TRE35-001

Shock and Temperature logger

Measuring range:

- -16g to +16g
- -40°C to 85°C

Precision :

- 0.5g
- ± 0.3°C for [-30°C... +70°C]
- ± 1°C for [-40°C...-30°C] and [+70°C...+85°C]

Certification: CE

Description

The TRE35 makes it possible to measure and record the transport conditions of goods and to trace shocks as well as temperature variations. It timestamps each event. The data is downloaded and analyzed on a PC. The TRE35 can be used in two distinct modes:

Live/Record: Before sending the package, the user activates “record” mode. Upon activation, the TRE stores the values in its memory. It is possible to read the recorded data using RF Monitor. At the end of the transport, the user stops recording and can extract the data into memory.

Monitoring (real-time monitoring applications): The TRE sends recorded data to the PC in real time. If communication cannot be done, the logger records the data in memory, and sends it as soon as the connection is possible. A silent mode can be used in air transport. In this case, to find the recorded data, it will be necessary to use the “find products in silent mode” function using the RF Monitor software.

It is equipped with:
IP65 housing
Internal antenna
1 A Lithium power battery

Specifications

	Accelerometer	Temperature	Humidity	Brigtness
TRE35	-16g to +16g on 3 axes	-40°C to 85°C	-----	------

Shock sensor	1 accelerometer that measures on 3 axes (XYZ)
Measurement Range	Shock : -16g to +16g on each axis Minimum threshold : -1g to +1g on each axis (XYZ)
Resolution	14 bit-3.9 mg
Accuracy at 25°C	±0.5g from -16g to +16g (without resonance) If the shok is too hight over this range, the TRE at 16g, and will record the measurement.
Noise	65 mg
Calibration	Calibration carried out at the factory by the manufacturer
Drift of accuracy	Possible drift of 10 mg/year on each axis for 4 years. Not guaranteed after 4 years.
Bandwidth	1600 Hz
Temperature sensor	
Measuring range	-40°C to 85°C
Accuracy	± 0.2°C for (0... 60°C)
Resolution	0.015°C
Response time	<10 seconds
Long-term drift	<0...05K / year

Power supply	1 Lithium Thionyl battery size A (3.6V) with connector	1 AA Alkaline battery (1.5V) in the battery holder
Operating temperature range	-40°C to +60°C (up to 85°C peak) but the case may be damaged	-10°C to +50°C
Battery Life	At 25°C : almost 2 years	At 25°C : approximately 1 year
Battery Supplier	Newsteo	Any supplier
User replaceable	Yes, From connector to plug	Yes, Battery holder, polarity correct

RTC	Integrated real-time clock for timestamping measurements Resolution : 1s Maximum drift : 2 minutes/month at 25°C The time is set in production
Operating temperature range	-40°C to 60°C with lithium batteries, -10°C to 60°C with alkaline batteries Recommended temperature range to maximize peoduct autonomy : +5°C to 35°C
Flash memory	16 Mbits flash, or 129.000 measurement blocks (shocks take 2 blocks) For example, it allows in a single 2 years measurement campaign : - 1 inclination and temperature measurement every 15 minutes (70.080 records) - 29.000 shocks recordings
Wireless communication	Operates on ISM band, short range device This device is designed for the European market (Uses the 868MHz band)
Antenna	Internal antenna
range	100 meters in open space
ILS	Magnetic sensor for user actions : - Wake up the product in hibernation mode - Taking a measurement outside the defined measurement frequency

Color	Black
Material	Plastic
Charactteristics of the case	The case included 2 holes for fixing to a wall or inside a package
Dimensions	<table><tr><th></th><th>Without flange cover</th><th>With flange cover</th></tr><tr><td>Length</td><td>84.80mm</td><td>110.15mm</td></tr><tr><td>Width</td><td>56mm</td><td>56.20mm</td></tr><tr><td>Height</td><td>22mm</td><td>26.2mm</td></tr></table>
Weight approx.	160g (lithium batteries included)
IPlevel	IP54