T.M.Electronics (UK) Ltd Technical Data

DATA SHEET

TMELOG 1020 Data Logger – indoor temperature and humidity logger

Description

The TMELOG 1020 has the ability to record temperature and humidity and is designed for indoor applications.

Suitable applications

- Office and housing monitoring
- Pharmaceutical manufacture
- Dry food storage
- Museum display and repository
- Incubators

Features

Total Reading Capacity	32,000 readings
Memory type	Non Volatile
Trigger Start	Magnetic Switch
Delayed Start	Relative/Absolute (up to 45 days)
Stop Options	When full, After Readings, Never (overwrite oldest data)
Reading Types	Actual, Min, Max
Logging Interval	1 sec to 10 days
Offload	While stopped or when logging in minutes mode
Alarms	2 fully programmable; latchable

Reading Specification

Temperature

Reading Range	-25ºC to +85ºC (-13ºF to 185ºF)
Sensor Type	10K NTC Thermistor (Internally mounted)
Response Time	20 mins to 90% FSD in moving air
Reading Resolution	0.01ºC or better

Reading Specification

Relative Humidity

Reading range	0 to 95% RH
Sensor Type	Capacitive
Accuracy	±3.0% RH at 25˚C/ 77˚F
Reading Resolution	Better than 0.3% RH
Sensor Location	Externally mounted
Response Time	10 seconds to 90% FSD

Physical Specification

IP Rating	IP53 splash proof (see notes)
Operational Range*	-40ºC to +85ºC (-40˚F to +185˚F)
Case Dimensions	
Diameter	72mm/2.83”
Width	60mm/2.36”
Depth	33mm/1.30”
Weight	55g/1.94oz

*The Operational Range indicates the physical limits to which the unit can be exposed, not the reading range over which it will record.

Notes

Battery Type	Tekcell SBAA02P SAFT LS14250 or LST14250

The logger will operate with other ½ AA 3.6V Lithium (Li-SOCl2) batteries but performance cannot be guaranteed.

Replacement Interval	Annually

Before replacing the battery the data logger must be stopped.

When replacing the battery, wait at least one minute after removing the old battery before fitting the new one.

Data stored on the logger will be retained after a battery is replaced.

If used at low temperatures the data logger should be allowed to warm to room temperature before it is opened to avoid condensation forming inside the unit.

The IP53 rating is valid only when the unit’s connector cap is securely fitted and the unit is orientated with its hanging tip uppermost

If moisture forms on the units RH sensor readings may become unpredictable. Once the sensor has dried out, and provided no residue is left behind, the unit should return to normal reading within 30 minutes.

Any dust, salts or residue that is allowed to build up on the RH sensor will affect the units reading accuracy.

The sensor may be cleaned with de-ionised water or with pure isopropanol, but not with abrasive detergents as these may damage the sensors coating and affect its accuracy.

The RH sensor will resist small amounts of the following chemicals: formaldehyde, ammonia, carbon monoxide, ethylene oxide, hydrogen chloride, hydrogen fluoride, hydrogen peroxide, nitrogen dioxide, methyl chloride, chlorine, Freon, methanol, ethanol, isopropanol and ozone. It also offer resistance to ultraviolet rays.

Salt solutions may cause permanent damage as crystals forming within the porous layers affect moisture levels there.

Trigger Start

The trigger start option allows a unit to be set ip as required and then started at a later time with a magnet. The position of the trigger start switch is indicated by the ··· marking on the back of the logger. When the “Wait until trigger event” option is selected in the Tinytag Explorer software the green LED on the unit will flash once every eight seconds to indicate that it is waiting to start. When a magnet is held next to the ··· marking, the green LED will light to indicate the switch is closed. After the magnet has been removed, the green LED will flash every four seconds to indicate that the logger is recording.