

## ELDFHG Two Stage High Response Proportional Valve with OBE

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

### ■ ELDFHG-04/06 EH Series

ELDFHG-04/06EH is a high flow closed loop OBE type High Response Proportional Electro-Hydraulic Directional and Flow Control Valve. The two different models of two stage OBE valves have a maximum rated flow rate up to 500 L/min ( $\Delta P=0.5\text{MPa}$  (72 psi) at each port) are available.

The two stage valve is a result of a direct operated high response proportional Electro-Hydraulic pilot valve developed from Yuken's high-speed linear servo valve known for its' fast response.

A small, powerful proportional solenoid pilot valve is applied closed loop around the main stage with an LVDT for spool position detection. The valves provide high response, high accuracy, and high reliability equivalent to that of basic servo valves.

Zero lap spools (spool type 3C2L) are offered, suitable for position or pressure control.

### ■ Features

#### ● Response Characteristics Equivalent to those of basic 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 basic Servo Valves for position or pressure control.

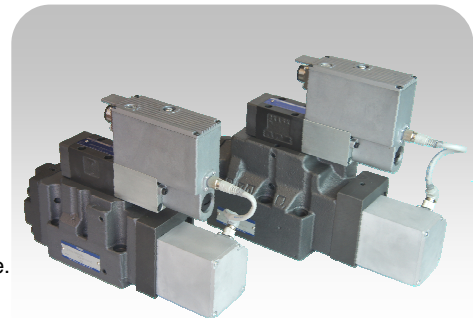
#### ● Simple Operation and User-Friendliness

24 V DC power supply ,

Low voltage or amperage control signals result in accurate and fast response.

#### ● Excellent Contamination Resistance

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



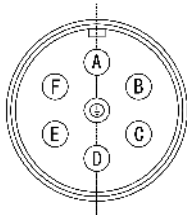
### ■ Specifications

Model Number		ELDFHG-04EH-280	ELDFHG-06EH-350	ELDFHG-06EH-500
Max. Operating Pressure	MPa (PSI)	35 (5100)		31.5 (4600)
Max. Tank Line Back Pressure	MPa (PSI)	21 (3100)		
Rated Flow ( $\square P=0.5\text{MPa}$ at 1Port)	L/min	280	350	500
Hysteresis		0.1 % or less		
Repeatability		0.1 % or less		
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)		

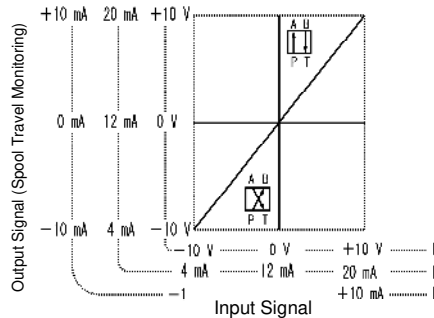
### Electrical Specification

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 #1	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

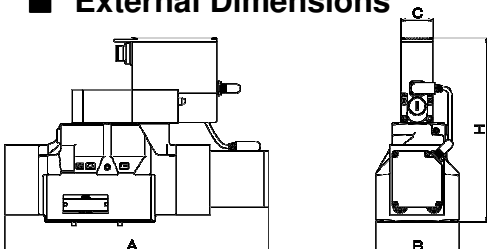


- ★1. Differential input signals can be used only for the valves with +/-10V(ELDFHG-\*EH-\*D).
- ★ 2. The recommended load resistance is  $R_L=200\Omega$ .

### 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
<b>ELDFH:</b> Two Stage type High Response Type Proportional Electro-Hydraulic Directional and flow Control Valves	<b>G:</b> Sub- Plate Mounting	<b>04</b>	<b>EH:</b> OBE Type	<b>280</b>	<b>3C2:</b> 10%Over Lap <b>3C40:</b> A,B,T Connection <b>3C2L:</b> 2% Over Lap (Linear Flow Gain)	<b>XY:</b> Meter-In Meter-Out	<b>None:</b> Internal Pilot <b>E:</b> External Pilot	<b>None:</b> External Drain <b>T:</b> Internal Drain	<b>C:</b> Neutral <b>A:</b> PABT Position Valve Opening10% <b>B:</b> PBAT Position Valve Opening10%	<b>D:</b> Voltage Signal ±10V <b>E:</b> Current Signal 4~20 mA <b>F:</b> Current Signal ±10 mA	<b>10</b>

### External Dimensions



Model Code	Dimensions (mm)				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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