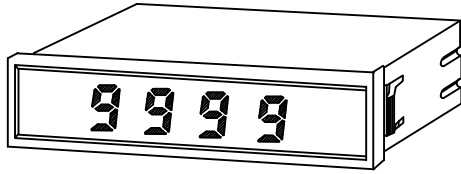


BCD INPUT PANEL INDICATOR MODEL AI-404 SERIES INSTRUCTION MANUAL



Caution

- (1) The application of voltage or current exceeding its maximum allowable value to the input terminals may result in instrument damage.
- (2) The supply of power out of its allowable range may cause fire, electric shock or instrument failure.
- (3) The content of this manual may subject to change without prior notice for product improvement.
- (4) This manual is carefully prepared. However, if any question arises, or any mistake, omission or suggestion is found in the content of this manual, contact your nearest our sales agent.
- (5) After read this manual, please keep it as anytime can see.

1. OUTLINE

The AI-404 Parallel BCD input panel indicator is a highly reliable 4 digits display based on a one chip LSI design. It conforms to DIN external standards dimensions of 96mm(W) × 24mm(H). This meter is driven by DC5V and having large 14.2mm LEDs. The decimal point can be user set to any digit position desired.

2. SPECIFICATIONS

Model	Input Level	Input pull up Resistance
AI-404-11	$3.5 \leq H \leq 5.0V$ $0.0 \leq L \leq 1.5V$	4.7k Ω

3. COMMON SPECIFICATIONS

Maximum Display	: 9999
Display	: LED numeric element height 14.2mm
Decimal Points	: Can be set at desired position
Operating Temperature	: 0 to 50°C
Power Supply	: 5V DC $\pm 5\%$ 185mA (MAX)
Dimensions	: 96mm (W) × 24mm (H) × 96.5mm (D)
Weight (Unit only)	: Approx. 0.15lbs
Accessories	: Instruction Manual, Connector

4. HANDLING

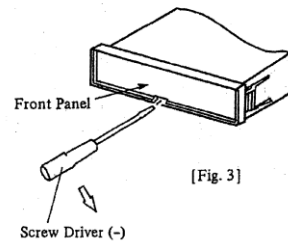
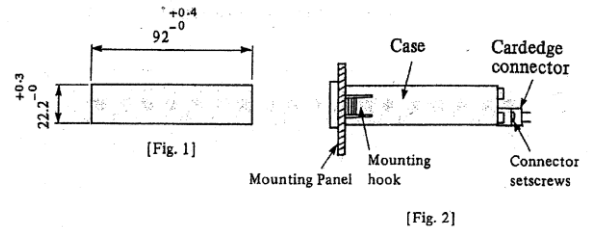
4-1 General Cautions and Preparation Prior to Operation

- 1) This instrument should be used at an ambient temperature between 0 and 50°C and humidity of 80% or less, paying special attention to dew condensation.
- 2) It must be used in an environment free of dust, dirt, gases and chemicals harmful to electronic components.
- 3) Care should be taken to prevent vibration and shock.

4-2 Mounting

1) Panel mounting

Make a rectangular cutout as shown in Fig. 1, insert the instrument in the panel as shown in Fig. 2, and then fully push the instrument into the panel (it's recommended that panel thickness be from 1 to 4mm.)



2) Removal of the PC board

Insert a screwdriver into the center on bottom of the meter and twist so that the front panel comes off. Then, push the printed circuit board from the back and pull it out from the front. (Fig. 3)

4-3 Connector Connection

Insert the attached cardedge connector at the rear of the indicator. The connector is provided with an insertion key to make sure that it is not connected upside down. After insertion, tighten both sides with the attached screws.

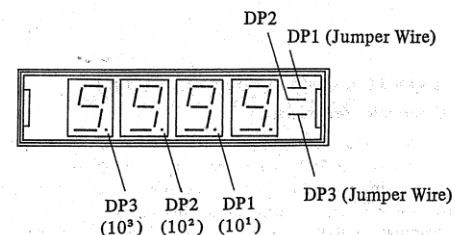
1) Power connection

Connect power to connector terminals Nos 17 and 18. Use a DC supply of 5V $\pm 5\%$. (Note that because this instrument is not provided with a power supply switch, it starts operating when power is supplied.)

2) Decimal point setting

The decimal point can be set to any position when the following jumper wire is cut. However, because the decimal point is not set prior to shipment, it must be set at the appropriate position by the customer.

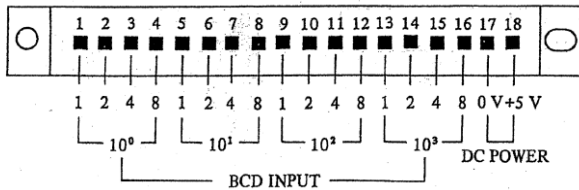
Take out the front panel in accordance with 4.2.2 then cut the necessary jumper wire.



3) Input connection

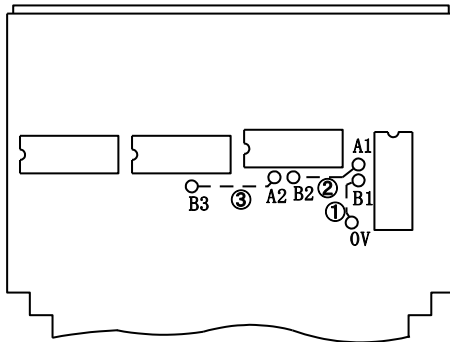
Connect an input signal (BCD parallel) as the following connector diagram shows. Use a short connection cable and 2-core shielded cable near a signal source.

■ Connector Connection Diagram



5. ZERO SUPPRESSION

Remove the internal board as shown in (4.2). Next, connect the specified points on the PC board to initiate the zero suppression function.



5-1 Integer Number Zero Suppression

If 1, 2 and 3 in the above figure are connected, only the zero in the least significant digit is displayed and zeros in the 10^1 to 10^3 digits are suppressed.

5-2 10^1 -digit Decimal Point Zero Suppression

If 1 and 2 in the above figure are connected, the zeros in the 10^2 to 10^3 digits are suppressed. (If the 10^3 -digit BCD input signal is other than zero, the zero in the 10^2 -digit is displayed.)

5-3 10^2 -digit Decimal point Zero Suppression

If 1 in the above figure is connected, the zero in the 10^3 -digit is suppressed.

6. MAINTENANCE AND INSPECTION

6-1 Caution for Maintenance

The storage temperature of this instrument should be within the range -10°C to $+70^{\circ}\text{C}$ with relative humidity not higher than 60%.

If the instrument is used at a dusty location, withdraw the meter assembly from the case at certain intervals and brush off any dust. (The combination of dust and high temperature will shorten the life of the meter parts.) The instrument case and bezel are molded plastic, do not use a volatile liquid such as thinner to clean them.

7. Warranty

The warranty lasts for one year from the date of delivery. If this product fails during this period and the reason is considered to be clearly.

The manufacturer warrants to the original retail customer its indicator to be free of defects in material and workmanship for use under normal care and will repair or replace any

8. After Sales Service

Under strict quality control measures, this product was manufactured, tested, inspected and shipped. Should a defect in manufacture or Workmanship be identified, please return the product to our distributor or directly to us. It would be highly appreciated if you could give a detailed account of the fault and enclose it with the product.

watanabe

WATANABE ELECTRIC INDUSTRY CO., LTD.

6-16-19, Jingumae, Shibuya-ku, Tokyo 150-0001, Japan

Phone: (81)3-3400-6141

Homepage <http://www.watanabe-electric.co.jp/en/>