Digital Meter Relay

PSD-05D

PSD-05D is ultra small digital scaling meter with built-in DC 24V power supply for sensor. Direct pressure display is capable connecting with 3-wire type pressure sensor or two-point comparison output can be detected. Comparison output can be selected at Hi-Hi, Hi-Lo or Lo-Lo.

Specification

■Measurement Input

Input Signal Source	0 to 5V output 3-wire type pressure sensor
Input Method	Single end input (current is isolated)
Allowable Input	5V
Scaling Method	Digital scaling method
Scaling Range	Zero point setting range: ±9999 Full scale setting range: ±4000 (Maximum value of span is ±4000 digits)
A-D Conversion Method	Double integral technique with zero correction
NMRR	40dB standard (2.5 times/second, 50/60Hz)
CMRR	80dB standard (2.5 times/second, 50/60Hz)
Measurement Accuracy	±0.1% rdg+0.2 digit/℃ Ta+23℃ ±5℃ 35 to 85% RH, one year
Temperature Drift	±100ppm rdg+0.2 digit/℃(Ta 0℃ to 50℃)
Warm-up Time	5 minutes
Sampling Rate	Selected and set from one of 20, 10, 5, 2.5, 1 time/second

■Display

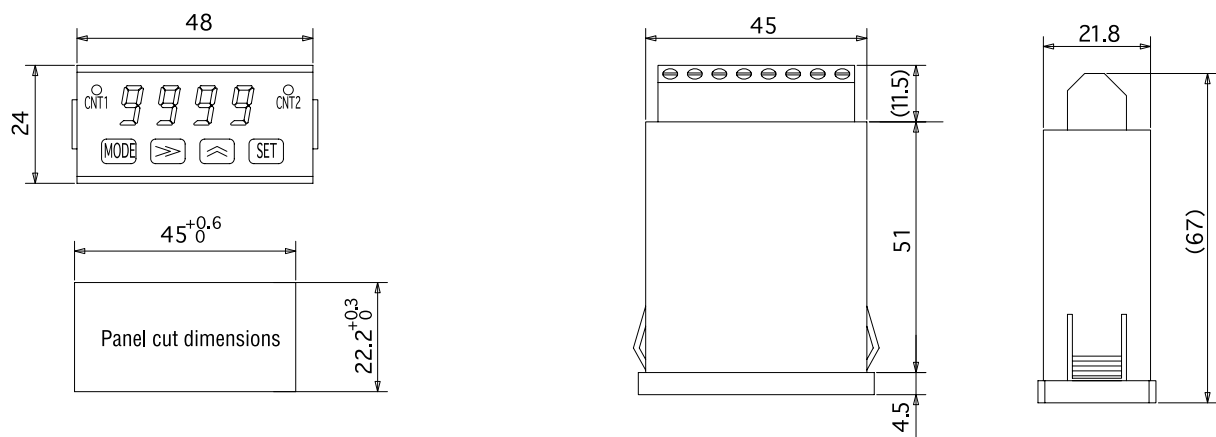|	
Number of Display Digits	±4 digits displayed (±9999 displayed)
Displayed Range	For the portion of arbitrary 4000 digits within ±9999 display
Display Devices	7 segments red LED, Height of character 8mm
Display Rate	Selected and set from one of 20, 10, 5, 2.5, 1, 0.5 time/second
Polarity Display	"−" is displayed for minus only
Overflow (Input)	Display blinks at Input ≧ +110% FS, Input ≦ −110%
Overflow (Display)	Display blinks at Display value ＞ +9999, Display value ＜ −9999
Decimal Point Display	Can light up at arbitrary digit by key switch input
Zero Suppress	"0" display of upper digits of decimal point display can be suppressed
Last Digit [0] Fixed Display	Last digit can be fixed to "0" and displayed by setting

■Comparison

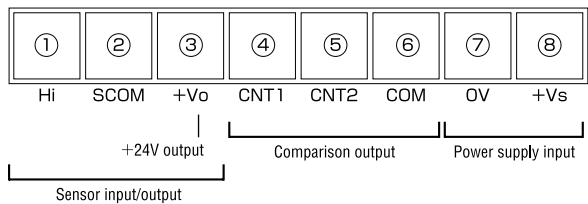|	
Comparison Value Setting Method	Digital setting method by key switch
Comparison Value setting Range	9999 to 9999 digits
Comparison Value Setting Resolution	1 digit
Hysteresis Setting Range	1 to 3999 digits
Hysteresis Setting Resolution	1 digit
Comparison Method	Comparison output: CNT1 and CNT2 can be set individually CNT1 and CNT2 can be set to [H] or [L] separately Hysteresis can be set for CNT1 and CNT2 separately
Comparison Operation	(For setting H) relay is turned ON at measurement value setting value of CNT1, 2 (For setting L) relay is turned ON at measurement value setting value of CNT1, 2
Contact Capacity	Type of contact: 1 make contact (a contact) DC 30V / 2A, AC 125V / 0.5A (resistance load) Lifetime of contact: 100,000 times or more (DC30V 2A resistance load)

■Rating / General Specification

Supplied Voltage	DC 24V± 15%
Power Consumption	3.2W or less
Power Supply Output for Sensor	DC 24V± 10%, 30mA max.
Backup Memory	Nonvolatile memory (EEPROM) rewritable number: 10,000,000 times Memory capacity 40 years can be stored
Operating Temperature	0 to 55
Operating Relative Temperature	35 to 85% RH
Storage Temperature	20 to 70
Withstanding Voltage	1500V AC one minute
Insulation Resistance	1000M or more (initial value) Between input and power supply, between terminal collectively and case (at 500V DC mega)
Noise Resistance	Normal / common mode power supply noise ± 1000V (startup 1nsec, pulse width 1μsec ± polarity)
Oscillation Resistance	10 to 55Hz, single amplitude 0.75mm each direction of X, Y, Z, two hours
Impact Resistance	30G each direction of X, Y, Z, three times each
Weight	Approximately 62g
I/O Terminal	Terminal block for connecting strip wire (screw M3)
Case	Made of plastic mold

Dimensional Outline Drawings

48

24

45$^{+0.6}_{0}$

Panel cut dimensions

22.2$^{+0.3}_{0}$

45

(11.5)

51

4.5

21.8

(67)

Terminal Connection Method

| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| Hi | SCOM | +Vo | CNT1 | CNT2 | COM | 0V | +Vs |

+24V output

Comparison output

Power supply input

Sensor input/output

Terminal No.	Signal Name	Description
1	Hi	Input terminal of measurement signal.
2	SCOM	Common terminal of power supply for measurement signal and sensor
3	+Vo	Output terminal of DC 24V for sensor.
4	CNT1	Comparison output (1)
5	CNT2	Comparison output (2)
6	COM	Common terminal of comparison output (CNT 1, CNT 2).
7	0V	Input terminal of power supply (0V).
8	+Vs	Input terminal of power supply (DC24V).

How to Order

Display Unit

PSD - 05D - 1

1 : psi
2 : kgf/cm²
3 : bar
4 : torr
5 : atm
6 : KPa
7 : MPa

※Specification is subject to
change without notice.

Indicator