

## Power Amplifiers For 10Ω Series Control Valves

These power amplifiers are used to drive the 10Ω series proportional electro-hydraulic pressure or flow control valves.



### Model Number Designation

AME	-D	-10	-100	-20
Series Number	Type of Function	Coil Resistance of Valve	Power Supply	Design Number
AME	D: DC Input Type	10: 10 Ω	100: 100 V AC 200: 200 V AC	20

SK1022	-A	-100	-11
Series Number	Type of Function	Power Supply	Design Number
SK1022: DC Input-Feedback Type	A: Polarity of Feedback Voltage...(-) B: Polarity of Feedback Voltage...(+)	100: 100 V AC 200: 200/220 V AC	11
SK1015: DC Input Type for DC Power Supply	—	—*	11

\* Use with 24 V DC since this is for a battery power supply.

### Applicable to Valve

Name of Valve	Model Numbers
Pilot Relief Valves	EDG-01*
Relief Valves	EBG-03 EBG-06 EBG-10
Relieving and Reducing Valves	ERBG-06 ERBG-10
10 Ω Series Flow Control Valves	EFG-03/06 EFCG-03/06 (51 Design)
Flow Control and Relief Valves	EFBG-03 EFBG-06 EFBG-10

### Specifications

Model No.	AME-D-10-*-20	SK1022-A-*-11	SK1022-B-*-11	SK1015-11
Description				
Type of Function	DC Input Type	DC Input Feedback Type	DC Input Feedback Type	DC Input Type
Max. Output Current	1 A (10 Ω Solenoid)	1 A (10Ω Solenoid)	1 A (10Ω Solenoid)	0.9 A (10Ω Solenoid)
Max. Input Voltage	+ 10 V DC	+ 10 V DC	+ 10 V DC	+ 10 V DC
Feedback Voltage	—	0 to -10V	0 to +10V	—
Input Impedance	10 kΩ	50 kΩ	50 kΩ	50 kΩ
Max. Gain	1 A / 5 V	1 A / 0.5 V	1 A / 0.5 V	0.9 A / 5 V
Dither	Variable	Fix	Fix	Fix
Temperature Drift (Max.)	0.2 mA /°C	0.2 mA /°C	0.2 mA /°C	1 mA /°C
Power Supply	100 V AC, 200 V AC (50/60 Hz)*	100 V AC, 200/220 V AC ±10% (50/60 Hz)		22-30 V DC
Power Input (Max.)	55 VA	45 VA	45 VA	25 VA
Ambient Temperature	0-50°C (32-122°F)	0-50°C (32-122°F)	0-50°C (32-122°F)	0-50°C (32-122°F)
External Setting Resistance	1 kΩ	1 kΩ	1 kΩ	10 kΩ
Mass	2.1 kg (4.6 lbs.)	4.5 kg (9.9 lbs.)	4.5 kg (9.9 lbs.)	0.4 kg (.88 lbs.)

\* Serviceable Range; 100 VAC can be used from 90 to 132 VAC, 200 VAC can be used from 180 to 264 VAC.

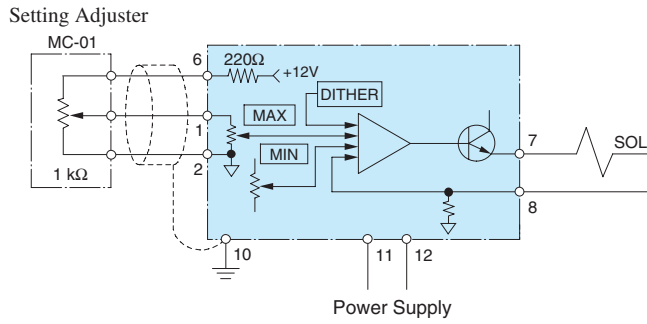
### Instructions

Power supply for the setting adjuster can be provided from this power amplifier, but for only one.

However, please use the variable resistor or potentiometre of which impedance is 1 kΩ (in case of madel SK1015, use 10 kΩ) for the setting adjuster.

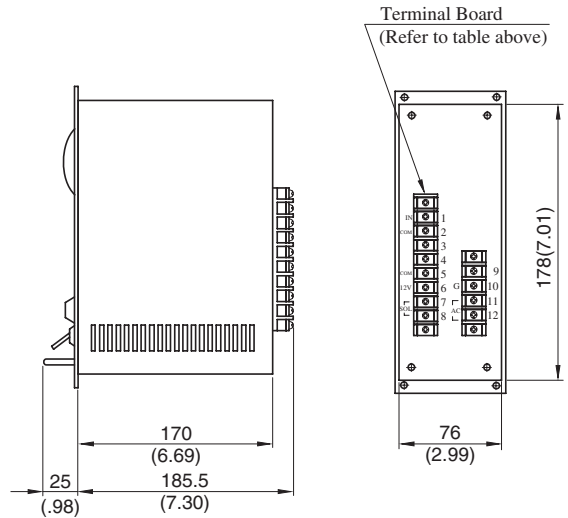
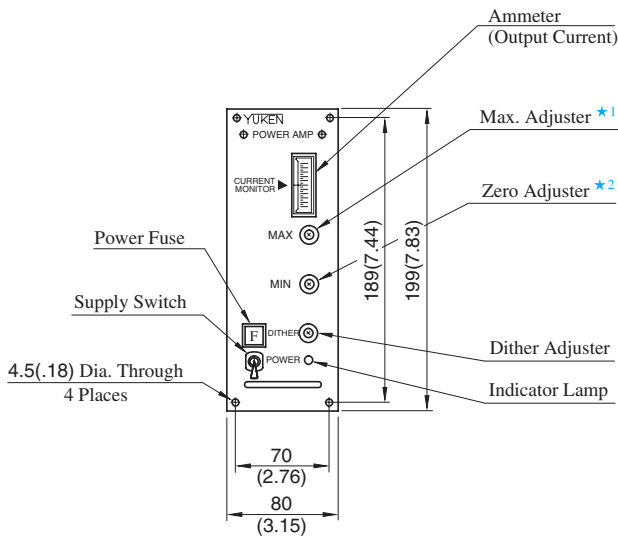
AME-D-10-\*-20

[Example Diagram]



● Detail of Terminal Board

Terminal Number	Name	
1	Input Signal	IN
2	Input Signal	COM
3	—	
4	—	
5	Input Signal	COM
6	Internal Power Supply	+12 V
7	Output to Valve Solenoid	SOL
8	—	
9	—	
10	Ground	G
11	Power Supply	
12	100/200 VAC	

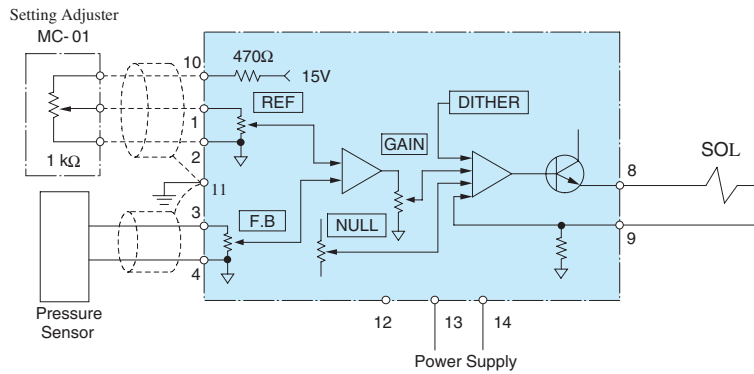


- ★1. Adjustment of upper limit of usable range
- ★2. Adjustment of lower limit of usable range

DIMENSIONS IN  
MILLIMETRES (INCHES)

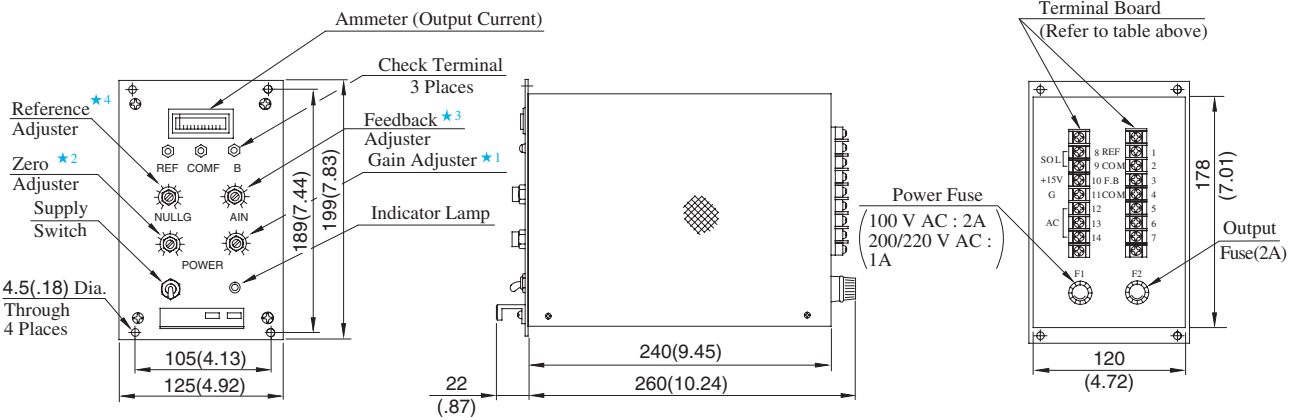
SK1022-A/B-\*-11

[ Example Diagram ]



● Detail of Terminal Board

Terminal Number	Name	
1	Input Signal	REF
2	Input Signal	COM
3	Feedback Signal	F.B
4	Feedback Signal	COM
5		—
6		—
7		—
8	Output to Valve Solenoid	SOL
9		—
10	Power Supply for Setting Adjuster	+15V (10 V at 1 kΩ)
11	Ground	G
12	Power Supply	100 V AC, 200V AC : 13, 14 220 V AC : 12, 14
13		
14		

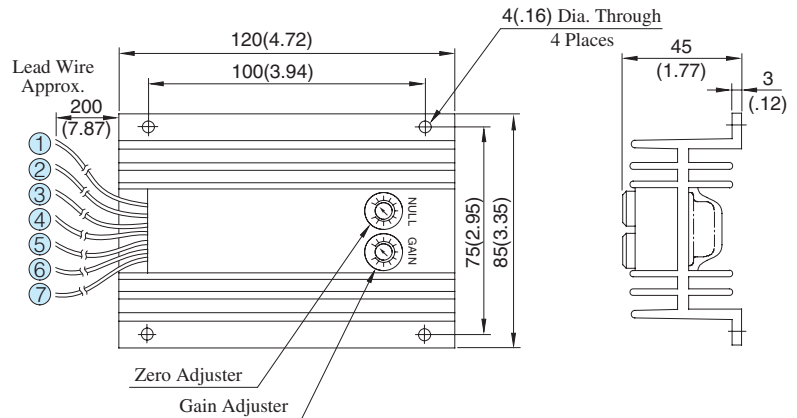
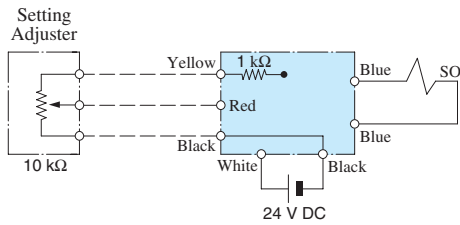


- ★ 1. Adjustment of upper limit of usable range
- ★ 2. Adjustment of lower limit of usable range
- ★ 3. Adjustment of feedback voltage ratio
- ★ 4. Adjustment of input voltage ratio

DIMENSIONS IN MILLIMETRES (INCHES)

**SK1015-11**

[ Example Diagram ]



● **Lead Wire Detail**

- ① White.....Plus of 24 V DC
- ② Black.....Zero of 24 V DC
- ③ Blue.....
- ④ Blue..... } Output to Valve Solenoid
- ⑤ Yellow.....15 V Power Supply for Setting Adjuster (10 V at 10 kΩ)
- ⑥ Red.....Input Signal
- ⑦ Black.....Zero of Input Signal

DIMENSIONS IN  
MILLIMETRES (INCHES)

■ **Instructions**

● **Supply 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.