

# CYCLOPS C160L

A FAMILY OF HIGH PRECISION PORTABLE  
INDUSTRIAL PYROMETERS



200 to 1400 °C / 392 to 2552 °F



**LAND**  
**AMETEK®**



QUALITY CUSTOMER SOLUTIONS

# CYCLOPS C160L

A FAMILY OF HIGH PRECISION PORTABLE INDUSTRIAL PYROMETERS

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

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).



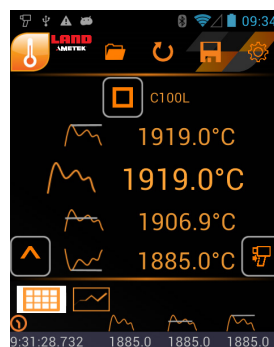
The Table View showing Instantaneous, Valley, Average and Peak, plus the unique Meltmaster temperature (on the 055 L model) readings.



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.



# SPECIFICATION & DESIGN



## 1: MENU CONTROLS

Simple, easy to use controls to select required mode from the icon based menu.

## 2: MULTI-FUNCTION DISPLAY

The bright, backlit external display panel provides an indication of status and configuration of the pyrometer together with four simultaneous live measurement modes.

The panel displays an intuitive, icon-driven, language-free menu system navigated via key pad controls:

- Mode selection
- Emissivity
- Window Compensation
- Communication Status
- Battery Status
- Alarm Status
- Standalone Route Mode
- Clock

## 3: OPTICS

Through-The-Lens reflex optical system gives a precise definition of the target spot and a simultaneous backlit display of the user selected temperature mode in the viewfinder.

## 4: CONNECTIVITY

Wireless Bluetooth® or USB technology offers datalogging using the Cyclops Logger software to a suitable industrial mobile or laptop/notebook, eliminating safety hazards when using cables.

## 5: RUGGED CASING

The instrument casing allows for extended periods of exposure to harsh environments.

## 6: EASY OPERATION

A number of easily set operating modes guarantees easy single-handed operation even in hazardous conditions.

## KEY APPLICATIONS

Industrial Processing - Heat Treatment  
Annealing  
Induction Heating  
Further Processing  
Welding

## ACCESSORIES

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



## FEATURES & BENEFITS

### 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

# CYCLOPS C160L

A FAMILY OF HIGH PRECISION PORTABLE INDUSTRIAL  
PYROMETERS

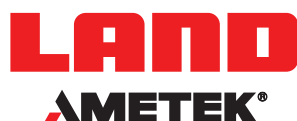
## SPECIFICATIONS

Measurement range:	200 to 1400°C / 392 to 2552°F
Display:	External backlit LCD display 5-digit LCD in viewfinder
Measuring modes:	Continuous, Peak, Valley and Average
Data logging:	9999 readings and 9 routes internally; Mobile (4GB standard storage) or PC logger software ( via Bluetooth® or USB connector)
Data logging modes:	Classic, Burst, Latched, Route
Optical system:	9° field of view; eyepiece adjustable -3.75 to +2.5 diopters
Focusing range:	1 m / 39.3 in. to infinity 450 to 620 mm / 17.7 to 24.5 in. and 215 mm / 8.5 in. fixed focus - with optional close-up lens
Minimum target size:	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
Spectral response:	1.6 µm with advanced spectral filtering
Emissivity adjustment:	0.10 to 1.20 in 0.01 step graduations
Response time:	30 ms
Display update time:	0.5 s
Accuracy:	± 0.25% C + 2σC
Measurement resolution:	0.1 °C / 1 °F
Measurement field of view:	180:1 circular
Repeatability:	<1 °C / 2 °F
Operating temp range:	0 to 50 °C / 32 to 122 °F
Power requirement:	One MN1604 / 6LR61 / PP3 Battery or USB
Output:	Bluetooth®/USB Connector
Weight:	0.83 kg / 1.8 lb.
Sealing:	IP40
Free Data-logger Software:	Available at <a href="https://www.ametek-land.com/products/software/cyclopslogger">https://www.ametek-land.com/products/software/cyclopslogger</a> ; For Android devices, the Cyclops Data Logger App is available through the Google Play Store
Standard accessories:	Lens cap, protection window/filter, battery, wrist strap, USB cable, heat protection jacket
Optional accessories:	Close-up lenses, waterproof carry case, long eye relief eyepiece

The Bluetooth® word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by AMETEK Land is under licence. Other trademarks and trade names are those of their respective owners.

DISCOVER HOW OUR BROAD RANGE OF  
NON-CONTACT TEMPERATURE MEASUREMENT  
AND COMBUSTION & EMISSIONS PRODUCTS  
OFFER A SOLUTION FOR YOUR PROCESS

[WWW.AMETEK-LAND.COM](http://WWW.AMETEK-LAND.COM)



### CONTACT US



[www.ametek-land.com](http://www.ametek-land.com)



[land.enquiry@ametek.com](mailto:land.enquiry@ametek.com)



We are fully committed to Quality Assurance. See all our accreditations at [AMETEK-LAND.COM/QUALITY](http://AMETEK-LAND.COM/QUALITY)