



8-17

Proportional digital damper actuator GDA-20PD / 40PD



Summary

GDA-20PD / 40PD, by Direct-coupling, is used for HVAC as digital damper actuator to open/close by proportional input signal.

- GDA-20PD / 40PD (A) : input signal 0~10VDC / output signal 0~10VDC
- GDA-20PD / 40PD (B) : input signal 4~20mA
- GDA-20PD / 40PD (C) : input signal 2~10VDC



Use

- GDA-20PD : Norminal stroke 20Nm / 4.6m² damper size available to the Max.
- GDA-40PD : Norminal stroke - 40Nm / 8m² damper size available to the Max.
- For air-circulation and HVAC to operate damper
- To open and close(ON/OFF) damper
- For outside air-damper, Ventilation, circulation damper



Function

- Direction change available with DIP S/W for CW or CCW
- LCD display for the open position of damper by "%"
(Reversed mounting position to be modified by DIP S/W)
- "0°" or "90°" movement in normal power supply
- Stop at the current position when power-off

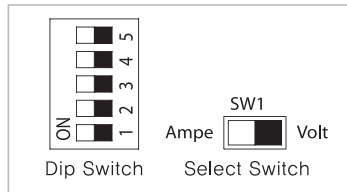


Technical data

	GDA-20PD	GDA-40PD
Display of opening position	Digital LCD display (0 ~ 100 %)	
power supply	24VAC ±10% 50/60HZ	
Consumption power	Operation / 5VA(4.5W), 2.9W usually	Operation / 5.5VA(5W), 2.9W usually
Operation type	0~10VDC, 2~10VDC, 4~20mA	
Norminal force	20Nm	40Nm
Angle of rotation	90° / Max. 95° ± 2°	
Turning direction		
Operation time for 90°		
Ambient Temp		
Ambient humidity	5 ~ 95%RH	
	35dB	
	IP54 (EN60529)	
	1.5kg	1.5kg

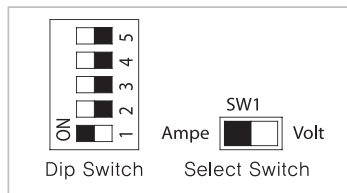
Input Signal Converting Method

1. Input Signal Converting [DIP-1, SW1 operation]



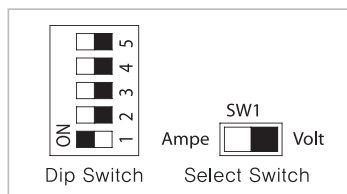
▶ 0 – 10V DC

For input signal 0 ~ 10VDC, alter "Select Switch" to "Volt" side and Dip switch No. 1 to "OFF"(right side)



▶ 4 – 20mA DC

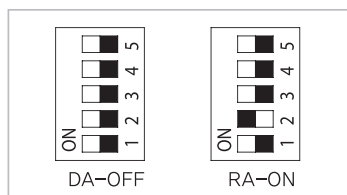
For input signal 4 ~ 20mA DC, alter "Select Switch" to "Ampe" side and Dip switch No. 1 to "ON"(left side)



▶ 2 – 10V DC

For input signal 2 ~ 10VDC, alter "Select Switch" to "Volt" side and Dip switch No. 1 to "ON"(left side)

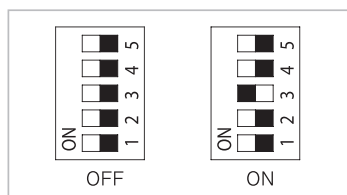
2. DA(forward Direct Acting) and RA(Reverse Acting) converting[DIP-2]



In DA mode, damper shaft(rod) rotates CCW("0", ↺) with input signal 0(2)VDC or 4mA. Alter Dip Switch No. 2 to "OFF"(right side)

In RA mode, damper shaft(rod) rotates CW("1", ↻) with input signal 0(2)VDC or 4mA. Alter Dip Switch No. 2 to "ON"(left side)

3. LCD digital display converting[DIP-3]



Factory setting is DIP-3 to "OFF" side.

Alter DIP-3 to "ON"(left side) to display digital number of LCD rightly in reversed mounting.

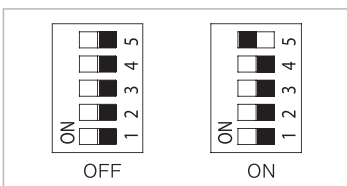
4. Converting with input signal off[DIP-4]



"OFF"(right side) : "CLOSE" position of damper with input signal off

"ON"(left side) : stop at the current position with input signal off (only available with 4 ~ 20mA and 2 ~ 10VDC)

5. Auto-Setting Converting[DIP-5]



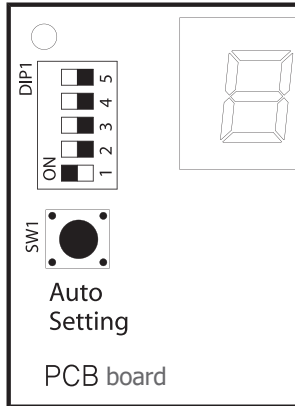
※ Except GDA-40PD

"OFF"(right side) : "Auto-setting" to be performed when installation or restarting after power-off

"ON"(left side) : re-start "Auto-setting" automatically after power-off (required in mounting on high position)

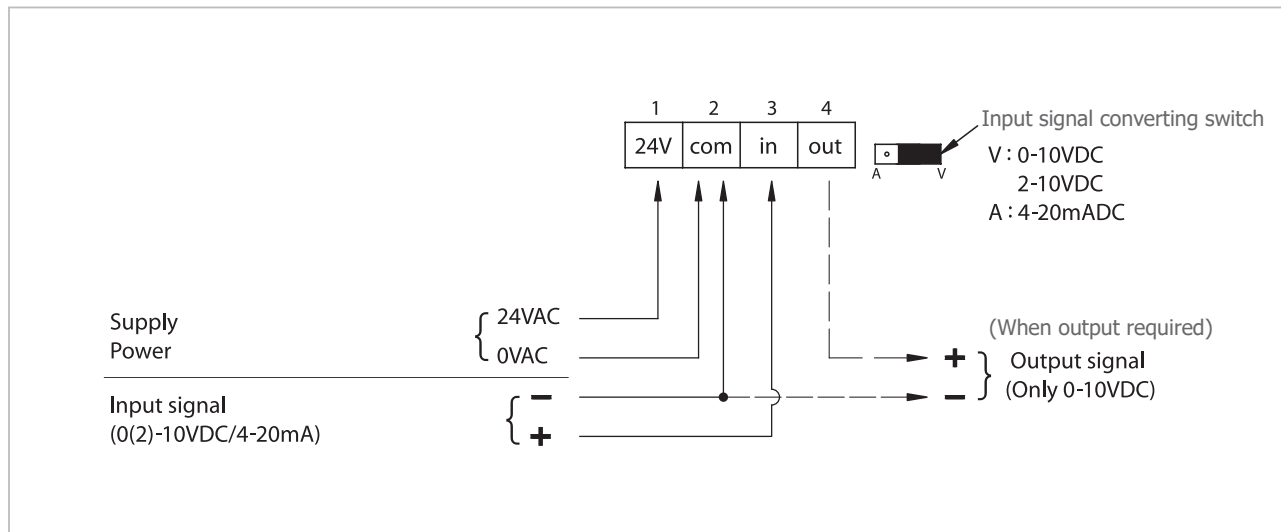
※ 5min for "Auto-setting"

Auto-setting(to be performed after installation)



1. Check the position of OPEN/CLOSE after mounting actuator onto damper
2. Connect the wire of power with terminal block of PCB
- wire 24VAC not to be entangled with COM of terminal block
3. Start "Auto-setting" by pressing the button(SW1) on PCB for 3 ~ 5 sec.
Complete "Auto-setting" by pressing its button again at required position up to 90°
4. "Auto-setting" is completed at CLOSE position in DA MODE
- In RA MODE, it is finalized at OPEN position
※ 2 actuators incompatible with 1 axis of damper
※ GDA-40PD : "Auto-setting" in the factory
(factory setting, user's setting prohibited)

Wiring Diagram



Note) available up to 6 actuators connecting in parallel(Slave actuator)

Mounting Notes

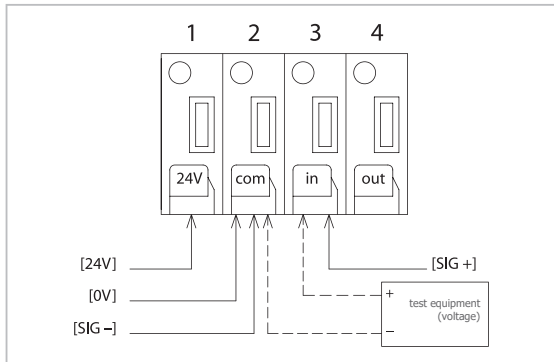
- Bracket must be used to mount actuator directly onto damper with bracket pin right on the angle of actuator
- Mounting location must be proper to dial-setting on the front side of actuator and to cable connection
- Manual operation : For the accurate switching location of on/off damper operation, press the button of manual operation and adjust the shaft adapter and position indicator
(Do not supply the electric power when manual operation)



Check Points At Breakdown

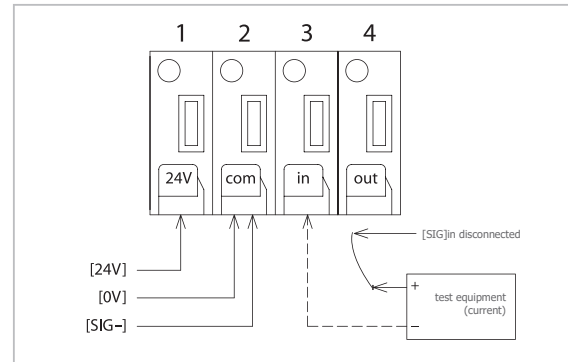
1. Check 24VAC power supply at terminal block with test equipment
2. Check input signal setting of actuator(refer to input signal converting switch)

► Input signal 0(2) ~ 10 VDC



Test with [+] connected to [SIG] of terminal block and [-] connected to [COM] of terminal block

► Input signal 4 ~ 20mA



Test after disconnecting [SIG]in with [-] connected to [in] of terminal block and [+] connected to [SIG] of terminal block



Dimensions

