

SPOTAL EQ5

ALUMINIUM APPLICATIONS PYROMETER
FOR EXTRUDERS AND ROLLING MILLS

A PRODUCT OF THE SYSTEM 5 FAMILY
WWW.SPOTTHERMOMETER.COM



① 200 to 700 °C / 392 to 1292 °F



LAND
AMETEK[®]
PROCESS & ANALYTICAL INSTRUMENTS



QUALITY CUSTOMER SOLUTIONS

SPOTAL EQS

ALUMINIUM APPLICATIONS PYROMETER

BUILDING ON THE VAST EXPERTISE AMETEK LAND HAS IN MEASURING ACCURATE TEMPERATURE OF ALUMINIUM AT AN EXTRUDER, QUENCH OR STRIP MILL, THE SPOTAL EQS NOW HAS ALL THREE MEASUREMENT MODES IN ONE DIGITAL PYROMETER.

Utilising the latest cutting edge design in detectors combined with the most advanced data processing algorithms has created an extremely accurate and repeatable pyrometer for use in the low emissivity Aluminium industry.

SPOTAL EQS algorithms are new improved versions of the existing System 4 AET, AQT and AST models with additional parameters of fit modeled extensively on real plant installations. Standard fit algorithms are available for Extrusion, Quench and Strip and all of these can be fine tuned and new alloys added through a simple to use interface. SPOT uses the latest on-board digital processing to ensure a fast response time even with these complex algorithm calculations.

With the Webserver or free to download SPOTViewer software, the algorithm can be tuned to the site or alloy parameters depending on the expected emissivity range according to the background reflection level (a 1 point correlation). In the SPOTServer you can fully customise an algorithm to a new product with a multi point thermocouple correlation.

This latest SPOT application pyrometer can be integrated with press controls, PLCs and control software, and the temperature can be used to accurately control the customer's press or mill to run at optimum throughput rates. Integrating directly allows presses to run reliably and repeatably and produce the highest quality

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.

products with minimal scrap. The SPOTAL EQS has additional inputs and outputs including emissivity out and LED switching which are available as analogue/digital control I/O as well as over Ethernet.

Combining Ethernet, Modbus TCP, Video, Analog and Alarm Outputs within one device, SPOTAL EQS makes all these conveniently available to the operator. Pyrometer readings and configuration settings are available on the rear display and remotely via a web browser or through SPOTViewer software. SPOTAL EQS features both local and remote motorized focus adjustment.

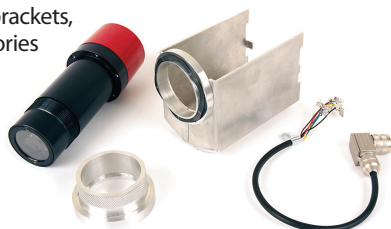
Dedicated software extends the usability. SPOTServer software allows you to configure, display and log data from up to 40 different SPOTAL EQS pyrometers. To ensure security with multiple users, various levels of access are available. Data log frequency, file size, save and archive locations are all configurable. SPOTViewer is free to download and the perfect choice for smaller operations with a single SPOTAL EQS pyrometer.

MOUNTINGS & ACCESSORIES ▼

AMETEK LAND OFFERS A RANGE OF MOUNTINGS AND ACCESSORIES FOR SPOTAL PYROMETERS

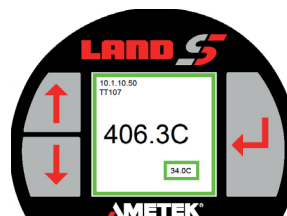
SPOTAL EQS is designed to be interchangeable with existing fixed spot pyrometers. To view the full range of mountings and accessories available, see our SPOTAL Mountings and Accessories brochure.

For specific recommendations on the choice of mountings, brackets, cables or any other accessories that may suit your specific industry or installation, please contact an AMETEK Land sales manager or representative for further advice before ordering.



SPOTAL MENU ▼

Remote user interface



Actual SPOTAL image view



Flexibility of design enables the SPOTAL EQS to adapt to multiple aluminium application scenarios.

Updating from an older AMETEK Land sensor to SPOTAL form factor is flexible and easy. Utilize existing mountings and accessories for simple integration and installation.

SPECIFICATION & DESIGN



1: PRE-SET ALGORITHMS

Three dedicated pre-set algorithms for Aluminium Extrusion, Quench and Strip

2: THROUGH-THE-LENS INTEGRATED CAMERA

Easy target alignment and verification in low and high brightness environments

3: PATENTED* PULSED HIGH BRIGHTNESS LED SIGHTING

Indicates both target size and location using an easily visible pattern; no laser safety requirements

4: SIGNAL PROCESSING

All processing features are integrated into SPOT. No need for any separate processor unit

5: HIGH QUALITY OPTICS

Features a durable sapphire protection window and ensures precise targeting and quality measurements

6: INTEGRATED WEB SERVER

Allows for remote adjustment and readings via any web browser

7: REAR DISPLAY & CONTROLS

Target viewing, temperature reading and set-up through simple menu driven choices; no need for separate software

8: POWER OPTIONS

Powered by either 24 VDC or Power over Ethernet

AL EQS

APPLICATION SPECIFIC DESIGN

ONE PYROMETER CAN BE USED FOR ALUMINIUM HOT ROLLING MILLS AND ALUMINIUM EXTRUSION PLANTS - AT THE PRESS EXIT AND QUENCH POSITIONS

TYPICAL APPLICATIONS

Aluminium Extrusion - Press Exit

Aluminium Extrusion - Quench

Hot Rolling Mills - Aluminium Strip

SPOTSERVER SOFTWARE

SPOTServer's simple installation means that the operator can quickly connect, configure and view data from any of AMETEK Land's SPOT AL EQS pyrometers.

The AMETEK Land SPOTServer software provides storage and analysis of data from multiple SPOT pyrometers. A flexible user interface allows the user to simultaneously display and analyze the data from up to 40 SPOT pyrometers. The user can access the SPOT integrated camera image when applicable. Each pyrometer can be configured independently with the freedom to define the storage interval for the target and ambient temperatures. Storage triggers allow the user to define custom criteria to capture important events and manage how and when to store data.

Data can be stored to either Microsoft SQL, XML text file or .csv file. Microsoft SQL provides a database archive that supports complex data queries and the possibility of plant data integration and reporting.



FEATURES & BENEFITS

Specialized Aluminium Algorithms - provide accurate digital temperature readings of low and variable emissivity Aluminium allowing optimisation of press speed and quality of the extrusion

Single person installation at instrument location - local display and settings; no need for a second person in the control room

Industry standard 4-20 mA linear temperature output in addition to other outputs

Modbus TCP - widely used and popular industrial protocol over Ethernet

Durable Sapphire Protection Window - resists scratches, solvents and easily cleaned with a soft cloth

Single Sensor Solution - Ideal for use with customer PLCs or DCS systems; no requirement for a separate processor. Easy to implement in small or large organizations

Software - SPOTViewer provides remote display and data logging of one SPOT pyrometer, whereas SPOTServer provides for multiple and allows customised algorithms.

* Patent Pending

SPECIFICATIONS

Measurement Range:	200 -700 °C / 392-1292 °F
Measurement Accuracy:	± 5 °C at 200 °C, ± 3 °C at 250 °C or ± 2 °C or 0.25% K at 300 °C and above (extrusion and quench), ± 5 °C or ±0.5 %K (strip)
Repeatability:	±3 °C at 200 °C, ±2 °C at 250 °C, ±1 °C at 300 °C and above (extrusion and quench), ± 5 °C (lubricated strip)
Resolution:	0.1 °C
Noise:	5 °C at 200 °C, 1.5 °C at 250 °C, <0.5 °C at 300 °C and above
Detector Type:	Application specific selected range of narrow wavelength bands designed to optimise temperature accuracy measurement of Aluminium
Sealing:	IP65
Response Time:	Adjustable 15 ms to 10 s
Interfaces:	0-20 mA DC or 4-20 mA DC, Digital or Analogue (0 or 4-20 mA) CMD In and CMD Out, Ethernet (TCP-IP, Modbus TCP, DHCP, http, udp, ICMP)
Processing Functions:	Peak/Valley Picking, Averager, Modemaster, CMD In sampling or LED control, CMD Out alarms, emissivity output or actuator control
Power Requirement:	Power over Ethernet or 24 V DC
Display:	Local display with image streaming
Software:	Live configuration and temperature display on any web browser. Freely downloadable SPOTViewer software with datalogging, live and historical data trending plus remote image capture; SPOTServer software available for use with multiple SPOT pyrometers
Languages:	Integrated multiple language selections: English, German, French, Italian, Spanish, Portuguese (Brazilian), Japanese, Chinese (simplified Mandarin), Korean, Russian, Polish
Field of View:	60 :1 to 90%
Mounting:	Full range of mountings and accessories available
Ambient Temp Range:	5 - 60 °C / 41 - 140 °F specified, 0-70 °C / 32 - 158 °F operating before cooling required
Focus Range:	300 mm / 11.8 in to infinity, locally or remotely adjusted
Sighting:	Integrated video with local display and remote image capture. Patented** pulsed Green LED focus pattern confirmation
Inputs:	24 V DC, CMD In, Ethernet, (TCP-IP, Modbus TCP, DHCP, http, udp, ICMP)
Outputs:	0-20 mA, 4-20 mA, CMD Out, Ethernet (TCP-IP, Modbus TCP, DHCP, http, udp, ICMP)
Settings:	Configure locally using the thermometer interface or remotely (using the Webserver, SPOTViewer, or SPOTServer). Emissivity, mode, current output range, alarm logic output and thresholds, network settings, focus and LED, language and user name
Warranty:	36 months

*Measurements within specification over 5-95% of range. ** Patent pending.

SEE OUR OTHER LITERATURE ON SPOT MOUNTINGS & ACCESSORIES AND SPOTVIEWER SOFTWARE:



**SPOT FAMILY
PYROMETERS**

DOWNLOAD:
spotthermometer.com

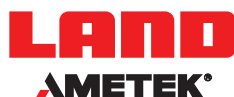


**SPOTVIEWER
SOFTWARE**

DOWNLOAD:
spotthermometer.com

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

WWW.LANDINST.COM | WWW.AMETEK.COM



Land Instruments International
Stubley Lane, Dronfield
S18 1DJ
United Kingdom

Tel: +44 (0) 1246 417691
Email: land.enquiry@ametek.com
www.landinst.com

AMETEK Land - Americas
150 Freeport Road,
Pittsburgh, Pennsylvania, 15238
United States of America

Tel: +1 (412) 826 4444
Email: land.enquiry@ametek.com
www.ametek-land.com

AMETEK Land China Service
Part A1 & A4, 2nd Floor Bldg. 1
No. 526 Fute 3rd Road East,
Pilot Free Trade Zone 200131
Shanghai, China

Tel: +86 21 5868 5111 ext 122
Email: land.enquiry@ametek.com
www.landinst.com

AMETEK Land India Service
Divyasree N R Enclave, Block A,
4th Floor, Site No 1, EPIP Industrial Area
Whitefield, Bangalore- 560066
Karnataka, India

Tel: +91 - 80 67823240
Email: land.enquiry@ametek.com
www.landinst.com