

Preparation unit—Accessories

AIRTAC

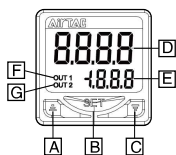
DPS Series digital display pressure sensor



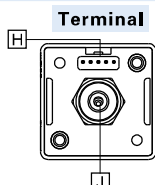
Symbol



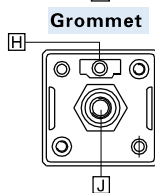
User interface Instruction



No.	Item
A	Value up button
B	Setting button
C	Value Down button
D	Pressure display area
E	Set pressure display area
F	Output 1 indicator light
G	Output 2 indicator light
H	Power and signal connector
J	Pressure input

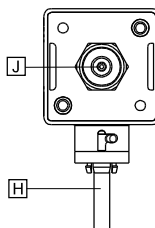


Terminal



Grommet

Output on the bottom



Specification

Input power	Voltage	12~24 VDC $\pm$ 10% Ripple(p-p) < 10%
Pressure range	Fluid	Non-corrosive gas
	Measurement range	DPSN1(P1)-01: -100kPa~100kPa
		DPSN1(P1)-10: -100kPa~1,000kPa
	Withstand pressure	DPSN1(P1)-01: 200kPa
		DPSN1(P1)-10: 1500kPa
Measurement error	Measurement error	$\pm$ 2% F.S., $\pm$ 1digit(Temperature:25 $\pm$ 3 $^{\circ}$ C)
	Repetitive accuracy	$\pm$ 0.2% F.S.
	Temperature error	$\pm$ 3% F.S.(Base 25 $^{\circ}$ C, Range 0 to 50 $^{\circ}$ C)
Display	Type	Double row LCD display,4-digit measurement, 3.5-digit setting
	Color	2-color LCD (Red/Green)
	Display period	100ms、250ms、500ms、1,000ms
Output	Output group	DPSN1:Built-in two sets of NPN output
		DPSP1:Built-in two sets of PNP output
	Transistor output	NPN:Maximum applied voltage 30V/100mA,Retained voltage <1.5V
		PNP:Maximum applied voltage 30V/100mA,Retained voltage <1.5V
	Output delay time	2ms、20ms、50ms、100ms、250ms、500ms 1,000ms、2,500ms、5,000ms
Hysteresis	Hysteresis	DPSN1(P1)-01: 0.1、0.2、0.3..... 0.8(kPa)
		DPSN1(P1)-10: 1、2、3..... 8(kPa)
	Output mode	Basic mode, Hysteresis mode, Window comparator mode
Pressure Unit	DPSN1(P1)-01	kPa、kgf/cm 2 、bar、psi、mmHg、inHg
	DPSN1(P1)-10	MPa、kPa、kgf/cm 2 、bar、psi、cmHg、inHg
Vibration-resistant		10 Hz to 150 Hz, full amplitude of 1.5 mm, 2 hours each in X, Y, and Z directions (without power).
Impact resistance		Maximum 100m/s 2 , X, Y, Z directions 3 times each
Operating Temp. range		0~50 $^{\circ}$ C
Stored Temp. range		-20~65 $^{\circ}$ C
Humidity range		35%~80% RH(No condensation)

Ordering code

DPS N1 □ -01 020 □

1 2 3 4 5 6

①Model	②Output type	③Electrical entry	④Measurement range	⑤Lead wire length	⑥Piping specifications
DPS: Digital Display Pressure Sensor	N1: NPN P1: PNP	Space: Plug-in type B: Pre-wired type [Note1] D: Output on the bottom type	01: -100kPa~100kPa 10: -100kPa~1,000kPa	020: Length 2m 030: Length 3m 050: Length 5m M08:300mm with M8 plug connector[Note2]	Blank: Male thread PT1/8; female thread: M5 T: Male thread NPT1/8; female thread: 10-32UNF G: Male thread G1/8; female thread: M5

[Note1] The safety grade of pre-wired type is IP63.

[Note2] There is no plug-in type for M08.

The sockets of M08 need additional order.
Please check on the right.

Ordering code of Socket **F - EC M08 D 020**

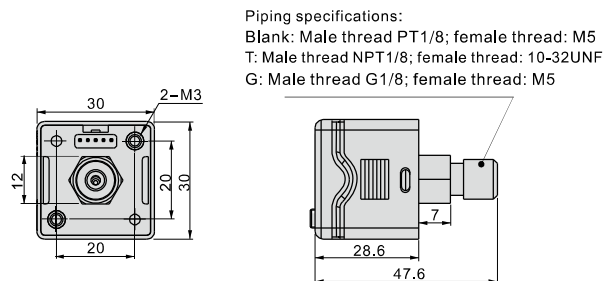


Category code	F: Accessory
Type code	EC: Connecting wire
Socket type	M08:M8 socket
Wire type	D: 4-wire type
Wire length	020: 2 meters 030:3meters 050:5meters 100:10meters

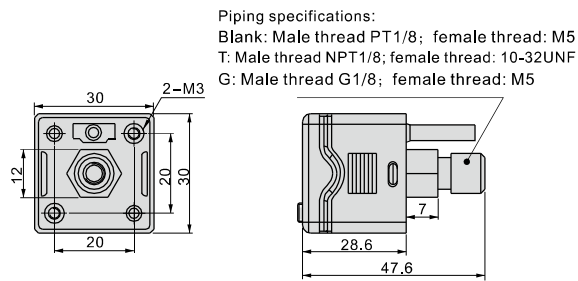
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Dimensions

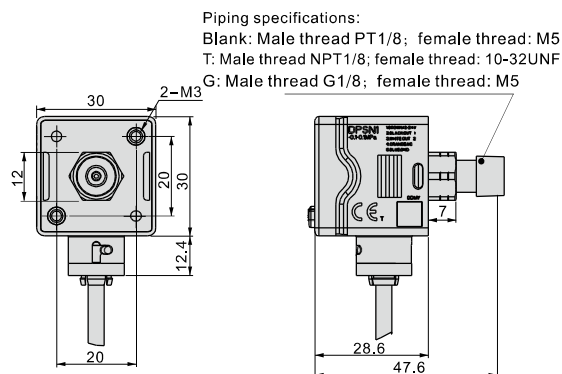
Plug-in connector



Pre-wired type



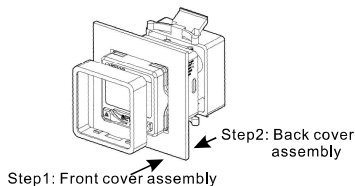
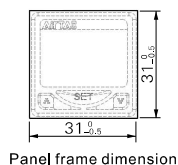
Output on the bottom type



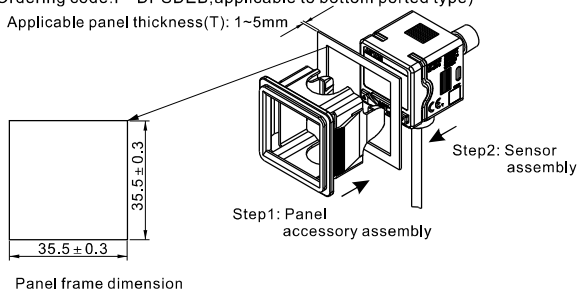
Dimensions/Assembly Instruction

Panel mount adapter + Front protective cover

Order the Installation accessories
(Ordering code: F-DPSEB, applicable to terminal and grommet type)

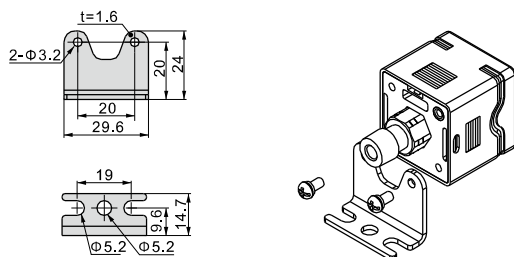


Order the Installation accessories
(Ordering code: F-DPSDEB, applicable to bottom ported type)
Applicable panel thickness(T): 1~5mm



Bracket

Order the installation accessories (Ordering code: F-DPSLB)

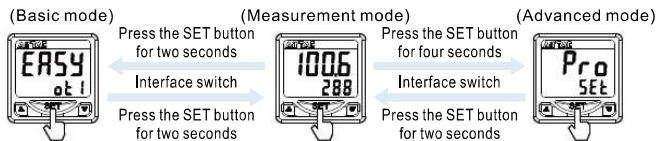


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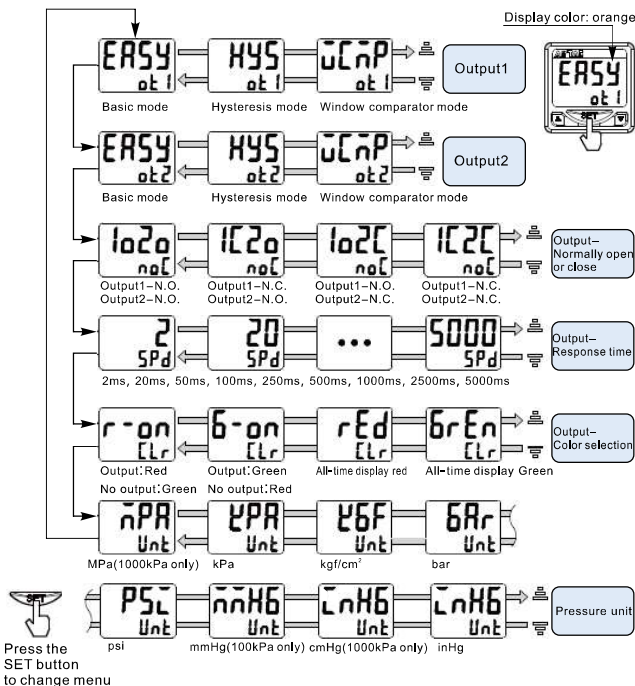
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User Interface Instructions

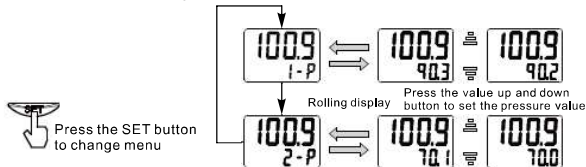
1. Mode switch



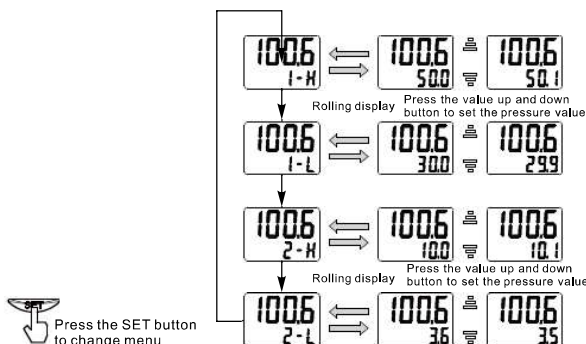
2. Basic mode



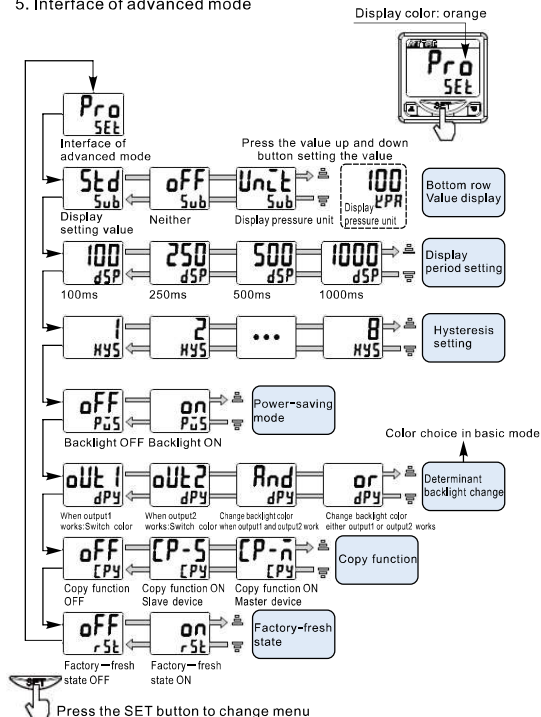
3. Base mode pressure setting



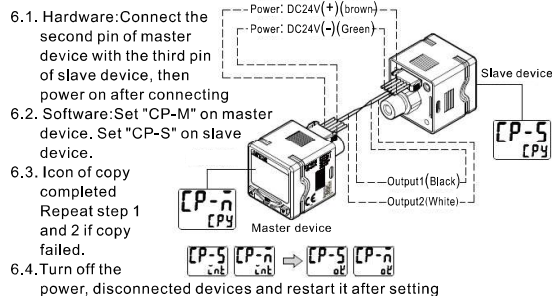
4. Hysteresis /window comparator mode



5. Interface of advanced mode

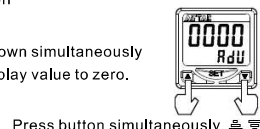


6. Copy function

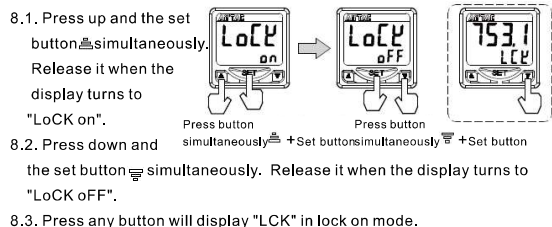


7. Zero-Clear Function

Press up and down simultaneously to reset the display value to zero.



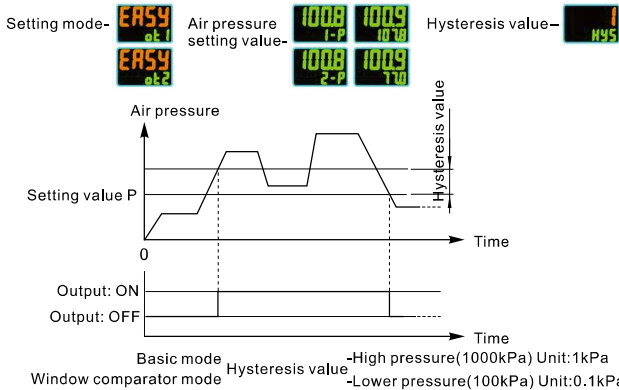
8. Key lock Function



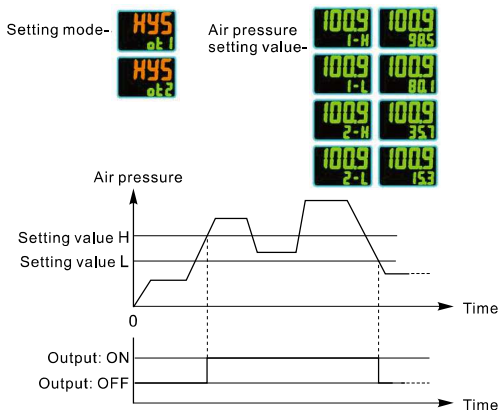
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Output mode

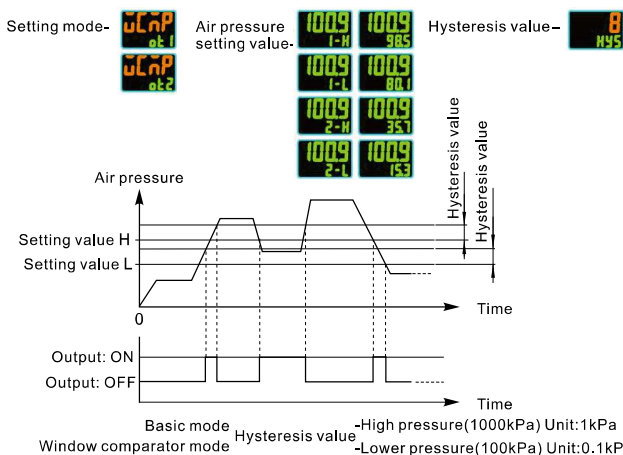
- 1. Basic mode:** Air pressure setting value 'P'. When air pressure large then (Setting value P+Hysteresis value), the output is 'ON'; When air pressure less than setting value 'P', the output is 'OFF'.



- 2. Hysteresis mode:** Air pressure setting value 'H/L'. When air pressure large then setting value 'H', the output is 'ON'; When air pressure less than setting value 'L', the output is 'OFF'.

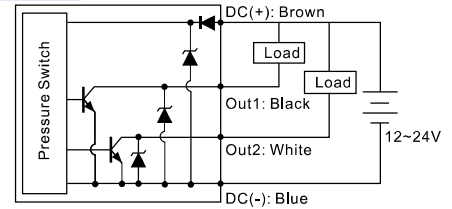


- 3. Window comparator mode:** Air pressure setting value 'H/L'. When air pressure large then value 'H' or less then value 'L', the output is 'OFF'; When air pressure large then value 'L' and less than value 'H', the output is 'ON'.

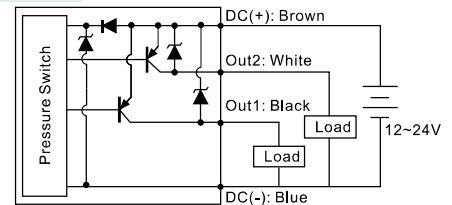


Connection Example

NPN Output



PNP Output



Notes

- Do not drop · knock or apply excessive impact while handling. Otherwise could cause damage and a malfunction.
- The tensile strength of the cord is 60N. Applying a greater pulling force on it can cause a malfunction.
- Do not exceed the screw-in torque of 7N.m when installing piping. Exceeding this value may cause malfunctioning of the sensor.
- Do not use it with corrosive and/or flammable gases or liquids.
- Please use it within rated pressure range.
- Turn off the power before connecting the wires.
- Don't use in an environment with spattering liquid of oil or solvent.
- Separate power lines from high voltage lines, avoiding wiring in the same conduit with these lines.
- When output current exceeds 100mA, circuit protection will be activated. System will resume once reboot.
- Adjust output-response response time can avoid errors caused by sudden change of working pressure.
- There is no copy function for PNP type.