



409-W Strain Gauge Indicator

Masibus' 409-W Strain Gauge Indicator accepts strain gauge signal from strain gauge sensors such as load cells, pressure transducers and torque sensors and provide alarms, indicates value and also converts into selected DC voltage or current output allowing direct connection to PLC's, dataloggers & displays.

5-digit, 0.56" red seven segment display facilitates the user to monitor Strain gauge value. It displays field settable Gross or Net value.

409-W Strain Gauge Indicator accepts field selectable load cell input ranging from -75 to 75mV DC. It has built-in factory set load cell excitation voltage selectable from 5 to 15V DC. Tare adjustment can be done through keypad / digital input.

409-W Strain Gauge Indicator also provides relay output for alarm. It can be interfaced with SCADA/PLC system using optional RS485 communication and analog retransmission output.

Model 409-W is equipped with advanced functions like digital filtering, digital input and password setting for optimum process functionality.

Features

- Selectable load cell input ranges
- 5 Digit. 0.56" LED display
- Load cell excitation voltage selectable from 5 to 15V DC (factory set)
- Tare adjustment through keypad/ DI
- User selectable gross and net values
- Zero and span calibration by front key-pad
- Programmable high/low alarm relay
- Retransmission o/p (optional)
- RS485 interface (optional)

Applications

- Signal conversion for use with PLC and SCADA systems
- Dynamic and static weighing applications
- Food processing equipment
- Rubber press machine

TECHNICAL SPECIFICATIONS

| Input | | Power Supply | |
|---|---|--|--------------------------|
| Input type | ±75mV DC (field settable) | Standard | 85-265VAC/ 100-300VDC |
| Display range | -19999 to 99999 | Optional | 18 to 36VDC |
| Accuracy | 0.1 % of Full span ± 1 digit | Power consumption | <10 VA |
| Digital input | 1-Channel (Isolated) non- voltage contact input, maximum reverse voltage 6V, maximum forward voltage 50V, capacity 24V DC, 10mA | Isolation (Withstanding voltage) Between primary terminals* and secondary terminals**: At least 1500 V AC for 1 minute Between secondary terminals**: At least 500 V AC for 1 minute * Primary terminals indicate power terminals and relay output terminals. ** Secondary terminals indicate analog I/O signal and communication O/P. Insulation resistance: 20MΩ or more at 500 V DC between power terminals and secondary terminal. Between secondary terminals**: At least 500 V AC for 1 minute | |
| Sampling period | 4 Sample/Sec | Physical | |
| Burn out current | 0.5 uA | Enclosure protection | IP20 |
| NMRR | >40 dB (50Hz) | Mounting | Panel mount |
| CMRR | >100 dB (50Hz) | Enclosure material | ABS plastic |
| Response time | <1000mS | Dimensions (in mm) | 96(W) x 48(H) x 112(D) |
| Resolution | 17 bits | Panel cutout (in mm) | 92 x 46 |
| Repeatability | 0.05% of FS | Weight | 260 g (Approx) |
| Temp-co | < 100 ppm for input to display <150 ppm for retransmission output | Terminal cable size | 2.5 mm ² |
| Display & Keys | | Standard accessories | 2 Nos. Clamp |
| Process value | 0.56" 5 digit seven segment Red LED | Environmental | |
| Status indication | 4 Red LED's for (Alarm and Tx/Rx) | Operating temperature | 0-55 °C |
| Keys | Menu, Enter, Increase, Decrease | Storage temperature | 0-80 °C |
| Special Feature | | Humidity | 20-95 %RH non-condensing |
| Digital filter | 0-60 Sec | Connection Diagram | |
| Rx output mapping | Corresponding to net or gross value | <p>The diagram shows a terminal block with 20 pins. Pins 1 and 2 are for Power Supply (+ and -). Pins 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 are for Alarm Relay (C, NO, NC contacts). Pins 14 and 15 are for Digital input for Tare (+ and - 24V DC). Pins 3, 4, 12, 13 are for EXC+ and EXC- terminals. Pins 17, 18, 19 are for RS485 (+, -, and common). Pins 20 and 21 are for RX (+ and -).</p> | |
| On demand display value | Gross, mV | | |
| Input offset | To remove dead weight | | |
| Digital input | For Tare | | |
| Decimal point | User programmable | | |
| Output | | | |
| Alarm Output | | | |
| Relays | 2 Nos | | |
| Type | Single change over (C, NO, NC) | | |
| Rating | 5A @ 230VAC / 30VDC | | |
| Retransmission Output (Optional) | | | |
| Output signal (any-one factory set) | 4-20mA/ 0-20mA/ 1-5V DC/ 0-5V DC/ 0-10V DC | | |
| Accuracy | ±0.25% of full span | | |
| Load resistance | for current o/p ≤ 600 Ω for voltage o/p ≥ 2 KΩ | | |
| Communication Output (Optional) | | | |
| Interface | RS485 | | |
| Protocol | Modbus-RTU | | |
| Baud rate | 9600, 19200, 38400 | | |

ORDERING CODE

| Model | Load Excitation Voltage | Auxiliary Power Supply | Retransmission o/p | Communication |
|--------------|-------------------------|---------------------------------|--------------------|---------------|
| 409-W | X | XX | X | X |
| | 1 5 V DC | U1 85-265 V AC/ 100-300 V DC | N None | N None |
| | 2 10 V DC | U2 18-36 V DC | C 4-20mA | Y RS485 |
| | 3 12 V DC | | D 0-20mA | |
| | 4 15 V DC | | E 1-5V | |
| | S Special | | F 0-5V | |
| | | | G 0-10V | |