

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

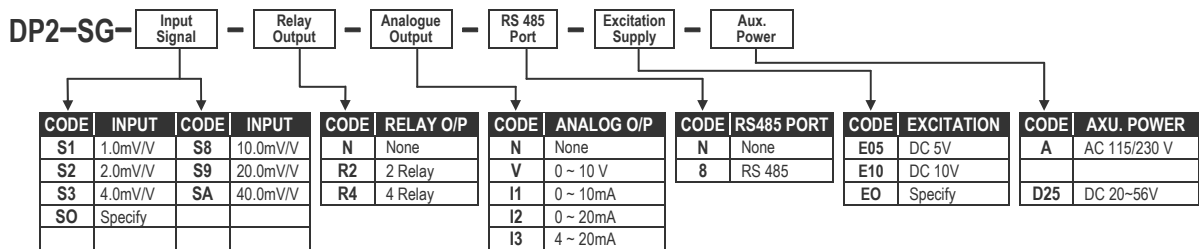
DP2-SG

▶ FEATURES

- Measures & Displays Strain Gauge signals
0~1.0/~2.0/~4.0/~10.0/~20.0/~40.0mV/V
- Accuracy: ± 0.04%;
- Easily programmable via the front panel
- *Field calibration function*
- *Up to 4 relays available with latching and time delay programmable*
- Analogue output and RS 485 communication port options
- *3 external control inputs for Reset and hold functions*
- 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 or DC 10, 40mA
0 ~ 10.0/~20.0/~40.0 mV/V		

Calibration: Calibration from front panel
Field calibration function: *Calibration with field signal input high & low, and field calibration reset*

Accuracy: ≤ ± 0.04% of FS ± 1C;
Response time: ≤ 100 msec.(when the AvG = "1")

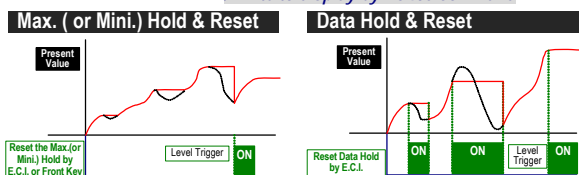
Operating Programming: 4 keys for Enter(Function) / Shift(Escape) / Up / Down
 Up key: increases the number /back to previous function
 Down key: decreases the number / go to next function
 Shift/Escape key: moves the flashing digit position / Return to upper level

Enter/Fun key: enter the parameters you set or selects programming mode
 4 keys for Enter(Function) / Shift(Escape) / Up / Down

Security: 4 digit password
Lock: 3 levels of security (None/User/Master)

Display functions LED: Measuring value: 0.56" red high-brightness LED
 Relay output indication: square red LED
 External control input: square green LED
 RS 485 communication: square red LED
 Max. / Mini. Hold: square red LED

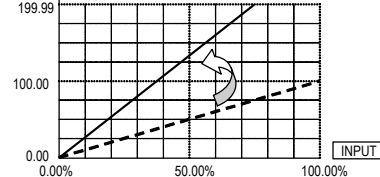
Low Cut function: **Low.cut :**Settable range: -19999~19999 counts
Average function: **AvG :**Settable range: 1~99 times
Digital Filter function: **D.FiLt :** Settable range: 0(None)/1~99 times
Over range indication: **ovFL,** when input is over 120% of input range Hi
Under range indication: **-ovFL,**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



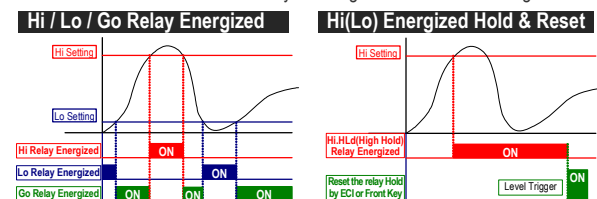
Scaling
Input range function: Ai.Lo: 0~100% of input

Scaling function: Ai.Hi: 0~100% of input
 Hi.SC(High scale): -19999~29999
 Lo.SC(Low scale): -19999~29999
Decimal point: Settable from 00000~0.0000

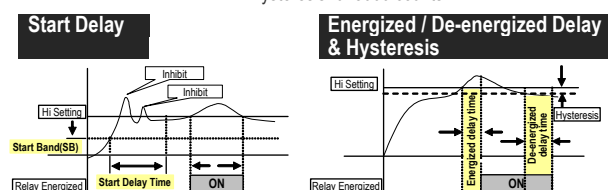
SCALE: Default: Ai.Lo: 0%, Ai.Hi: 100%; Lo.SC: 0.00, Hi.SC: 100.00
 Change to Ai.Lo: 0%, Ai.Hi: 75%; Lo.SC: 0.00, Hi.SC: 199.99



Control functions
Relay: 2 Relays SPDT, 5A/230Vac, 10A/115V
 2 Relays SPST, 1A/230Vac, 3A/115V
Relay Output: Energized levels are compared with set-points:
 Hi / Lo / Hi.HLd / Lo.HLd / do / Go-1.2 / Go-2.3
 DO function: Energized by RS485 command
 Relay Latching : Selectable Low or High Hold



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



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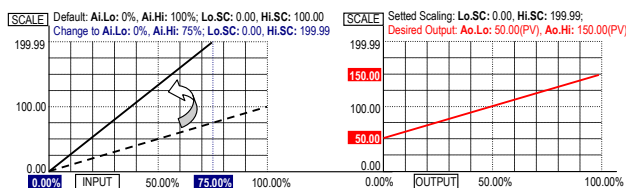
External Control

Input mode: 3 inputs, Contact or open collect input
Functions: *Relative PV / PV Hold / Reset Max or Mini. Hold / DI / Reset for Relay Latch*
De-bounce time: 5 ~ 255 x 8mseconds

Analogue output(option)

Accuracy: $\leq \pm 0.1\%$ of F.S.; 16 bits AD converter
Ripple: $\leq \pm 0.1\%$ of F.S.
Response time: ≤ 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 Capability: Voltage: 0~10V: $\geq 1000\Omega$;
 Current: 0(4)~20mA: $\leq 600\Omega$

Functions: *Ao.Hi(output high): PV Hi vs. output range Hi*
Ao.Lo(output range Low): PV Low vs. output range Lo
Ao.LM(output High Limit): 0.00~110.00% of output High



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: Setable 1 ~ 255
Write function: Write to display value from PC's RS485 command

Power

Excitation Supply: DC 5V or 10V $\pm 0.1\%$, 30mA
Power Supply: AC 115/230V $\pm 15\%$, 50/60Hz; **Optional DC 20~56V**
Power consumption: 5.0VA
Back up memory: By EEPROM

Environmental

Operating temperature: 0~60 °C
Operating relative humi.: 20~95 %RH, Non-condensing
Temperature coefficient: ≤ 100 PPM/°C
Storage temperature: -10~70 °C
Enclosure: Front panel: IEC 549 (IP54)

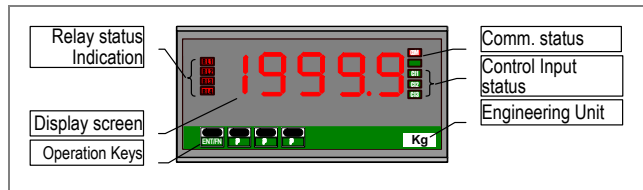
Electrical safety

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

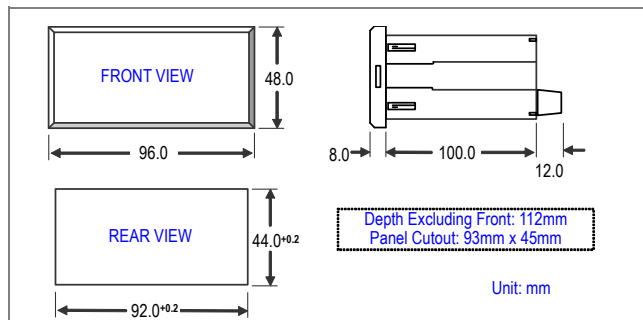
Mechanical

Dimensions: 96mm(W) x 48mm(H) x 120mm(D)
Panel cutout: 92mm(W) x 44mm(H)
Case Materiel: 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: 550g

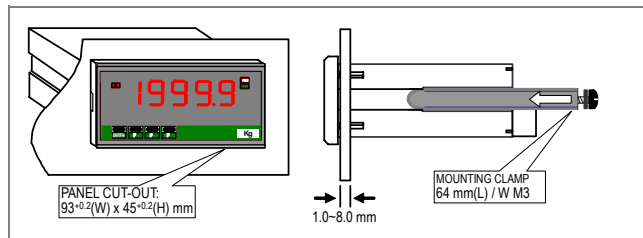
FRONT PANEL



DIMENSIONS



INSTALLATION



CONNECTION DIAGRAM

