

## New Generation Telemetry Handheld Advanced

### Features



- Capable of displaying up to 12 data inputs
- 2 way radio system for data integrity
- Very low power consumption for long battery life
- Worldwide licence exempt 2.4 GHz radio
- 120 metre (400 feet) range maximum
- Simple configuration and calibrated via PC using base station with Telemetry Toolkit software
- Programmable wireless print capability
- 6 button tactile keypad
- Environmentally sealed to IP65



### Introduction

The T24-HA is an advanced handheld display for Mantracourts sensor acquisition system. It allows wireless remote viewing of multiple inputs such as strain, voltage or current using 2.4GHz radio. The device provides sleep and wake functionality for all wireless modules thus extending battery life and maintenance costs. The wide temperature operating range and the robust technology ensures that the module it is not susceptible to harsh physical or electrical environments.

#### Result Mode:

This default mode creates a single resultant by summing the values from up to 12 acquisition modules simultaneously as well as allowing users to view the discrete values that make up the result.

#### Item Mode:

In this mode each acquisition module is treated as a separate entity and the T24-HA is used to cycle through all available items.

The module can operate in two modes:

### Specifications

#### General Radio

	Min	Typical	Max	Units
Licence		Licence Exempt		
Modulation method		MS (QPSK)		
Radio type		Transceiver (2 way)		
Data rate		250		K bits/sec
Radio Frequency	2.4000		2.4835	GHz
Power		1		mw
Range RAD24i (Integrated antenna)			120 (400)	Metres (feet) *
Range RAD24e (External antenna)			200 (650)	Metres (feet) *
Channels (DSSS)		16		

- Maximum range achieved in open field site with T24-SA at a height of 3 metres above ground and T24-HA held at chest height pointing towards the T24-SA

## T24-HA - Handheld Reader

Electrical	Min	Typical	Max	Units
Power Supply voltage	2.4	3.0	3.6	V dc

Power Supply	Min	Typical	Max	Units
Active		35	40	mA
Low power mode		120	160	uA
Estimated Battery life using 2Ahr batteries:				
Standby mode (Powered off)		1.5		Years
Continuous operation		40		Hours

Use a pair of alkaline AA batteries. Due to the higher voltage requirements of this device NiMH and NiCad batteries are not recommended.

Environmental	Min	Typical	Max	Units
IP rating		IP65		
Operating temperature range	-10		+50	C
Storage temperature	-40		+85	C
Humidity	0		95	%RH

### Module Transmits & Receives giving:

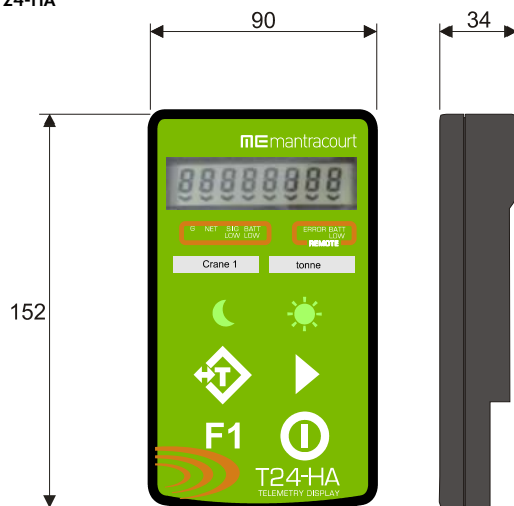
1. Full error detection and correction
2. Ability to switch to low power modes
3. Calibration & configuration via radio telemetry
4. Ability to be switched from sleep to operating mode via radio
5. Calibration stored within the module
6. Remote battery check

### Product Order Codes

T24-SAi	Strain Gauge Acquisition Module internal antenna	T24-HS	Handheld Reader Simple
T24-SAe	Strain Gauge Acquisition Module with socket for external antenna	T24-HA	Handheld Reader Advanced
T24-VAi	Voltage Acquisition Module internal antenna	T24-BSu	Base Station USB
T24-VAe	Voltage Acquisition Module with socket for external antenna	T24-BSi	Base Station Industrial
T24-IAi	Current Acquisition Module internal antenna	T24-SO	Serial Output
T24-IAe	Current Acquisition Module with socket for external antenna	T24-BC1	Battery Charger
T24-SAfi	'Fast' Strain Gauge Acquisition Module internal antenna	T24-ACM	Single Channel Acquisition Connectivity Module
T24-SAfe	'Fast' Strain Gauge Acquisition Module with socket for external antenna	T24-PR1	Thermal Printer

### Mechanical Dimensions

T24-HA



### Approvals

CE, Complies with EMC directive. 2004/108/EC  
The Radio Equipment and Telecommunications Terminal Equipment (R&TTE) Directive, 1999/5/EC.



In the interests of continued product development, Procter & Chester (Measurements) Ltd reserves the right to alter product specifications without prior notice