

## ELDFHG Two Stage type High Response Proportional Valve with OBE

OBE type High Response Proportional Electro-Hydraulic Directional and Flow Control Valves

### ■ ELDFHG-04/06 EH Series

ELDFHG-04/06EH is corresponding to high flow closed loop OBE type High Response Proportional Electro-Hydraulic Directional and Flow Control Valve. Two different models of two stage OBE valves with a maximum rated flow rate up to 500 L/min ( $\Delta P=0.5\text{MPa}$  at 1port) are available.

The main stage valve is adopted "Direct operated and high response type proportional Electro-Hydraulic Directional and Flow Control Valve" and the pilot valve has inherited the know-how of the high-speed linear servo valve having a good reputation as High-Speed and High-Response valve.

Small powerful on a proportional solenoid is adopted to the pilot valve with closed loop control based on a combination of solenoids and a LVDT for spool position detection, the valves provide high response, high accuracy, and high reliability equivalent to those of simple servo valves.

Both each size, the zero lap spool type (spool type 3C2L) is suitable for position or pressure control.

### ■ Features

#### ● Response Characteristics Equivalent to those of simple Servo Valves

**ELDFHG-04EH: 50 Hz/90° ( $\pm 25\%$ Amplitude)**

**ELDFHG-06EH: 47 Hz/90° ( $\pm 25\%$ Amplitude)**

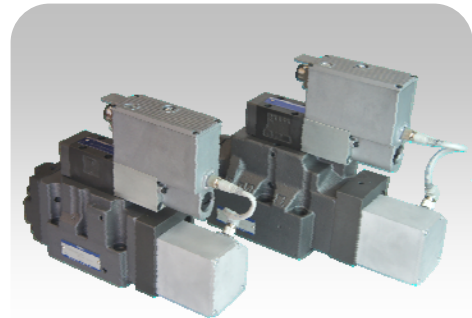
These valves can be used in place of simple Servo Valves for position or pressure control.

#### ● Simple Operation and User-Friendliness

Only with 24 V DC power supply and command signal input, the valves allow highly accurate and fast operation of hydraulic systems.

#### ● Excellent Contamination Resistance

The valves provide excellent contamination resistance due to the powerful solenoids, thus reducing problems caused by fluid contamination as well as filtration costs.



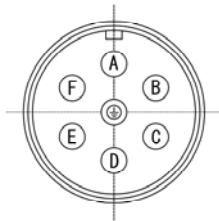
### ■ Specifications

Model Number		ELDFHG-04EH-280	ELDFHG-06EH-350	ELDFHG-06EH-500
Item				
Max. Operating Pressure	MPa	35		31.5
Max. Tank Line Back Pressure	MPa	21		
Rated Flow ( $\Delta P=0.5\text{MPa}$ at 1Port)	L/min	280	350	500
Hysteresis		0.1 % 以下		
Repeatability		0.1 % 以下		
Step Response	(0→100%V)	20 ms	20 ms	22 ms
	(100→0%V)			
Frequency Response ( $\pm 25\%$ Amplitude)	Phase:-90 degree	50 Hz	47 Hz	40 Hz
	Gain:-3dB	42 Hz	58 Hz	50 Hz
Coil Resistance (20°C)	$\Omega$	3		
Current Consumption	A	Max:2 Intermittent :3		
Mass	kg	13	19	
Electric Connection		6+PEConnector (EN175201 Part 804)		

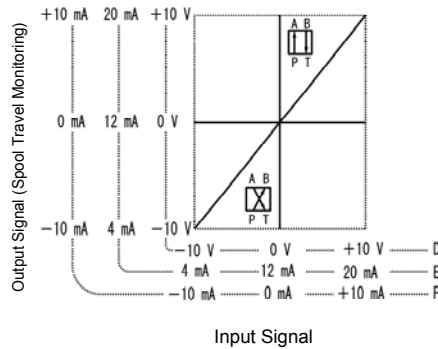
### Electrical Specification

Valve Model		ELDFHG- * EH- * -D	ELDFHG- * EH- * -E	ELDFHG- * EH- * -F
Pin A	Power Supply	24 VDC (DC 21.6 ~ 26.4 V Included Ripple) 75 VA or more		
Pin B		0 V		
Pin C	Signal Common	COM (0 V)		
Pin D	Input(+)(Differential)*1	0~±10V Ri≥50kΩ	4~20mA Ri=200Ω	0~±10mA Ri=200Ω
Pin E	Input(+)(Differential)*1			
Pin F	Spool Travel Monitoring	0~±10V RL≥10kΩ	4~20mA RL=100~500Ω ★2	0~±10mA RL=100~500Ω ★2
Pin	Protective Earth	-		

#### Pin-Out



#### I/O Signal Characteristics

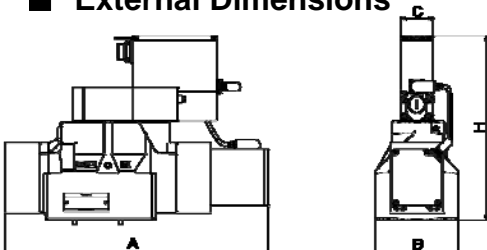


- ★1. Differential input signals can be used only for the valves with the valves with the voltage signal specifications of +/-10V(ELDFHG-\*EH-\* -D).
- ★ 2. The recommended load resistance is  $R_L=200\Omega$ .

### Model Number Designation

ELDFH	G	- 04	EH	- 280	- 3C2	- XY	- E	- T	- C	- D	- 10
Series Number	Type of Mounting	Valve Size	Amplifier Type	Rated Flow L/min	Spool Type	Direction of Flow	Pilot Connection	Drain Connection	Fail-Safe Function	Input Signal /Spool Travel Monitoring	Design Number
ELDFH: Two Stage type High Response Type Proportional Electro-Hydraulic Directional and flow Control Valves	G: Sub-Plate Mountin	04  06	EH: OBE Type	280  350 500	3C2: 10%Over Lap 3C40: A,B,T Connection 3C2L: 2% Over Lap (Linear Flow Gain)	XY: Meter-In Meter-Out	None: Internal Pilot  E: External Pilot	None: External Drain  T: Internal Drain	C: Neutral A:PABT Position Valve Opening10% B:PBAT Position Valve Opening10%	D:Voltage Signal ±10V E:Current Signal 4~20 mA F:Current Signal ±10 mA	10  10

### External Dimensions



Model Code	Dimensions				Standard of Mounting Surface
	A	B	C	H	
ELDFHG-04EH-*	298.5	91	46	229.5	ISO4401-07-06-0-94
ELDFHG-06EH-*	375.5	118	46	255.5	ISO4401-08-07-0-94

#### ELDFHG-04EH/06EH

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