Smart Digital Universal Temperature Transmitter

User Manual

Model NO.: MTR430

(Analog Output Version)

Ver1.0

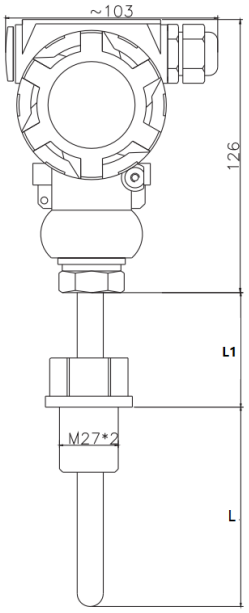
MTR430 Smart Digital Temperature Transmitter

Manual V1.0

⚠ **Notice: Please read this user manual carefully before using.**

1) Please kindly confirm the transmitter order code and range are same as ordered. It is not allowed to disassemble the transmitter or touch the diaphragm by hand without our approval.
2) Please read and master the connections and operation first before testing and installing the transmitter.
3) Please use the transmitter for its intended working conditions only.

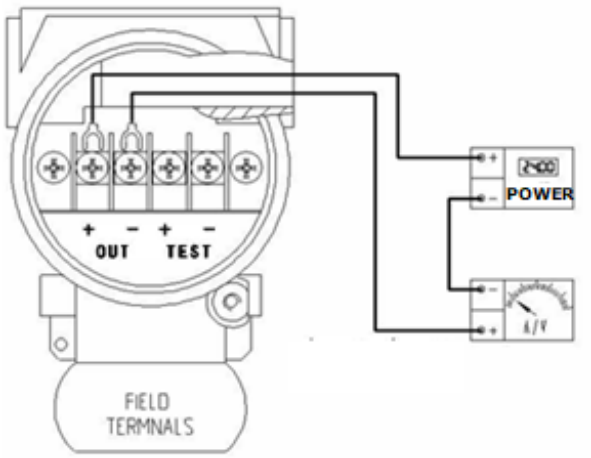
1.Dimension(unit：mm)



2. Diagram

4-20mA output, 2 wire output; Power Supply: 24VDC

OUT+：24V+, OUT-：4-20ma Output



3. Wiring Notes:

- The signal terminal is in electrical box, please unscrew the electrical cover for wiring connection.
- The signal wire can be a twisted pair wire. It is suggested to use shielded wires and proper grounding when it is used in areas with severe electromagnetic interference on site.
- Please keep signal wires and power supply wires separate. Avoid the signal wires passing nearby strong current equipment.
- Please keep the electrical connection cable plug sealed or blocked with sealant to avoid moisture penetration to the inner electrical housing. If the electrical connection cable plug is not sealed, please keep cable plug facing downward in order to drain any potential liquid out.
- The transmitter is grounded by the capacitive coupling, therefore a megohmmeter exceeding 100V cannot be used when checking the insulation resistance. An ohmmeter with voltage not exceeding 45V should be used for circuit inspection.

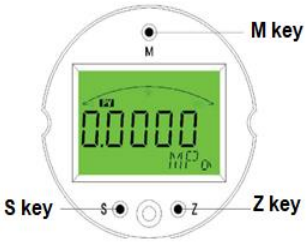
4. Notes:

- Please follow the correct wiring diagram. With reverse polarity connection on signal wires, there will be no signal output because of the built in protection circuit. The transmitter will work after powering on with the signal output more stable and reliable after 30 minutes preheating in the process.
- The maximum temperature should be not exceed.
- Please keep the transmitter installed in ventilated, dry areas without corrosion, shade the LCD from direct sunlight. With harsh environment sites, proper protection measures should be taken.
- If there is abnormal error on the output, please power off the transmitter. If there is quality problem, please contact us for further maintenance.
- It is prohibited to remove the circuit board or modify other setting if nonprofessional technical or engineers.

4. Display & Key Description

4.1 LCD Display Description

4.2 Key Description



M: Mode Key; Confirm key; Menu shift key, Parameter Setting Status Shift Key.

. Under PV display measurement mode, press M key to enter password setting menu.

. Under Setting mode, press M key to set the parameter, the parameter will flash; press M key again to finishing the parameter setting.

S: Span Key; Up key to shift to next parameter; Up key to increase the value

. Under PV display measurement mode, press S key to enter display mode (SHO) Menu setting.

. Under Setting mode, press S key to move to next parameter; press and hold S key for next parameters or increase value continuously .

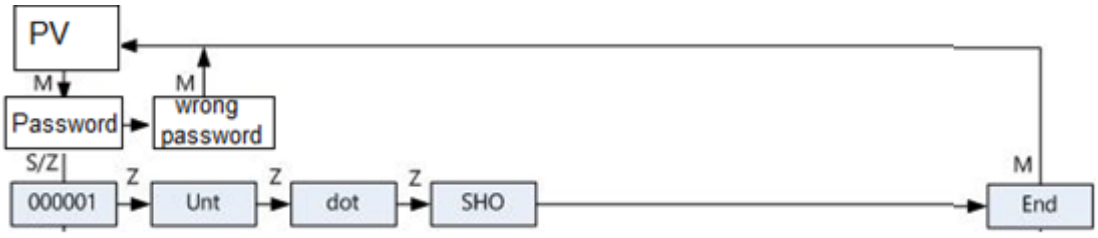
Z: Zero Key; Move Key; Down key to Shift to previous-parameter

. Under PV display measurement mode, press Z key to enter display mode (SHO) Menu setting.

. Under Setting mode, press Z key to move the cursor position or shift to previous-parameter; press and hold Z key to move to previous- parameter or decrease value continuously.

5. Menu Operation

5.1 Menu Operation



There is parameters menus list with passwords.

1 st menu: password: 000001, three parameters setting: Engineer Unit, Resolution, Display Mode

***Notes**: If there is no key operation within 30 seconds, the transmitter will return to the PV measurement mode. This function is forbidden to be used in the production process but is suitable for field site use.

6. Menu Parameters Description

Menu	Display	Setting Description and Range
LOCK		**Password Input Menu** Range: -19999 to 99999, Menu Symbol: PIN 1st Menu password: 00001 2nd Menu password: 00016 If there is no key operation within 30 seconds, the transmitter will return to the PV measurement mode.

Menu Parameters Description

Menu	Display	Setting Description and Range
Unt		**Engineer Unit Setting** Range:0 -4, 5 types engineer unit setting as follows: 0=℃, 0=°F, 0=K, 0=°Ra, 0=°Re
dot		**Decimal Point Setting** Range: 0-3, which will be set as required in site. The more the number of decimals is set, the better it is not. Priority should be given to ensuring the stability of the PV value. At the same time, the "dot" value setting will be limited by the maximum PV value of the calibration range. If the decimal point is set exceeds the 5-digit when the maximum PV value is displayed, the set number of decimal points will be limited to ensure that the maximum PV display value is displayed normally. **E.g.**: the calibration range is 0.0000-20.000℃, so "dot" will be set among 0 to 3, cannot set as 4 because 20.0000 is beyond the 5digit display range of the transmitter
SHO		**Display Model Setting:** Range:0-5 "0"—Display main variable PV, symbol: -PV- "1"—Display current, symbol: -mA- "2"—Display %, symbol: -%- "3"—Display PV and Current alternatively, symbol: PV-mA "4" -- Display PV and Current alternatively, symbol: PV--% "5" -- Display PV and Current alternatively, symbol: mA--%

7. Order Code

MTR430 Smart Digital Temperature Transmitter									
Order Code: E.g.: MTR430-DT100AP2D6NL100N									**Description**
MTR430	-X	X	X	X	X	X	X	X	**Smart Digital Temperature Transmitter**
Type	-E								Yes, with LED indicator (thermocouple)
	-D								Yes, with LCD indicator (PT100)
Measured Temperature		TX							e.g.: T100: 0-100degc, please advise the range required
Output			A						4-20mA, 2 wire
			R						RS485 output, standard MODBUS-RTU protocol
			AH						4-20ma+Hart protocol
Process Connection				P1					G1/2'', thread, fixed
				P2					1/2''NPT, thread, fixed
				P3					G1/4'', thread, fixed
				P4					1/4''NPT, thread, fixed
				P5					M20X 15, thread, fixed
				P6					M14x1.5, thread, fixed
				P7					M27X2.0, thread, fixed
				PX					customized
Protection tube stem diameter					-D6				Φ6mm
					-D8				Φ8mm
					-D10				Φ10mm
					-D12				Φ12mm
					-DX				Customized
Stem Extended Length including thread						N			None
						E			Extended length including thread: 100mm
						E5			Extended length including thread: 50mm
Stem Insert Length (mm)							LX		L100：L=100mm
Others								N	None
								A2	0.2%FS high accuracy
								M	316SS protection tube material
								X	Others

Warranty Card

User information:

User Information	**Product Information:**
*Company:_____	*Item Name:_____
*Address:_____	*Item No._____.
*Tel. No.:_____	*Serial No.:_____
*Email: _____	*Order Date:_____

Note: Please fill the details in * marks.

Warranty Terms and conditions:

Thanks for your ordering Madincos transmitters. In order to offer you better and faster service, please read the warranty conditions carefully as follows:

1. Warranty: one year since ex-work.
   During warranty, if the ordered goods after delivery are damaged or with function problems caused only by itself quality problem, please send the goods back to Madincos for free repair and maintenance.
2. If the goods are over-warranty time, extra cost will be required accordingly.
3. Please see below conditions which is not belong to free repair during warranty:
   - The transmitter is damaged by force majeure factor.
   - The transmitter is damaged by natural disasters such as lightning
   - The transmitter is damaged by unstable power supply
   - The user disassembles the meter without approval by us.
   - The transmitter is damaged by user's improper operation or improper storage and protection.
   - The transmitter hardware is burned; its circuit board burned; connection interface is fractured or broken; obvious physical difference with the original meter.
4. The warranty time will be according to the serial no. in meter or ex-work time if without warranty letter.
5. The final explain rights of the warranty conditions are belong to Madincos company. Please read the products manual first before using. If any queries, please feel free to contact us

Madincos will be not responsible for offering free maintenance for above cases.

Welcome to contact us:

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