

## Power Amplifiers for High Response Type Directional and Flow Control Valves

### AMB-EL-\*\*-\*\*-20

#### Notice of Model Change

We are pleased to announce that the highly reputed power amplifiers for high response type direction and flow control valves AMB-EL have been remodeled by supporting a wider variety of I/O signal types.

#### ■ Major Changes

While the previous models support only one I/O signal type (voltage signal  $\pm 10$  V), the remodeled products support additional I/O signal types (current signal 4 - 10 mA and current signal  $\pm 10$  mA). Along with this change, the I/O signal type designation has been added to the model number designation.



#### ■ Specifications

Model Numbers	AMB-EL-01	AMB-EL-03	AMB-EL-04	AMB-EL-06
Items				
Max. Output Current	2.5 A (3.9 $\Omega$ Solenoid)	3.0 A (3 $\Omega$ Solenoid)	2.5 A (3.9 $\Omega$ Solenoid)	
Max. Input Voltage	Voltage Signal Type (A, D): $\pm 10$ V/ $\pm 5$ V <sup>*1</sup> Current Signal Type (B, E): 4 - 20 mA Current Signal Type (C, F): $\pm 10$ mA			
Input Impedance	Voltage Signal Type (A, D): 100 k $\Omega$ (50 k $\Omega$ in single-end mode) Current Signal Type (B, C, E, F): 200 $\Omega$			
Slope-off Input	4 - 28 V			
Slope Adjust Time	0.05 - 5 s (The slope adjustment function is not available with AMB-EL-**-2P.)			
Stroke Monitor Signal <sup>*2</sup>	Voltage Signal Type (A, D): $\pm 10$ V/Rated Stroke (RL $\geq 10$ k $\Omega$ ) Current Signal Type (B, E): 4 - 20 mA/Rated Stroke (RL 100 - 500 $\Omega$ ) Current Signal Type (C, F): $\pm 10$ mA/Rated Stroke (RL 100 - 500 $\Omega$ )			
Alarm	Open Collector (30 V DC, 10 mA Max.)			
Supply Voltage Range	21 - 28 V DC			
Power Input	30 W	40 W	30 W	
Ambient Temperature	0 - 50 $^{\circ}$ C			
Ambient Humidity	85 %RH or less (No Condensing)			
Connector	DIN41612-F32			
Approx Mass	280 g	280 g	340 g	340 g

#### ■ Applicable to Valve

Power Amplifier Model Numbers	Valve Model Numbers
AMB-EL	ELDFG-01/03 ELDFHG-04/06

\*1. The input signal voltage can be switched between  $\pm 10$  V and  $\pm 5$  V by the "input sensitivity selection jumper plug" in the amplifier.

\*2. For AMB-EL-04/06, the value corresponds to the monitoring of the main spool stroke; the monitor signal for the pilot spool stroke is  $\pm 10$  V/rated stroke.

#### ■ Model Number Designation

AMB	-EL	-03	-2P	-1	-A	-20
Series Number	Type of Function	Size of Applicable Valve	Applicable Spool Type	Compensation	I/O Signal Type	Design Number
AMB	EL: DC Input Type Directional and Flow Control with Minor Feedback	01	None: 3C2, 3C40	*	A: Voltage Signal $\pm 10$ V (Positive Input: P $\rightarrow$ B $\rightarrow$ A $\rightarrow$ T Flow) B: Current Signal 4 - 20 mA (12 - 20 mA: P $\rightarrow$ B $\rightarrow$ A $\rightarrow$ T Flow) C: Current Signal $\pm 10$ mA (Positive Input: P $\rightarrow$ B $\rightarrow$ A $\rightarrow$ T Flow) D: Voltage Signal $\pm 10$ V (Positive Input: P $\rightarrow$ A $\rightarrow$ B $\rightarrow$ T Flow) E: Current Signal 4 - 20 mA (12 - 20 mA: P $\rightarrow$ A $\rightarrow$ B $\rightarrow$ T Flow) F: Current Signal $\pm 10$ mA (Positive Input: P $\rightarrow$ A $\rightarrow$ B $\rightarrow$ T Flow)	20
		03		1: 40/80 L/min		
		04		2: 280 L/min		
		06	3: 350 L/min 4: 500 L/min			

Please refer to us for \*.

### AMB-EL-※-※-※-※-20

YUKEN AMPLIFIER

MODEL: AMB-EL-04-2-A-20

YUKEN KOGYO CO., LTD. MADE IN JAPAN

Jumper Plugs: Selects the slope time.

Jumper Plugs: Selects the input sensitivity.

Gain Adjuster (AMB-EL-01/03)

Sensor Adjuster (AMB-EL-04/06)

■ Pin Connections and Functions

Pin No.	Name	Pin No.	Name
b02	Power Supply 0 V	z02	sol a(+)
b04	Power Supply 0 V	z04	sol a(-)
b06	sol b(+)	z06	
b08	sol b(-)	z08	
b10		z10	Command Input (+)
b12		z12	Command Input (-)
b14	COM	z14	
b16	Power Supply +24 V	z16	COM (NO. 2)
b18	Power Supply +24 V	z18	Carrier (NO. 3)
b20	Slope Off	z20	Signal (NO. 1)
b22	COM (NO. 3)	z22	Connected to direct type control valve <sup>-1</sup>
b24	Signal (NO. 1)	z24	Alarm Output (-)
b26	Carrier (NO. 2)	z26	Alarm Output (+)
b28	Output 24 V	z28	Stroke Monitor Signal (P) <sup>-2</sup>
b30	Output 24 V	z30	Stroke Monitor Signal (S) <sup>-3</sup>
b32	FG	z32	

■ Sensor Connection

● Main Valve Sensor (ELDFHG-04/06)

Carrier Output (z18)

● Direct Type Control Valve/ Pilot Valve Sensor

■ Lamp Pattern

■ I/O Signal Characteristics

AMB-EL-※-※-※-※-A/B/C

AMB-EL-※-※-※-※-DE/F

This power amplifier requires connector cards for connection. A connector card attached model is also available. Please ask for details if interested.

## ■ Timing of Release

Scheduled to be released in MM 2013.

## YUKEN KOGYO CO.,LTD.

### Contact

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