IRTC101A
INFRARED THERMOCOUPLE DATA LOGGER

MADGETECH
WE BUILD DATA LOGGERS

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

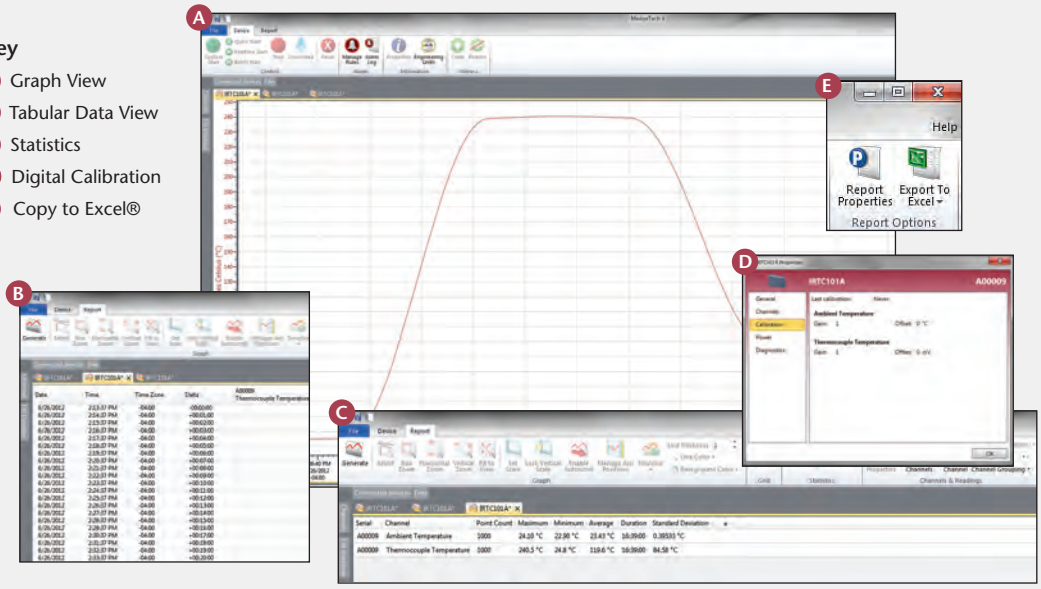
The IRTC101A is a battery powered infrared thermocouple based temperature data logger. It provides nearly instantaneous, non-contact temperature measurements, making it a perfect solution for applications such as surface temperature recording and monitoring moving objects.

The IRTC101A features a 10 year battery life, 1 second reading rate, a multiple start/stop function, ultra-high speed download capability, 500,000 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 DATA LOGGER SOFTWARE

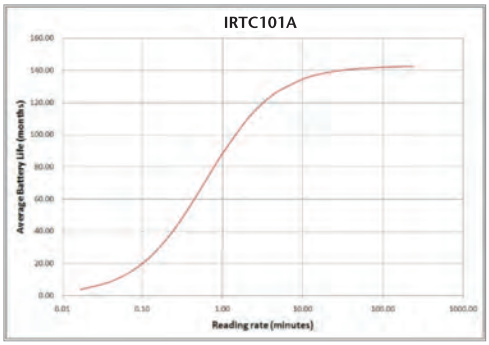
Key
- A Graph View
- B Tabular Data View
- C Statistics
- D Digital Calibration
- E Copy to Excel®



Software Features:
- 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
- Data table view
- Automatic report generation
- Summary view
- Multilingual

IRTC101A SPECIFICATIONS*

Internal Channel		
Temperature Range:	-40 °C to +80 °C (-40 °F to +176 °F)	
Temperature Resolution:	0.1 °C (0.18 °F)	
Calibrated Accuracy:	±0.25 °C (±0.45 °F)	
Remote Channel		
Thermocouple Type:	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	
Thermocouple Type	**Range (°C)**	**Sensor**
K	25 °C to 80 °C	±2.0 °C
	Contact for other ranges.	
Field of View:	60 ° (1:1)	
Minimum Spot Size:	8 mm (0.3 in)	
Spectral Response:	6.5 to 14 microns	
Reading Rate:	1 reading every second up to 1 reading every 24 hours	
Memory:	• 500,000 readings; software configurable memory wrap • 250,000 readings in multiple start/stop mode	
Wrap Around:	Yes	
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	
Multiple Start/Stop Mode Activation:	To start the device: *Press and hold the pushbutton for 5 seconds, the green LED will flash during this time. The device has started logging.* To stop the device: *Press and hold the pushbutton for 5 seconds, the red LED will flash during this time. The device has stopped logging.*	

Real Time Recording:	The device may be used with PC to monitor and record data in real time
Alarm:	Programmable high and low limits; alarm is activated when temperature reaches or exceeds set limits
LED Functionality:	Green LED blinks: *10 second rate to indicate logging* *15 second rate to indicate delay start mode* Red LED blinks: *10 second rate to indicate low battery and/or full memory* *1 second rate to indicate an alarm condition*
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.
Battery Type:	3.6V lithium battery included; **user replaceable**
Battery Life:	10 years typical at a 15 minute reading rate  Graph display of the device recording in a 25 °C environment.
Data Format:	Date and time stamped °C, °F, K, °R; µV, mV, V
Time Accuracy:	±1 minute/month (at 20 °C, stand alone data logging)
Computer Interface:	USB (interface cable required); 115,200 baud
Software:	XP SP3/Vista/Windows 7/Windows 8
Operating Environment:	-18 °C to +70 °C (-40 °F to 158 °F) 0 %RH to 95 %RH non–condensing
Dimensions:	1.4 in x 2.2 in x 0.6 in (36 mm x 56 mm x 16 mm)
Data Logger Probe Dimensions:	3.25 in L x 1.80 cm Dia. (1.28 x 0.71 in); 0.9 m (36 in) PFA coated unshielded stranded wire
Weight:	0.9 oz (24 g)

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

ORDERING INFORMATION

MODEL	DESCRIPTION
IRTC101A	Thermocouple Recorder with infrared thermocouple.
IFC200	Software, manual and USB interface cable.
Calibration Certificate	Calibration Certificate available for data logger
LTC-7PN	Replacement battery for IRTC101A.

ASK ABOUT OUR OTHER DATA LOGGERS

Temperature
Humidity
Pressure
pH
Level
Shock
LCD Display
Pulse/Event/State
Current
Voltage
Wireless
Intrinsically Safe
Spectral Vibration
Motion