
**User's
Manual**

YEW SERIES 80

**Model SIHN
INDICATOR
(Direct Panel-Mount Type)**

IM 1B4B5-01E

Notices

■ Regarding This User's Manual

- (1) This manual should be passed on the end user. Keep at least one extra copy of the manual in a safe place.
- (2) Read this manual carefully and fully understand how to operate this product before you start operation.
- (3) This manual is intended to describe the functions of this product. Yokogawa Electric Corporation (hereinafter simply referred to as Yokogawa) does not guarantee that the functions will suit a particular purpose of the user.
- (4) Under absolutely no circumstances may the contents of this manual in part or in whole be transcribed or copied without permission.
- (5) The contents of this manual are subject to change without prior notice.
- (6) Every effort has been made to ensure accuracy in the preparation of this manual. Should any error or omissions come to your attention however, please contact your nearest Yokogawa representative or our sales office.

■ Regarding Protection, Safety, and Prohibition against Unauthorized Modification

- (1) In order to protect the product and the system controlled by it against damage and ensure its safe use, make certain that all of the instructions and precautions relating to safety contained in this manual are strictly adhered to. Yokogawa does not guarantee safety if products are not handled according to these instructions.
- (2) Be sure to use the spare parts approved by Yokogawa when replacing parts or consumables.
- (3) Modification of the product is strictly prohibited.
- (4) Reverse engineering such as the disassembly or decompilation of software is strictly prohibited.
- (5) No portion of the software supplied by Yokogawa may be transferred, exchanged, leased or sublet for use by any third party without the prior permission of Yokogawa.

■ Force Majeure

- (1) Yokogawa does not make any warranties regarding the product except those mentioned in the WARRANTY that is provided separately.
- (2) Yokogawa assumes no liability to any party for any loss or damage, direct or indirect, caused by the user or any unpredictable defect of the product.

Model SIHN
INDICATOR
(Direct Panel-Mount Type)

1. INTRODUCTION.

This instrument was thoroughly tested at the factory before shipment. However, when you receive this instrument:

- (1) Inspect for visible damage.
- (2) Compare the model and suffix codes shown on the shipping documents, and also on the nameplate at the rear of the instrument, are the same as your order sheet.

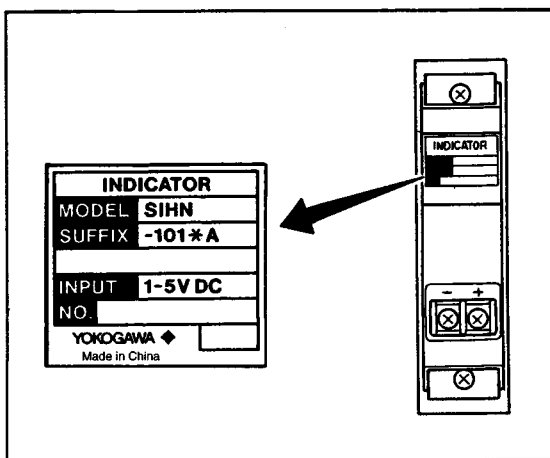


Figure 1-1. Nameplate.

If you have any questions about this instrument, please contact either your nearest Yokogawa Sales/Service Office or Yokogawa Electric Corporation, Tokyo, Japan.

2. GENERAL.

This instrument is a direct panel-mounted single point indicator that can accept either 1 to 5 V or 4 to 20 mA DC inputs.

2-1. Standard Specifications.

Input Signal Specifications

- Input Signal: 1 to 5 V DC or 4 to 20 mA DC.
 Input Resistance: 2 kΩ±10% (for 1 to 5 V DC input).
 Less than 25 Ω (for 4 to 20 mA DC input)

Indicator

- Type: Moving coil type single-point indicator.
 Pointer Color: Red.
 Indication Range: 0 to 100%.

Effective Scale Length: 100 mm.

Scale Plate: Single scale marking. The scale plates are interchangeable.

Mounting

Mounts directly in an indoor panel face.

Inclined Mounting: Face of instrument may be tilted 0 to 75° backwards from vertical (the rear of instrument is lower than the front). For inclined mounting, a zero adjustment must be performed on the indicator.

Wiring: External signal wires are connected to the terminal block with M4 (4 mm) screws.

External Dimensions (height x width x depth from panel): 150 x 37.5 x 179 mm.

Weight: 0.8 kg.

Standard Performance

Accuracy: ±1% of span.

Insulation Resistance:

Between each terminal and case: 100 MΩ/500 V DC.

Dielectric Strength:

Between each terminal and case: 500 V AC for 1 minute.

Normal Operating Conditions

Ambient Temperature: 0 to 50°C.

Humidity: 5 to 90% RH (Non-condensing)

2-2. Model and Suffix Codes.

Model	Suffix Codes	Description
SIHN		Indicator
Number of Inputs	-1	One input
	0	Always 0
Input Signal	1	1 to 5 V DC
	2	4 to 20 mA DC
Style Code	*A	Style A
Options	/NP	Nameplate lettering
	/NPE	Nameplate engraving

3. INSTALLATION AND WIRING.

3-1. Location for Installation.

This instrument should be installed in an installation site which is:

- (1) Relatively free from mechanical vibrations.
- (2) Relatively free from dust and corrosive gases.

For general precautions regarding the installation environment and the general procedure for equipment installation and wiring, refer to YEW SERIES 80 AND YEWPACK Installation Manual (TI 1B4A9-01E).

3-2. External Dimensions and Panel Cutout Dimensions.

Figure 3-1 shows the external dimensions and panel cutout dimensions.

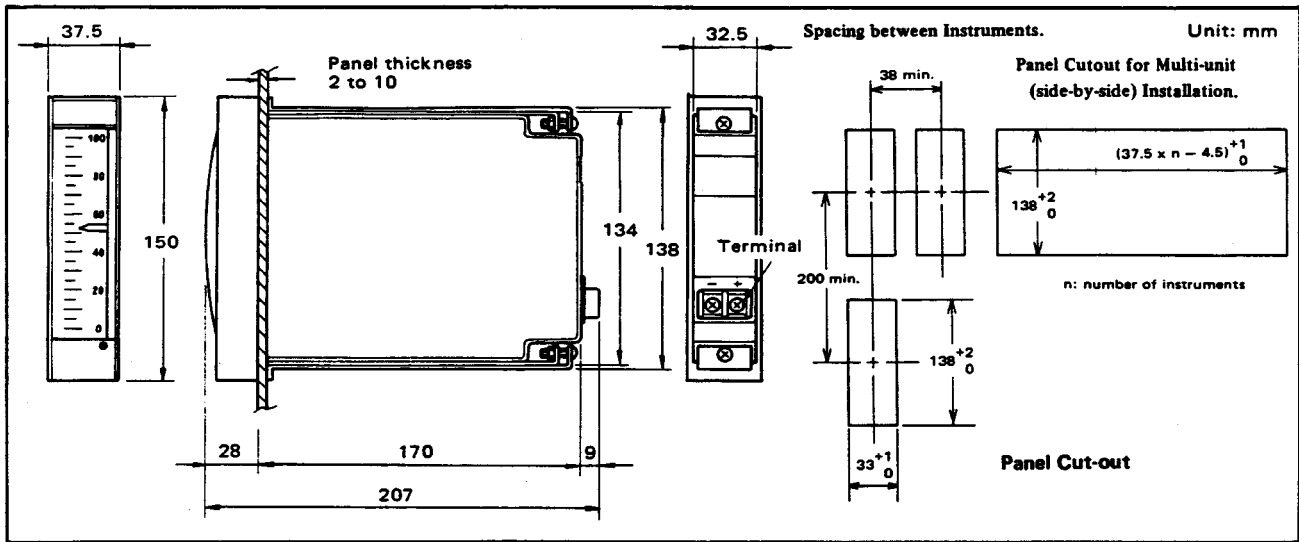


Figure 3-1. External Dimensions and Panel Cutout Dimensions.

3-3. Panel Installation.

Insert this instrument into the front face of the panel, fit the two upper and lower supports from the rear of the panel, and secure them to the instrument with mounting screws. (See Figure 3-2.)

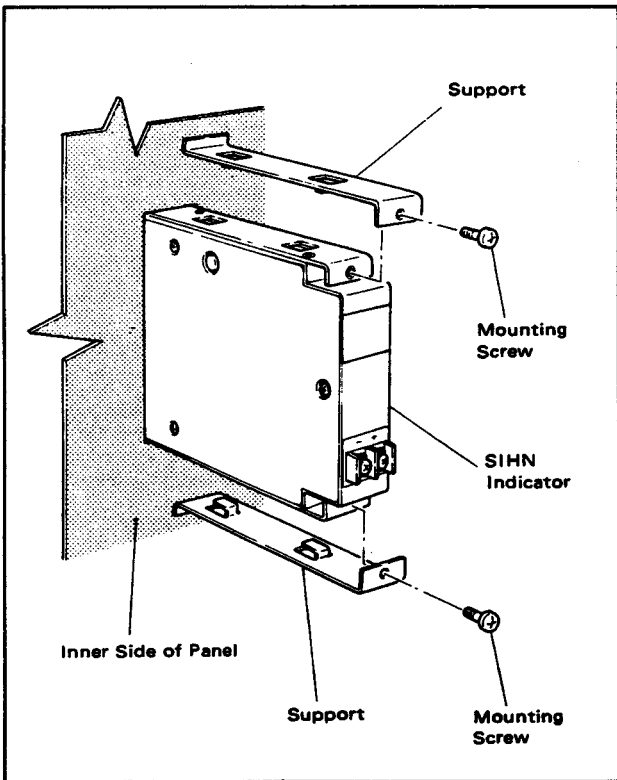


Figure 3-2. Installation of Unit to Panel.

3-4. Wiring.

Wire the unit while referring to Table 3-1.

Note: Be sure to attach a solderless crimp-on lug (for 4 mm screw) at the end of each wire.

Table 3-1. Terminal Wiring.

Terminal Designation	Description
+	Input signal
-	

4. PRINCIPLES OF OPERATION.

This moving coil instrument receives 1 to 5 V DC or 4 to 20 mA DC signals and displays the input signal on the scale.

Since a taut-band suspension has been adapted for the meter support section, this indicator features low hysteresis and high shock resistance.

Figure 4-1 shows the circuit diagram for this instrument.

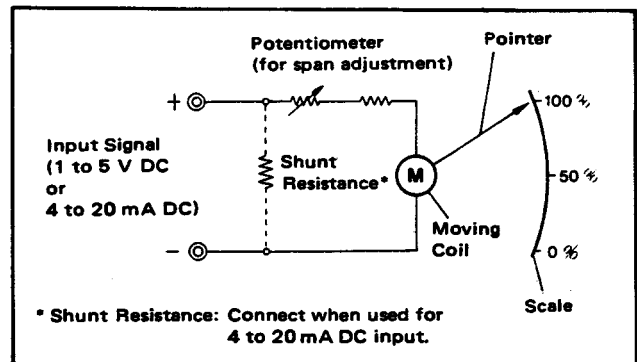


Figure 4-1. Circuit Diagram.

5. OPERATION.

5-1. Names of Components.

Figure 5-1 shows the names and location of components.

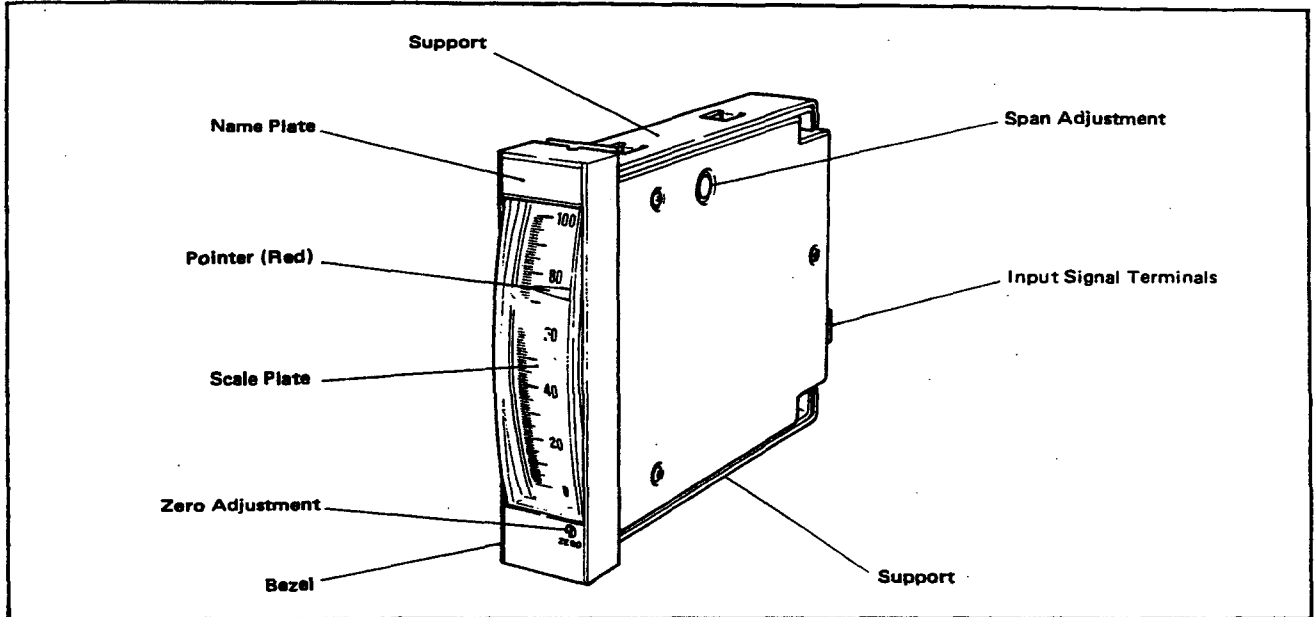


Figure 5-1. Names of Components.

5-2. Pointer Zero and Span Adjustments.

Perform a zero adjustment on the indicator pointer by using the zero adjustment located on the front lower portion of the unit. (This adjustment can be made while the instrument is mounted in the panel.)

To adjust the indicator span, remove the unit from the panel and turn the span adjustment located on the side face.

6. MAINTENANCE.

6-1. Test Equipment.

DC standard voltage and current generator
Model 2554 manufactured by Yokogawa or equivalent
..... 1 unit.

6-2. Zero-Point and Span Adjustment.

Connect the instrument to be tested to the test apparatus as shown in Figure 6-1.

- (1) For SIHN-101: Use 1 V, 2 V, 3 V, 4 V and 5 V input signals.
For SIHN-102: Use 4 mA, 8 mA, 12 mA, 16 mA and 20 mA input signals.
- (2) Insure that the indicator reads the 0%, 25%, 50%, 75% and 100% positions on the scale when the respective signals in step 1 are applied.

- (3) If the indicator deviates more than $\pm 1\%$ of span at any of these points (in all readings, the line of vision seeing the pointer and the scale plate must be parallel to the horizon), perform zero-point and span adjustments using the procedures described below.
- (4) Set the input signal to 1 V DC (or 4 mA DC).
- (5) Turn the zero adjustment until the pointer indicates correctly the 0% position on the scale.
- (6) Set the input signal to 5 V DC (or 20 mA DC).
- (7) Turn the span adjustment until the pointer correctly indicates the 100% position on the scale.
- (8) Repeat steps (1) and (2) to ensure that the meter indication at each position is within the specified accuracy. If the specified accuracy is not obtained, repeat steps (4) thru (7).

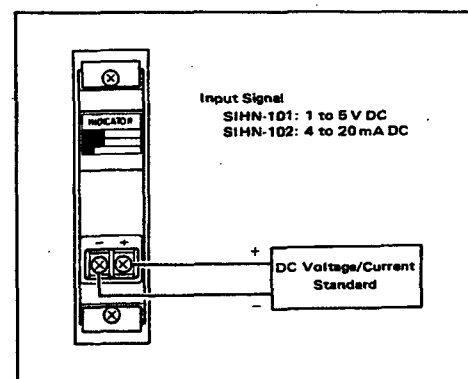


Figure 6-1. Wiring Diagram.

6-3. Parts Replacement.

6-3-1. Replacement of Scale Plate.

- (1) Remove the front face bezel by lightly depressing the latch with a screwdriver. (See Figure 6-2.)
- (2) Remove the scale plate retainer, and pull out the scale with a pair of tweezers. (See Figure 6-3.)
- (3) Insert a new scale plate and install the scale plate retainer and bezel by reversing the removal procedure.

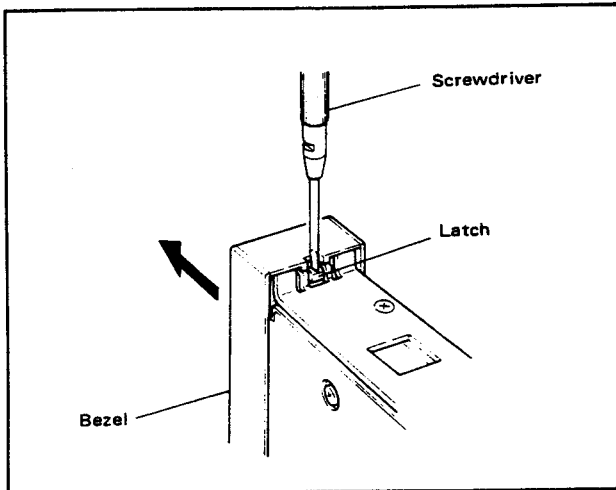


Figure 6-2. Removing the Bezel.

6-3-2. Replacing the nameplate.

Removing the nameplate

- (1) Remove the bezel from the main body by referring to Figure 6-2.
- (2) Peel off the nameplate by pushing it outward from the inside of the bezel with a pair of tweezers. (See Figure 6-4.)

Reinstalling the nameplate

- (3) Remove the protective covering from the rear face of a new nameplate, and attach it to the specified position on the bezel.

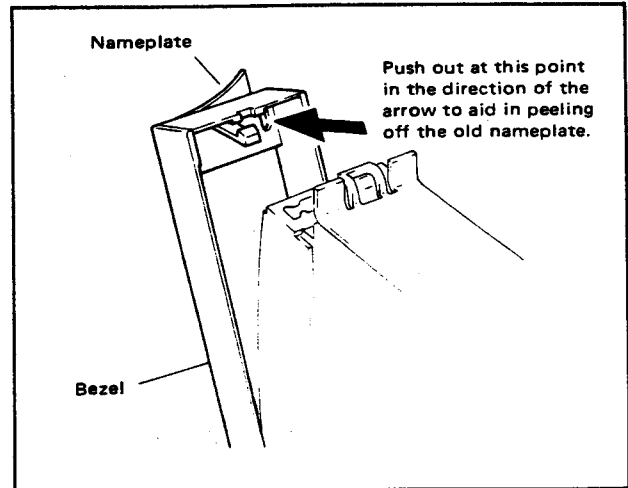


Figure 6-4. Removing the Nameplate.

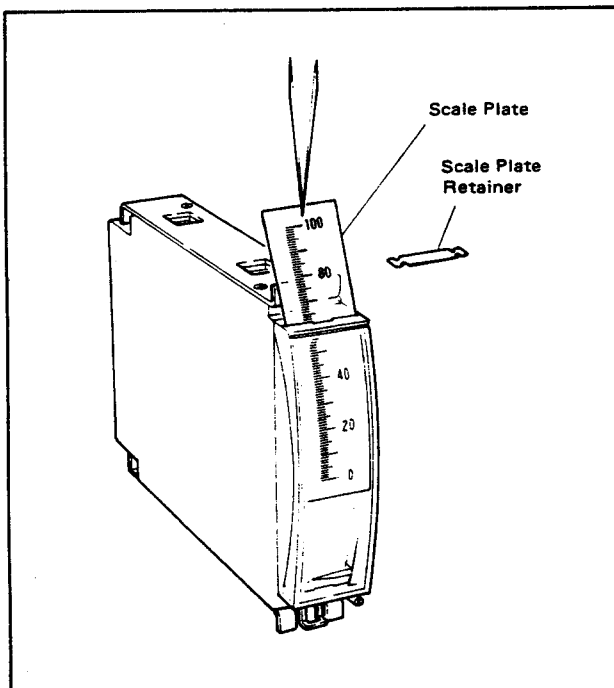


Figure. 6-3. Replacing the Scale Plate.

YOKOGAWA 
Yokogawa Electric Corporation

YOKOGAWA ELECTRIC CORPORATION

Network Solutions Business Div.

2-9-32, Nakacho, Musashino-shi, Tokyo, 180-8750 JAPAN

Phone: +81-422-52-7179 Facsimile: +81-422-52-6793

Sales Branch Offices

Tokyo, Nagoya, Osaka, Hiroshima, Fukuoka

YOKOGAWA CORPORATION OF AMERICA

Headquarters

2 Dart Road, Newnan, GA. 30265-1094 U.S.A.

Phone: +1-770-253-7000 Facsimile: +1-770-251-0928

Sales Branch Offices / Texas, Chicago, Detroit, San Jose

YOKOGAWA EUROPE B. V.

Headquarters

Databankweg 20, 3821 AL Amersfoort THE NETHERLANDS

Phone: +31-334-64-1611 Facsimile: +31-334-64-1610

Sales Branch Offices / Houten (The Netherlands), Wien (Austria), Zaventem (Belgium), Ratingen (Germany), Madrid (Spain), Bratislava (Slovakia), Runcorn (United Kingdom), Milano (Italy), Vélizy villacoublay (France), Johannesburg (Republic of South Africa)

YOKOGAWA AMERICA DO SUL S.A.

Headquarters & Plant

Praca Acapulco, 31-Santo Amaro, Sao Paulo/SP, BRAZIL CEP-04675-190

Phone: +55-11-5681-2400 Facsimile: +55-11-5681-4434

YOKOGAWA ENGINEERING ASIA PTE. LTD.

Head office

5 Bedok South Road, Singapore 469270 SINGAPORE

Phone: +65-6241-9933 Facsimile: +65-6241-2606

YOKOGAWA ELECTRIC KOREA CO., LTD.

Seoul Sales office

395-70, Shindaebang-dong, Dongjak-gu, Seoul, 156-010, KOREA

Phone: +82-2-3284-3000 Facsimile: +82-2-3284-3019

YOKOGAWA TAIWAN CORPORATION

Head office

17F, No.39, Sec. 1, Chung Hwa Road Taipei, 100 TAIWAN

Phone: +886-2-2314-9166 Facsimile: +886-2-2314-9918

YOKOGAWA AUSTRALIA PTY. LTD.

Head office

Centrecourt D1, 25-27 Paul Street North, North Ryde, N. S. W. 2113, AUSTRALIA

Phone: +61-2-9805-0699 Facsimile: +61-2-9888-1844

YOKOGAWA INDIA LTD.

Head office

40/4 Lavelle Road, Bangalore, 560 001, INDIA

Phone: +91-80-227-1513 Facsimile: +91-80-227-4270

LTD. YOKOGAWA ELECTRIC

Grokholskiy per. 13, Build. 2, 4th Floor, 129010, Moscow, RUSSIA FEDERATION

Phone: +7-095-737-7868 Facsimile: +7-095-737-7869
