Operation description

1. Operating testing temperature:-55°C~+150°C
2. Measurement error:±1°C
3. Operating environment temperature:-40°C~+100°C
4. Modulation:GFSK
5. Frequency band:2.45GHz
6. Wireless communication distance:>300m(2.45GHz,open space)
7. Measurement interval:4s (risk), 16s (alarm) and 30s (normal)
8. Average power consumption:≤3μA(3V)
9. Battery life:≥10years
10. Battery capacity:500mAh
11. Surface material:stainless steel; thermal pad material:heat conductive copper
12. Dimension (Φ x H):31mm x 12mm
13. Weight:32g
14. Packaging:IP68
15. Installation:glue and/or clamp
16. Transmisson power:10mw

DWT100-ST112 wireless temperature sensors measure the temperature of monitoring points regularly, and one or more sensors are used to mesure the environment temperature as well. These temperature data measured by sensors are transmitted to the base stations via 2.45GHz ISM band wireless channel periodically. The base station will save and record these data.

The host machine will periodically poll the base stations in roll via wired network connections over RS-485 bus (or CAN); Upon polling each base station will transmit the temperature data to the host through the network connection. Then the host will process and save these temperature data.

By comparing the relative temperature rises between the equipment and the enviroment, between indoor air and outdoor air, the host machine can detect possible overheat situation and produces Early Warning Signal to alert operators to handle the situation. The host can further communicate with a backend control station on Ethernet, through IEC 61850 standard protocol; and the host can also use a standard relay to send the alerting signal to public measurement/control panel.