

Reformer and Heater Furnace Tubes Temperature Data Logging System



DL-1000 Data Logging System with Cyclops 390 FurnacePro for computing and logging true tube temperatures in pyrolysis, steam reforming furnaces and reheat furnaces in metals industries

The Pocket PC based Cyclops DL-1000 Data Logging and Tube Furnace Temperature System provides a fast and simple method to correct for reflection errors from hotter backgrounds when measuring catalyst tube temperatures in pyrolysis and reforming furnaces.

The **Cyclops 390B FurnacePro** incorporates Bluetooth® technology, allowing wireless data logging to Bluetooth® equipped iPAQs, stored safely in your pocket, and to PC/laptops.

Background measurements are logged then averaged by the software to a single value. All subsequent measurements are then automatically stored as background-compensated measurements. These readings are automatically corrected for reflection errors providing true tube temperature measurement.

Data files can be created and named by the user, with each session identified by a short description. Tube temperatures are logged to a data file on the Pocket PC together with the reading number, date,

time of reading, emissivity value and background temperature for import into wordprocessing and spreadsheet programs.

Temperature readings can be taken manually or on timed acquisition at intervals from 1 to 3600 seconds.

The Pocket PC is supplied complete with the data logger software. Users can also perform their own software installation from a CD via a desktop PC utilizing the USB cradle.

Data file upload to a PC is managed by a simple file transfer utility provided.

The system comprises:

- HP iPAQ Pocket PC operating the Land Cyclops DL-1000 Data Logging software program
- USB Synchronization cradle
- ActiveSync file transfer utility
- Cyclops 390 FurnacePro portable infrared thermometer. (Available separately)

LAND

Non-Contact Temperature
Measurement Solutions

Land Instruments International Ltd • Dronfield S18 1DJ • England
Email: land.infrared@ametek.co.uk • www.landinst.com • Tel: +44 (0) 1246 417691 • Fax: +44 (0) 1246 410585

AMETEK Land, Inc. • 150 Freeport Rd • Pittsburgh, PA 15238 • U.S.A.
Email: irsales@ametek.com • www.ametek-land.com • Tel: +1 (412) 826 4444 • Fax: +1 (412) 826 4460

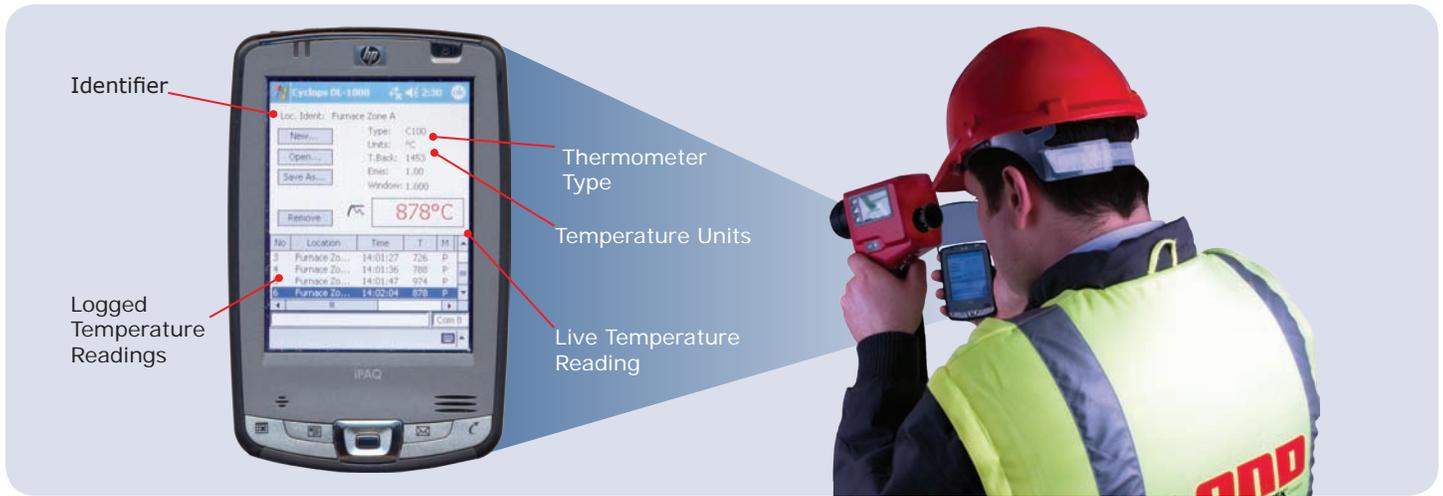
For a full list of international offices, please visit our website.



An **AMETEK** Company

Applies in the UK

Applies in the USA



Applications

Where measurement errors due to hotter background reflections are a problem, reflection errors can be minimized using the Cyclops 390B FurnacePro:

- In the Petrochemical industry: tube temperatures in tube furnaces (pyrolysis, reformer, cracking).
- In the Steel industry: stock temperatures in the preheat and heating zones of reheat furnaces.



Land Cyclops 390B FurnacePro is a dedicated high precision, portable infrared thermometer, designed for accurate measurement in gas or oil fired furnaces, in the temperature range 450 to 1400°C / 842 to 2552°F.

Accurate sighting is ensured by the clear, wide angle (9°) field of view and small, clearly defined (1/3°) square measurement area. Focusing is variable from 1m/3ft to infinity.

The operating waveband has been carefully chosen as a narrow spectral response centred at 3.9µm which eliminates errors caused by absorption/emission bands present in combustion gases and reduces errors caused by background reflections.

The 390B provides both wired RS232 communications and convenient Bluetooth® wireless technology.

See datasheet LCM_390 for further details

	Cyclops 390B FurnacePro
Temperature Range	450 to 1400°C / 842 to 2552°F
Spectral Response	3.9µm (nominal)
Accuracy	≤0.5% C/F of reading
Field of View	180:1 square to 98% energy
Response Time	<500ms (to 98%)
Repeatability	≤1°C / 2°F
Weight	0.83kg / 1.8lb