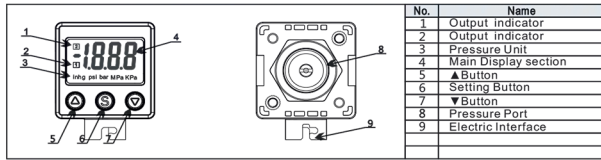


DIGITAL PRESSURE SWITCH  
DPS-5 Series(anti-corrosion)

Panel



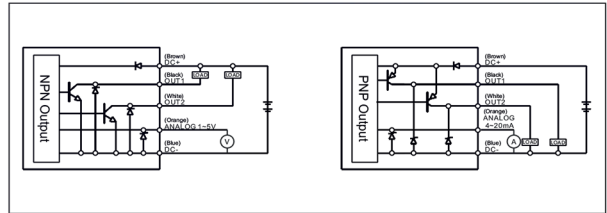
Specifications

Model	DPS-501	DPS-510	DPS-520
Pressure Measure	Range of measure: -100KPa~+100KPa Setting range: -100KPa~+100KPa Withstand pressure: 300KPa Pressure type: The product is not suitable for media which corrodes SUS316L Measure accuracy: ±2%F.S. (Ambient temperature 25°C) Temperature error: ±3%F.S. (Temperature range 0~50°C) Measure pattern: Easy mode Hysteresis mode: Compare mode of upper and lower bounds	Range of measure: -0.1MPa~1MPa Setting range: -0.1MPa~1MPa Withstand pressure: 3MPa Pressure type: The product is not suitable for media which corrodes SUS316L Measure accuracy: ±2%F.S. (Ambient temperature 25°C) Temperature error: ±3%F.S. (Temperature range 0~50°C) Measure pattern: Easy mode Hysteresis mode: Compare mode of upper and lower bounds	Range of measure: -0.1MPa~2MPa Setting range: -0.1MPa~2MPa Withstand pressure: 3MPa Pressure type: The product is not suitable for media which corrodes SUS316L Measure accuracy: ±2%F.S. (Ambient temperature 25°C) Temperature error: ±3%F.S. (Temperature range 0~50°C) Measure pattern: Easy mode Hysteresis mode: Compare mode of upper and lower bounds
Display	Port size: External R1/4, NPT1/4, G1/4 option, internal thread M5 Status display: 4-digit measurement value, unit display, output status display Display model: Adjustable backlight, 4 groups of display models Voltage range: 12~24VDC ±10% power consumption: 40mA Max(non-load)	Port size: External R1/4, NPT1/4, G1/4 option, internal thread M5 Status display: 4-digit measurement value, unit display, output status display Display model: Adjustable backlight, 4 groups of display models Voltage range: 12~24VDC ±10% power consumption: 40mA Max(non-load)	Port size: External R1/4, NPT1/4, G1/4 option, internal thread M5 Status display: 4-digit measurement value, unit display, output status display Display model: Adjustable backlight, 4 groups of display models Voltage range: 12~24VDC ±10% power consumption: 40mA Max(non-load)
Output signal	Transistor output: NPN open-collector output Output current: 80mA MAX Voltage drop: ≤1V Analog output: Voltage output Signal amplitude: 1~5V Load resistance: ≥1KΩ	Transistor output: PNP open-collector output Output current: 80mA MAX Voltage drop: ≤1V Analog output: Current output Signal amplitude: 4~20mA Load resistance: ≤400Ω	Transistor output: PNP open-collector output Output current: 80mA MAX Voltage drop: ≤1V Analog output: Current output Signal amplitude: 4~20mA Load resistance: ≤400Ω
Environmental resistance	Response time: Adjustable: 2.5ms, 20ms, 100ms, 500ms, 1000ms, 2000ms Short-circuit protection: Yes IP level: IP65 Ambient temperature: Operating temperature 0~50°C, storage temperature -20~60°C Ambient humidity: Operating humidity 35~80%RH Insulation voltage: 1000VAC 1min Insulation resistance: ≥50MΩ(500VDC) Shock: Max 100m/s <sup>2</sup> 3 times each in 6 directions of X, Y and Z vibration: Amplitude 1.5mm, 10HZ~500HZ, 2 hours each direction of X, Y and Z	Response time: Adjustable: 2.5ms, 20ms, 100ms, 500ms, 1000ms, 2000ms Short-circuit protection: Yes IP level: IP65 Ambient temperature: Operating temperature 0~50°C, storage temperature -20~60°C Ambient humidity: Operating humidity 35~80%RH Insulation voltage: 1000VAC 1min Insulation resistance: ≥50MΩ(500VDC) Shock: Max 100m/s <sup>2</sup> 3 times each in 6 directions of X, Y and Z vibration: Amplitude 1.5mm, 10HZ~500HZ, 2 hours each direction of X, Y and Z	Response time: Adjustable: 2.5ms, 20ms, 100ms, 500ms, 1000ms, 2000ms Short-circuit protection: Yes IP level: IP65 Ambient temperature: Operating temperature 0~50°C, storage temperature -20~60°C Ambient humidity: Operating humidity 35~80%RH Insulation voltage: 1000VAC 1min Insulation resistance: ≥50MΩ(500VDC) Shock: Max 100m/s <sup>2</sup> 3 times each in 6 directions of X, Y and Z vibration: Amplitude 1.5mm, 10HZ~500HZ, 2 hours each direction of X, Y and Z

1

DIGITAL PRESSURE SWITCH  
DPS-5 Series(anti-corrosion)

Output circuit wiring diagrams



Quick setting

Zero point setting



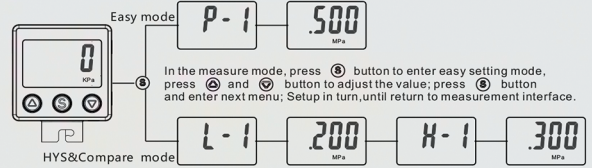
In the measure mode, press ▲ + ▼ button at the same time, until display "0", release the button;  
PS: reset range: +/-10%F.S.

Key lock and unlock



Lock: in the measure mode, press ▲ + ▼ button at the same time until "LOCK ON" shown, release the buttons;  
Unlock: in the measure mode, press ▲ + ▼ button at the same time until "LOCK OFF" shown, release the buttons.

Easy setting function

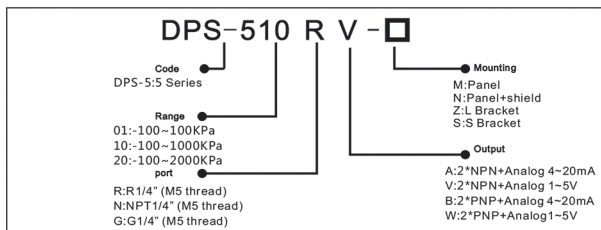


In the measure mode, press ▲ button to enter easy setting mode, press ▲ and ▼ button to adjust the value; press ▲ button and enter next menu; Setup in turn, until return to measurement interface.

2

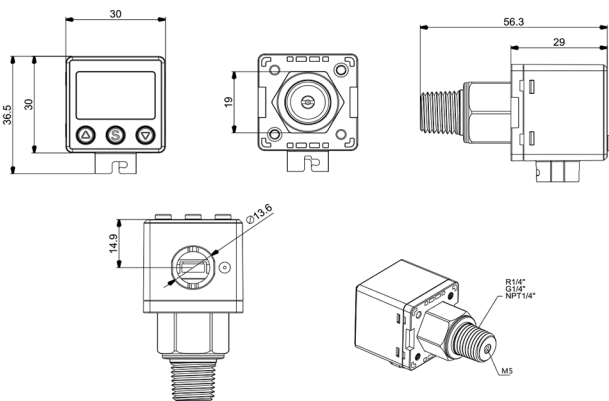
DIGITAL PRESSURE SWITCH  
DPS-5 Series(anti-corrosion)

Ordering code



Mounting dimensions (unit:mm)

Overall dimensions & connection port

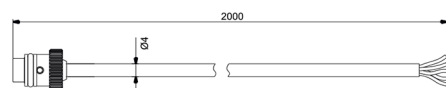


3

DIGITAL PRESSURE SWITCH  
DPS-5 Series(anti-corrosion)

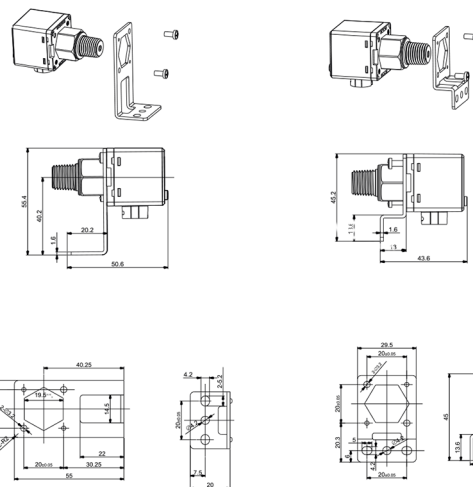
Mounting dimensions (unit:mm)

Wire dimensions



Mounting bracket

L Bracket S Bracket



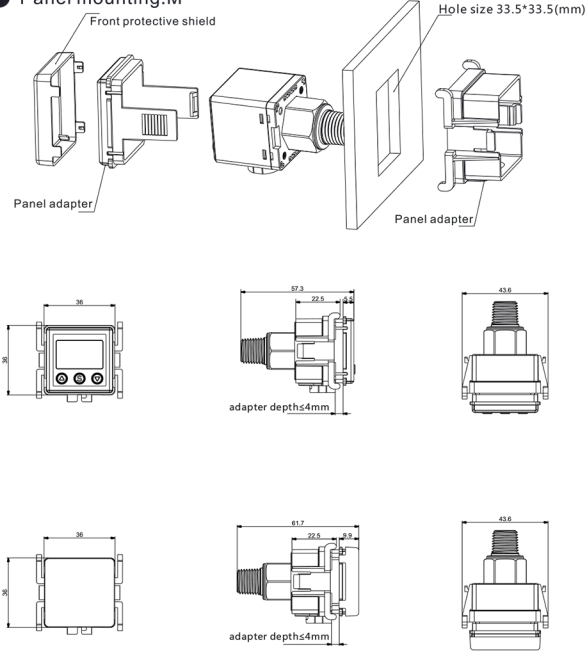
4

DIGITAL PRESSURE SWITCH

DPS-5 Series(anti-corrosion)

Mounting dimensions (unit:mm)

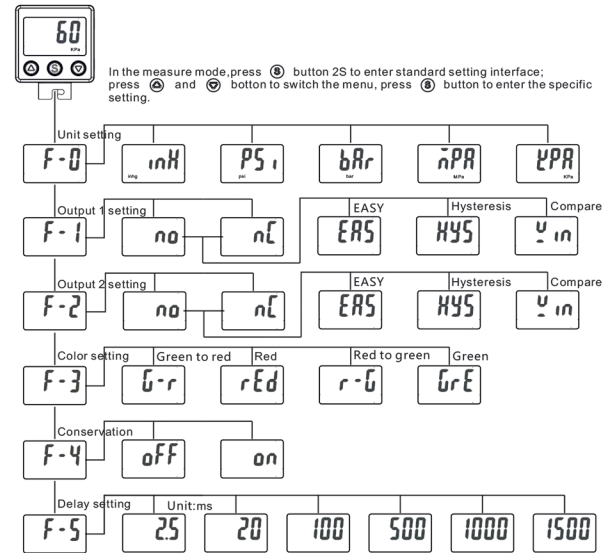
● Panel mounting:M



DIGITAL PRESSURE SWITCH

DPS-5 Series(anti-corrosion)

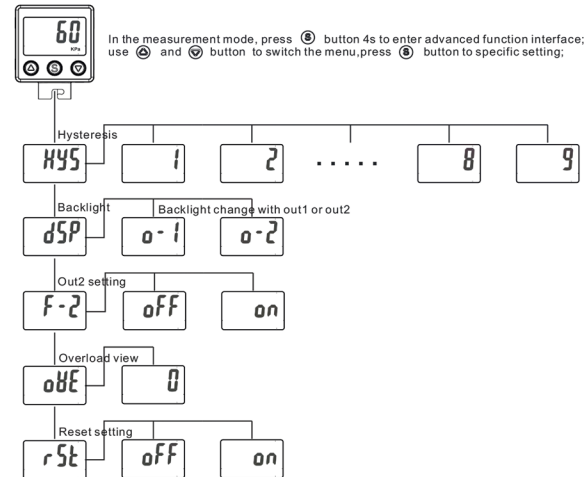
Operation instruction ( Standard setting )



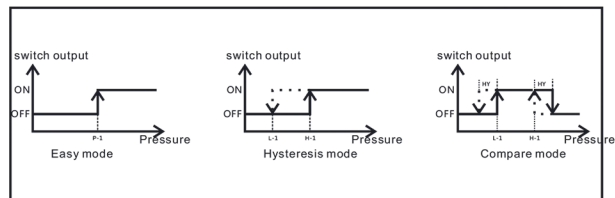
DIGITAL PRESSURE SWITCH

DPS-5 Series(anti-corrosion)

Advanced setting mode



Output function diagram



DIGITAL PRESSURE SWITCH

DPS-5 Series(anti-corrosion)

Error code description

Error code	Problem	Solution
E-1	Exceed zero point reset range	Zero point reset range: +/-10%FS do not over value setting
E-2	Large output current	Please check the black wire short circuit,over load or others
E-3	Large output current	Please check the white wire short circuit,over load or others
E-5	Storage data error	Chip error need maintain
HHH	Exceed pressure measure	adjust the pressure to the range

Pressure unit conversion table

From	To	Pa	kPa	MPa	kgf/cm <sup>2</sup>	mmHg	psi	bar	inHg
1Pa		1	0.001	0.000001					
1kPa		1000	1	0.001	0.010197	7.500616	0.145038	0.01	0.2953
1MPa		1000000	1000	1	10.197	7500.616	145.038	10	295.2998
1kgf/cm <sup>2</sup>		98066.5	98.0665	0.098066	1	735.559	14.2233	0.980665	28.95979
1mmHg		133.32	0.13332	0.000133	0.001359	1	0.019336	0.001333	0.03937
1psi		6895	6.985	0.006895	0.07031	51.7157	1	0.06895	2.036074
1bar		100000	100	0.1	1.01972	750.062	14.5038	1	29.52998
1inHg		3386.388	3.386388	0.003386	0.034530	25.4	0.491141	0.033863	1

**Caution**

- 1.The product is not suitable for media which corrodes SUS316L.
- 2.Avoid to be used in high temperature and high humidity.
- 3.Before installation or removal, please make sure pressure source has been stopped, the output wire is disconnected with controller, to ensure safety.
- 4.When installation please use the part that meet the pressure connection port and sealing is good, to avoid measure error or gas leakage and other issues.
- 5.Before connecting to the power, make sure the wiring is correct, higher voltage input will damage the pressure switch