

A6-SG 6 DIGITAL WEIGHING Controller

DESCRIPTION

A6-SG weighing controller has been designed with high accuracy measurement (24bit A/D), 6 digital display, flexible I/O functions and communication port for general weighing application.

They are also build in 4 Relay outputs, 4 External Control Inputs, 1 Analogue output and 1 RS485 (Modbus RTU Mode) interface with versatile functions such as control, alarm, re-transmission and communication for a wide range of industrial applications.

They was designed the tracking zero and tracking stable function in programming level. According to the system, user can set the function to get the suitable reading.

According the purpose, the 4 relays can be selected individual for feeder, discharge, peak, or alarm in 7 control modes.



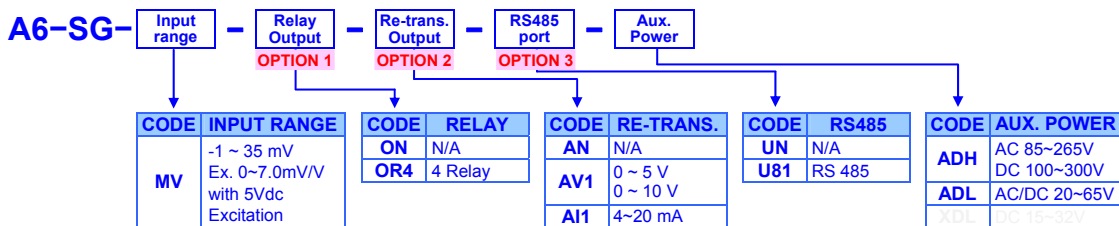
FEATURE

- Measuring range -1~35mV, 0.3μV/D resolution, and the sampling rate can be set from 6.25~100 time/second
- There are two calibration modes in mV standard input and key in the number of load cell's signal(mV/V) or counterweight with system to do the calibration
- 4 relay output are not only can be set to Hi/OK/Lo \ period compare and compare by trigger 3 modes, but also feeder, discharge, peak, compare during PV over the band of zero, and so on.
- 4 control input can be set from terminals or front key input with zero, tare, gross, net, weighing start/end function....and so on.
- Optional re-transmission and RS485 communication port available.
- Apply to CE standard and RoHS

APPLICATIONS

- Weighing machine
- Filling machine
- Force testing equipment
- Weighing check with Hi/OK/Lo
- Mixture machine

ORDERING INFORMATION



TECHNICAL SPECIFICATION

Input			
Input Range	Input Impedance	Display Range	Resolution
-1 ~ 35 mV	≥ 69K ohm	0~999999	0.001

A/D converter:	24 bits resolution
Input sensitive:	0.3μVdc / Digit
Display resolution:	± 999999
Excitation supply:	5Vdc ± 5%, 60mA(can be connected 4 load cell-350 ohm)
Sampling rate:	[5rRtE] Settable: 6.25~100 time/second
Linearly:	≤ 0.01%
Calibration:	There are 2 mode to calibrate;
Simulation	Calibration by 0~35mV standard source
Counterweigh	Calibration by counterweigh with load cell to calibrate zero and span

Display & Functions	
LED:	Numeric: 6 digits, 0.5"(12.5mm)H red high-brightness LED
I/O indicators	Relay output indication: 4 square red LED ECI function indication: 4 square green LED RS 485 communication: 1 square orange LED ZERO / MD / NET: 3 square red LED Mn / Cn / Au / PK: 3 square red LED
Measuring status:	[d5PαL] the max. value of display: 0~+999999
Measuring function:	[dP] Programmable from 0 / 00 / 000 / 0000
Display range:	[tEd u] Programmable 1, 2, 5, 10, 20, 50
Decimal point:	
Display sensitive:	

Over range indication: -oL-, when display is over the setting of [d5PαL]
Tracking zero time: [P t - t] settable: 0.0(off)/0.1~10.0 second
Tracking zero range: [P t - r] settable: 0.1~10.0 digits
 Tracking range = ([P t - r] S.V. x [tEd u] S.V.)

Unstable Tracking time: [n d - t] settable: 0.0(off)/0.1~10.0 second
Unstable Tracking range: [n d - r] settable: 0.1~10.0 digits
 Tracking range = ([P t - r] S.V. x [tEd u] S.V.)
Programmable Kg / g / t / lb

Engineer unit:

Front key functions

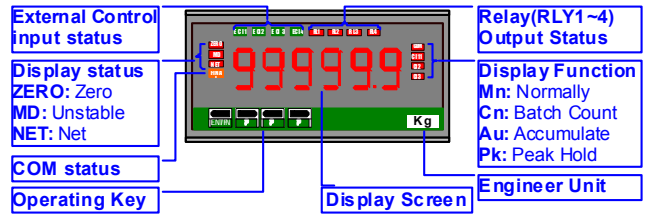
Front key functions: The up key and down key on front panel can be set individual to represent the function as below. when the user press the key that means to execute the function
Zero / Tare / Net & Gross / M+(Accumulation) / M-(Inverse Accumulation) / MC(reset Accumulation) / CLR(reset tare) / Start(start counting) / END(Stop counting) / CH.DSP(Change display)

External control input(ECI)

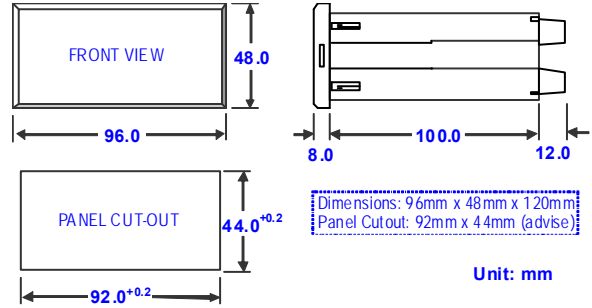
Input mode: 4 ECI points, Contact or open collect input, Level trigger
Functions: 4 ECI can be set individual to represent the function as below. when the ECI terminals is close that means to execute the function

Zero / Tare / Net & Gross / M+(Accumulation) / M-(Inverse Accumulation) / MC(reset Accumulation) / CLR(reset tare) / Start(start counting) / END(Stop counting) / CH.DSP(Change display)

FRONT PANEL

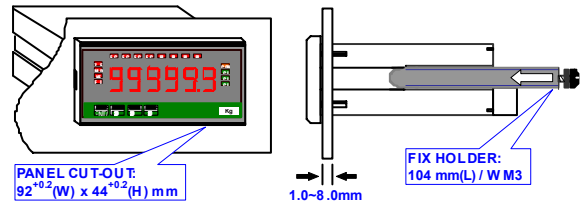


DIMENSIONS

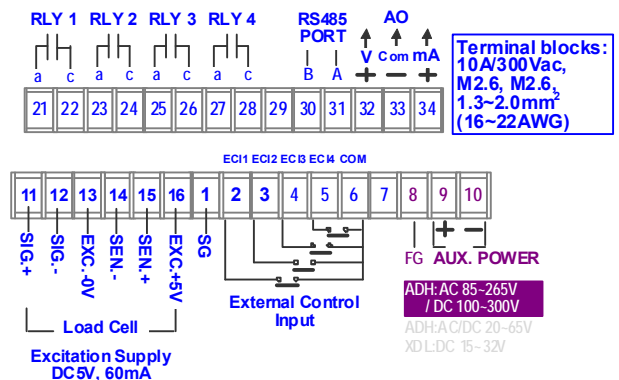


INSTALLATION

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.

Control functions(Optional)

Relays: 4 relays FORM-A, 1A/230Vac, 2A/115V
Relay energized mode: Programmable Hi / OK / Lo / Zero Band / SP1 \ SP2 \ SP3 / FINISH / DO(UART)
Relay contact status: Relay contact can be set Normally open or close

AO re-transmission(Optional)

Accuracy: $\pm 0.1\%$ of F.S.; 16 bits DA converter
Ripple: $\leq \pm 0.1\%$ of F.S.
Response time: ≤ 100 m-sec. (10~90% of input)
Isolation: AC 2.0 KV between input and output programmable either Voltage or Current output
Output range: Voltage: 0~5V / 0~10V or Current: 4~20mA
Functions:
[R_oSEL] AO represents parameter selection
 Settable: Display / Gross / Net / Peak / DO
[R_oRSP] AO represent value selection
 Settable: Positive / Negative / Absolute
[R_oRCT] AO output direction
 Settable: Equal / Opposite
[R_oL5] AO range low; Settable: 0~999999
[R_oH5] AO range high; Settable: 0~999999
[R_oPrn] Settable range: 0~65535
[R_oSPn] Settable range: 0~65535

Digital fine adjust:

RS 485 Communication(option)

Protocol: Modbus RTU mode
Baud rate: 9600/19200/38400/57600 programmable
Data bits: 8 bits
Parity: none programmable
Address: 1 ~ 255 programmable
Distance: 1200M
Terminate resistor: 150Ω at last unit.

Power

Power supply: ADH:AC 85~265V/DC 100~300V
 ADL:AC/DC 20~65V or XDL:DC 15~32V

Power consumption: 2.5VA maximum

Back up memory: By EEPROM

Electrical Safety

Dielectric strength: AC 2.0 KV for 1 min,
 Between Power / Input / Output / Case
Insulation resistance: ≥ 100 M ohm at 500Vdc, Between Power / Input / Output
Isolation: Between Power / Input / Relay / Analogue / RS485 / ECI
EMC: EN 55011:2002; EN 61326:2003
Safety(LVD): EN 61010-1:2001

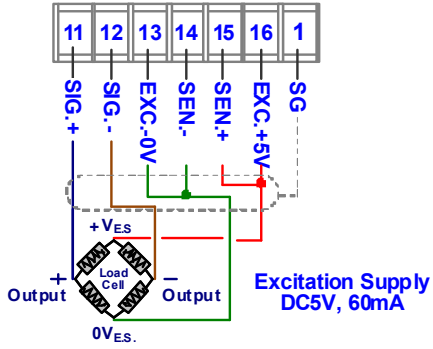
Environmental

Operating temp.: 0~60 °C
Operating humidity: 20~85 %RH, Non-condensing
Temp. coefficient: ≤ 50 PPM/°C
Storage temp.: -10~70 °C
Enclosure: Front panel: IEC 549 (IP54); Housing: IP20
Vibration: 1~800Hz, 3.175g²/Hz

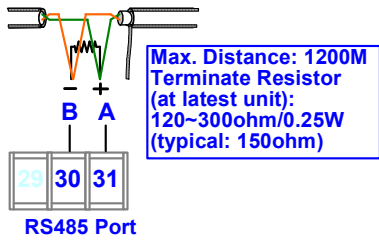
Mechanical

Dimensions: 96mm(W) x 48mm(H) x 120mm(D)
Panel cutout: 92mm(W) x 44mm(H)
Case material: ABS fire-resistance (UL 94V-0)
Mounting: Panel flush mounting
Terminal block: Plastic NYLON 66 (UL 94V-0)
 10A 300Vac, M2.6, 1.3~2.0mm²(16~22AWG)
Weight: About 350g

Load cell Input Connection



RS485 Connection



AO(re-transmission) Connection

