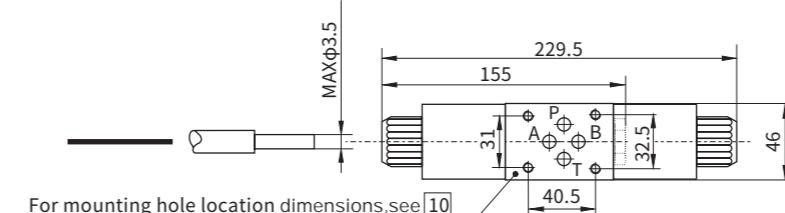
Threaded Cartridge Valve

Two-way Cartridge Valve

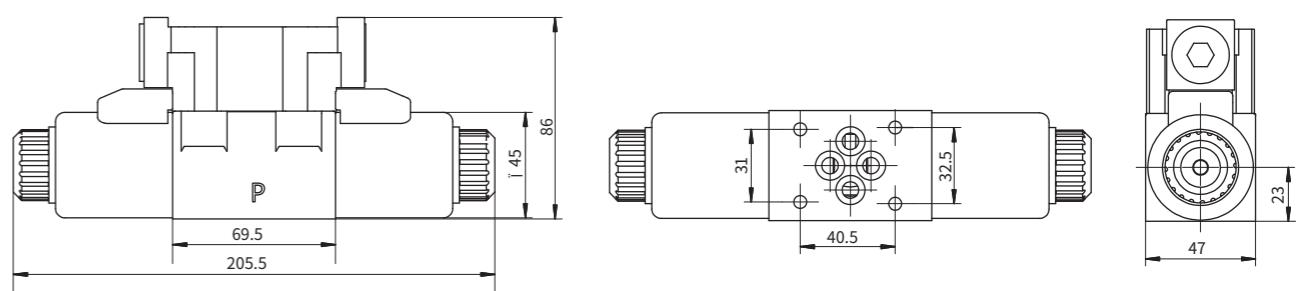
Electrical Control

■ Product Dimensions

DC Solenoid Coil



DEO-1 Outline Drawing



**SUNWAY**

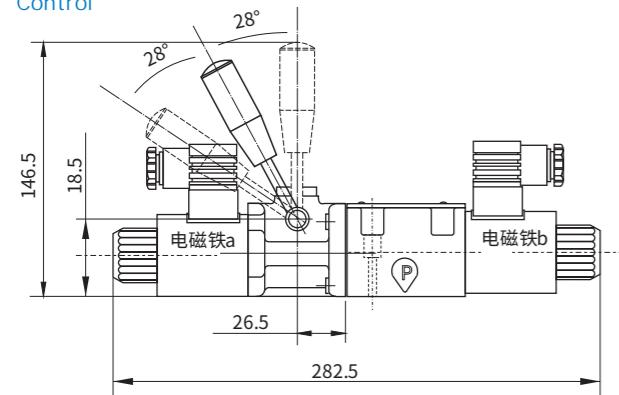
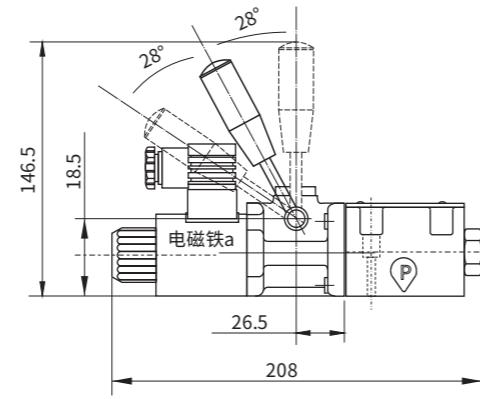
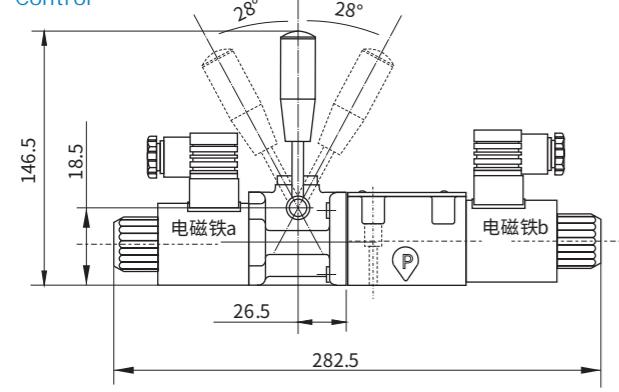
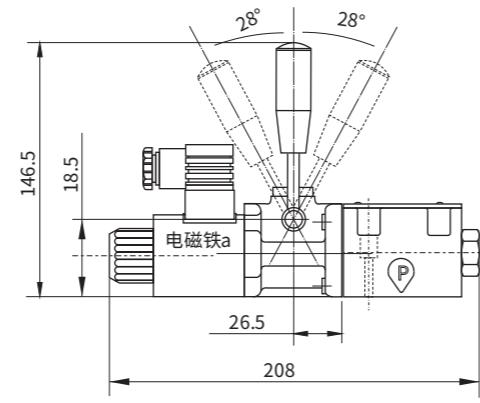
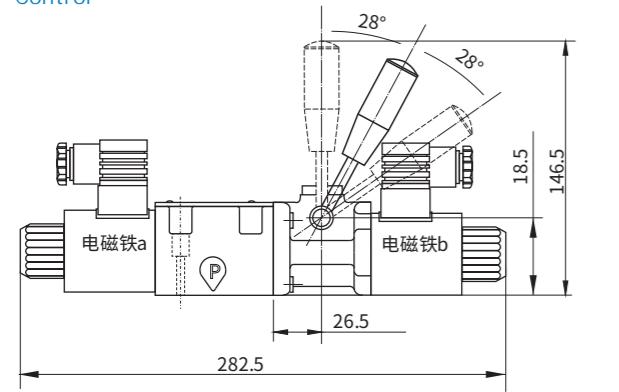
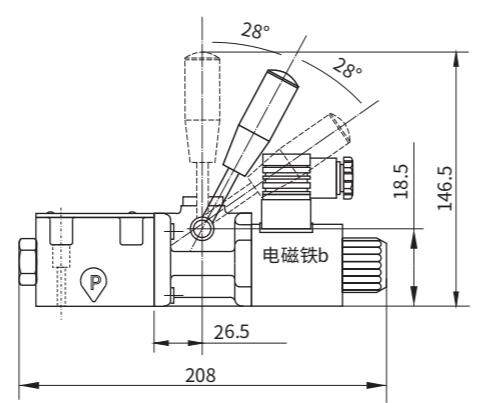
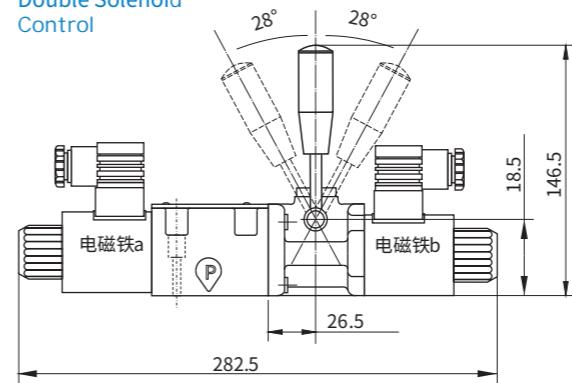
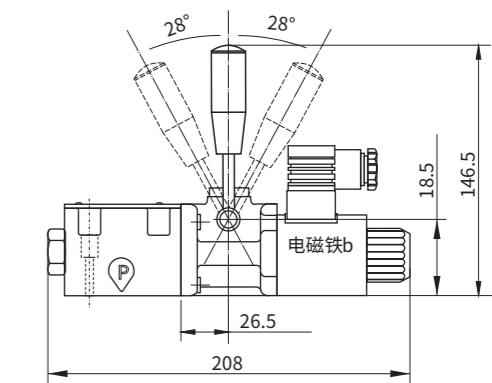
Specialized Integrated Solutions for Electro-Hydraulic Servo Systems

■ Product Dimensions

DEO*-LE Port T Maximum Working Pressure: **Dynamic: 16 MPa Static: 21 MPa

The solenoid valve with an emergency manual override offers enhanced safety and flexibility in application. Its flexibility is reflected in the placement of the manual override between the valve body and the spool. Different models of SUNWAY solenoid valves are fully interchangeable. As a safety device applied to the electromagnet, this manual override complies with industrial standards and plays a vital role in the event of a power failure.

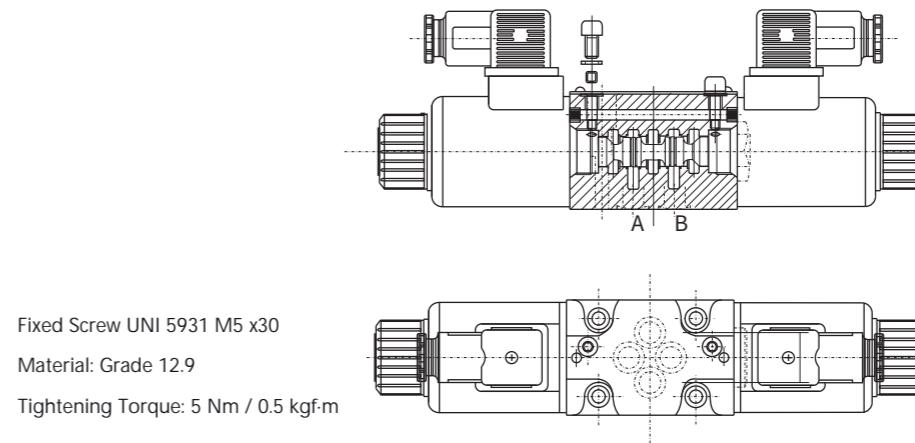
This control is used in agricultural and automotive industries. The manual function enables periodic maintenance of vehicle components, keeping them in a highly safe operating condition.

DEO-*-LE
Double Solenoid Control****Single Solenoid Control****DEO-***-LE/V
Double Solenoid Control****Single Solenoid Control****DEO-***-LE/A
Double Solenoid Control****Single Solenoid Control****Standard Valve****Standard Valve****DEO-***-LE/A/V
Double Solenoid Control****Single Solenoid Control****■ Product Dimensions DEO***-J**

This type of switching valve features a lower spool speed than traditional solenoid valves, which helps prevent system shock during operation. The use of calibrated orifices reduces the flow passages for oil transfer from one solenoid to the other.

This valve type is designed for DC power supply only, and its operating limits are reduced. It is recommended to conduct your own tests during application.

To customize the DEO-***-J valve, please determine the cavity code.

DEO-0C11-J

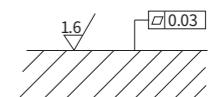
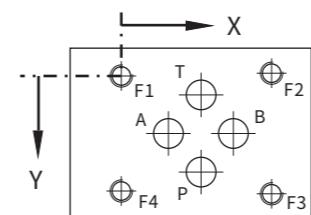
Fixed Screw UNI 5931 M5 x30

Material: Grade 12.9

Tightening Torque: 5 Nm / 0.5 kgf·m

Holes used: Standard holes

Φ(mm)	M4×4	Code
0.3	M89.10.0028	J3
0.4	M89.10.0029	J4
0.5	M89.10.0006	J5
0.6	M89.10.0030	J6

Mating Surface Specifications**■ Mounting Hole Locations (Per ISO 4401 Standard)**

Non-Standard(Standard diameter: 7.5 mm)
Thread Depth
Ferrous metals: min. 8.5 mm
Non-ferrous metals: 10 mm

Tolerances
Oil passage holes: ± 0.2 mm in both X and Y axes
Mounting holes: ± 0.1 mm in both X and Y axes
Surface roughness: Rmax 4 μ m
Surface flatness: 0.01 mm per 100 mm length

	P	A	T	B	F1	F2	F3	F4
X	21.5	12.7	21.5	30.2	0	40.5	40.5	0
Y	25.9	15.5	5.1	15.5	0	-0.75	31.75	31
Φ	8 ¹⁾	8 ¹⁾	8 ¹⁾	8 ¹⁾	M5 ²⁾	M5 ²⁾	M5 ²⁾	M5 ²⁾