

SETPOINT COMPARATOR

AM-147

*RS232C output



■ DC Voltage Measurement

| Input | Range | Measuring Range | Display Adjustable | Input Impedance | Input Protection |
|-------|-------|-----------------|--------------------|-----------------|------------------|
| DV | 11 | ±99.9mV | Offset | 100MΩ | ±250V |
| | 12 | ±999.9V | | 100MΩ | ±250V |
| | 13 | ±9.999V | ±9999 | 1MΩ | ±250V |
| | 14 | ±99.99V | Fullscale | 10MΩ | ±500V |
| | 15 | ±700.0V | ±0 to 9999 | 10MΩ | ±700V |
| | IV | 1 to 5V | | 1MΩ | ±250V |

Accuracy: ±(0.03% of rdg + 2 digit)(23°C±5°C 45 to 75% RH)

■ DC Current Measurement

| Input | Range | Measuring Range | Display Adjustable | Internal Resistance | Input Protection |
|-------|-------|-----------------|--------------------|---------------------|------------------|
| DA | 23 | ±9.999mA | Offset | 10Ω | ±150mA |
| | 24 | ±99.99mA | ±9999 | 1Ω | ±500mA |
| | 25 | ±999.9mA | Fullscale | 0.1Ω | ±3A |
| | 2A | 4 to 20mA | ±0~9999 | 10Ω | ±150mA |

Accuracy: ±(0.1% of rdg + 2 digit)(23°C±5°C 45 to 75% RH)
±(0.3% rdg + 2 digit) for 25 range

■ General specifications

●Measurement block

Input configuration: Single ended
 Operation method: Dual slope
 Conversion rate: 12.5 time/sec (50 Hz), 15 time/sec (60 Hz)
 Noise rejection ratio: NMR more than 50 dB (50/60 Hz)
 Temp. coefficient: ±(0.005% of rdg + 0.3 digit)/°C
 Display: Red LED, 14.2 mm height
 Green LED, 8 mm height for setpoint
 Polarity display: Automatic "-" display when the computation result is minus
 Overrange warning: When input exceeds the maximum display, display 0L or -0L
 Maximum display: 0 to ±9999 (4 digit)
 Decimal poin: Settable to any digit position (by front sheet switch)
 Zero display: Leading zero suppression

●External control block

Hold: Shorted COM terminal and S/H terminal or level "0"
 Start: Shorted COM terminal and S/H terminal or level "1"
 Digital zero: Shorted COM terminal and DZ terminal or level "0"
 (displayed zero and that value is stored)

Peak hold

Valley hold: Shorted COM terminal and PH terminal or level "0"

Peak Valley hold

Pattern selection: Any one of 8 patterns is settable in combination of COM terminal and P.SEL terminal 0, 1 and 2
 Level "0" : 0 to 1.5V
 Level "1" : 3.5 to 5 V
 Input current : less than -2 mA

●Comparison block

Control method: Computation by microcomputer
 Setting range: -9999 to 0 to +9999 (Including polarity)
 Setting condition:

■ Features

- Conversion rate 12.5times/sec(50Hz) or 15times/sec(60Hz)
- Four setpoint(Can display two setpoint)
- Multiple range
- Scaling value and setting value stored 8 pattern
- Peak hold, Valley hold, Peak-valley hold, Digital zero, Moving average(standard)
- Power supply for sensor 24VDC 40mA
- Direct setting function
- Power supply 90 to 264VAC

Comparison condition:

| Comparison condition | Comparison result |
|---|-------------------|
| High high limit set value < Measured value | HH |
| High limit set value < Measured value | HI |
| High high limit set value Low low limit set value ≥ Measured value ≥ | GO |
| High limit set value Low limit set value | |
| Measured value < Low limit set value | LO |
| Measured value < Low low limit set value | LL |

Comparison relay output: Contact capacity

250 V AC 0.2 A Resistive load
 120 V AC 0.5 A Resistive load
 28 V DC 1 A Resistive load

Photo coupler output: (NPN)

Voltage = Max. 30 V
 Current = Max. 50 mA
 Saturation voltage = less than 1.2 V at 50 mA

Hysteresis:

1 to 999 digit for each set point

External control:

Relay reset
 Shorted COM terminal and R.RE terminal or level "0"
 Level "0": 0 to 1.5 V
 Level "1": 3.5 to 5 V
 Input current: less than -2 mA

●Common block

Memory backup: EEPROM (rewrite 100,000 times)
 back up 10 years
 Operating temp: 0 to 50°C 35 to 85% RH (No condensation)
 Storage temp: -10 to 70°C less than 60% RH
 Power supply: 90 to 264 V AC (50 Hz/60 Hz)
 Power consumption: Approx 10 VA typ (at 100 V AC)
 Dimensions: 96 mm (W)×48 mm (H)×148 mm (D)
 DIN size
 Weight (unit only): Approx 450 g
 Dielectric strength: Input/COM, EXC (0 V), comparative output, 500 V DC/1 min.
 Input/COM of each output (BCD:FD.COM, ANALOG:-, RS-232C:SG, RS-485) 500 V DC/1 min.
 Power supply terminal/input terminal, COM, EXC (0 V), case, comparative output, 1500 V AC/1 min.
 Power supply terminal/COM of each output (BCD:D.COM, ANALOG:-, RS-232C:SG, RS-485) 1500 V AC/1 min.
 500 V DC more than 100 MΩ at the above terminals
 Dielectric noise: Power supply terminal normal/common mode ±1500 V
 Power supply for sensor: 24 V DC±10% 40 mA ripple 100 mVp-p
 Accessories: Instruction manual
 quick manual, setting list, unit label, terminal cover

