

CS3-SG STRAIN GAUGE Indicator (24x48) ADTEK

DESCRIPTION

CS3-SG Strain Gauge Indicator has been designed with high accuracy measurement, display and communication of DC signal 0~1.0/~2.0/~3.0/~3.33/~4.0mV as like as Load Cell or Strain Gauge.

☑ The meter supports Field Calibration function. It can be calibrated with sensor(Load Cell/Strain Gauge) to meet machinery structure. They are also building in 2 Relay outputs, 1 External Control Input, 1 Analogue output or 1 RS485(Modbus RTU Mode) interface with versatile functions such as control, alarm, re-transmission or communication for a wide range of machinery and testing equipments applications.

Miniature Indicator(24x48mm)



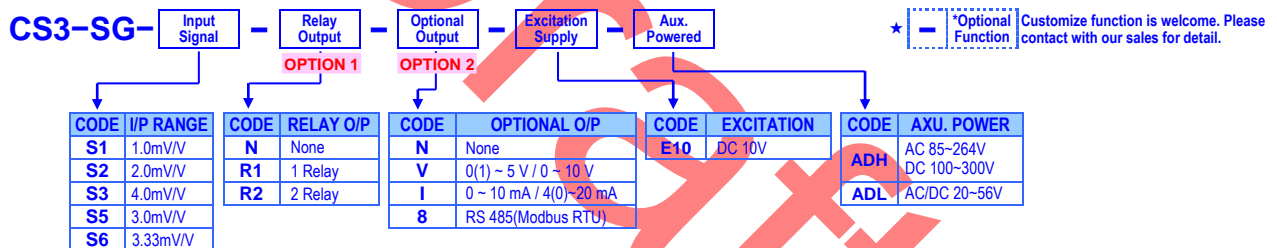
FEATURE

- Measuring load cell, strain gauge signal 0~1.0/~2.0/~3.0/~3.33/~4.0mV/V
- Field calibration with load cell or strain gauge to meet the system requirement
- 2 relay can be programmed individual to be a Hi / Lo / Hi Latch / Lo Latch energized with Start Delay / Hysteresis / Energized & De-energized Delay functions, or to be a remote control.
- Analogue output or RS 485 communication port available in option
- 1 external control input can be programmed to be Relative PV(Tare) / PV Hold / DI (remote monitoring) / Reset for Maximum or Minimum Hold / Reset for Relay Energized Latch....
- CE Approved & RoHS

APPLICATIONS

- Testing Equipments for weight/force Measuring, Alarm, Control and Communication with PC/PLC
- Leakage testing equipment by tare and relay function.
- Weighting control for packing machine, filling machine.

ORDERING INFORMATION



TECHNICAL SPECIFICATION

Measuring Range	Input Impedance	Excitation Voltage
0~1.0/~2.0/~3.0/~3.33/~4.0 mV/V	≥ 1M ohm	DC 10V, 40mA

Calibration: Digital calibration by front key
Field calibration: Calibration with sensor input high & low to meet system structure. And field calibration reset is not change the accuracy & linear of factory calibration.
A/D converter: 16 bits resolution
Accuracy: ≤± 0.04% of FS ± 1C;
Sampling rate: 15 cycles/sec
Response time: ≤100 m-sec.(when the AvG = "1") in standard
Input range: Input High and Low programmable
Relay: Settable range: 0.00~100.00% of input range
Relay: Settable range: 0.00~100.00% of input range

Display & Functions
LED: Numeric: 4 2/3 digits, 0.4"(10.0mm)H red high-brightness
 Relay output indication: 2 square red LED
 RS 485 communication: 1 square orange LED
 E.C.I. function indication: 1 square green LED
Display range: -19999~29999;
Scaling function: L:5C : Low Scale; Settable range: -19999~+29999
 H:5C : High Scale; Settable range: -19999~+29999
Decimal point: Programmable from 0 / 0.0 / 0.00 / 0.000 / 0.0000

Over range indication: ouFL, when input is over 20% of input range Hi
Under range indication: -ouFL, when input is under -20% of input range Lo
Max / Mini recording: Maximum and Minimum value storage during power on.
Display functions: PV / Max(Mini) Hold / RS 485 Programmable
Front key functions: Up key can be set to be a function as ECI.
Low cut: Settable range: -19999~29999 counts
Digital fine adjust: P.u.P.r.o : Settable range: -19999~+29999
 P.u.S.P.n : Settable range: -19999~+29999

Reading Stable Function
Average: Settable range: 1~99 times
Moving average: Settable range: 1(None)~10 times
Digital filter: Settable range: 0(None)/1~99 times

Relay Output Function (option)
Set-points: Two set-points
Control relay: 2 Relays FORM-C, 2A/250Vac
Relay energized mode: Energized levels compare with set-points:
 Hi / Lo / Hi.HLd / Lo.HLd; programmable
Energizing functions: DO function: Energized & De-energized delay / Hysteresis / Energized Latch
 Start delay / Energized & De-energized delay / Hysteresis / Energized Latch
Start band(Minimum level for Energizing): 0~9999counts
Start delay time: 0:00.0~9(Minutes):59.9(Second)
Energized delay time: 0:00.0~9(Minutes):59.9(Second)
De-energized delay time: 0:00.0~9(Minutes):59.9(Second)
Hysteresis: 0~5000 counts



External Control Inputs(ECI)

Input mode: 1 ECI points, Contact or open collect input, Level trigger
Functions: Relative PV (Tare) / PV Hold / Reset for Max or Mini. Hold / DI / Reset for Relay Energized latch
Debouncing time: Settable range 5 ~255 x (8m seconds)

Analogue output(option)

Accuracy: $\pm 0.1\%$ of F.S.; 16 bits DA converter
Ripple: $\pm 0.1\%$ of F.S.
Response time: ≤ 100 m-sec. (10~90% of input)
Output range: Specify either Voltage or Current output in ordering
Voltage: 0~5V / 0~10V / 1~5V programmable
Current: 0~10mA / 0~20mA / 4~20mA programmable
Output capability: **Voltage:** 0~10V; $\geq 1000\Omega$;
Current: 4(0)~20mA; $\leq 600\Omega$ max
Functions: **R_oH_S** (output range high): Settable range: -19999~29999
R_oL_S (output range Low): Settable range: -19999~29999
R_oL_h (output High Limit): 0.00~110.00% of output High
R_oP_ro: Settable range: -38011~+27524
R_oS_Pn: Settable range: -38011~+27524

RS 485 Communication(option)

Protocol: Modbus RTU mode
Baud rate: 1200/2400/4800/9600/19200/38400 programmable
Data bits: 8 bits
Parity: Even, odd or none (with 1 or 2 stop bit) programmable
Address: 1 ~ 247 programmable
Distance: 1200M
Terminate resistor: 120~300 Ω /0.25W(typical: 150 Ω)

Electrical Safety

Dielectric strength: AC 2KV, 50/60Hz for 1 min, Between Power / Input / Output / Case
Insulation resistance: $\geq 100M$ ohm at 500Vdc, Between Power / Input / Output / Case
EMC: EN61326:1:2013 / CISPR11 Class A
 EN61000-3-2:2014 / EN61000-3-3:2013
 IEC 61000-4-2:2008 / IEC61000-4-3:2006+A1:2007+A2:2010
 IEC 61000-4-4:2012 / IEC 61000-4-5:2005
 IEC 61000-4-6:2013 / IEC 61000-4-8:2009
 IEC 61000-4-11:2004
Safety(LVD): EN 61010-1:2010
FCC: FCC part 15 subpart B: Class A

Environmental

Operating temp.: 0~60 °C
Operating humidity: 20~95 %RH, Non-condensing
Temp. coefficient: ≤ 100 PPM/°C
Storage temp.: -10~70 °C
Enclosure: Front panel: IEC 529 (IP52); Housing: IP20

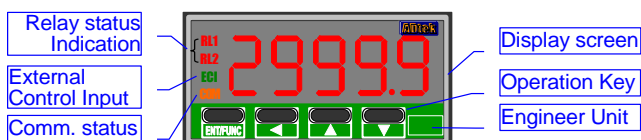
Mechanical

Dimensions: 48mm(W) x 24mm(H) x 107mm(D)
Panel cutout: 45mm(W) x 22mm(H)
Case material: ABS fire-resistance (UL 94V-0)
Mounting: Panel flush mounting
Terminal block: Plastic NYLON 66 (UL 94V-0)
 5A 300Vac, M2.0, 0.5~1.3mm²(22~16AWG)
Weight: About 110g

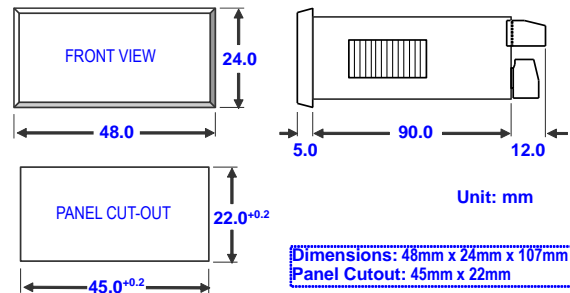
Power

Power supply: AC 85~264V, DC 100~300V, AC/DC 20~56V
Excitation supply: DC 10V / 40mA
Power consumption: AC : $\leq 10VA$ @ 230V / DC : $\leq 3W$
Back up memory: By EEPROM

FRONT PANEL

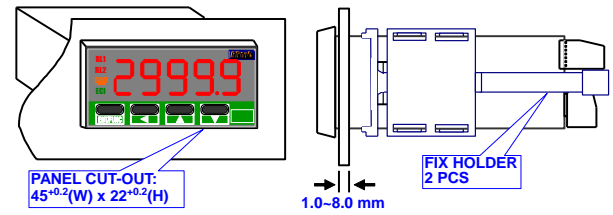


DIMENSIONS

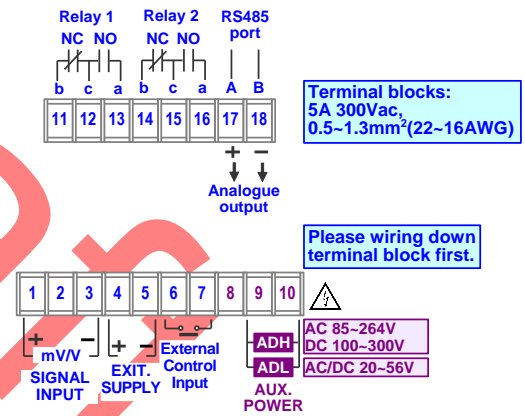


INSTALLATION

The meter should be installed in a location that does not exceed the maximum operating temperature and provides good air circulation.

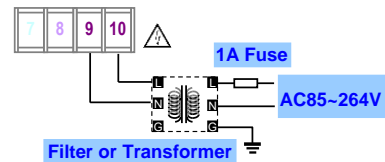


CONNECTION DIAGRAM

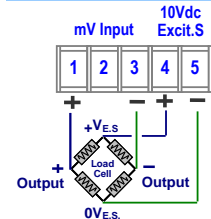


Please check the voltage of power supplied first, and then connect to the specified terminals. It is recommended that power supplied to the meter be protected by a fuse or circuit breaker.

Power Supply



Load Cell connection



RS485 Communication Port

