

Specifications - CYCLOPS 160B

Measurement range:	200 to 1400°C / 392 to 2552°F (operating) / 200 to 1300°C / 392 to 2372°F (specified)
Indication:	4-digit LCD in viewfinder; external backlit LCD display
Measuring modes:	Continuous, Average, Peak, Valley
Data logging modes:	Classic, Historic, Burst
Optical system:	9° field of view; 1/3° measurement area (180:1 to 98 % energy); eyepiece adjustable -3.75 to +2.5 diopters
Focusing range:	1m / 39.3in to infinity 460 to 630mm / 18.1 to 24.8in and 217mm / 8.5in fixed focus - with optional close-up lens
Minimum target size:	5mm at 1m / 0.19in at 39.3in 2.0mm / 0.08in and 0.5mm / 0.2in - with optional close-up lens
Spectral response:	1.6µm with advanced spectral filtering
Emissivity adjustment:	0.10 to 1.20in 0.01 step graduations
Response time:	30 ms
Display update time:	0.5 s
Accuracy:	≤0.25% + 2°C
Repeatability:	≤1°C
Operating temp. range:	0 to 50 °C / 32 to 122 °F
Power requirement:	One MN1604 / 6LR61 / PP3 battery
Output:	Bluetooth®
Weight:	0.83 kg / 1.8 lb
Sealing:	IP51
Standard accessories:	Lens cap, protection window, battery, wrist strap
Optional accessories:	Close-up lenses, Data logger DL-1000, HP PDA, rugged IP67 iPAQ waterproof carry case, Long eye relief eyepiece, heat protection Jacket

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Other models available



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Non-Contact Temperature
Measurement Solutions

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An **AMETEK**® Company

Applies in the UK

Applies in the USA

200-1400°C

392-2552°F

LAND



High precision portable
infrared thermometer

CYCLOPS 160B



An **AMETEK**® Company

CYCLOPS 160B

Land Cyclops 160B is a general purpose, high precision, portable infrared thermometer, designed for accurate measurement of temperatures in the range 200 to 1400°C / 392 to 2552°F.

Features

Non-contact measurement technology
High accuracy measurement and repeatability
Long term drift-free measurement
Single handed operation, contact free measurement
Standard Bluetooth
Rugged instrument casing
Calibrated and traceable to National Standards
Four Measurement modes - Continuous, Average, peak, Valley
Innovative Advanced spectral filter
Digital signal processing, output for data logging
Range of Accessories including a DL-1000 Data Logger, Long Eye Relief eye piece adapter, Rugged IP67 PDA, Heat resistant jacket, Waterproof carry case

Benefits

No contamination, interference or damage to process or material
Confidence in the measurement for process control and quality control applications
Confidence in the measurement
Better Safety in hazardous environments
No hanging cables, link straight to a PDA device
Can withstand harsh environments for extended periods
Your guarantee of measurement accuracy
Measurement to exactly meet your own specific requirements
Eliminates the effects of atmospheric water vapor
Access your measurement information and record it
Customize to your measurement needs

The measured temperature is displayed in four simultaneous modes: continuous, peak, average and valley, with user selected mode for the viewfinder display.

Accurate sighting is ensured by the clear, wide angle (9°) field of view and small, clearly defined (1/3°) measurement area. Focusing is variable from 1m to infinity, with close focus options available using auxiliary lenses.

Emissivity compensation is provided via the icon-based menu system.

The operating waveband has been carefully chosen to minimize errors due to uncertainty in emissivity and the effects of atmospheric vapor components.

Target Size Table

Target distance (m)	100	50	20	10	7	5	2	1
Measurement area (mm)	576	287	114	57	39	28	11	4.8
Target distance (ft)	328	164	65.6	32.8	22.9	16.4	6.5	3.2
Measurement area (in)	22.6	11.2	4.48	2.24	1.53	1.10	0.43	0.18

Target size can be reduced to a minimum of 0.5mm / 0.02in with optional close-up lenses



Graphics Panel Menus

When the C160B is switched on the side mounted LCD graphics panel activates. There are three data logging modes working in wireless Bluetooth format.

Peak temperature - maximum from when trigger pressed.

Continuous temperature - 0.5s display / serial updates when the trigger is pressed.

Average temperature - from when trigger pressed. Adjustable time constant.

Valley temperature - minimum from when trigger pressed.

Accessories

A range of standard and optional accessories is available including:

Close up lenses to allow temperature measurement of small target areas.

Heat resistant jackets to provide protection against excessive heat and dust.

A waterproof carry case is available as an optional accessory.

Long Eye Relief Eye piece adapter - where you are wearing protective goggles or a hard hat with face shield, e.g. when you cannot directly see through the eyepiece.

Heat resistant jacket



Long eye relief (LER) Eye piece adapter



Close up lenses



Waterproof carry case

Data Logger DL-1000

The DL-1000 Data Logging System provides a fast and simple method for logging temperature readings taken using Land Cyclops portable infrared thermometers.

When being used with a PDA, stored readings can be transferred using Microsoft ActiveSync file transfer utility to a partnership PC. Data can also be transmitted directly to a PC via Bluetooth using the PC version of the software. The logged data can then be used for further analysis and trending purposes.

Wireless communications using Bluetooth®

Wireless data logging to Bluetooth® equipped PDA (safely in your pocket) or PC / laptop with connections typically over several feet.

Rugged IP67 PDA Pocket PC (optional)



Optics

Single through the lens reflex optical system gives a precise definition of the target spot and simultaneous backlit display of user selected values in the viewfinder.

Trigger

2-position trigger to take and store temperature readings

Connectivity

C160B offers data logging to DL-1000 via Bluetooth®



Menu Controls

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

Multi-function Display

The bright, back-lit external display panel provides an indication of status and configuration of the thermometer together with four simultaneous live measurement modes.

The panel displays a simple icon-driven, language-free menu system navigated via keypad controls.



Mode selection
Emissivity
Window Compensation
Communication Status
Battery Status
Alarm Status

The user highlights the mode to be displayed in the viewfinder.

Flexible Operation

Three data output modes to the DL-1000 Data logger software are available:

- **Classic mode** - logs a measurement for each trigger release
- **Historic mode** - logs continuous, average, peak and valley readings
- **Burst mode** - logs a stream of measurements to the DL-1000 while the trigger is held pressed - approximately 30 to 35 readings / sec, up to a maximum of 999 readings per burst.

Applications

Cyclops 160B is ideal for use in a wide range of industries and applications.

Steel Heat Treatment

- Welding
- Tempering
- Annealing

Semi-conductors

Induction heating application

