

EP series proportional valve controllers (valve mounted type)

EPAD



- This controller should be used with EP series proportional solenoid valves with DIN connectors (DIN43650).
- Two types of input commands—the analog voltage input type and the ON/OFF control input type—have been made available.
- The LAG (UP/DOWN) function effectively alleviates shock.

Model Code

EPAD-A-1A-12

1 2 3 4

1 Plug on DIN connector type controller

2 Functions

Code	Input Command	LAG (UP/DOWN)
A	Analogue voltage	Dependent on ON/OFF control input
AL		Always active
SC	Internal setting for ON/OFF control	Always active

3 Output current

1A: 0 to 1 A

1A6: 0 to 1.6 A

4 Design no.

Specifications

Model Code	EPAD-**-1A-12	EPAD-**-1A6-12
Power requirements	DC21~28 V	DC19~28 V
Rated output current	1 A	1.6 A
Applicable coil resistance	10 to 14 Ω (at 20°C)	6 to 10 Ω (at 20°C)
*1 Input impedance	20 k Ω	20 k Ω
DITHER adjustment range	90~300 Hz	90~300 Hz
*1 MAX adjustment range	36~105 mA/V	60~176 mA/V
*1 JUMP adjustment range	0~0.47 A	0~0.83 A
LAG (UP/DOWN) adjustment range	5 to 1100 ms (time constant)	5 to 1100 ms (time constant)
*2 ST1~3 adjustment range	0~1 A	0~1.6 A
*2 NULL adjustment range	0~0.5 A	0~0.8 A
Working temperature range	-20°C~+70°C	-20°C~+70°C
Environment resistance	IP65 (with valve)	IP65 (with valve)
Weight	120 g	120 g

Note:

*1 Applicable to EPAD-A(L)-**-12

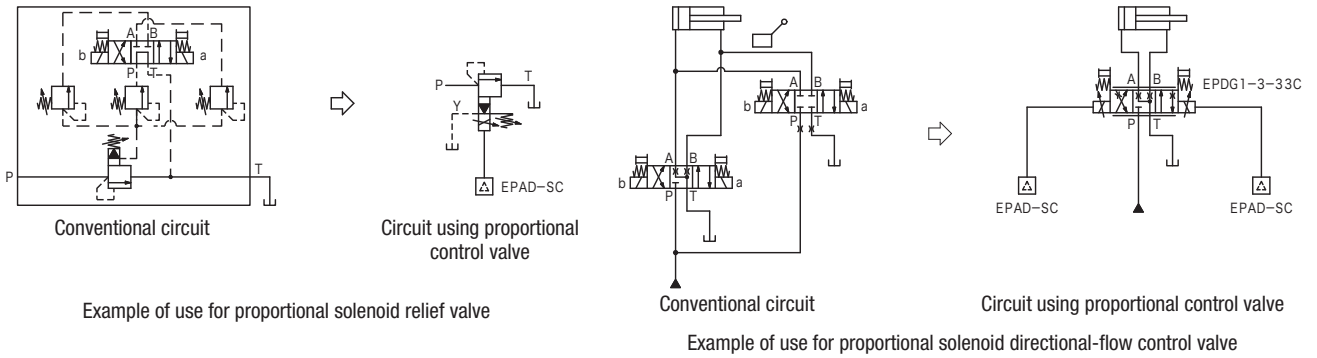
*2 Applicable to EPAD-SC-**-12

Note:

- The solenoid coil resistance is 14 Ω (at 20°C) for all the control valves in the EP series.
- Select EPAD-**-1A-12 when using the control valves in the EP series.

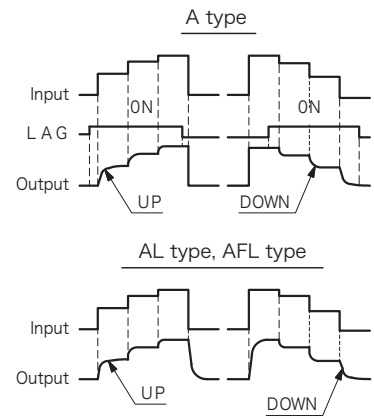
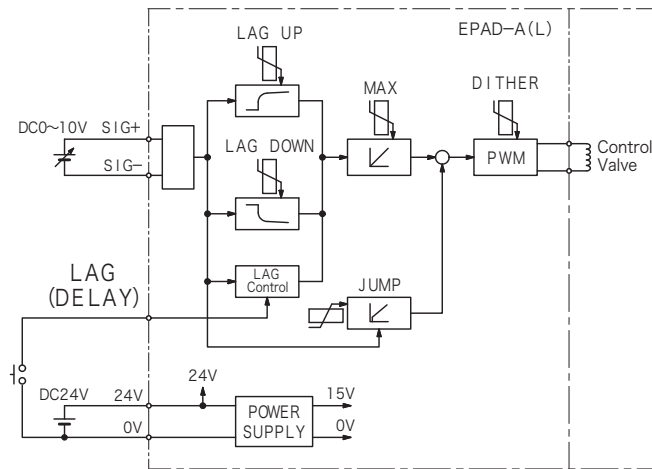
- Three trimmers used for establishing settings are incorporated into the built-in setting device type of controller. Connect a PLC or other device available on the market to drive the controller.
- Using the UP and DOWN trimmers, the time constant of the LAG is changed, and the extent to which shock is alleviated is adjusted.

Specifications



Block diagram and connection examples

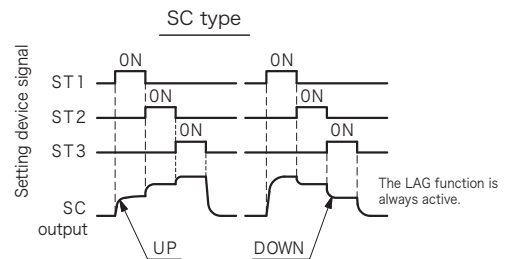
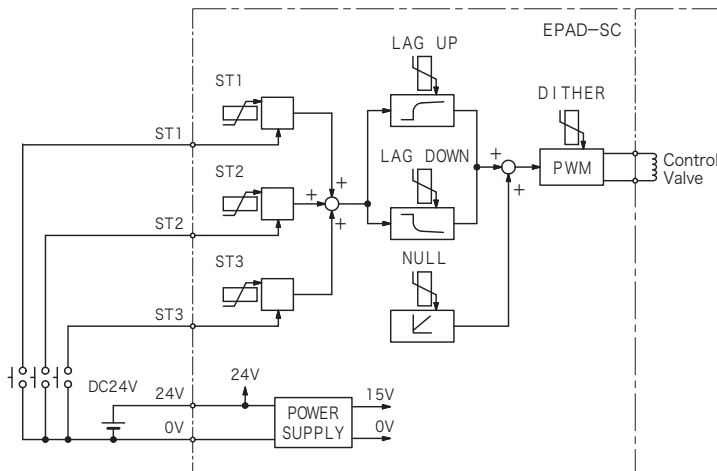
EPAD-A (L)



Truth table (A type)

LAG (DELAY) ~ 0V	LAG function
ON (shorted)	Active
OFF (open)	Not active

EPAD-SC



Truth table

ST*~0V	ST1~ST3
ON (shorted)	ON
OFF (open)	OFF

Notes on Operation

- Input signal cables are shielded, grounding should be done on signal generator side.
- Settings prior to shipment from manufacturer.
 MAX..... set at rated output current (at input signal 10 V)
 NULL, JUMP set at minimum
 ST1, ST2, ST3, UP, DOWN..... set at minimum
 DITHER..... adjusted to 160 Hz

- Appropriate wire size should be max. 2.5 mm² for wiring to terminal panel.
- Current monitor pin voltage
 -1A: 5 V at 1 A
 -1A6: 3 V at 1 A

Dimensions

