

# BS EN 12830:1999 Declaration of Conformance



This declaration applies to the following Lascar data loggers:

<b>EL-21CFR-1-LCD</b>	<b>EL-21CFR-TP-LCD-PROBE-G</b>	<b>EL-WIFI-21CFR-DTP+PROBE-G</b>	<b>EL-WIFI-21CFR-TP</b>
<b>EL-21CFR-2-LCD</b>	<b>EL-CC-1-XXX PK10</b>	<b>EL-WIFI-21CFR-T</b>	<b>EL-WIFI-21CFR-TP+</b>
<b>EL-21CFR-2-LCD+</b>	<b>EL-CC-2-XXX PK10</b>	<b>EL-WIFI-21CFR-T+</b>	<b>EL-WIFI-21CFR-TP+-PROBE-G</b>
<b>EL-21CFR-TC</b>	<b>EL-PDF-1-XXX PK10</b>	<b>EL-WIFI-21CFR-TC</b>	
<b>EL-21CFR-TP-LCD</b>	<b>EL-WIFI-21CFR-DTC</b>	<b>EL-WIFI-21CFR-TH</b>	
<b>EL-21CFR-TP-LCD+</b>	<b>EL-WIFI-21CFR-DTP+</b>	<b>EL-WIFI-21CFR-TH+</b>	

4.1	The means of temperature measurement used by the recorder shall be independent of any temperature measurement which is used to control the refrigerating system.	All our data loggers are stand alone, battery powered devices.
4.2	The measuring range shall conform to the following limits: <ul style="list-style-type: none"> <li>● Lower limit <math>\leq -25^{\circ}\text{C}</math></li> <li>● Higher limit <math>\geq 15^{\circ}\text{C}</math></li> <li>● Span <math>\geq 50\text{K}</math></li> </ul>	All our data loggers exceed this requirement
4.3	The date and time of the beginning of recording shall be readable from the recorded data. The means for adjusting settings which configure the recording shall be either protected against accidental or unauthorized modifications or any adjustments should be recorded.	All readings are date and time stamped. The EL-CC and EL-PDF ranges cannot be configured by a user while the EL-21CFR and EL-WIFI-21CFR ranges of data loggers have a full audit trail of user interaction which is password protected.
4.4.1	At least the temperature and the time shall be recorded. The place of measurement and the date has to be indicated.	Temperature and time are stored in the data. The place of measurement can be entered as the logger name or written on the logger.
4.4.2	It shall be possible to identify and consult the charts and the recorded data. It shall be possible to consult those intended for archiving for a period of at least a year.	All records are identified and stored on the users' system indefinitely. Appropriate back up procedures should be used to ensure the safety of the data.
4.4.3	The scrolling speed of the chart shall be greater than or equal to: <ul style="list-style-type: none"> <li>● 6mm/h for durations less than 24h</li> <li>● 2mm/h for durations less than 7 days</li> <li>● 0.5mm/h for durations over 7 days</li> </ul>	N/A
4.5	Devices with an autonomous power supply shall be indicated on the recorder or on the power supply or in the technical documentation with the corresponding usage temperature.	Data sheets state operating range and expected battery life, status indication by LED and in software.
4.6	The degree of protection provided by the enclosure shall be: <ul style="list-style-type: none"> <li>● IP 20 for heated / air conditioned premises</li> <li>● IP 55 for cold enclosures and external sensors</li> <li>● IP 65 for outside buildings or transport vehicles</li> </ul>	Please refer to the data sheet of your chosen product.

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4.7	The recorder shall conform to the requirements of EN 61010-1 (if applicable).	N/A
4.8	Operating characteristics linked to external electrical influences	N/A
4.9.2.1	The recorder under class 1 operating conditions is at a maximum $\pm 1^{\circ}\text{C}$ accuracy with a resolution of $\pm 0.5^{\circ}\text{C}$ .	All loggers meet or exceed this specification.
4.9.2.2	The maximum recording interval will be one of the following for transport: 5 minutes for less than or equal to 24 hours. 15 minutes for 24 hours to 7 days. 60 mins for anything higher than 7 days. For storage it is 30 minutes.	Please refer to data sheet of your chosen model for the configurable logging rates.
4.9.2.3	The manufacturer will specify the recording capacity: either as the recording duration at the recording interval chosen according to 4.9.2.2 or as the number of recorded temperature values.	Specified in software and on data sheet.
4.9.2.4	The maximum relative timing error is 0.2% of the recording duration when the date is reset up to 31 days and 0.1% of the recording duration including the error of the date and time when the date is reset after 31 days.	All loggers meet or exceed this specification
4.9.2.5	The response time for the recorders with an external sensor is a maximum of 10 minutes for transport and a maximum of 20 minutes for storage. For internal sensors a maximum 60 minutes applies.	All external sensors comply.
4.9.3.1	Please see Table 3 of BS EN 12830:1999.	All loggers meet or exceed these requirements
4.9.3.2	Equipment for use on transport vehicles will be able to operate under the following environmental conditions: <ul style="list-style-type: none"> <li>● vibration frequency: 5 Hz to 8.6 Hz displacement amplitude 10mm</li> <li>● vibration frequency 8.6 Hz to 150 Hz acceleration 3g</li> </ul>	All loggers are designed to comply with this requirement