

Thermal Watch

Failsafe Wireless Temperature Monitoring



Models Available :
TWS1 / TWS2

Threshold Available :
60 / 70 / 80 / 90 / 100°C



Why Wireless Temperature Monitoring?



10 years Lifespan

Industrial battery and infrared communication ensure low power consumption and long lifespan



Secure & Fail Safe

Independent temperature monitor and operating till 115°C



Simple Operation for User

With 24/7 temperature monitoring

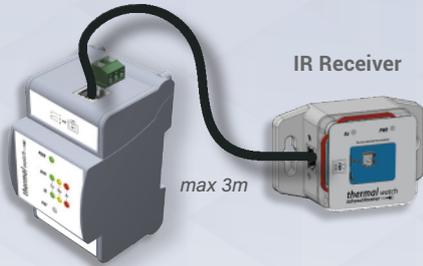


Easy Installation & Maintenance

Operative indoor and outdoor

Overview System

DIN Frame 1 modules receiving devices - TWR1



..... up to 6m

THERMAL WATCH SENSOR - TWS



up to 30 TWS

Communication with upper level

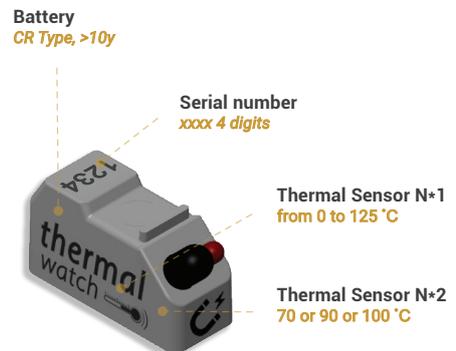
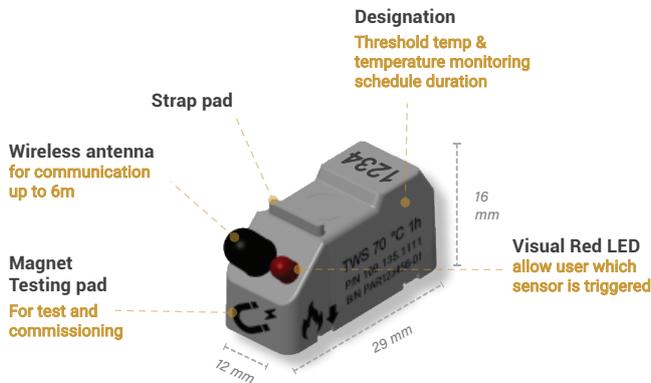


Data Concentrator
with / without HMI

CAT6 cable : RS485 + 12VDC

LAN or WIFI connection
IEC61850 / DNP3 /
MODBUS or REST API

TWS - Thermal Watch Sensor



TWS sends 4 information :

- Device identification number, as stated on the body of the device,
- Temperature,
- Mode in which the device is,
- Battery level.

example of data transmitted

| | |
|----------------|-------|
| ID of device | 0001 |
| Temperature °C | 82 °C |
| Mode | Test |
| Battery left | OK |

4 Operation Modes

TEST

using a magnet applied to the TWS, the user forces the TWS to send data.

ALARM

upon temperature sensor reaching threshold, factory set, the TWS will send alarm signal.

COMMISSIONING

applying the magnet for more than 5s will result in the TWS to delay the signal sending by 15min. The time for the operator to put the switchgear/board in operation.

TEMPERATURE REPORTING

based on a preset timer, the TWS will send periodically the temperature value.

The lifespan of the device will depend on the periodicity of the signal as per table.



** Periods can be changed as below with following life expectancies at 25°c*

| Period | Life expectancy | |
|---------|-----------------|--------|
| | TWS1 | TWS2 |
| 1 min | >1m | >6m |
| 5 mins | >6m | >2yrs |
| 15 mins | >2yrs | >7yrs |
| 30 mins | >4yrs | >10yrs |
| 1 hour | >8yrs | >10yrs |
| 2 hours | >10yrs | >10yrs |

THERMAL WATCH RECEIVER

Dry contact output

For LED or control other devices

Connection for IR receiver

RJ12, up to 3m

ON & Communication

Green/Yellow LED indicator



ALARM

Red LED indicator

Reset button

Communication & Power

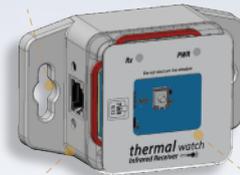
RJ45 IN and OUT



TWR1-DIN = DIN Receiver

Mounting holes for easy installation

Hole slots

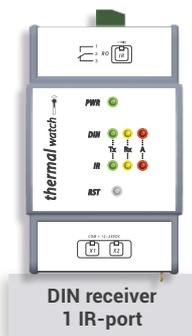


Connection for IR DIN

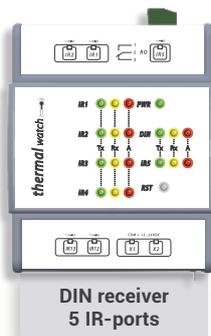
RJ12, up to 3m

Cleanable receiver

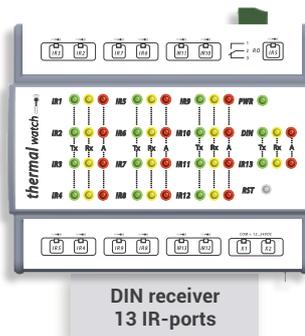
TWR1-IR = IR Receiver



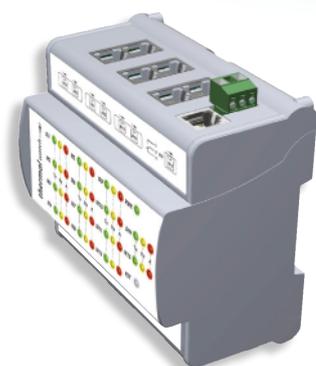
DIN receiver
1 IR-port



DIN receiver
5 IR-ports



DIN receiver
13 IR-ports



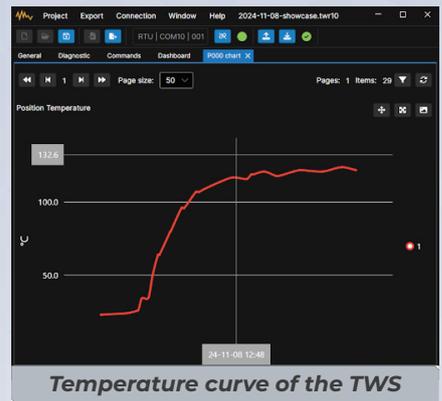
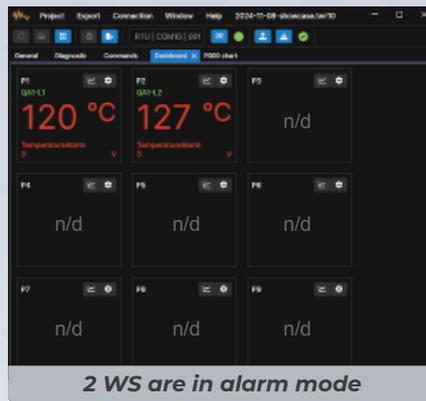
TWR-DIN storage features: 280 000 temperature records & 72 000 alarms.

PLUG AND PLAY

The system is designed to be "plug and play".

TWS are factory programmed and tested: TWS will send signal periodically and upon alarm, including their ID. The TWR-IR are interchangeable and not assigned to any address: TWR-IR will communicate data to TWR-DIN regardless of where the information comes from. TWR-DIN will store the information based on the ID of the TWS, up to 280 000 records. The ID of the TWS is engraved on the body of the TWS and upon alarm the red LED of the TWS will blink. The user can optionally assign a name to the ID of the TWS.

SOFTWARE



The software can be setup in a standalone computer or delivered along with our standard monitoring unit.

HOW TO ORDER

109-TWS Thermal Watch Sensor

| Digit 4 | | Digit 5 | | Digit 6 | | Digit 7 | | Digit 8 | | Digit 9,10 | |
|---------|-------------|-------------|---------|---------------------|---------|---------------------|---------|----------|---------------|------------|---------|
| Type | | Temperature | | Health check period | | Commissioning delay | | Mounting | | Spare | |
| 1 | TWS1 85 °C | 1 | 60 °C | 1 | 1 min | 1 | 15 mins | 1 | Strap | 11 | Default |
| 2 | TWS2 115 °C | 2 | 70 °C | 2 | 5 mins | 2 | 30 mins | 2 | Metal plate | | |
| | | 3 | 80 °C* | 3 | 15 mins | 3 | 5 mins | 3 | Embedded hole | | |
| | | 4 | 90 °C* | 4 | 30 mins | | | | | | |
| | | 5 | 100 °C* | 5 | 1 hour | | | | | | |
| | | 6 | 2 hours | | | | | | | | |

* only for TW2

110-TWS Thermal Watch Receiver

| Digit 5 | | Digit 6 | | Digit 7 | | Digit 8 | | Digit 9,10 | |
|-------------|----------------------|--------------------------|-------------------|--------------|------|------------------|----------|------------|---------|
| temperature | | Number of corded sensors | | Cable length | | Modbus connector | | Spare | |
| 1 | DIN- Receiver | 1 | 1 x IR receiver | 1 | None | 1 | RJ45 | 11 | Default |
| 2 | IR-Receiver | 2 | 5 x IR receivers | 2 | 1m | 2 | DB9 | | |
| 3 | RJ12 cables | 3 | 13 x IR receivers | 3 | 2m | 3 | Terminal | | |
| 4 | LAN CAT6 RJ45 cables | | | 4 | 3m | | | | |
| 5 | Adapters | | | | | | | | |



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