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TEMPERATURE TRANSMITTER
with Field Diaplay LED / LCD Explosion-proof
Operation Manual

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TTID Field Diaplay LED/LCD Explosion-proof Temperature Transmitter

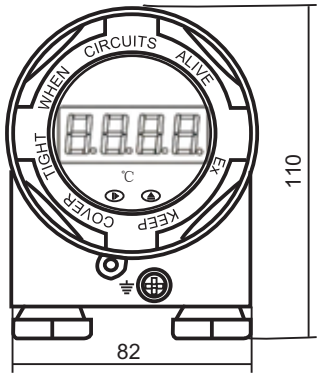
Introduction

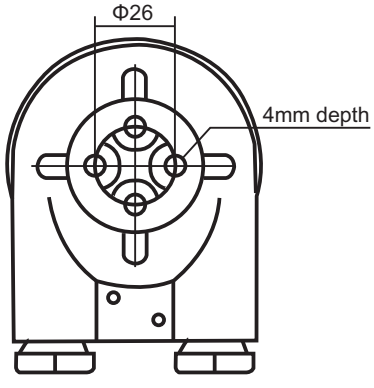
TTID loop-powered indicator is designed for field-installation. It accepts various RTD TC signal and outputs 4~20mA standard current signal and displays the value (the value can be set by user to corresponding to the 4~20mA current signal) by a LED which powered by the loop circuit (Without external power supply).

TTID-H is the version with the HART interface. TTID is installed in an aluminum alloy explosionproof which protection is IP 67.

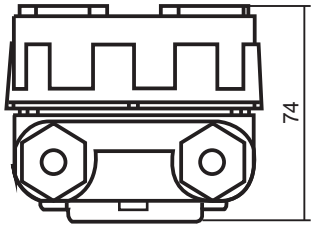
Technical Specifications	
Input signal	RTD, TC
Output	4~20mA
Power supply	12~36V/DC
Probe break / short circuit	>21mA or<3mA
Measuring range	Programmable
Display range	-1.9.9.9~3.9.9.9 (Decimal point can be set)
Display bit	4
Display-Accuracy	0.1%±1 bit
Display height	14.2mm
Temperature drift	<0.01% FS/1℃
EMC	IEC61326
Ex protection	EEx ia II CT6,EEx d II CT6
Protection class	IP 67 (Aluminum alloy shell)
Ambient temperture	-20~+60℃

Appearance and Dimensions (in mm)





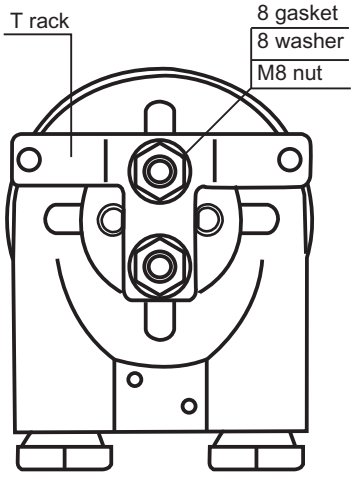
Back-view

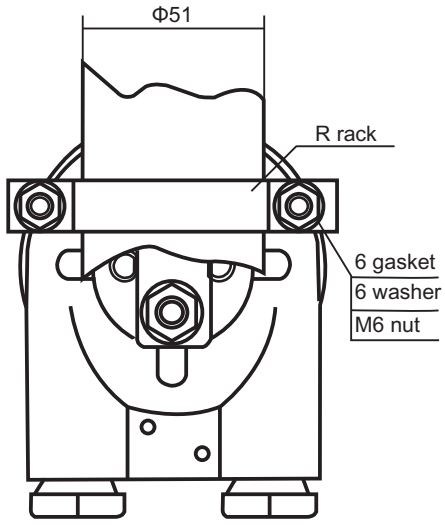


Up-view

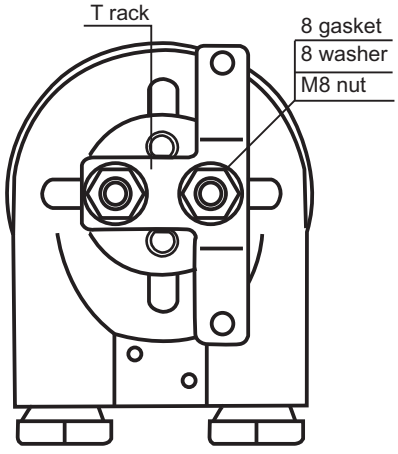
Introduction

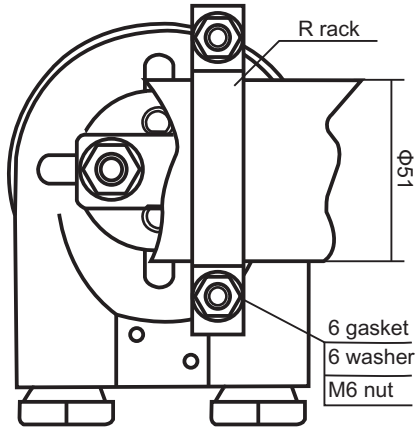
1. This instrument is designed for installing at field, in the use of accessories T rack and the R rack; you may fix the instrument on vertical pipe or the horizontal pipe on the spot. (Please refer to attached figure)





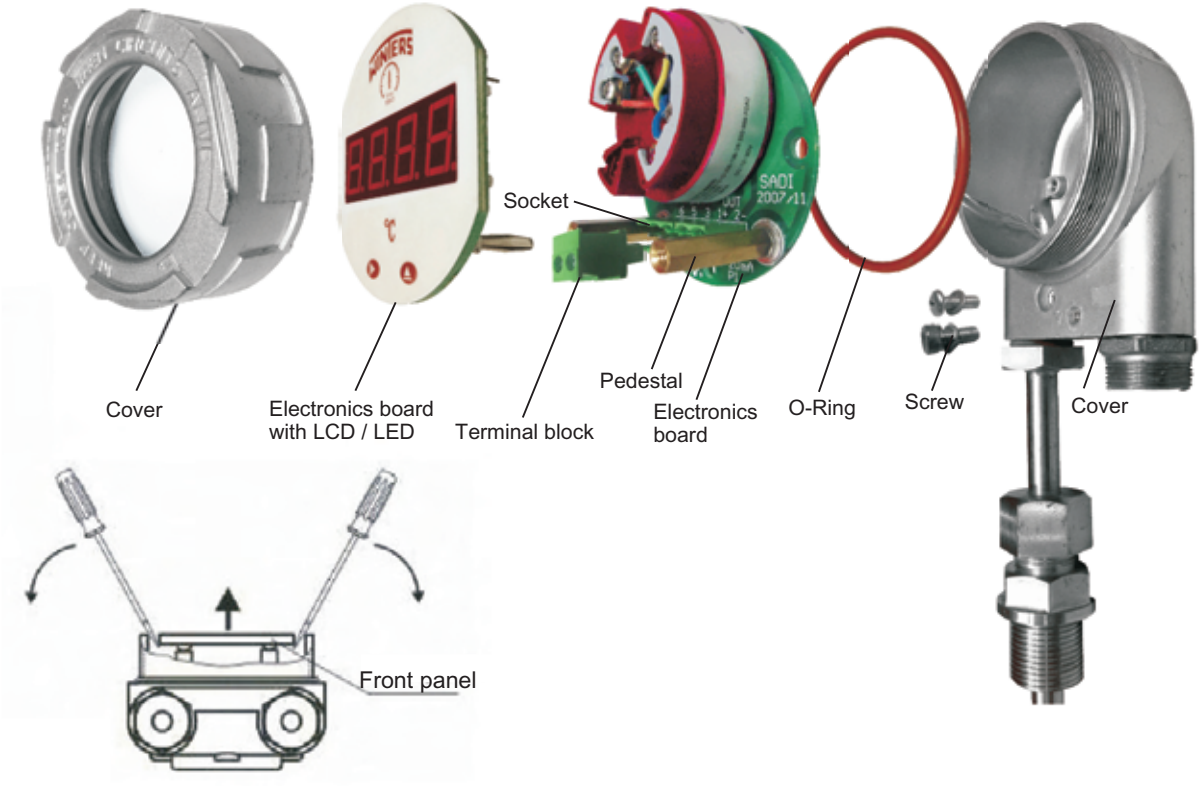
Fix the instrument on vertical pipe





Fix the instrument on horizontal pipe

2. When wiring , first, unscrew the lid, your hands are each to take a small screwdriver, then insert into the crevice at the two sides of the front-panel respectively, till the head of the screwdriver reach to the bottom of the front-panel. You can open the front-panel slightly. When the front-panel is higher than the pedestal of the instrument, you can just use your hands to draw it from the pedestal.
3. Pull the wire into the shell from waterproof hole, connect the wires to the corresponding plug, then put the plug in the socket, put the front-panel back and make sure the lid be screwed back tightly onto the shell.

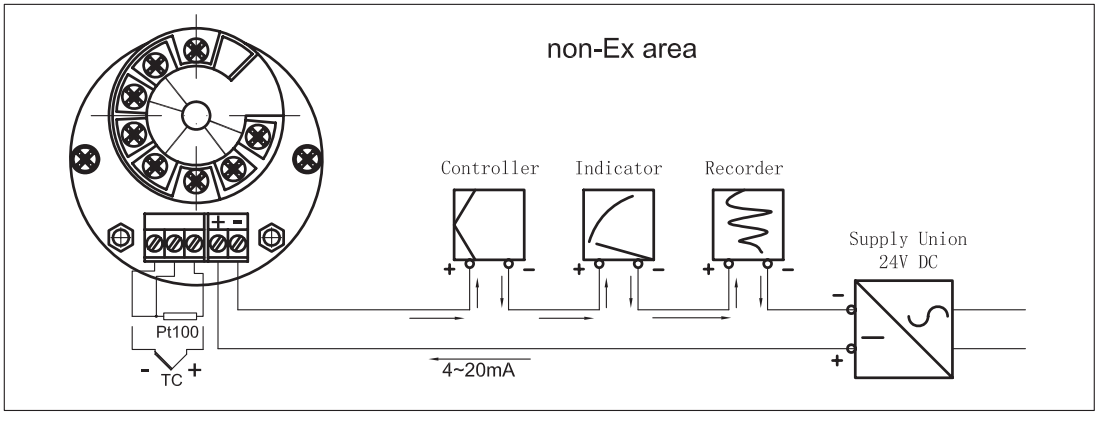


Note

1. Make sure the type of the instrument and the connection are right before you use it.
2. Forbid to modify the components of the instrument arbitrarily.
3. The outer diameter of the cables you used should be Φ7~8mm. The nuts should be screwed tightly to make the rubber seal in the lid protect the cables.
4. If you just use one of the waterproof holes for wiring, the other one should be sealed completely with the blind-pad.

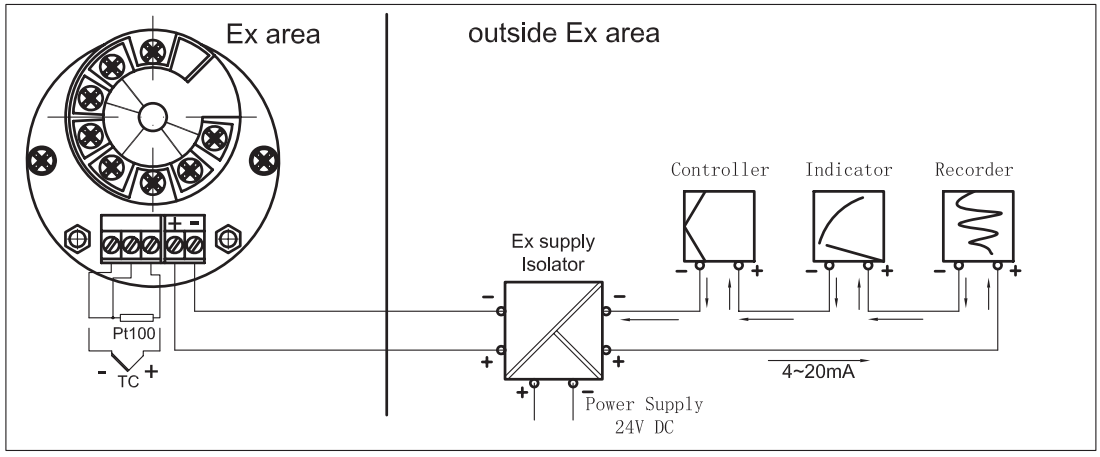
Wiring Diagram

TTID connection example with power supply unit

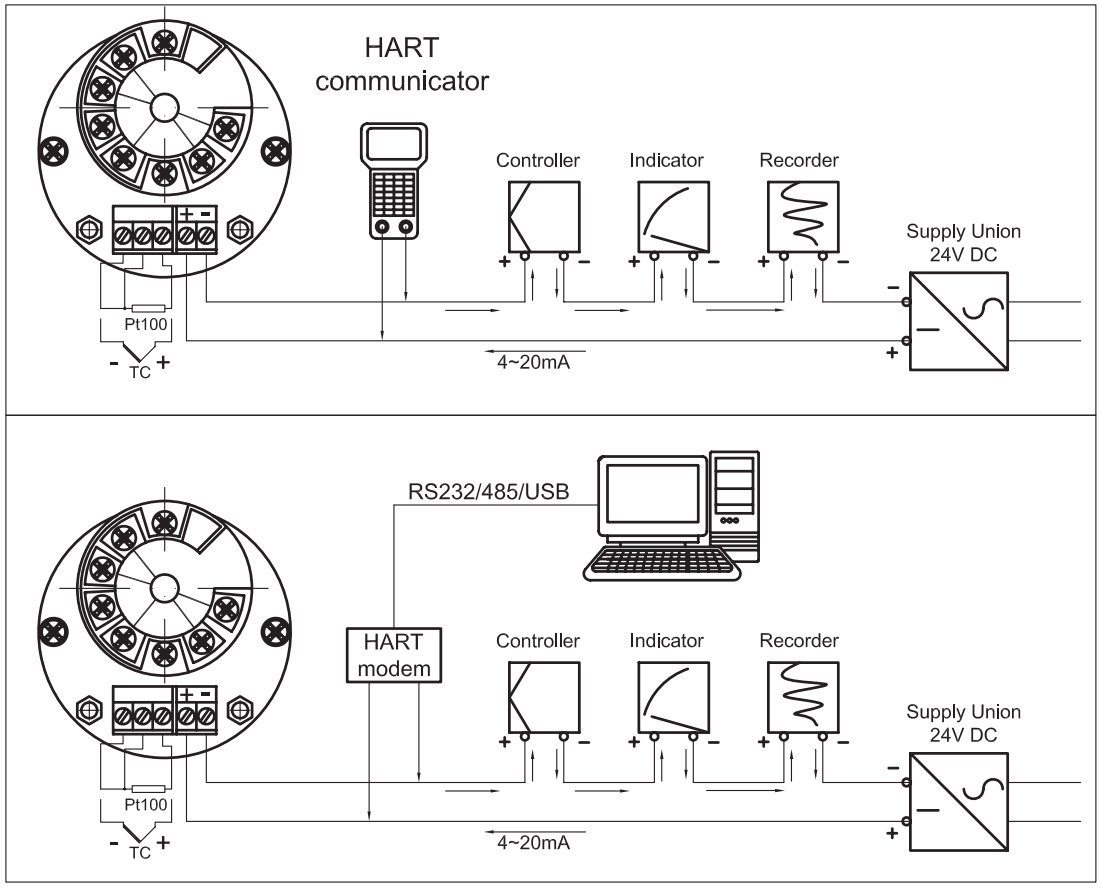


Wiring Diagram

TTID connection example with Ex supply isolator



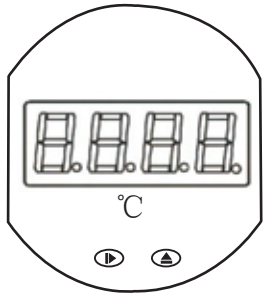
TTID -H Via HART Communicator and HART moden



Method for Configuring the 4-bit Indicator Measure Range

1. Change the display range should be under working conditions, and it will exit the configure pattern in 6s automatically without operation.
2. Display Range: -1.9.9.9~3.9.9.9
3. Buttons Function:
   ① ▶ Shift right for 1 bit
   ② ▲ Number + 1
   ③ To change the configure pattern: press and hold the ▶ button first, press the ▲ button latter, then release the two buttons simultaneously.

1. Example:
   Change the measuring range from 0~50 to 50.0~150.0



Order	Operatation	Display	Illuminate
①	Press ▶ and then press ▲	4 3 2 1 8.8.8.	Wait about 8 seconds
②	Release ▶ ▲Simultaneously	4 3 2 1 4	Present for setting the lower-limit
③	Repeat ① ②	4 3 2 1 0000	Ready to set the lower-limit for bit 1
④	Press ▶ twice	4 3 2 1 0.800	No diaplay change, only a decimal point display at bit 3, ready to modify bit 3
⑤	Press ▲ 5 time	4 3 2 1 0.500	Modify bit 3 to 5
⑥	Press ▶ 1 time	4 3 2 1 0.50.0	A decimal point display at bit 2, ready to modify bit 2
⑦	Repeat ③	4 3 2 1 20	Complete config the lower-limit, prepare to set the upper-limit
⑧	Repeat ③	4 3 2 1 0500	Ready to set the upper-limit bit 1
⑨	Press ▶ 1 time	4 3 2 1 0.050	Ready to modify bit 4
⑩	Press ▲ 1 time	4 3 2 1 1.050	Modify bit 4 to 1
⑪	Press ▶ 1 time	4 3 2 1 10.50	Ready to modify bit 3
⑫	Press ▲ till display 5	4 3 2 1 15.50	Modify bit 3 to 5
⑬	Press ▶ 1 time	4 3 2 1 155.0	Ready to modify bit 2
⑭	Press ▲ till display 0	4 3 2 1 150.0	Modify bit 2 to 0
⑮	Repeat ③	Display the Corresponding current	Completes configuration, Exit
⑯	Repeat ① ∽ ⑮		If failed, please repeat ① ∽ ⑮