FLUKE®

Process Instruments

TECHNICAL DATA

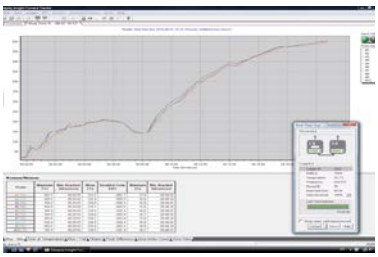
Furnace Tracker®

Real-Time Temperature Data Directly from Inside Your Furnace Process

The Datapaq TP6 radio telemetry system utilizes high temperature radio-frequency technology to allow data transmission from the data logger in real time. As the system travels through the process, product and process temperature data can be viewed, analyzed and reported instantaneously. This technology can be applied to monitoring key thermal processes in most industrial heating applications.

System Features

- The radio telemetry system can be tailored to meet your specific process requirements:
  - Batch process(es) – simple primary receiver kit
  - Conveyorized processes – primary receiver complemented with add-on secondary receivers
- Automatic frequency selection from software, minimizing interference and maximizing signal quality
- Intelligent listen-before-transmit feature enables the system to operate with multiple loggers on the same transmitting frequency and data collection with one installation of Insight™ software
- Receivers connected in series with low-loss RS485 digital communications bus, maximizing data reception
- Comprehensive on screen, real time system diagnostics reporting signal status for each transmitting logger and receiver
- Transmission performance optimized for high-temperature operation with internal self-calibration routines
- Ultra low power consumption extends battery life and operating life
- In-logger data storage backs up transmitted data, ensuring integrity of data



Real time data capture

TM21 primary receiver Kit

Features and Benefits

Rapid QA – know that your product has been thermally processed to specification before the system has even exited the process

Improve the productivity of any batch process – know when critical product temperature has been achieved and allow the process to be completed or moved on to the next phase; optimize cycle times with confidence

Rapid fault-finding – see immediately when process problems are being experienced without having to wait until the completion of the process; allow corrective action earlier, saving time and reducing possible scrap

Improve efficiency of process optimization – use live data to view the effect of any process-parameter changes on the temperature profile instantly

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Technical Specifications

TM21 Transmitter (TX1401)

Transmitter fitted inside data logger

TP6 logger range	10 or 20 channels, type K, N, R, S, B 70 °C & 110 °C (158 °F to 230 °F)
Operational frequency ranges*	Europe/China 434.065–434.740 MHz USA/Canada 463.525–463.975 MHz Japan 429.275–429.725 MHz
Operating temperature range	–20 °C to 110 °C / –4 °F to 230 °F
Transmission range	200 m (656 ft) "in open field conditions"
Max number of transmitters per system	6
Sampling interval range	2 sec to 50 min
Interleaving limits	10
Approvals*	EU CEPT/ERC/70-03E Canada RSS-119 USA FCC CFR 47 Part 90 Taiwan NCC-LP0002 Japan ARIB STD-T67 China CMIT-2010DJ5117

*Contact Fluke Process Instruments for availability of telemetry/Bluetooth in your country.

Datapaq TP6 data loggers

TM21 Primary Receiver (Europe RX4200, USA RX4100, Rest of world RX4000)

Primary receiver with integral USB comms to PC. Powered by CH0070. Equipped with type N RF connector.

Dimensions (H x W x L)	44 × 139 × 98 mm / 1.7 x 5.5 x 3,9 in
Frequency	To match transmitter
Antenna	Desktop 15 cm
Operating temperature	0 °C to 50 °C / 32 °F to 122 °F
Status display	2 line 16 character backlit LCD

Primary receiver

TM21 Secondary Receiver (Europe RX4201, USA RX4101, Rest of World RX4001)

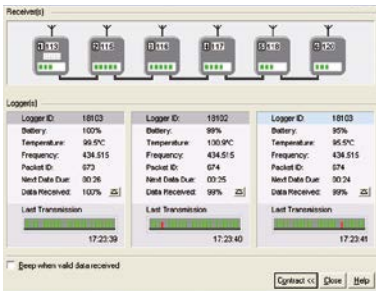
Secondary receiver connected to the TM21 primary receiver with RS485 communication cable (10 to 100 m / 32 to 328 ft).

Dimensions (H x W x L)	44 × 139 × 98 mm / 1.7 x 5.5 x 3,9 in
Frequency	To match transmitter
Antenna	Unity gain end feed with type N connector
Operating temperature	0 °C to 50 °C / 32 °F to 122 °F
Status display	Single power and status LED
Maximum quantity	Max 6 secondary connected to 1 primary receiver

Frequency scanner

Insight Software

- Automatic frequency selection and set-up
- Real time tool detailing quality of data transmission for each logger / receiver and system status information
- Real-time analysis of process data and review against process set-up (zones, temperature set-points, overlays)
- Event markers log events at the precise point they happen on the profile
- Automatic data-saving to PC to guarantee data



Insight Software

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Worldwide Service
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