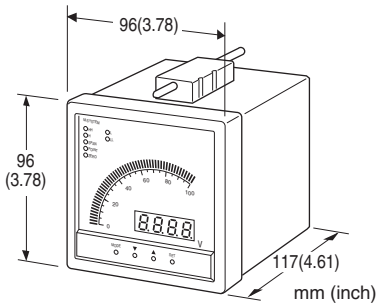
Bargraph Indicators 49 Series

BARGRAPH INDICATING ALARM

Functions & Features
- Bargraph and digital displays
- DIN size
- Easy-to-read tri-color LED indicator

Typical Applications
- Indicator for various signals
- Available to use alarm with display



MODEL: 49AV2-[1]W1[2]-[3]

ORDERING INFORMATION

- Code number: 49AV2-[1]W1[2]-[3]

Specify a code from below for each of [1] through [3].
(e.g. 49AV2-4W13-M)
- Special input range (For codes Z & 0)
- Digital meter scale (e.g. 0.0 – 150.0)
- Use Ordering Information Sheet (No. ESU-9333). Factory setting will be used if not otherwise specified.

[1] ALARM OUTPUT

0: None
2: 2 points
4: 4 points

BAR LED COLOR

W: 3 colors (red, green, amber)

DIGITAL DISPLAY

1: With

[2] INPUT

Current
A: 4 – 20 mA DC (Input resistance 10 Ω)
D: 0 – 20 mA DC (Input resistance 10 Ω)
G: 0 – 1 mA DC (Input resistance 200 Ω)
Z: Specify current (See INPUT SPECIFICATIONS)
(0 % input must be 0 mA.)
Voltage
3: 0 – 1 V DC (Input resistance 1 MΩ min.)
4: 0 – 10 V DC (Input resistance 1 MΩ min.)
5: 0 – 5 V DC (Input resistance 1 MΩ min.)
6: 1 – 5 V DC (Input resistance 1 MΩ min.)
0: Specify voltage (See INPUT SPECIFICATIONS)
(0 % input must be 0 V.)

[3] POWER INPUT

AC Power
M: 85 – 264 V AC (Operational voltage range 85 – 264 V, 50/60 Hz
DC Power
R: 24 V DC
(Operational voltage range 24 V ±15 %, ripple 10 %p-p max.)

GENERAL SPECIFICATIONS

Construction: Panel flush mounting
Connection: M4 screw terminals
Housing material: ABS resin
Isolation: Input to alarm output to power
Zero adjustment: -10 to +10 % (front)
Span adjustment: 90 to 110 % (front)
Scale plate: Aluminium (white scale & characters on black base)
H & L alarm output delay: 0 sec. (factory setting; fieldselectable between 0 and 15 sec. by 1 sec. increments)
Setpoint adjustment
2 points:
H [L setpoint] to 100 %
L 0 to [H setpoint]
4 points:
HH [H setpoint] to 100 %
H [L setpoint] to [HH setpoint]
L [LL setpoint] to [H setpoint]
LL 0 to [L setpoint]
Read rate: 12.5/s
Moving average sample number: 4 (factory setting; field selectable among 1, 2, 4, 8 or 16)

■ BARGRAPH
LED: 51-segment LED
Scale length: 89 mm (3.50”) long, angle 120°
Display range: 0 to 100 (scaling function not available)

■ DIGITAL DISPLAYS
LED: 7-segment red LED, character 10 mm (.39”) high
Number of digits: 4 digits
Setting range: -1999 to 9999
(Min. 3 significant digits)

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Minimum scale value: 120 (3 digits, the decimal point position disregarded)
Factory setting: 0.0 to 100.0
Display range: the ranges from -1999 to 9999 and from -10 to +110 % of input span
(The indicator blinks while displaying "Lo" when the input is below -10% and "Hi" when the input is over 110%)
Decimal point position: 10^{-1}, 10^{-2}, 10^{-3} or none
Zero indication: Higher-digit zeros are suppressed
Engineering unit indication: Sticker label attached;
%, m, N/m^2, m^3/h, mm, ℃, Pa, A, pH, m^3, Nm^3/h, t/h, ℓ/h, kg/h, kPa, abs, ppm, psi, kg/cm^2G, N/cm^2, lb/h, J, kJ, Nℓ, lbs, Ω, μΩ, 1°, km^3/h, Sm^3

INPUT SPECIFICATIONS

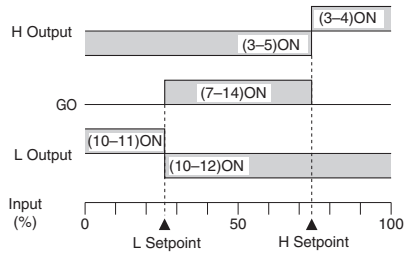
■ **DC Current**: 0 – 50 mA DC; input resistor incorporated
Minimum span: 1 mA
■ **DC Voltage:** 0 – 10 V DC
Minimum span: 1 V
Input resistance: ≥ 1 MΩ

OUTPUT SPECIFICATIONS

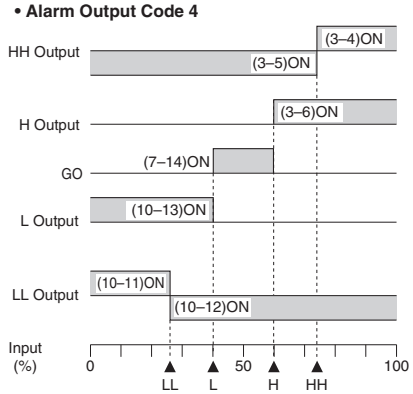
■ **Alarm Output**: Relay contact
Rated load: 250 V AC @3 A (cos ø = 1)
30 V DC @3 A (resistive load)
Maximum switching voltage: 300 V AC, 50 V DC
Maximum switching power: 750 VA, 90 W
Minimum load: 5 V DC @100 mA
Mechanical life: ≥ 2 × 10^7 cycles (rate 300 cycles/min.)

Alarm Trip Operation Terminal No. in parentheses

• **Alarm Output Code 2**



• **Alarm Output Code 4**



Terminals 3 – 5, 10 – 12 turn on at a loss of power.

INSTALLATION

Power consumption
•**AC**: Approx. 7 VA
• **DC**: Approx. 6 W
Operating temperature: 0 to 45°C (32 to 113°F)
Operating humidity: 40 to 80 %RH (non-condensing)
Mounting: Panel flush mounting
Weight: 500 g (1.1 lb)

PERFORMANCE in percentage of span

Accuracy
Bargraph: ±2 %
Digital indicator: ±0.5 %
Setpoint accuracy
Bargraph: ±2 %
Digital indicator: ±0.5 %
Response time: 0.5 sec.
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength:
2000 V AC @1 minute (input to power)
1500 V AC @ 1 minute (input to alarm output)
1500 V AC @ 1 minute (alarm output to power)
2000 V AC @ 1 minute (input or alarm output or power to ground)

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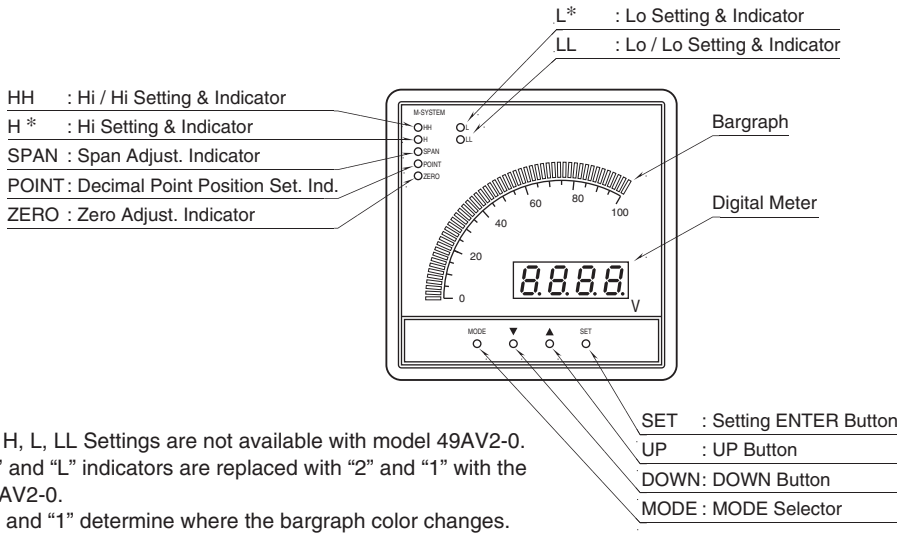
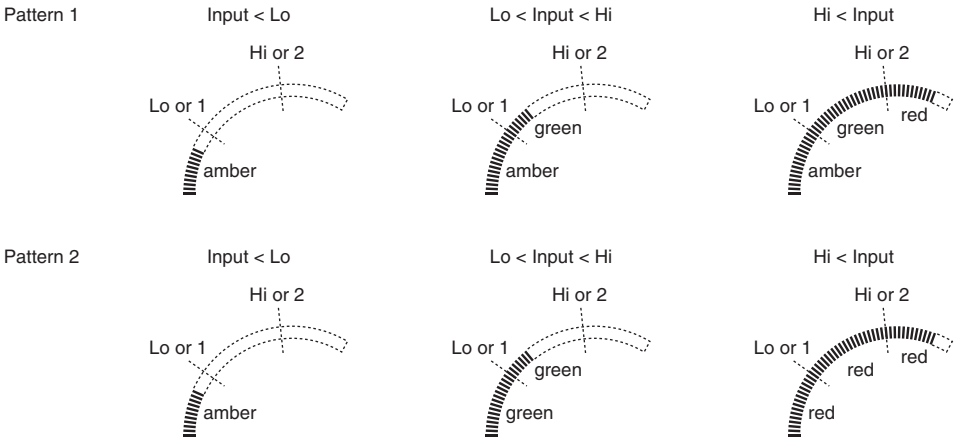
EXTERNAL VIEW



Note 1: HH, H, L, LL Settings are not available with model 49AV2-0.
* "H" and "L" indicators are replaced with "2" and "1" with the 49AV2-0.
"2" and "1" determine where the bargraph color changes.
Note 2: HH, LL Settings are not available with model 49AV2-2.

Mulit-Color Indication



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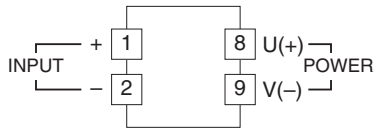
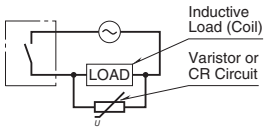
CONNECTION DIAGRAM

• 49AV2-0

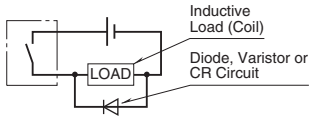


• Relay Protection

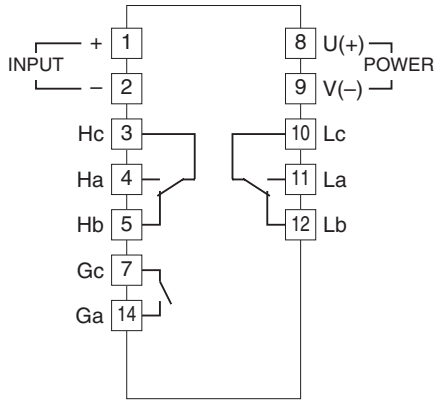
AC Powered



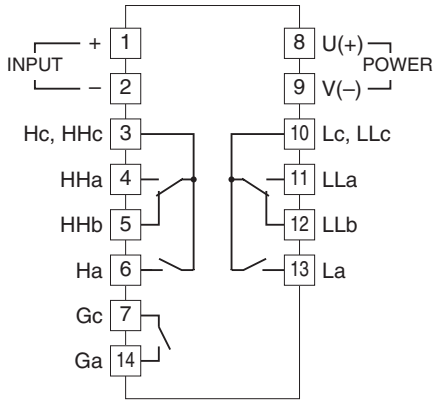
DC Powered



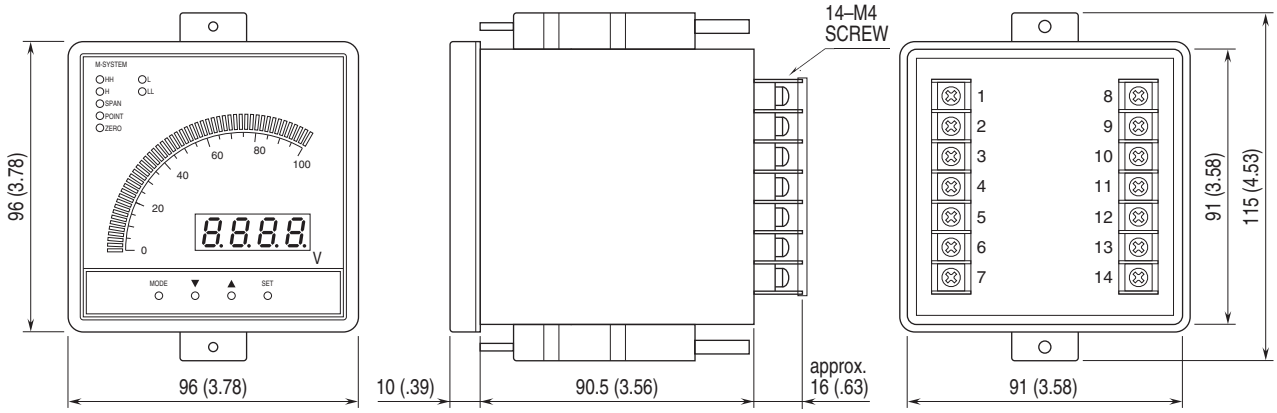
• 49AV2-2



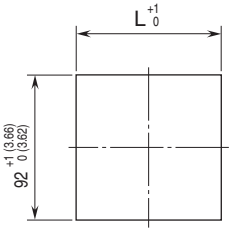
• 49AV2-4



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



PANEL CUTOUT unit: mm



Panel thickness 1.6 – 5.5 mm
L = 96 × (N – 1) + 92 (mm)
where N : number of units

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⚠ Specifications are subject to change without notice.

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