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Modul wireless de preluare tensiune si curent T24-VA & T24-IA



Modul wireless de preluare tensiune si curent T24-VA & T24-IA Producator: LCM Systems T24-VA & T24-IA Wireless Telemetry Voltage & Current Input Acquisition Module

Descriere

T24-VA & T24-IA Wireless Telemetry Voltage & Current Input Acquisition Module

Features :

- 2 way radio system for data integrity
- Very low power consumption for long battery life
- Very small size
- Worldwide licence exempt 2.4 GHz radio
- Option of hand held remote display or PC interface for data capture
- Remote power on/off (sleep/wake)
- 120 metre (400 feet) range maximum
- Simple configuration and calibrated via PC using base station with Telemetry Toolkit software

The T24-VA & IA are high performance voltage (0-10V) and current (0-21 mA - calibrated to a 4-20mA range) to radio telemetry converter modules, offering precision measurement with high performance two-way telemetry. Usable around the globe on licence-free 2.4GHz frequency, the T24 range avoids local radio interference to ensure data integrity and security. For use in any measuring applications, from torque to weight, vibration to flow, the T24 offers users a complete solution to your measurement requirements.

The modules form part of a simple measurement system that offers the opportunity to collect measurements from a variety of sources, enabling accurate and immediate data collection without the requirement for extensive and labour intensive cabling operations.

Transmitting from a analogue module on 2.4 GHz to a variety of receivers including a user friendly simple 2 button handheld T24-HS which captures this data and displays it providing a line of sight communication range of typically 120 metres. The T24-HS also performs the function of waking the T24-VA when it is turned on and sending it to deep sleep module when it is turned off.

The wide temperature operating range and the robust technology ensures that the module is not susceptible to harsh physical or electrical environments. Options include internal or external antenna and a growing range of interface modules.

The licence-free 2.4GHz radio provides a line-of-sight communication range of 120 metres (400 feet), extendable by the use of a repeater. The use of the latest DSSS radio technology minimises local radio interference and ensures data integrity and security.

The wide operating temperature range and the robust technology ensures that the module is not susceptible to harsh physical or electrical environments.

LCM Systems can supply the T24 products integrated into a complete system, to meet a variety of different application requirements. Please contact LCM’s technical department to discuss your wireless telemetry requirements.

Specifications - - General Radio

Approvals

T24-VA - Voltage Input				
Measurement				
Parameter	Min	Typical	Max	Units
Input Range Sensitivity (FR)	0		+10	V dc
Gain Temperature Stability			50	ppm/°C
Non-Linearity before Linearisation		2	25	ppm of FR
Internal Resolution		16,000,000/24		Resolution/Bits
Input Impedance		100,000		ohms
Input Calibration Accuracy			<±0.1	%FR
Noise Free where sample time <10mS		5,000/12.5		Resolution/Bits
Noise Free where sample time <100mS		8,000/13.0		Resolution/Bits
Noise Free where sample time <1000mS		11,000/13.5		Resolution/Bits
Noise Free where sample time >1000mS		15,000/13.75		Resolution/Bits
T24-IA - Current Input				
Measurement				
Parameter	Min	Typical	Max	Units
Input Range Sensitivity (FR)	0		21	mA dc
Calibrated Range	4		20	mA dc
Gain Temperature Stability			50	ppm/°C
Non-Linearity before Linearisation		5	25	ppm of FR
Internal Resolution		16,000,000/24		Resolution/Bits
Input Impedance		47		ohms
Input Calibration Accuracy			<±0.1	%FR
Noise Free where sample time <10mS		5,000/12.5		Resolution/Bits
Noise Free where sample time <100mS		8,000/13.0		Resolution/Bits
Noise Free where sample time <1000mS		11,000/13.5		Resolution/Bits
Noise Free where sample time >1000mS		15,000/13.75		Resolution/Bits
Electrical				
Parameter	Min	Typical	Max	Units
Power Supply Voltage	2.1	3	3.6	Vdc
Power Supply Ripple			50	mV ac pk-pk
Power Supply Current				
Parameter	Min	Typical	Max	Units
Normal Mode (on constantly)		40	45	mA
Sleep Mode		5	20	µA

Battery Life (in low power mode, 3Hz update rate)				
Parameter	Usage	Battery Life		
Pair AA cells	Constantly on	1 month		
Pair AA cells	12 sessions per day of 5 minutes	2 years		
Pair D cells	Constantly on	2.5 months		
Pair D cells	12 sessions per day of 5 minutes	5 years		
Environmental				
Parameter	Min	Typical	Max	Units
Operating Temperature Range	-40		+85	°C
Storage Temperature	-40		+85	°C
Humidity	0		95	%RH

Measurement

Measurement

Electrical

Power Supply Current

Battery Life (in low power mode, 3Hz update rate)

Environmental