



DESCRIPTION

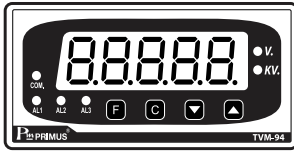
- Measurement and display of DC and AC voltage.
- Measurement area
 - AC Voltage 5-500 VAC (Direct) 0-100 kVAC (With PT)
 - DC Voltage 0-500 VDC (Direct)
- There are 3 Alarm Relay Outputs with 4 Alarm Function settings
- 4-20 mA /0-10 VDC Transfer Outputs are either Direct or Inverse
- Can be connected computer by RS - 485 MODBUS RTU protocol
- Absolute Input Function shows positive value all the time, regardless of the positive polarity

TECHNICAL SPECIFICATION

Model.		TVM-94N-1	TVM-94N-2
Power Supply		100-250VAC 50/60 Hz	
		10-24VAC/VDC	
Power Consumption		3VA	
Display		7 Segment 5 Digit, Size 0.56 Inch	
		3 LED (Show Alarm Relay)	
		1 LED (Show Communication)	
Input	Voltage	AC Voltage	DC Voltage
		5-500VAC	0-500VDC
	Accuracy	±0.25% of Measurement Range at 25 °C	
Output	Relay Alarm	3 Alarm 5A 250VAC	
	Transfer Current	4-20mA	
	Transfer Voltage	0-10VDC	
	Output Impedance	Load 500Ω for 4-20mA Output	
		Load 1kΩ for 0-10VDC Output	
Accuracy	±0.1% of Output Range		
Communication	Protocol	MODBUS RTU	
	Address	1-127	
	Baud Rate	1200, 2400, 4800, 9600, 19200, 38400	
	Parity	None , Even, Odd	
	Data Bits	8 Bits	
	Stop Bits	1 , 2	
	Support Device Node	32	
Ambient Operation	Temperature	-10 °C to 60 °C	
	Humidity	85 % RH Non-Condensing	
Ambient Storage	Temperature	-20 °C to 80 °C	
	Humidity	85 % RH Non-Condensing	
Protection Degree	Front Protection Rating	IP52	
	Case Protection Rating	IP30	
Installation		Panel, Mounting	
Material		ABS-V0	
Size		48 x 96 x 80 mm.	
Weight		240g.	

FRONT DISPLAY

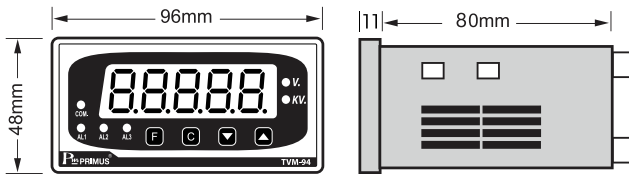
Display for push button and LED status.



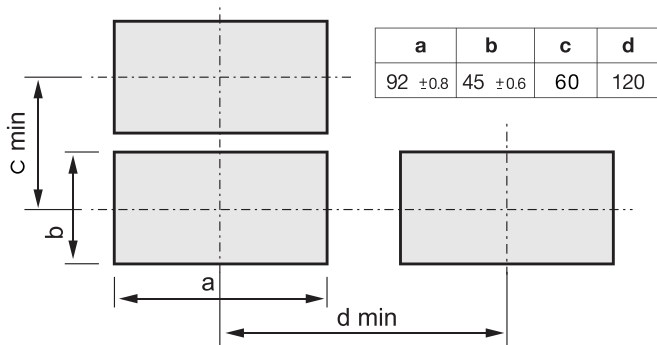
- AL1 ● Alarm 1 Operation
- AL2 ● Alarm 2 Operation
- AL3 ● Alarm 3 Operation
- COM ● Communication Status

- F Enter for Setting
- ▲ Increment push button
- ▼ Decrement push button

DIMENSION



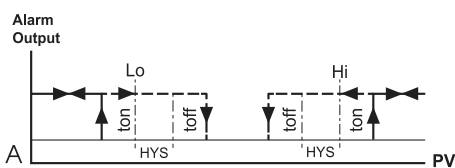
CUTTING PANEL



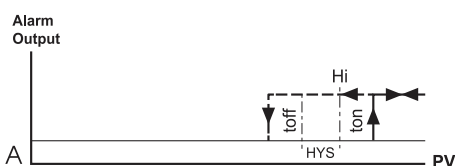
ALARM OUTPUT

Stand-by Sequence : After Starting Operation of Step, Alarm Output Does Not Turn on Unless The Process Value Reach The Value of OFF Position of Alarm Output.

1. Absolute value High Low Band Alarm

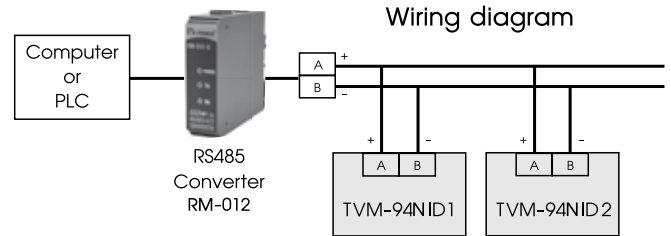


2. Absolute value High Alarm



SERIAL COMMUNICATIONS

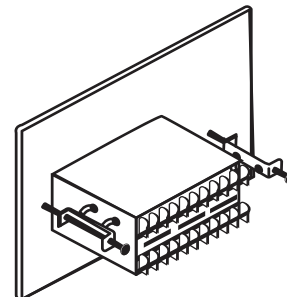
The TVM-94N are Equipped With a RS485 Serial Communications Interface to Allow Connection to Computers or PLCs. MODBUS Protocol is Provide as Stabdard Communication. The User Can Connect TVM-94N as Network up 127 Meters.



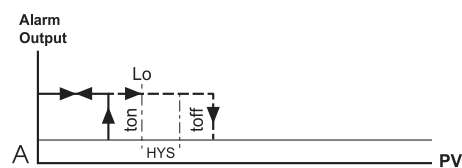
MODBUS PROTOCOL

- This MODBUS Protocol Has Been Implement in Accordance With MODBUS.ORG MODBUS Application.
- Protocol Specification V1.1 With the Following Conditions Applying.
- The Following Conditions Apply.
- Baudrate Can Selected Refer Speed Setting
- The Format is MODBUS RTU
- UART Data Can Selected Refer Communication Setting
- Data is Considered to Be Half Duplex Using 2 Wire

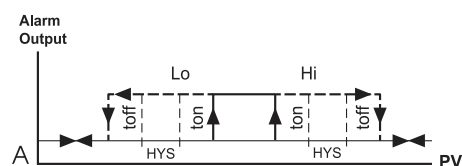
INSTALLATION



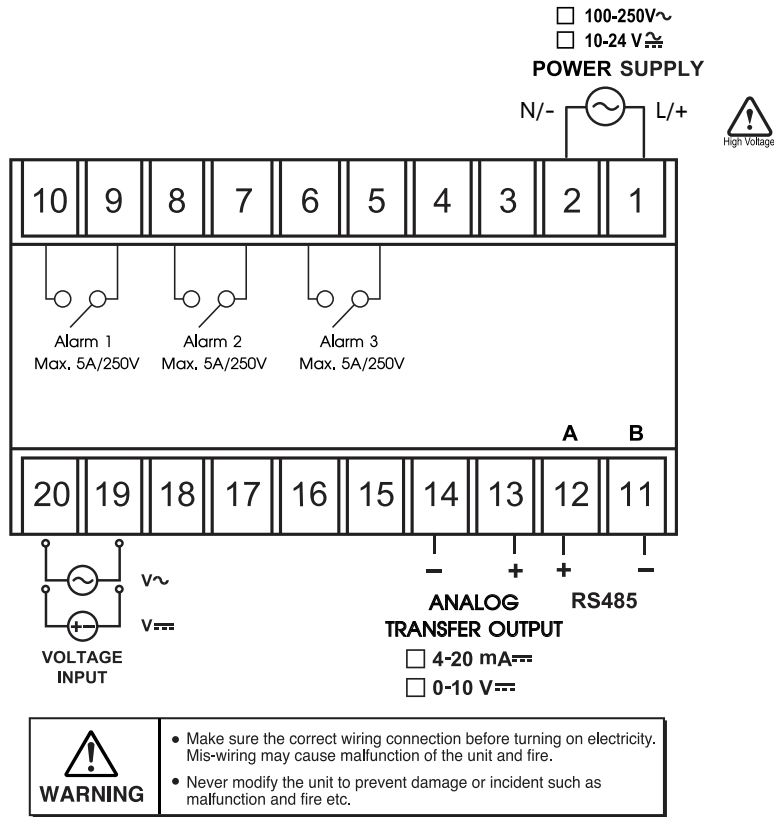
3. Absolute value Low Alarm



4. Absolute value High Low Band Alarm



WIRING DIAGRAM



ORDERING CODE

