

Power Amplifiers

For High Response Type Directional and Flow Control Valves

These power amplifiers are used to drive the high response type proportional electro-hydraulic directional and flow control valves.

A compact AMN-L model and a euro card type AMB-EL model are available.

The single height [3U: 100 × 160 mm (3.94 × 6.30 in.)] is employed for the euro card size of the AMB-EL model.



AMN-L



AMB-EL

Model Number Designation

AMN-L

AMN	-L	-01	-3	-2P	-10
Series Number	Type of Function	Size of Applicable Valve	Compensation	Applicable Spool Type	Design Number
AMN	L: DC Input Type Directional and Flow Control with Miner feedback	01: 01 Size	1: Type 1 3: Type 3	None: 3C2, 3C40 2P: 3C2P	10

AMB-EL

AMB	-EL	-03	-2P	-1	-10
Series Number	Type of Function	Size of Applicable Valve	Applicable Spool Type	Compensation	Design Number
AMB	EL: DC Input Type Directional and Flow Control with Miner feedback	01: 01 Size 03: 03 Size 04: 04 Size 06: 06 Size	None: 3C2, 3C40 2P: 3C2P	★1 1: For flow rate 40/80 L/min (10.6/21.1 U.S.GPM) 2: For flow rate 280 L/min (74.0 U.S.GPM) 3: For flow rate 350 L/min(92.5 U.S.GPM) 4: For flow rate 500 L/min(132 U.S.GPM)	10

Please refer to us for ★1.

Specifications

Model Numbers Description	AMN-L-01-1	AMN-L-01-3-2P	AMB-EL-01	AMB-EL-03	AMB-EL-04	AMB-EL-06
Max. Output Current	2.5 A (3.9 Ω Solenoid)		2.5 A (3.9 Ω Solenoid)	3.0 A (3 Ω Solenoid)	2.5 A (3.9 Ω Solenoid)	
Max. Input Voltage	+10 V DC: P→B→A→T -10 V DC: P→A→B→T		±10 V / ±5 V			
Input Impedance	10 kΩ or more		100 kΩ (50 kΩ in single-end mode)			
Slope-off input	Terminal Number 13-14 Short	—	4 – 28 V			
Slope Adjust Time	0.03 – 5 s	—	0.05 – 5 s (Slope Adjustment function is not available with “AMB-EL-*-2P”)			
Monitor Voltage	±1.5 V / ±3 mm st.		±10 V / rated st.			
Alarm	Open Collector (30 V DC, 10 mA Max.)		Open Collector (30 V DC, 10 mA Max.)			
Supply Voltage Range	24 V DC (20 – 30 V DC)		24 V DC (21 – 28 V DC)			
Power Input	75 W		30 W	40 W	30 W	
Ambient Temperature	0 – 50 °C (32 – 122 °F)		0 – 50 °C (32 – 122 °F)			
Ambient Humidity	90 % RH or less		85 % RH or less			
Connector	—		DIN 41612 – F32			
Approx. Mass	0.3 kg (.66 lbs.)		0.28 kg (.62 lbs.)		0.34 kg (.75 lbs.)	

Applicable to Valve

Power Amplifiers Model Numbers	Valve Model Numbers
AMN-L	ELDFG-01
AMB-EL	ELDFG-01/03 ELDFHG-04/06

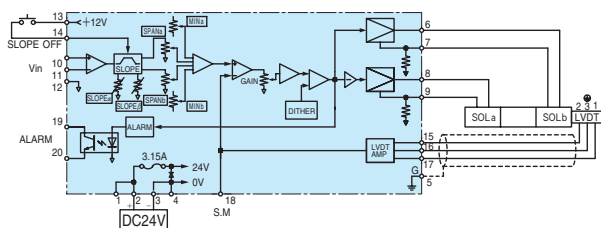
Instructions

Power Switch

The power amplifier has no power supply switch. As soon as it is connected to a power supply, it comes to be alive. Provide a power switch externally.

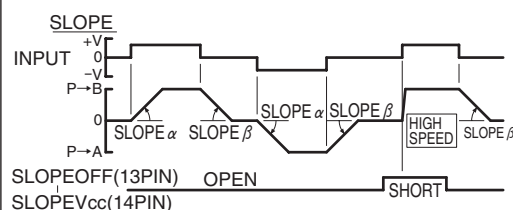
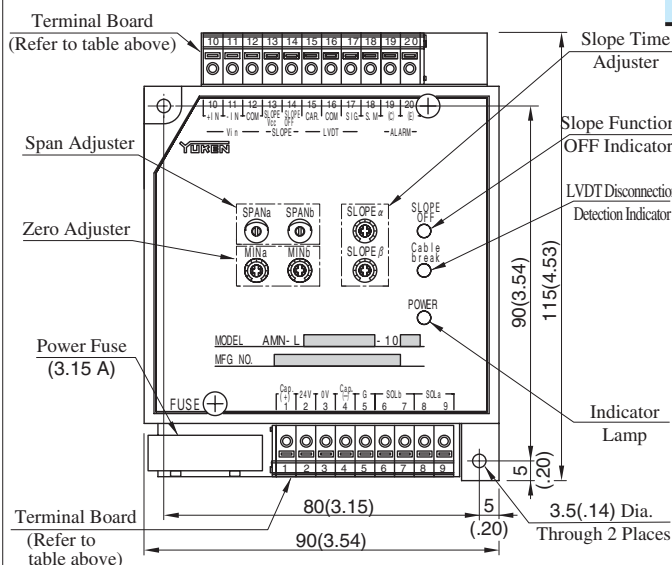
AMN-L-01-1-10

[Example Diagram]



● Detail of Terminal Board

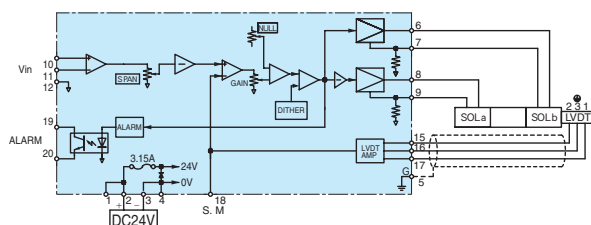
Terminal Number	Name	Terminal Number	Name
1	Power Supply CAPACITOR(+)	11	Input Signal -IN
2	Power Supply +24V	12	Input Signal COM
3	Power Supply 0V	13	Slope Control ON/OFF Terminal SLOPE Vcc
4	Power Supply CAPACITOR(-)	14	Slope Control ON/OFF Terminal SLOPE OFF
5	Frame Ground G	15	LVDT Terminal CAR.
6	Output to Valve Solenoid SOL b	16	LVDT Terminal COM
7	Output to Valve Solenoid SOL a	17	LVDT Terminal SIG.
8	Output to Valve Solenoid SOL a	18	Sensor Monitor Output S.M
9	Output to Valve Solenoid SOL a	19	Alarm Output ALM(C)
10	Input Signal +IN	20	Alarm Output ALM(E)



DIMENSIONS IN
MILLIMETRES (INCHES)

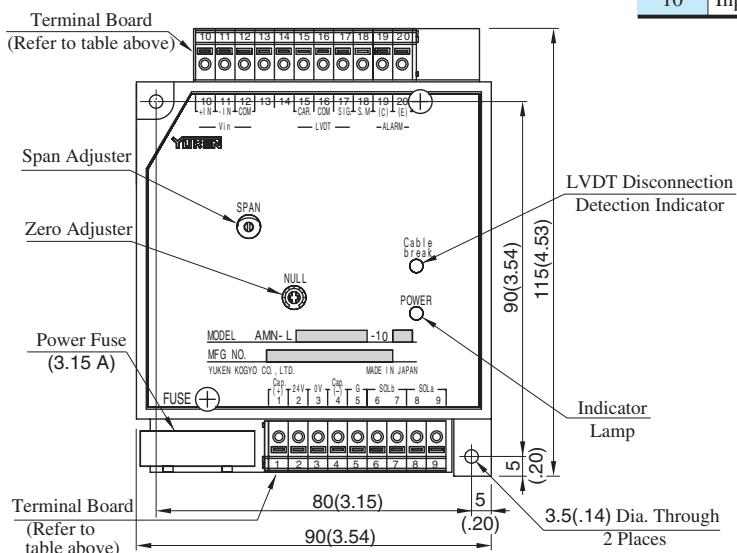
AMN-L-01-3-2P-10

[Example Diagram]



● Detail of Terminal Board

Terminal Number	Name	Terminal Number	Name
1	Power Supply CAPACITOR(+)	11	Input Signal -IN
2	Power Supply +24V	12	Input Signal COM
3	Power Supply 0V	13	
4	Power Supply CAPACITOR(-)	14	
5	Frame Ground G	15	LVDT Terminal CAR.
6	Output to Valve Solenoid SOL b	16	LVDT Terminal COM
7	Output to Valve Solenoid SOL b	17	LVDT Terminal SIG.
8	Output to Valve Solenoid SOL a	18	Sensor Monitor Output S.M
9	Output to Valve Solenoid SOL a	19	Alarm Output ALM(C)
10	Input Signal +IN	20	Alarm Output ALM(E)



DIMENSIONS IN
MILLIMETRES (INCHES)

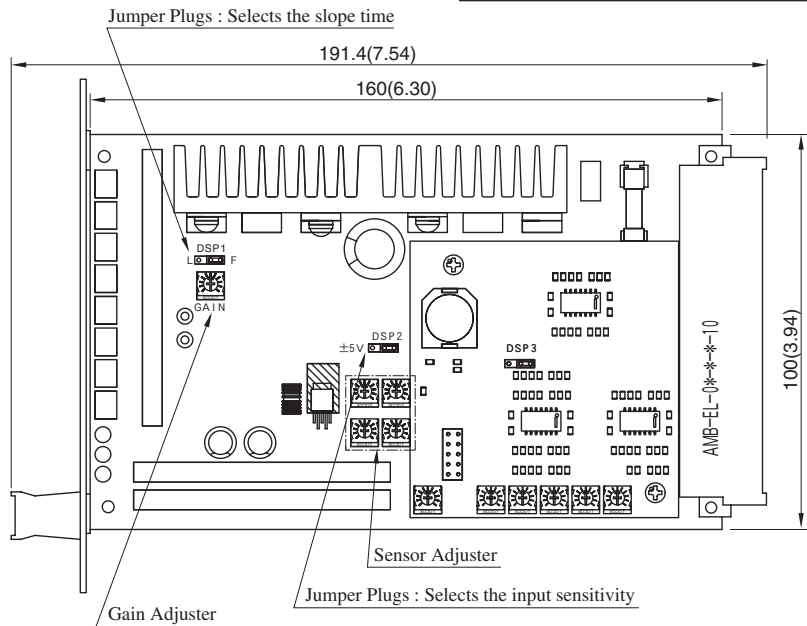
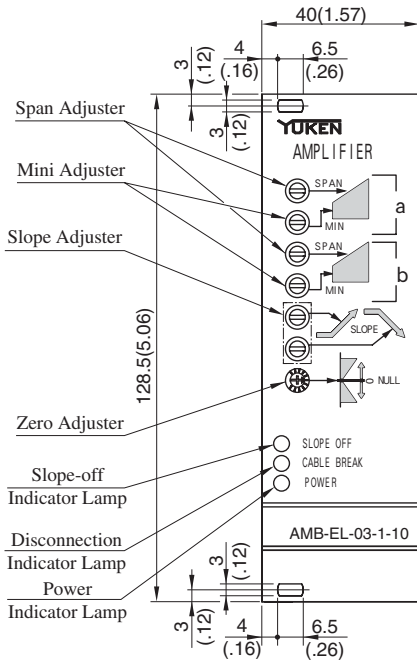
AMB-EL-*-10**

● Pin Connections and Functions

Pin Number	Name	Pin Number	Name
b02	Power Supply 0V	z02	sol a(+)
b04	Power Supply 0V	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 +24V	z16	COM (No.2)
b18	Power Supply +24V	z18	Carrier (No.3)
b20	Slope Off	z20	Signal (No.1)
b22	COM (No.3)	z22	_____
b24	Signal (No.1)	z24	Alarm Output (-)
b26	Carrier (No.2)	z26	Alarm Output (+)
b28	Output 24V	z28	Stroke Monitor Signal (P)
b30	Output 24V	z30	Stroke Monitor Signal (S)
b32	FG	z32	_____

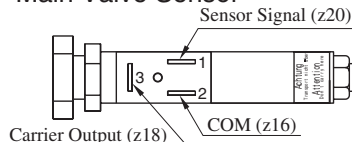
This power amplifier requires connector cards for connection. A connector card attached model is also available.
Please ask for details if interested.

**DIMENSIONS IN
MILLIMETRES (INCHES)**

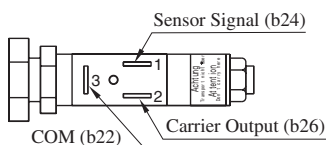


■ Sensor Connection

● Main Valve Sensor



● Pilot Valve Sensor



■ Lamp Pattern

