

# Multi-input Temperature Transmitter

## YTMX580



The YTMX580 can accept inputs from up to 8 points of measurement such as IEC-conforming thermocouples (eight types including Types K, E, J) and resistance temperature detectors (three types including Pt100), then converts the corresponding measurement input values to a wireless signal. The YTMX580 can also accept DC voltage, resistance, and 4-20 mA DC signal input. In addition to measured values, it can wirelessly send and receive parameter settings.

Powered by internal batteries, the YTMX580 needs no communication wires and power cable, significantly reducing the installation cost.

The YTMX580 is compliant with the ISA100.11a industrial automation wireless communication standard specified by the International Society of Automation (ISA).



### FEATURES

- Long-life battery  
Low-power consumption design for large-capacity lithium batteries achieves operation for years.
- Battery change  
Batteries can be changed as a pack even at worksites.
- Multi-point measurement with update period as fast as 1 second
- Various input signals
- Explosion proof certification  
The YTMX580 has been approved as intrinsically safe and nonincendive outside Japan. In Japan, the intrinsically safe approval is pending.

### SPECIFICATIONS

Item	Specifications
Wireless standard	Compliant with ISA100.11a (IEEE802.15.4)
Transmission rate	250 kbps
Wireless security	AES 128 bit codified *1
Wireless frequency bandwidth	2400 to 2483.5 MHz
Wireless output power	Max. 11.6 dBm (Fixed)
Antenna	+2 dBi Omni directional
Input channel	8 points *2
Input signal	Thermocouples, RTD, DC voltage, resistance, 4 to 20 mA DC *3, *4
Accuracy	Pt100: $\pm 0.3^{\circ}\text{C}$ (When operating at lower than $400^{\circ}\text{C}$ ), Type K: $\pm 1.0^{\circ}\text{C}$ , etc.
Cold Junction Compensation Accuracy	$\pm 0.5^{\circ}\text{C}$ (For thermocouples only, add this value to the accuracy value.)
Update period	1 sec to 3600 sec.
Battery life	Generally 6 years under typical conditions *5
Protection class	IP66/IP67, NEMA Type 4X
Explosion proof certification	Intrinsic safety: TIIS (pending), FM, CSA, ATEX, IECEx Nonincendive protection: FM, CSA
Mass	3.2 kg (without mounting brackets)

\*1: Common key encryption algorithm defined in the Advanced Encryption Standard (AES) in the USA.

\*2: Up to 3 input channels for the update period of 1 sec. and up to 8 for 2 sec or more.

\*3: Shunt resistance is needed for 4-20 mA DC signal input.

\*4: DC voltage and 4-20 mA DC signal input do not support explosion proof certification.

\*5: Typical conditions are as follows:

- Network connection: Jointed
- Update period: 60 sec
- Function: Basic function only, without router functions
- Ambient temperature:  $23 \pm 2^{\circ}\text{C}$
- LED indicator: Off

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