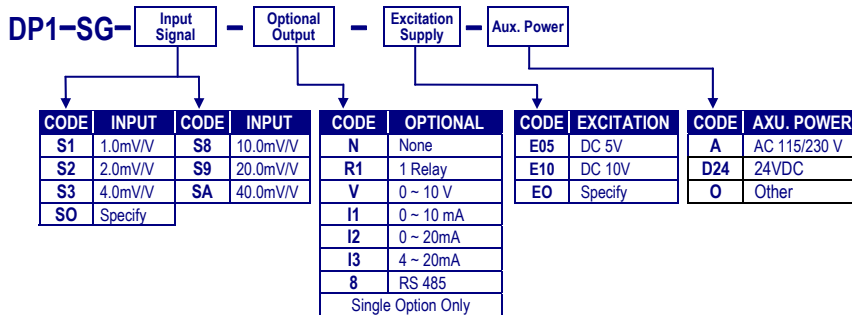


### ► FEATURES

- Measures Strain Gauge signals
- Accuracy:  $\pm 0.04\%$ ; Display range: -19999~29999
- Easily programmable via the front panel
- *Field calibration capability*
- *1 relay, 1 Analogue output or RS 485 communications*
- CE Approved



### ► ORDER CODING



### ► SPECIFICATION

Measuring Range	Input Impedance	Excitation Voltage
0 ~ 1.0/~2.0/~4.0 mV/V	≥ 1M ohm	DC 5V, 40mA
0 ~ 10.0/~20.0/~40.0 mV/V		or DC 10V, 40mA

**Calibration:** Calibration from front panel  
**Field calibration:** Calibration with field signal input high & low, and field calibration reset possible without affecting factory calibration

**Accuracy:**  $\leq \pm 0.04\%$  of FS  $\pm 1C$ ;  
**Response time:**  $\leq 100$  msec.(when the AvG = "1")

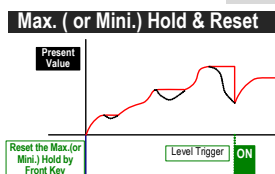
**Operating Programming:** 4 keys for Enter(Function) / Shift(Escape) / Up / Down  
 Up key: increases the number /back to previous function  
 Down key: decreases the number / go to next function  
 Shift/Escape key: moves the flashing digit position / Return to upper level

**Prorammmable key:** Enter/Fun key: enter the parameters you set or selects programming mode  
 Down key can be programmed to be Present Value (PV), PV Hold./ Max-Min value reset/ or Relay reset if alarm is configured as latching

**Security:** 4 digit password  
**Lock:** 3 function group lock level for None/User Level/ Engineer Level / All(Engineer Level & User Level)

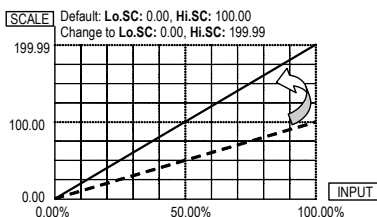
**Display functions LED:** Measuring value: 0.56" red high-brightness LED  
 Relay output indication: square red LED  
 RS 485 communication: square orange LED  
 Max. / Mini. Hold / PV Hold / Rel. PV : square red LED

**Low Cut function:** Low.cut :Settable range:-19999~+19999 counts  
**Average function:** AvG :Settable range: 1~99 times  
**Digital Filter function:** D.FilT : Settable range: 0(None)/1~99 times  
**Over range indication:** ovFL, when input is over 120% of input range Hi  
**Under range indication:** -ovFL, when input is under -120% of input range Lo  
**Display functions:** Present Value / Maximum Hold / Minimum Hold / Write to display by RS485 command



#### Scaling

**Scaling function:** Hi.SC(High scale): -19999~29999  
 Lo.SC(Low scale): -19999~29999



**Decimal point:** Settable from 00000~0.0000

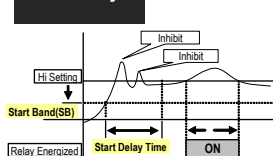
#### Control functions(optional)

**Relay:** 1 Relay SPDT, 5A/230Vac, 10A/115V

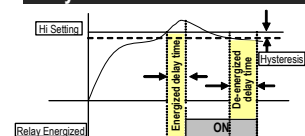
**Relay Output:** Energized levels compare with set-points:  
 Hi / Lo / Hi hold / Lo hold (latching) selectable

**Functions:** Start delay / Energized & De-energized delay / Hysteresis  
 Start band: 0~9999 counts  
 Start delay time: 0:00.0~9(Minutes):59.9(Seconds)  
 Energized delay time: 9(Minutes):59.9(Seconds)  
 De-energized delay time: 9(Minutes):59.9(Seconds)  
 Hysteresis: 0~5000 counts

#### Start Delay



#### Energized / De-energized Delay & Hysteresis



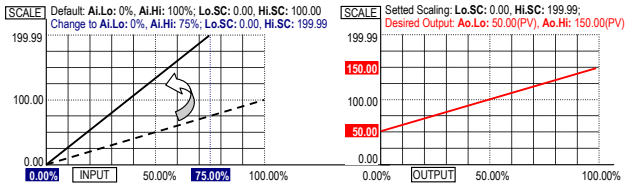
#### Analogue output(option)

**Accuracy:**  $\leq \pm 0.2\%$  of F.S.;  
**Ripple:**  $\leq \pm 0.1\%$  of F.S.  
**Response time:**  $\leq 200$  msec. (10~90% of input)  
**Isolation:** AC 2.0 KV between input and output  
**Output range:** Specify Voltage or Current  
 Voltage: 0~5V / 0~10V / 1~5V selectable  
 Current: 0~10mA / 0~20mA / 4~20mA selectable  
**Output Drive:** Voltage: 0~10V;  $\geq 1K\Omega$ ;  
 Current: 0(4)~20mA:  $\leq 600\Omega$

**Warnings:** Ao.Hi(output high): PV Hi vs. output range Hi  
 Ao.Lo(output range Low): PV Low vs. output range Lo

# 4½ Digit *Strain Gauge* with Alarm, A/O, RS485 Options

## DP1-SG



### RS 485 communication(optional)

**Protocol:** Modbus RTU mode  
**Baud rate:** Selectable 2400/4800/9600/19200/38400  
**Data bits:** Selectable 7 or 8 bit  
**Parity:** Selectable Even, odd or none (with 1 or 2 stop bit)  
**Device no:** Settable 1 ~ 255  
**Write function:** Write to display value from PC's RS485 command

### Power

**Excitation Supply:** DC 5V or 10V  $\pm$  0.1%, 40mA  
**Power Supply:** AC 115/230V  $\pm$  15%, 50/60Hz, DC 24V  $\pm$  10%  
**Power consumption:** 5VA  
**Back up memory:** By EEPROM

### Environmental

**Operating temperature:** 0~60 °C  
**Operating relative humidity:** 20~95 %RH, Non-condensing  
**Temperature coefficient:**  $\leq$  100 PPM/°C  
**Storage temperature:** -10~70 °C

**Enclosure:** Front panel: IEC 549 (IP54)

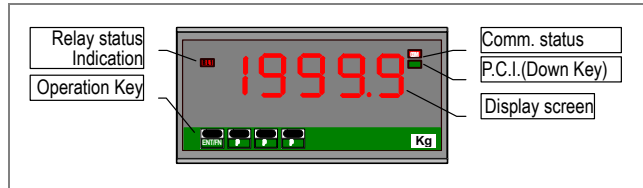
### Electrical safety

**Dielectric Strength:** AC 2.0 KV for 1 min  
 Between Power / Input / Output / Case  
 $\geq$  100M ohm at 500Vdc  
**Insulation resistance:** Between Power / Input / Output  
**Isolation:** Between Power / Input / Output  
**EMC:** EN61326  
**Safety:** EN61010

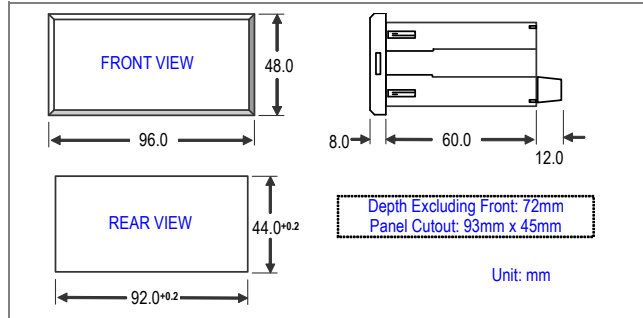
### Mechanical

**Dimensions:** 96mm(W) x 48mm(H) x 72mm(D)  
**Panel cutout:** 93mm(W) x 45mm(H)  
**Case Material:** ABS fire-protection (UL 94V-0)  
**Mounting:** Panel flush mounting  
**Terminal block:** Plastic NYLON 66 (UL 94V-0)  
 10A/300Vac, M2.6, 16~22AWG  
**Weight:** About 350g

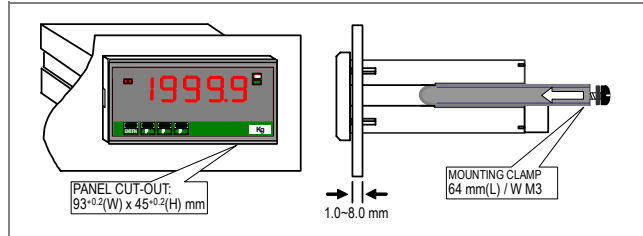
### FRONT PANEL



### DIMENSIONS



### INSTALLATION



### CONNECTION DIAGRAM

