## Product Specification Sheet

## ECOMM Series WC21-8TC FFD with 8-channel Thermocouple Module

The WC21-8TC Wireless thermocouple module comes as a 2 Piece set consisting of a WC21 FFD Mesh Node and an 8-channel ModBus RTU Slave input module along with a 4 Conductor Comm/Power cable 40 cm long which connects the two devices. Inputs supported are thermocouple types $J, K, E, T, N, B, S, R, C, D$ and $G$ with differential inputs to minimise electrical noise and mains pick-up, and built-in cold junction compensation. It also supports mV inputs. Two versions are available: WC21-8TCISO with, or WC21-8TC without, thermocouple inputs isolated from each other and internal logic circuits.

## Physical Characteristics / Dimensions



Operating Temperature -28C to 62.5C Storage Temperature -40C to 80C Operating RH 5-95\% Non-Condensing Storage RH 5-95\% Non-Condensing

| Detailed Specifications |  |  |  |
| :---: | :---: | :---: | :---: |
| RF |  | Full Function Device |  |
| RF Classification | 802.15.4 ISM Band Device | Mesh FFD Capacity | 75 FFD's |
| Frequency | 2.4 GHz 16 Channels | Line of Sight Range | 425 metres |
| Network Architecture | Star Mesh PAN Coordinator |  |  |
| Device Classification | Full Function Device |  |  |
| Transmit Sensitivity | 12 dBm |  |  |
| Receive Sensitivity | -94 dBm |  |  |
| Module Hardware |  | Physical |  |
| WC21 FFD Controller | 12-24 VDC | Dimensions 16DI module | $109 \times 96 \times 22 \mathrm{~mm}$ incl. connectors |
| 8TC Module | 12-24 VDC | Dimensions WC21 module | $75 \times 96 \times 34 \mathrm{~mm}$ incl mounting lugs |
| Mounting - 8TC module | DIN rail | Weight - complete | 200 g |
| Mounting - WC21 | screw fixing |  |  |
| Resolution | 0.1 C | Certifications | FCC / UL / UR / EC on Components |
| Drift | 100ppm/C typical | Operating temp | -28C to 62.5C |
| Isolation | 1500 Vrms between field and logic | Storage temp | -40C to 80C |
|  | 350 V peak between each TC input | Operating humidity | 5\% to 95\% (non condensing) |
| CJC error | +/- 0.5C typ after 30 min warm up | Storage humidity | 5\% to 95\% (non condensing) |
| I/O Module Detail |  |  |  |
| WC21 Polling Rate | 350 msec |  |  |
| Minimum Update Interval | 10 Seconds |  |  |
| Maximum Update Interval | 3,600 Seconds |  |  |
| WC21 On Board I/O | Not Functional when 16DI connected |  |  |
| Input Resolution | 32 bit |  |  |

