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MANIK ENGINEERS

IM 951HVS
2nd Edition

WHEN YOU RECEIVE THIS INSTRUMENT...

Thank you for purchasing the MANIK 951-S series process data scanner. Please read the instruction manual carefully and use instrument correctly.

MANIK ENGINEERS assumes no liability to any party for any loss or damage, Direct or indirect, caused by the use or any unpredictable defect of the product. Cleaning of the front panel should be limited to wiping lightly with a dry cloth.

CHECKING ACCESSORY ITEMS

Check that all of the following items are present.

- SERIES 951-S unit
- Terminal connector board for sensor connection
- A pair of mounting bracket
- Instrument to connector board wire
- Instruction manual

2. INSTALLATION

2.1 Installation Location

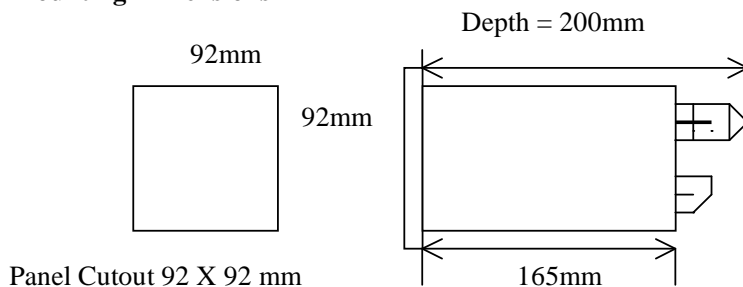
Install the instrument in a location that meets the following criteria.

- (1) Little or no mechanical vibration.
- (2) No corrosive gases.
- (3) Minimal temperature fluctuations and near normal temperature.
- (4) Not directly subject to radiant heat.
- (5) Not subject to strong electromagnetic field.
- (6) No direct exposure to water.

2.2 Installation procedure

- (1) Loosen the clamp by rotating the clamping bolt in anti-clockwise.
- (2) Insert the rear of the instrument through the front of the prepared hole.
- (3) Hook the clamp on both sides in the slot. With the front flange of the instrument Held tightly against the front of the panel, position the clamp.
- (4) Tighten the screws of both clamps equally. **DO NOT OVERTIGHTEN THESE SCREWS**, it will cause the clamp to slip.
- (5) Wire up the terminals as per wiring diagram.

2.3 Mounting Dimensions



3. WIRING

3.1 Wiring precautions

While wiring take the following precautions.

- (1) Field wiring to the instrument should be placed so as to avoid blocking the airflow, yet provide a suitable service loop to allow easy removal of unit with wiring attached.
- (2) Wires should be tied to maintain their order in the event they must be disconnected for any reason.
- (3) For connecting the wiring to the terminals, we recommend use of crimp terminal lugs with insulated sleeves.
- (4) Route the input circuit wiring away as possible from the power and ground circuits to avoid noise pickup.
- (5) Use proper-shielded wire to avoid electromagnetic interference.
- (6) Use of auxiliary relay is recommended if load exceeds the output relay contact rating (230vac, 5A resistive load).
- (7) For using an inductive load such as Auxiliary relay on output relay contact, use a diode (for DC) or an RC filter (for AC) in parallel as a surge suppressor circuit.

3.2 Wiring diagram

A) MAIN UNIT LOWER BACK CONNCTOR

Terminal No.	Description
1	LINE - 230Vac
2	NEUTRAL -
3	EARTH
4	TXD
5	RXD
6	GND
7	
8	
9	
10	
11	
12	
13	
14	
15	

B) EXTENSION BOARD

CH NO.	D ESCRIPTION
CH 1 +	CHANNEL 1 RTD +
CH 1 -	CHANNEL 1 RTD -
CH 1 -	CHANNEL 1 RTD - (3rd WIRE)
CH 2 +	CHANNEL 2 RTD +
CH 2 -	CHANNEL 2 RTD -
CH 2 -	CHANNEL 2 RTD - (3rd WIRE)
CH 3 +	CHANNEL 3 RTD +
CH 3 -	CHANNEL 3 RTD -
CH 3 -	CHANNEL 3 RTD - (3rd WIRE)
CH 4 +	CHANNEL 4 RTD +
CH 4 -	CHANNEL 4 RTD -
CH 4 -	CHANNEL 4 RTD - (3rd WIRE)
CH 5 +	CHANNEL 5 RTD +
CH 5 -	CHANNEL 5 RTD -
CH 5 -	CHANNEL 5 RTD - (3rd WIRE)
CH 6 +	CHANNEL 6 RTD +
CH 6 -	CHANNEL 6 RTD -
CH 6 -	CHANNEL 6 RTD - (3rd WIRE)
CH 7 +	CHANNEL 7 RTD +
CH 7 -	CHANNEL 7 RTD -
CH 7 -	CHANNEL 7 RTD - (3rd WIRE)
CH 8 +	CHANNEL 8 RTD +
CH 8 -	CHANNEL 8 RTD -
CH 8 -	CHANNEL 8 RTD - (3rd WIRE)
CH 9 +	CHANNEL 9 RTD +
CH 9 -	CHANNEL 9 RTD -
CH 9 -	CHANNEL 9 RTD - (3rd WIRE)
CH 10 +	CHANNEL 10 RTD +
CH 10 -	CHANNEL 10 RTD -
CH 10 -	CHANNEL 10 RTD - (3rd WIRE)
CH 11 +	CHANNEL 11 RTD +
CH 11 -	CHANNEL 11 RTD -
CH 11 -	CHANNEL 11 RTD - (3rd WIRE)
CH 12 +	CHANNEL 12 RTD +
CH 12 -	CHANNEL 12 RTD -
CH 12 -	CHANNEL 12 RTD - (3rd WIRE)
CH 13 +	CHANNEL 13 RTD +
CH 13 -	CHANNEL 13 RTD -
CH 13 -	CHANNEL 13 RTD - (3rd WIRE)
CH 14 +	CHANNEL 14 RTD +
CH 14 -	CHANNEL 14 RTD -
CH 14 -	CHANNEL 14 RTD - (3rd WIRE)
CH 15 +	CHANNEL 15 RTD +
CH 15 -	CHANNEL 15 RTD -
CH 15 -	CHANNEL 15 RTD - (3rd WIRE)
CH 16 +	CHANNEL 16 RTD +
CH 16 -	CHANNEL 16 RTD -
CH 16 -	CHANNEL 16 RTD - (3rd WIRE)

4) Front Panel Features

SET	Used to call individual programming parameter in sequence.
∧	Used to increase the displayed set point or any operating parameter value.
∨	Used to decrease the displayed set point or any operating parameter value.
ENT	Enters numeric values and changes

DISPLAY	FUNCTION
PV	Display the measured value. Display the parameter setting symbol while programming.
CH NO	Display the channel no of which the measured value is being displayed. Display the parameter value while programming.
HI	Lights when HI Alarm relay is ON.
LO	Lights when LOW Alarm relay is ON.
MN	Lights when MANUAL mode is selected.

5. OPERATING PARAMETER SETTING

The 951-S unit has two major display modes. Normal display mode and operating parameter display mode. In normal display mode the measured value is displayed. In parameter setting mode, the setting mode can be achieved by pressing SET key. In this mode the display shows the setting parameter symbol on the left & setting parameter numeric value on right side of display.

5.1 Setting Scan time

Menu used to set the scan time, duration between displays of two successive channel data. Range 3 to 60 sec maximum. From the operating parameter setting mode, press SET key several times to display "SCAN". Press ENT key. The top display (PV) shows the presetted value. The bottom display shows the parameter "St". Use the ∧ & ∨ keys to set the desired digit value (Scan time). Range : 3 to 60 sec. Press the ENT key. This completes setting.

5.2 Selecting AUTO mode

In AUTO mode the input signals are scanned for setted scan time and its value is displayed with its channel no on display. To select AUTO mode. Press SET key several times to display "AUTO". Press ENT key. After selecting AUTO mode, Lamp M gets OFF (if it is on). The unit always works in AUTO mode when power is switched ON.

5.3 Setting MANUAL mode

In MANUAL mode the each input channel value can be observed one by one by key press. The Top display (PV) shows the input signal value with the bottom display showing channel no. To select MANUAL mode. Press SET key several times to display "MAN". Press ENT key. The Top (PV) display shows the display input signal value. The bottom display shows the channel no of which the value is being displayed on PV. Press UP or DN key to advance the channel no. Thus each channel data can be observed one by one. Select the AUTO mode from main menu to terminate this mode. After selecting MANUAL mode, Lamp M gets ON. The unit always works in AUTO mode when power is switched ON.

5.4 Setting SKIP mode

Each channel can be made ON or OFF independently. Press SET key several times to display "SKIP". Press ENT key. The top display shows channel no. Select the required

