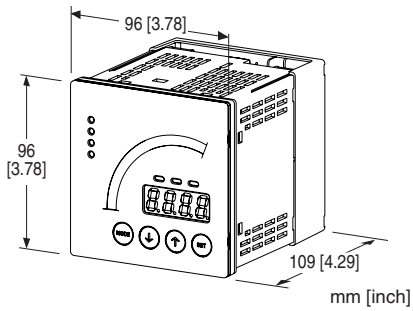
Bargraph Indicators 49 Series

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: 49AV3-[1]W1[2]-[3][4]

ORDERING INFORMATION

- Code number: 49AV3-[1]W1[2]-[3][4]

Specify a code from below for each of [1] through [4].
(e.g. 49AV3-4W1A-M2/Q)
- Specify the specification for option code /Q
(e.g. /SET)

[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
M2: 100 – 240 V AC (Operational voltage range 85 – 264 V, 47 – 66 Hz)

DC Power
R: 24 V DC
(Operational voltage range 24 V ±15 %, ripple 10 %p-p max.)

[4] OPTIONS

blank: none
/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q

EX-FACTORY SETTING
/SET: Preset according to the Ordering Information Sheet (No. ESU-9334)

GENERAL SPECIFICATIONS

Construction: Panel flush mounting
Connection: M3 separable screw terminal (torque 0.5 N·m)
Solderless terminal: Refer to the drawing at the end of the section.
Recommended manufacturer: Japan Solderless Terminal MFG.Co.Ltd, Nichifu Co.,ltd
Applicable wire size: 0.25 to 1.65 mm^2 (AWG 22 to 16)
Screw terminal: Nickel-plated steel
Housing material: Flame-resistant resin (black)
Isolation: Input to alarm output to power
Scale plate: Flame resistant resin (white scale & characters on black base)
Power outage protection: Setting value backup with non-volatile RAM
Setpoint adjustment
2 points:
H [L setpoint] to 100 %
L 0 % to [H setpoint]
or No alarm trip
P contact is on when all conditions of the alarm output are not met.

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4 points:
HH [H setpoint] to 100 %
H [L setpoint] to [HH setpoint]
L [LL setpoint] to [H setpoint]
LL 0 % to [L setpoint]
or No alarm trip
P contact is on when all conditions of the alarm output are not met.

Setting: (Front button)
• Zero and span adjustments
• Alarm setpoint
• Others
(Refer to the instruction manual for details)

Read rate: 20/sec.

Moving average sample number: Off (factory setting; field selectable among off, 2, 4, 8 or 16)

■ **BARGRAPH**

LED: 51-segment LED, 89 mm (3.50”), 120°

Display range: 0 to 100 (scaling function not available)
(0 % or 100 % position bar blinks when the range is exceeded.)

■ **DIGITAL DISPLAYS**

LED: 7-segment red LED, character 10 mm (.39”) high

Number of digits: 4

Scaled range: -1999 to 9999
(Min. 3 significant digits)

Display range: -15 to +115 % of input span
(within the range of -1999 to 9999)

Decimal point position: 10^{-1}, 10^{-2}, 10^{-3} or none

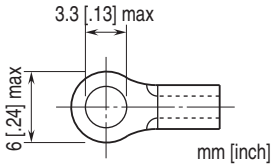
Default setting: 0.0 to 100.0

Zero indication: Higher-digit zeros are suppressed

Engineering unit indication: Sticker label attached
DC, AC, mV, V, kV, µA, mA, A, kA, mW, W,
kW, var, kvar, Mvar, VA, Hz, Ω, kΩ, MΩ,
cm, mm, m, m/sec, mm/min, cm/min, m/min,
m/h, m/s^2, inch, ℓ, ℓ/s, ℓ/min, ℓ/h, m^3, m^3/sec,
m^3/min, m^3/h, Nm^3/h, N·m, N/m^2, g, kg, kg/h,
N, kN, Pa, kPa, MPa, t, t/h, ℃, °F, %RH, J,
kJ, MJ, rpm, sec, min, min^{-1}, pH, %, ppm, etc.

■ **LEDS**
HH, H: Red
L, LL: Green
S, P, Z: Amber

■**Recommended solderless terminal**



INPUT SPECIFICATIONS

■ **DC Current**: 0 – 50 mA DC; input resistor incorporated
Minimum span: 1 mA
When specifying a resistance value, choose from below.
5.1 Ω, 10 Ω, 12 Ω, 20 Ω, 39 Ω, 200 Ω
(0.125 W ≥ [Input current]^2 × R)

■ **DC Voltage:** 0 – 10 V DC
Minimum span: 0.1 V
Input resistance: ≥ 1 MΩ

OUTPUT SPECIFICATIONS

■ **Alarm Output**

Rated load: 250 V AC @ 1 A (cos ø = 1)
30 V DC @ 3 A (resistive load)

Maximum switching voltage: 250 V AC, 30 V DC

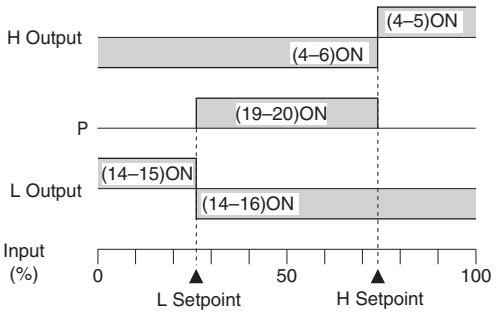
Maximum switching power: 380 VA (AC), 90 W (DC)
(resistive load)

Minimum load: 5 V DC @ 100 mA

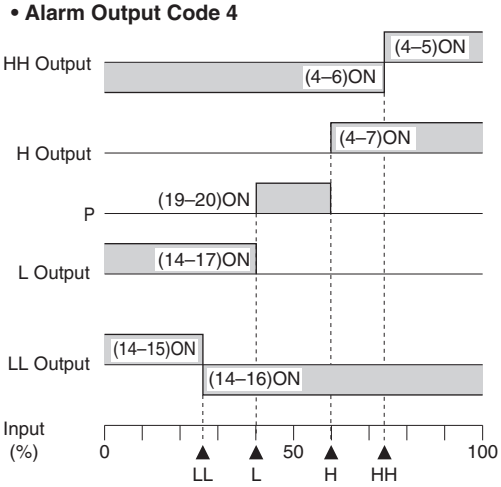
Mechanical life: ≥ 5 × 10^6 cycles (rate 180 cycles/min.)

Alarm Trip Operation Terminal No. in parentheses

• Alarm Output Code 2



• Alarm Output Code 4



Terminals 4 – 6, 14 – 16 turn on at a loss of power.

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INSTALLATION

Power consumption

•**AC**:
Approx. 5 VA at 100 V
Approx. 6.5 VA at 200 V
Approx. 7.5 VA at 264 V

•**DC**: Approx. 3 W

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 10 to 90 %RH (non-condensing)

Mounting: Panel flush mounting

Weight: 500 g (1.1 lb)

PERFORMANCE in percentage of span

Accuracy

Bargraph: ±2 % ±1 digit

Digital indicator: ±0.5 % ±1 digit

(When the zero position of bargraph is changed, input below 0% is out of conformance range.)

Temp. coefficient: ±0.015 % of FS/°C (±0.008 % of FS/°F)

Response time: ≤ 0.5 sec.

(when moving average sample number is set to off)

Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 2000 V AC @ 1 minute (input to power)
1500 V AC @ 1 minute (input or power to alarm output)
2000 V AC @ 1 minute (input or alarm output or power to ground)

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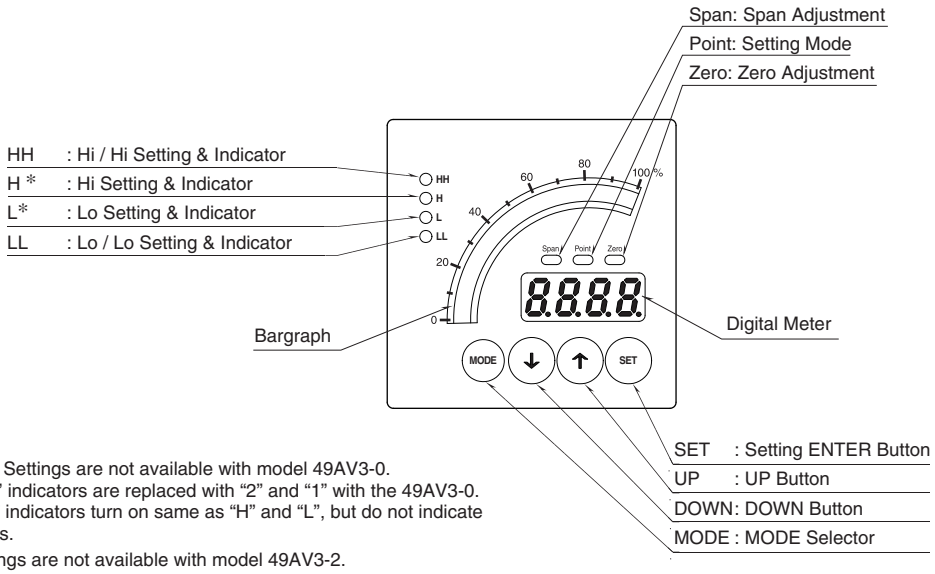
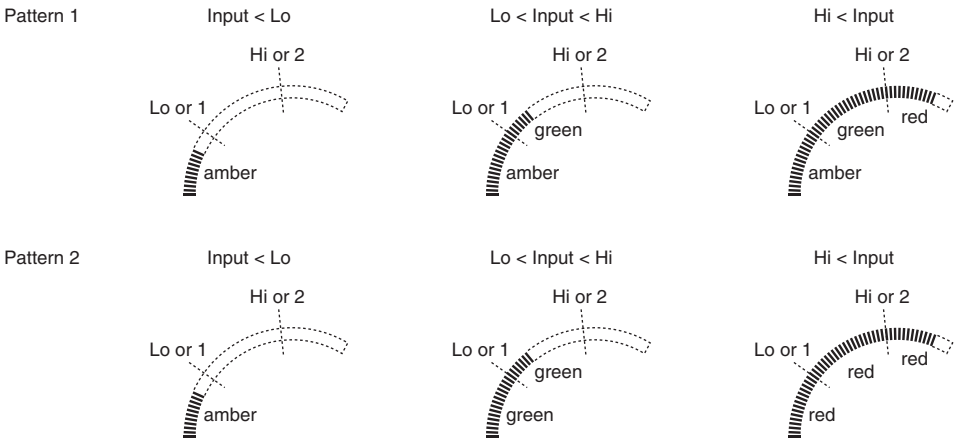
EXTERNAL VIEW

■ **FRONT VIEW**



Note 1: HH, H, L, LL Settings are not available with model 49AV3-0.
* "H" and "L" indicators are replaced with "2" and "1" with the 49AV3-0. "2" and "1" indicators turn on same as "H" and "L", but do not indicate relay status.

Note 2: HH, LL Settings are not available with model 49AV3-2.



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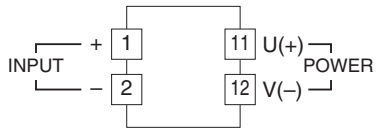
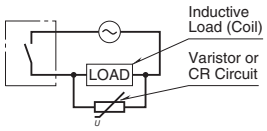
CONNECTION DIAGRAM

• 49AV3-0

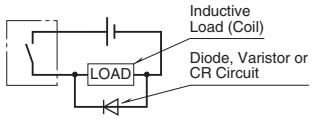


• Relay Protection

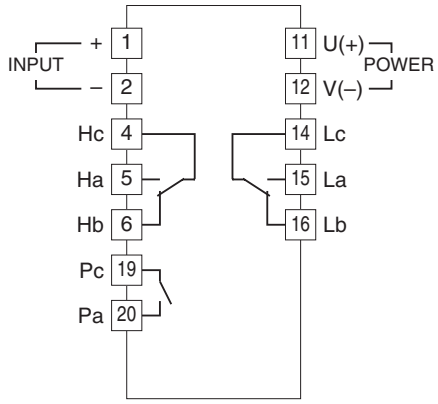
AC Powered



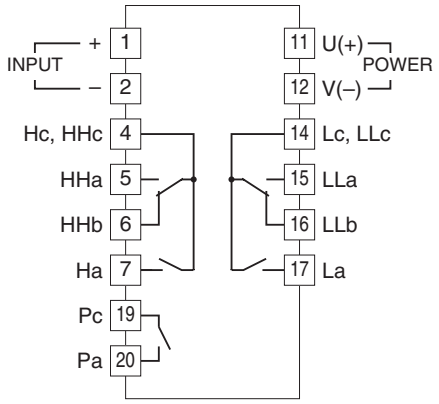
DC Powered



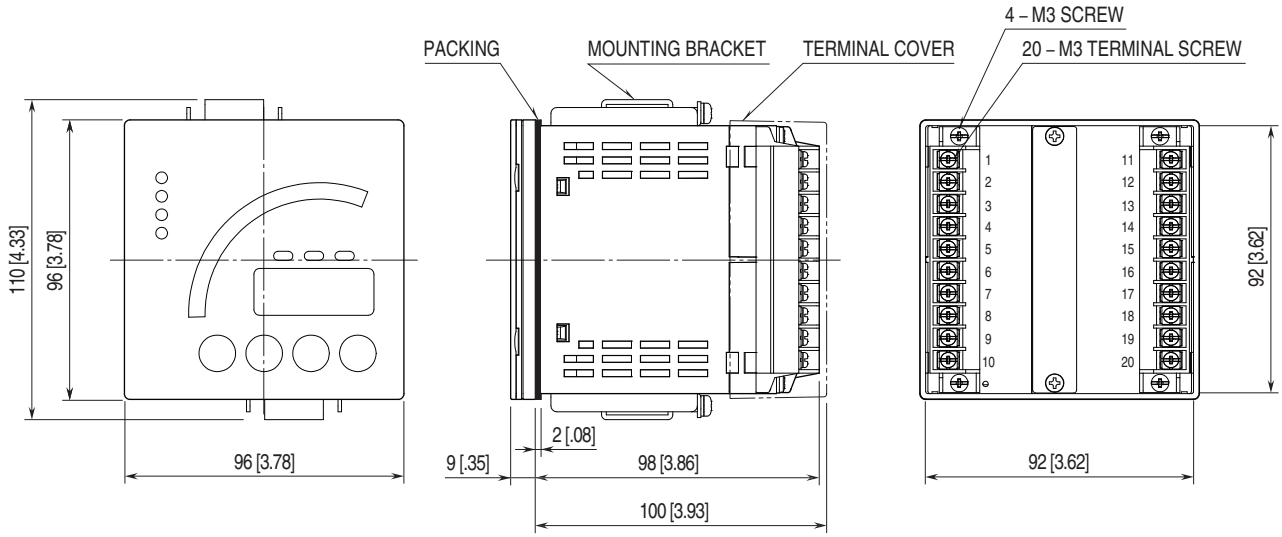
• 49AV3-2



• 49AV3-4

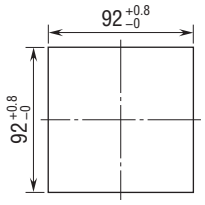


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]

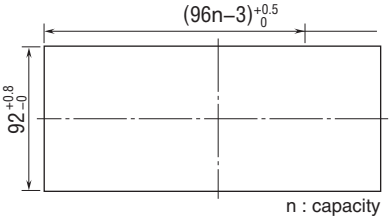


PANEL CUTOUT unit: mm [inch]

• Single Mount Base



• Multi Mount Base



Panel thickness: 0.5 – 10 [.02 to .39]

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⚠ Specifications are subject to change without notice.

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