MADGETECH
WE BUILD DATA LOGGERS

IRTC101A

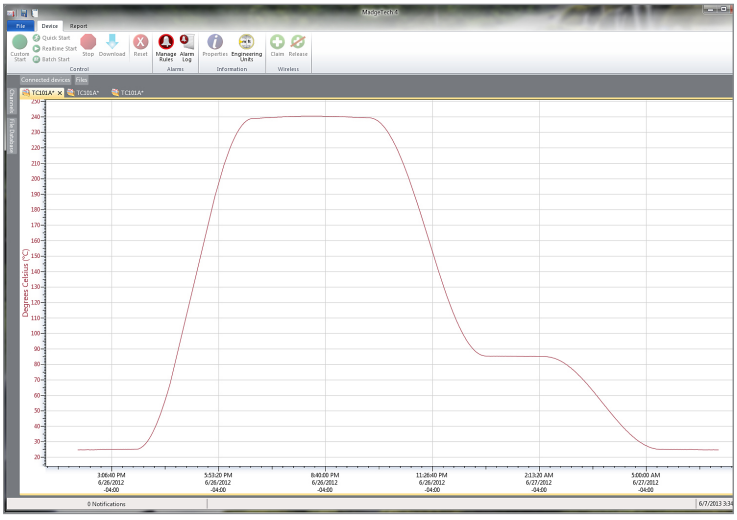
Infrared Thermocouple Data Logger

The IRTC101A is a battery powered infrared thermocouple based temperature data logger. It provides nearly instantaneous, non-contact temperature measurements, making it a perfect solution for applications such as surface temperature recording and monitoring moving objects.

The IRTC101A features a 10 year battery life, 1 second reading rate, a multiple start/ stop function, ultra-high speed download capability, over 800,000 reading storage capacity, optional memory wrap, battery life indicator, optional password protection, programmable high-low alarms and more.

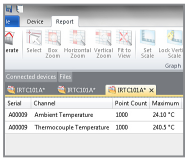
As the leader in low power data logger technology, MadgeTech continuously improves its products and develops solutions to meet ever-changing challenges. The IRTC101A was designed with our customers in mind. MadgeTech offers free firmware upgrades for the life of the product so that data loggers already deployed in the field can grow with new technological developments. Units do not need to be returned to the factory for upgrades. The user can do this from any PC.

MadgeTech 4 Software Features

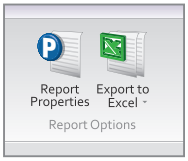


Graph View

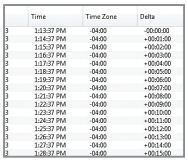
- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view



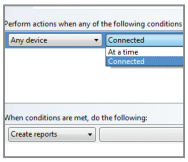
Statistics



Export to Excel



Tabular Data View



Automation

Features

- 10 Year Battery Life
- Wide Temperature Range
- Uses Thermocouple Type K (contact sales for other types)
- High Speed Download
- Real-time Operation
- Low Cost
- Programmable Start Time
- Miniature Size

Benefits

- Simple Setup and Installation
- Minimal Long-Term Maintenance
- Long-Term Field Deployment

Applications

- Non-contact Temperature Monitoring
- Flow Monitoring
- Surface Temperature
- Process Verification and Validation
- Remote Areas
- Moving Objects
- Long Distance Temperature Measurement
- Heavy Equipment

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call (603) 456-2011 or go to **madgetech.com** for details.

TEMPERATURE	
Temperature Range	-40 °C to +80 °C (-40 °F to +176 °F)
Temperature Resolution	0.1 °C (0.18 °F)
Calibrated Accuracy	±0.5 °C/±0.9 °F (0 °C to 50 °C/+32 °F to +122 °F)

REMOTE CHANNELS		
Thermocouple Types	K (Infrared, contact sales for other types)	
Thermocouple Connection	Female subminiature (SMP)	
Cold Junction Compensation	Automatic, based on internal channel	
Maximum Thermocouple Resistance	3000 Ω	
Temperature Resolution	0.01 °C (0.018 °F)	
Thermocouple Type	**Range**	**Accuracy**
K	+25 °C to +80 °C (+77 °F to +176 °F)	±2.0 °C (±3.6 °F)
Field of View	60 ° (1:1)	
Minimum Spot Size	8 mm (0.3 in)	
Spectral Response	6.5 to 14 microns	

GENERAL	
Start Modes	Immediate start Delay start up to 18 months Multiple pushbutton start/stop
Stop Modes	Manual through software Timed (specific date and time)
Multiple Start/Stop Mode	Start and stop the device multiple times without having to download data or communicate with a PC
Real Time Recording	May be used with PC to monitor and record data in real time
Password Protection	An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.
Memory	838,041 readings 322,323 readings in multiple start/stop mode
Wrap Around	Yes
Reading Rate	1 reading every second up to 1 reading every 24 hours
Alarm	Programmable high and low limits; alarm is activated when temperature reaches or exceeds set limits
LEDs	2 status LEDs
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	3.6V lithium battery included; user replaceable
Battery Life	10 years typical at a 15 minute reading rate
Data Format	Date and time stamped °C, °F, K, °R; µV, mV, V
Time Accuracy	±1 minute/month at 25 °C (77 °F) (Stand alone mode)
Computer Interface	USB (interface cable required); 115,200 baud
Operating System Compatibility	Windows XP SP3 or later
Software Compatibility	Standard Software version 2.05.06 or later Secure Software version 4.1.3.0 or later
Operating Environment	-40 °C to +80 °C (-40 °F to 176 °F) 0 %RH to 95 %RH non–condensing
Dimensions	1.38 in x 2.13 in x 0.58 in (35.1 mm x 54.1 mm x 14.8 mm)
Data Logger Probe Dimensions	3.25 in length x 0.775 in dia. (1.34 mm x 18.4 mm) 36 in (0.9 m) PFA coated unshielded stranded wire
Weight	0.8 oz (24 g) - data logger only 1.4 oz (40 g) - sensor and cable
Material	ABS Plastic

BATTERY WARNING: FIRE, EXPLOSION AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 100 °C (212 °F), INCINERATE, CRUSH, OR EXPOSE CONTENTS TO WATER.

Ordering Information

IRTC101A	PN 900326-00	Thermocouple Data Logger with infrared thermocouple
IFC200	PN 900298-00	USB interface cable
LTC-7PN	PN 900352-00	Replacement battery for the IRTC101A