CYCLOPS L
A FAMILY OF HIGH PRECISION PORTABLE NON-CONTACT PYROMETERS

200 to 3000 °C / 392 to 5432 °F
AMETEK LAND HAS BEEN MANUFACTURING PRECISION MEASURING EQUIPMENT SINCE 1947.

WE ARE SPECIALISTS IN NON-CONTACT TEMPERATURE MEASUREMENT AND COMBUSTION MONITORING WITH APPLICATIONS ACROSS DIVERSE INDUSTRIES SUCH AS STEEL AND GLASS MAKING, POWER GENERATION AND CEMENT MANUFACTURE.

As part of AMETEK Process & Analytical Instruments Division since 2006, our customers benefit from the worldwide AMETEK sales and service team.

DESIGNED FOR ACCURATE TEMPERATURE MEASUREMENT IN ANY APPLICATION IN TEMPERATURE RANGES OF 200 TO 3000 °C / 392 TO 5432 °F

The Cyclops family is the industry leading standard for high quality portable non-contact pyrometers.

Using camera quality Through-The-Lens sighting, what you see is what you measure. The single handed, ergonomic design enables you to make temperature measurements in hostile environments. Hold on to a hand rail and simultaneously take safe and accurate temperature readings. The high quality fully focusable lenses ensure the smallest spot size measurements at any distance. On-board data-logging means accurate measurements are stored directly to the instrument.

TAKING A MEASUREMENT

ALL PROCESSED TEMPERATURE VALUES ARE SHOWN CONTINUOUSLY ON THE DISPLAY WHEN THE TRIGGER IS PRESSED.

• Peak temperature
• Continuous temperature
• Average temperature
• Valley temperature
• Meltmaster temperature - C055L Models only.

The Cyclops L range provides fast and simple data logging with on-board storage. Bluetooth® and USB connectivity allow the data to be downloaded periodically to a PC or live streamed to a Mobile device for analysis and trending.

Four trigger operating modes for datalogging are available:

• Single Mode: logs a measurement for each trigger release
• Latch Mode: logs continuous, average, peak and valley readings at a user defined rate
• Burst Mode: logs a stream of measurements while the trigger is pressed - approximately 30 readings / sec
• Route Mode: Precisely execute pre-configured routes for consistent, long-term readings. Available using the standalone instrument or featuring increased functionality with the mobile software

LOGGER SOFTWARE

Transfer data to a computer or rugged mobile device running Cyclops Logger software in order to view, analyze and record live temperature readings. All stored measurement data can be displayed on the Measurement screen which combines the current reading, table view and trend view.

The Trend View displays Peak, Instantaneous, Average and Valley temperatures, Logger settings, Route Manager, Background Correction plus Timed Logging (taking measurements at pre-defined intervals between 1 and 60 secs).

When connected to a Cyclops pyrometer, the Logger software records instantaneous temperature measurements each time the pyrometer trigger is pressed.

The Cyclops Logger Software also allows you to manage the unique ROUTE configurations i.e. set up a sequence of measurement points covering your plant or process, ensuring consistent, repeatable data for accurate trending.

Connection between the Cyclops L model pyrometers and the computer can be either wireless (via Bluetooth®), or via a USB cable.
A RANGE OF STANDARD AND OPTIONAL ACCESSORIES IS AVAILABLE INCLUDING:

1. **Heat resistant jacket** is standard on every model; to provide protection against excessive heat and dust.
2. **Waterproof carry case** is available as an optional accessory. (Standard with all Premium Kits)
3. **Long Eye Relief Eyepiece adapter** for when you are wearing protective goggles or a hard hat with face shield, e.g. when you cannot directly see through the eyepiece
4. **Close-up lenses** offered for the C100L and C160L models; these allow temperature measurement of small targets at close range

**Standard Bluetooth and USB connectivity**
- Wireless and USB options for communicating straight to a mobile device or PC

**Rugged instrument casing** - can withstand harsh environments for extended periods. Protection against high temperatures as well as bumps and drops

**Calibrated and traceable to National Standards** - your guarantee of measurement accuracy

**Built in Route Mode** - Methodically execute pre-configured routes to ensure accurate readings and long term data trending

**Logger software** - data trending and analysis to identify on-site trends, improve process efficiency or protect assets and prolong their life cycles

**Internal Data Logging up to 9999 readings and 9 routes** - Onboard storage for single handed operation without the need for a separate storage device
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>C055L</th>
<th>C100L</th>
<th>C160L</th>
<th>C390L</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measurement range:</strong></td>
<td>1000 to 2000 °C / 1832 to 3632 °F</td>
<td>550 to 3000 °C / 1022 to 5432 °F</td>
<td>200 to 1400 °C / 392 to 2552 °F</td>
<td>450 to 1400 °C / 842 to 2552 °F</td>
</tr>
<tr>
<td><strong>Display:</strong></td>
<td>External backlit LCD display</td>
<td>External backlit LCD display</td>
<td>External backlit LCD display</td>
<td>External backlit LCD display</td>
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<tr>
<td><strong>Measuring modes:</strong></td>
<td>Continuous, Peak, Valley and advanced Metalmaster</td>
<td>Continuous, Peak, Valley and advanced Metalmaster</td>
<td>Continuous, Peak, Valley and advanced Metalmaster</td>
<td>Continuous, Peak, Valley and advanced Metalmaster</td>
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<tr>
<td><strong>Data logging:</strong></td>
<td>9999 readings and 9 routes internally; Mobile (4GB standard storage) or PC logger software (via Bluetooth® or USB connector)</td>
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<tr>
<td><strong>Data logging modes:</strong></td>
<td>Classic, Burst, Latched, Route</td>
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<tr>
<td><strong>Optical system:</strong></td>
<td>9° field of view; eye piece adjustable - 3.75 to +2.5 diopters</td>
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<tr>
<td><strong>Focusing range:</strong></td>
<td>Fixed focus, nominally at 5 m / 197 in from pyrometer body datum</td>
<td>1 m / 39.3 in. to infinity 460 to 630 mm / 18.1 to 24.8 in. and 217 mm / 8.5 in. fixed focus - with optional close-up lens</td>
<td>1 m / 39.3 in. to infinity 460 to 630 mm / 18.1 to 24.8 in. and 217 mm / 8.5 in. fixed focus - with optional close-up lens</td>
<td>1 m / 39.3 in. to infinity</td>
</tr>
<tr>
<td><strong>Minimum target size:</strong></td>
<td>Parallel 28 mm / 1.1 in target spot diameter from lens to 5 m / 197 in.</td>
<td>5 mm at 1 m / 0.19 in. at 39.3 in. / 1.8 mm / 0.07 in. and 0.4 mm / 0.016 in. - with optional close-up lens</td>
<td>5 mm at 1 m / 0.19 in. at 39.3 in. / 2.0 mm / 0.08 in. and 0.5 mm / 0.2 in. - with optional close-up lens</td>
<td>4.8 mm / 0.19 in. at 10.4 in. / 39.9 in. nominal from the pyrometer body datum</td>
</tr>
<tr>
<td><strong>Spectral response:</strong></td>
<td>Nominally 0.55 μm</td>
<td>1 μm with advanced spectral filtering</td>
<td>1.6 μm with advanced spectral filtering</td>
<td>Nominally 1.9 μm</td>
</tr>
<tr>
<td><strong>Emissivity adjustment:</strong></td>
<td>0.10 to 1.20 in 0.01 step graduations</td>
<td>0.10 to 1.20 in 0.01 step graduations</td>
<td>0.10 to 1.20 in 0.01 step graduations</td>
<td>0.10 to 1.20 in 0.01 step graduations</td>
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<tr>
<td><strong>Response time:</strong></td>
<td>30 s</td>
<td>30 s</td>
<td>30 s</td>
<td>&lt;500 ms (to 98%)</td>
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<tr>
<td><strong>Display update time:</strong></td>
<td>0.5 s</td>
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<tr>
<td><strong>Accuracy:</strong></td>
<td>&lt;0.5% (K)</td>
<td>≤0.25% (K)</td>
<td>≤0.25% (K) + 2°C</td>
<td>≤0.5% (K)</td>
</tr>
<tr>
<td><strong>Measurement resolution:</strong></td>
<td>0.1°C / 1°F</td>
<td>≤1°C / 2°F</td>
<td>≤1°C / 2°F</td>
<td>≤1°C / 2°F</td>
</tr>
<tr>
<td><strong>Measurement field of view:</strong></td>
<td>180° circular</td>
<td>180° circular</td>
<td>180° circular</td>
<td>180° circular</td>
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<tr>
<td><strong>Repeatability:</strong></td>
<td>&lt;1°C / 2°F</td>
<td>≤1°C / 2°F</td>
<td>≤1°C / 2°F</td>
<td>≤1°C / 2°F</td>
</tr>
<tr>
<td><strong>Operating temp range:</strong></td>
<td>0 to 50 °C / 32 to 122 °F</td>
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<tr>
<td><strong>Power requirement:</strong></td>
<td>One MN1604 / 6LR61 / PP3 Battery or USB</td>
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<td><strong>Output:</strong></td>
<td>Bluetooth®/USB Connector</td>
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<td><strong>Weight:</strong></td>
<td>0.83 kg / 1.8 lb.</td>
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<td><strong>Sealing:</strong></td>
<td>IP40</td>
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<tr>
<td><strong>Free Data-logger Software:</strong></td>
<td>Available at <a href="http://www.landinst.com/software-downloads">www.landinst.com/software-downloads</a></td>
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<tr>
<td><strong>Standard accessories:</strong></td>
<td>Lens cap, protection window/filter, battery, wrist strap, USB cable, heat protection jacket</td>
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<tr>
<td><strong>Optional accessories:</strong></td>
<td>Waterproof carry case, long eye relief eyepiece</td>
<td>Close-up lenses, waterproof carry case, long eye relief eyepiece, Neutral Density filters: Options 1F or 2F - filters darken the image to provide better image contrast on bright targets, use for higher temp. applications.</td>
<td>Close-up lenses, waterproof carry case, long eye relief eyepiece</td>
<td>Waterproof carry case, long eye relief eyepiece</td>
</tr>
</tbody>
</table>

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### SEE OUR OTHER RELATED LITERATURE FOR THE CYCLOPS L:

**CYCLOPS LOGGER SOFTWARE**

**WEB LINKS**

- [www.landinst.com](http://www.landinst.com)
- [www.ametek-land.com](http://www.ametek-land.com)
- [AMETEK Land - Americas](http://www.ametek-land.com)
- [AMETEK Land China Service](http://www.ametek-land.com)
- [AMETEK Land India Service](http://www.ametek-land.com)

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