

DIGITAL PROPORTIONAL CONTROLLER - DIN PLUG OPERATING INSTRUCTION

SY-DPCA-D-P9-1

FEATURES

- Direct assembly on the DIN43650 solenoid valve
- Control with digital microprocessor
- Simple setup via physical screen and button
- Short, open circuit protection with error code

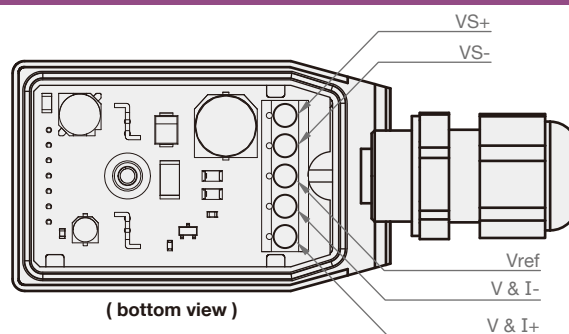
MODEL SPEC.

Model	SY-DPCA-D-P9-1
Operating Voltage	9 ~ 32VDC
Voltage Tolerance	5%
Input Signal Options	0~5V, 0~10V, 4~20mA
Output Current	3A max.
Dither Frequency	70 ~ 350Hz
Ramp Up and Down	0.1 ~ 5.0s
Reference Voltage	5V (max. current 5mA)
Operating Conditions	-20 ~ 60°C

CONNECTIONS

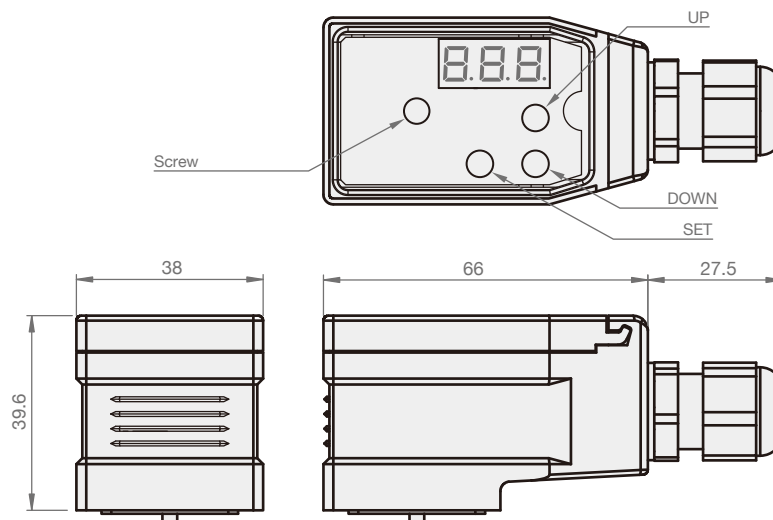
Wiring Instruction

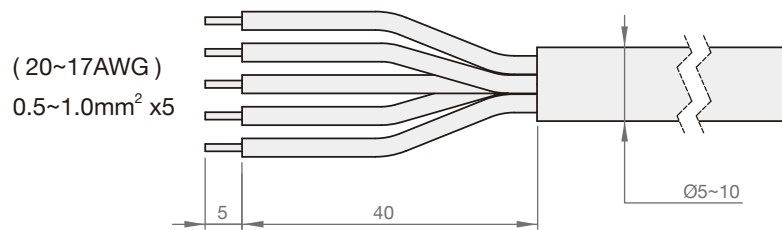
1	VS+	Power+
2	VS-	Power-
3	Vref	+5V reference voltage
4	V & I-	Command ground
5	V & I+	Command



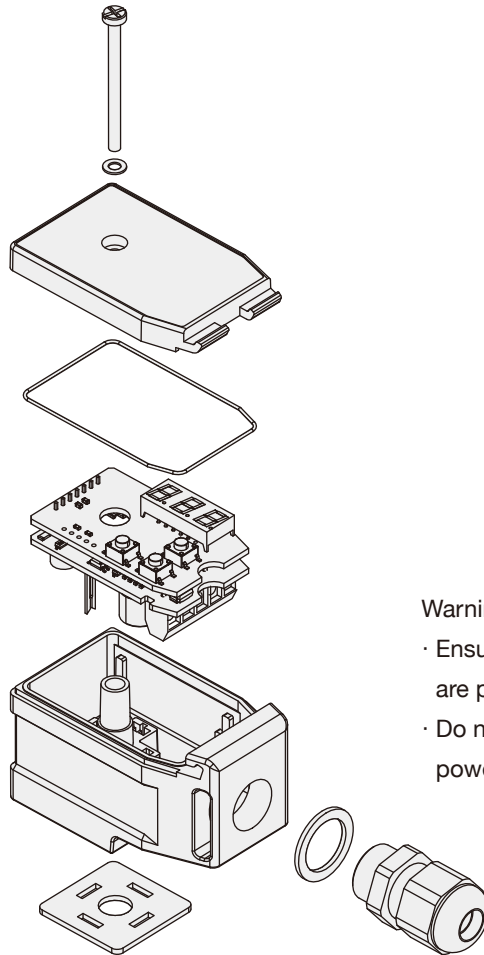
DIMENSIONS

(UNIT : mm)





ASSEMBLY

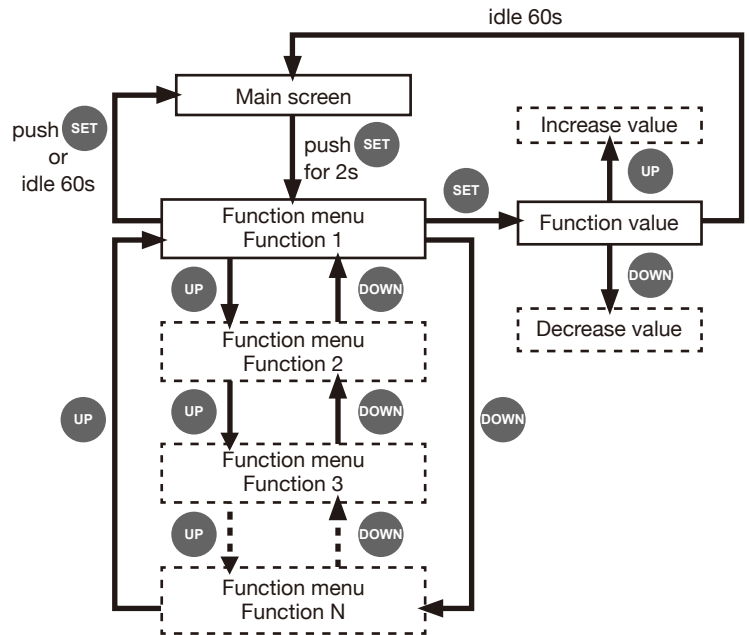


Warning:

- Ensure the cable gland and all sealing parts are properly installed.
- Do not mount or dismount the DIN plug when power is on.

SETTING THE PARAMETERS

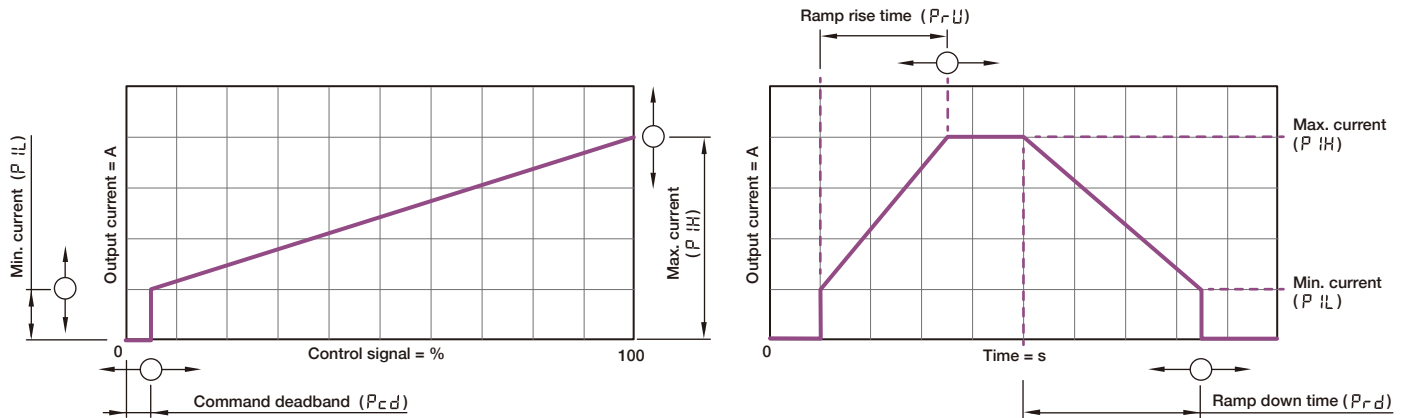
1. At main screen, push **SET** button for 2s and open function menu.
2. At function menu, push **UP** and **DOWN** to select function.
3. Push **SET** button to open function value and push **UP** and **DOWN** to adjust it.
4. After adjustment, push **SET** button to setup function value and return to function menu.
5. Return to main screen by pushing **SET** button for 2s manually or idling for 60s.
6. Save setup: select *P5R* function and adjust its value to "5". If no saving all the function value will be reset after reboot.
7. Default setup: select *P7F* function and adjust its value to "5".



FUNCTION TABLE

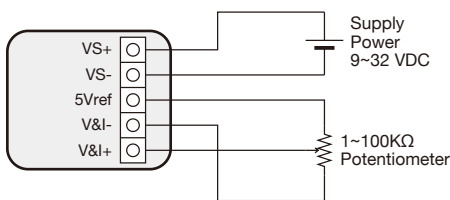
No.	Function	Display	Default Value	Adjustment Range	Unit	Description
1	Max. output current	<i>P1H</i>	1	0.20 ~ 3.00	A	adj. unit 0.01A
2	Min. output current	<i>P1L</i>	0.00	0.00 ~ 1.00	A	adj. unit 0.01A
3	Ramp up time	<i>P7U</i>	0.1	0.1 ~ 5.0	s	adj. unit 0.1s
4	Ramp down time	<i>P7d</i>	0.1	0.1 ~ 5.0	s	adj. unit 0.1s
5	Input signal type	<i>PR1</i>	10	10/5/420		10:0-10V ; 5:0-5V ; 420:4~20mA
6	Dither frequency	<i>PdF</i>	140	70 ~ 350	Hz	adj. unit 10Hz
7	Command deadband	<i>Pcd</i>	2	0 ~ 5	%	adj. unit 1%
8	Display type	<i>PdS</i>	0	0 ~ 2		0: output current (A) 1: input instruction (V or mA) 2: display off for power saving
9	Save setup	<i>P5R</i>	0	0 ~ 5		When the value = 5, save the parameters instruction
10	Default setup	<i>P7F</i>	0	0 ~ 5		When the value = 5, restore factory setting
11	Clear error code	<i>PcL</i>	0	0 ~ 5		When the value = 5, delete the error code of current overload

FUNCTION CHART



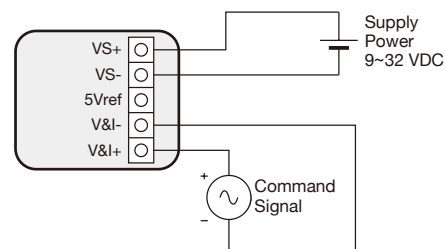
WIRING EXAMPLE

1. Potentiometer control via built-in 5Vref



* Adjust PR 1 function value as "5".

2. External command control



* Adjust PR 1 function value according to the signal source.

ERROR CODE

Error Code	Error Description	Clear Error Code
E 10	4-20mA signal open	For error code E 10, E 11, E 30, controller will detect troubleshooting and clear the error code automatically.
E 11	4-20mA signal overload	
E 30	Coil open	
E 31	Coil short	For error code E 31, after troubleshooting, it is necessary to adjust function P c L or reboot to clear the error code.

WARNING

1. Install the controller and Coil only when the power is off.
2. According to European standards EN-982, the electrical output signal of the controller (e.g. reference voltage) must not be directly used to activate safety functions, like to switch-ON/OFF the machine's safety components.



This product has been designed and tested to meet specific standards outlined in the European Electromagnetic Compatibility Directive (EMC)2014/30/EU.
 Emission: EN 61000-6-4:2019
 Immunity: EN 61000-6-2:2019; EN 61000-4-2:2009, EN 61000-4-3:2020, EN 61000-4-8:2010
 Certificate No. NE1105240044