

Bargraph Indicators 49 Series

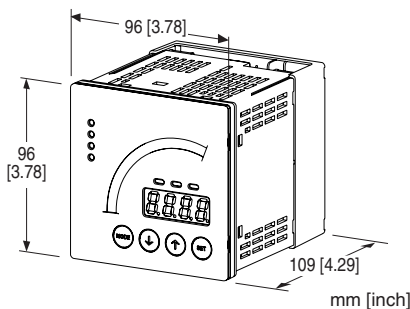
BARGRAPH INDICATING ALARM

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 mm² (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.

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, μ A, mA, A, kA, mW, W,

kW, var, kvar, Mvar, VA, Hz, Ω , k Ω , M Ω ,

cm, mm, m, m/sec, mm/min, cm/min, m/min,

m/h, m/s², inch, l, l/s, l/min, l/h, m³, m³/sec,

m³/min, m³/h, Nm³/h, N·m, N/m², g, kg, kg/h,

N, kN, Pa, kPa, MPa, t, t/h, °C, °F, %RH, J,

kJ, MJ, rpm, sec, min, min⁻¹, pH, %, ppm, etc.

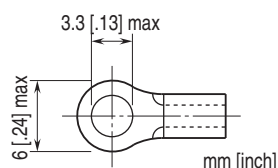
■ LEDS

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

($0.125 \text{ W} \geq [\text{Input current}]^2 \times R$)

■ **DC Voltage:** 0 – 10 V DC

Minimum span: 0.1 V

Input resistance: $\geq 1 \text{ M}\Omega$

OUTPUT SPECIFICATIONS

■ Alarm Output

Rated load: 250 V AC @ 1 A ($\cos \phi = 1$)

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)

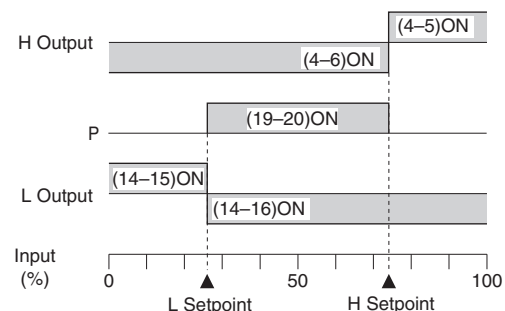
Minimum load: 5 V DC @ 100 mA

Mechanical life: $\geq 5 \times 10^6$ cycles (rate 180 cycles/min.)

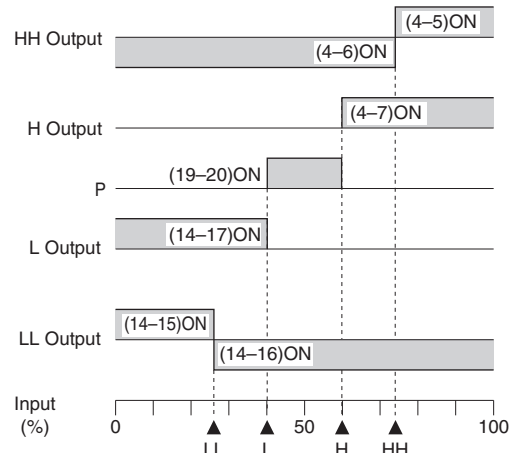
Alarm Trip Operation

Terminal No. in parentheses

• Alarm Output Code 2



• Alarm Output Code 4



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

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: $\pm 2\%$ ± 1 digit

Digital indicator: $\pm 0.5\%$ ± 1 digit

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

Temp. coefficient: $\pm 0.015\%$ of FS/°C ($\pm 0.008\%$ of FS/°F)

Response time: ≤ 0.5 sec.

(when moving average sample number is set to off)

Insulation resistance: $\geq 100\text{ M}\Omega$ with 500 V DC

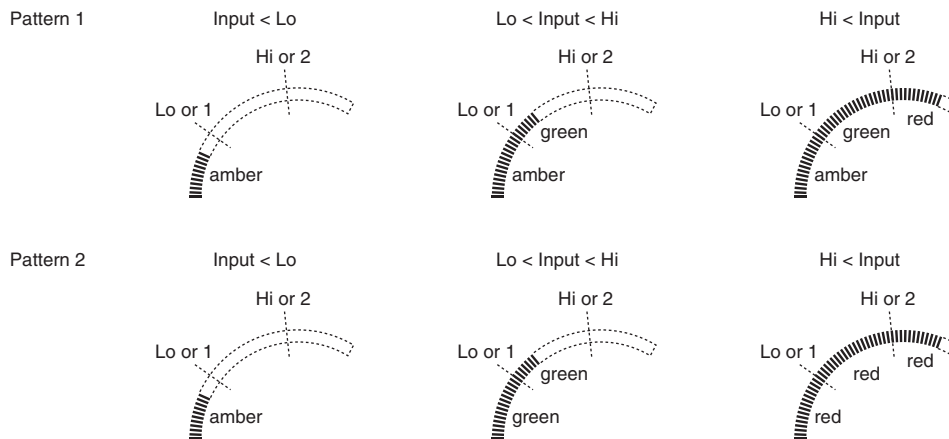
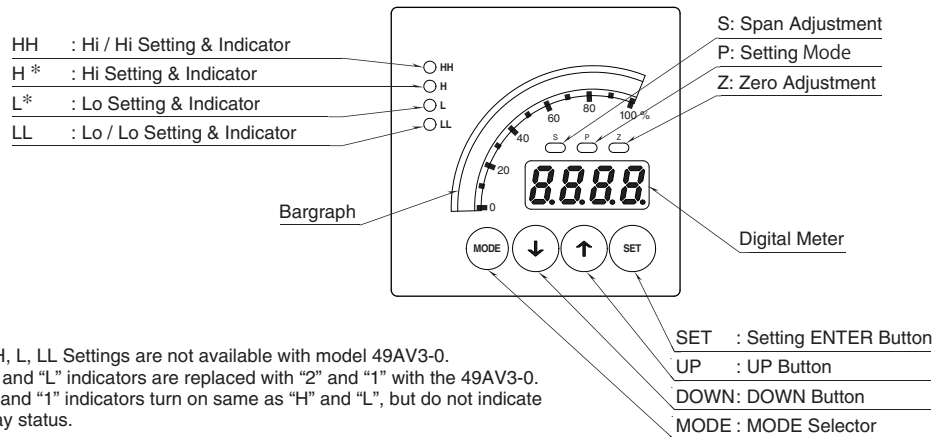
Dielectric strength: 2000 V AC @ 1 minute (input to power)

1500 V AC @ 1 minute (input or power to alarm output)

2000 V AC @ 1 minute (input or alarm output or power to ground)

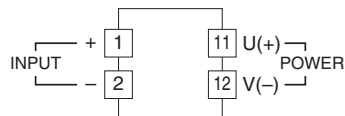
EXTERNAL VIEW

■ FRONT VIEW

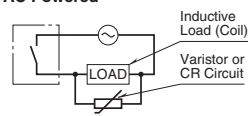


CONNECTION DIAGRAM

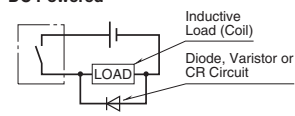
• 49AV3-0



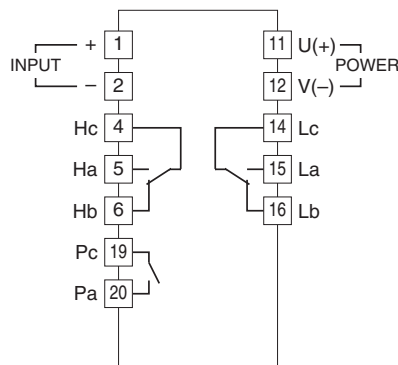
• Relay Protection AC Powered



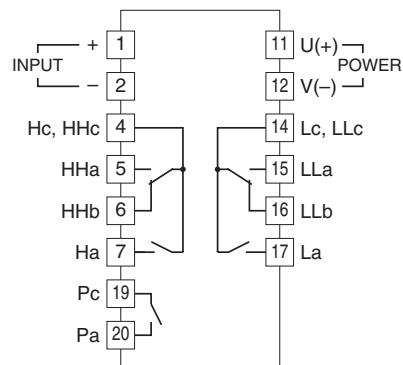
DC Powered



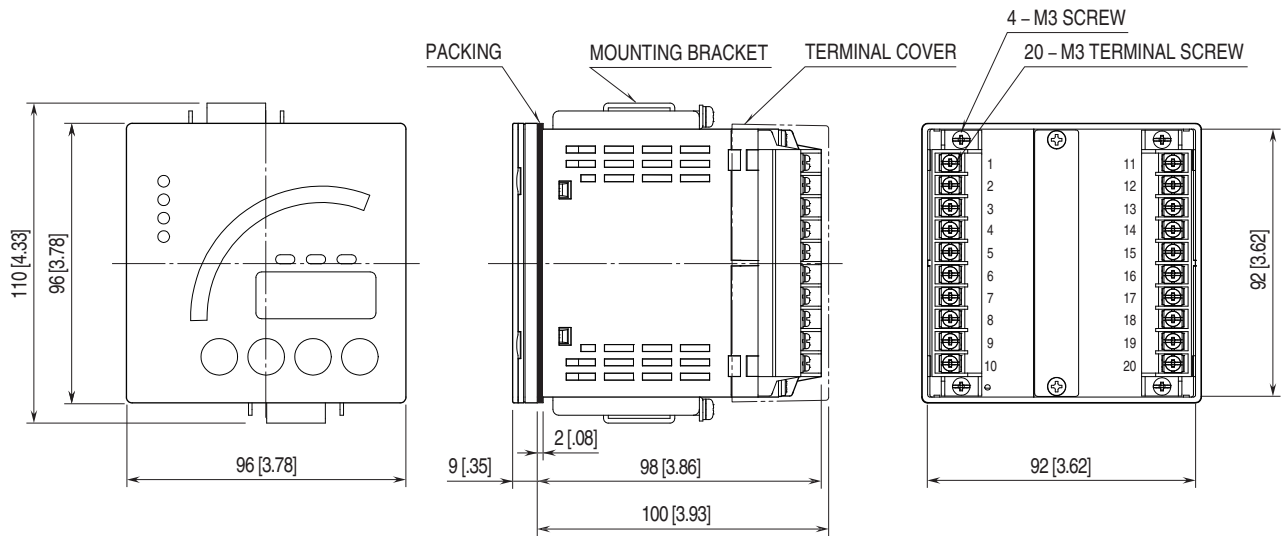
• 49AV3-2



• 49AV3-4

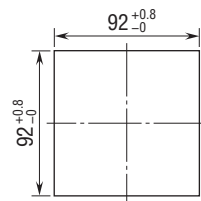


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]

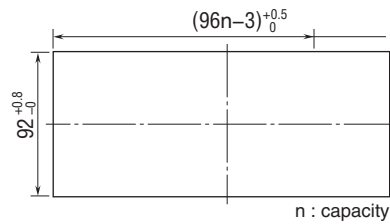


PANEL CUTOUT unit: mm [inch]

• Single Mount Base



• Multi Mount Base



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



Specifications are subject to change without notice.