

# FLT5B

GLASS FLOAT LINE THERMOMETER



250 to 1300 °C / 482 to 2372 °F



**LAND**  
**AMETEK®**



QUALITY CUSTOMER SOLUTIONS

# FLT5B

GLASS FLOAT LINE THERMOMETER

## 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.

**The FLT5B is a standalone thermometer offering precision measurement of the surface temperature of glass float lines, ensuring consistently high product quality throughout the process.**

Offering excellent precision and long-term stability, the FLT5B's extensive measurement range removes the need to use a range of temperature monitoring instruments on the float line, simplifying system integration and operation.

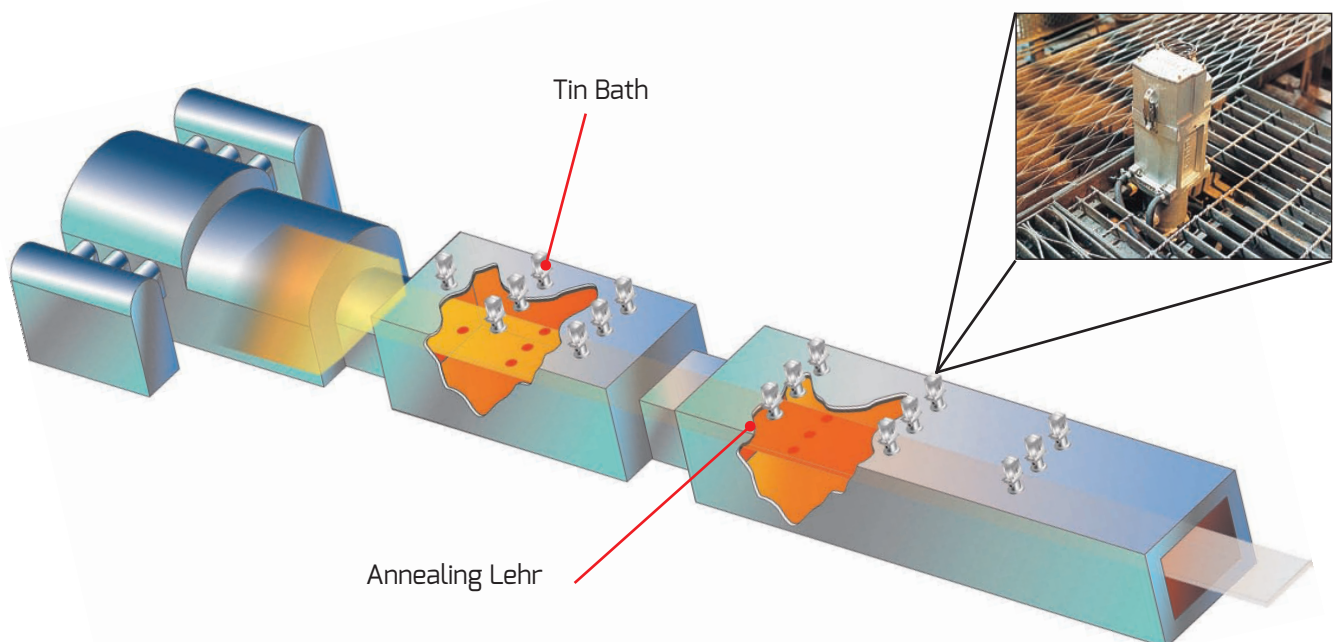
Accurate temperature measurement is vital in ensuring uniformity across the entire width of the glass. The FLT5B measures glass surface temperature in the range 250 °C to

1300 °C / 482 °F to 2372 °F, with excellent precision and long-term stability.

High measurement precision is achieved using AMETEK Land's leading-edge infrared technology, which gives a highly accurate, non-contact measurement with 1m fixed-focus 50:1 optical field of view.

Custom-designed for use in float lines in the glass production, the FLT5B is suitable for use through the process: from the initial floating and forming in the bath, to the cooling and annealing sections in the tin bath and annealing lehr.

### TYPICAL MEASURING POINTS ▼



FLT5B

# SPECIFICATION & DESIGN



## 1: WIDE BAND TEMPERATURE RANGE

Measures temperatures from 250 to 1300 °C / 482 to 2372 °F.

## 2: VERSATILE SPECTRAL RESPONSE

Offering a spectral response of 4.8 to 5.2  $\mu\text{m}$ , with low "penetration" into the glass.

## 2: ACCURATE RESULTS

With low 'penetration' into the glass, the thermometer's 50:1 optics and fixed 1m focus ensure 98 % energy from the 20mm target spot. This gives precise, stable results for surface temperature, even in conditions of high atmospheric humidity. Interchangeability 1 °C.

## 3: WIDE FIELD OF VIEW

Features 50:1 optics, fixed focus at 1 metre, with 98% energy guaranteed from within the 20mm target spot.

## 4: LOOP POWERED, 4 TO 20mA OUTPUT

Operates on a two-wire, 4 to 20 mA current loop.

## 5: MULTI-PRODUCT COMPATIBILITY

Quickly demountable from a cooling jacket and compatible with a comprehensive range of mountings and accessories.

## 6: EASY INSTALLATION

A versatile adjustable mounting assembly, complete with quick release adapter and air purge, provides ease of installation and removal for inspection purposes.

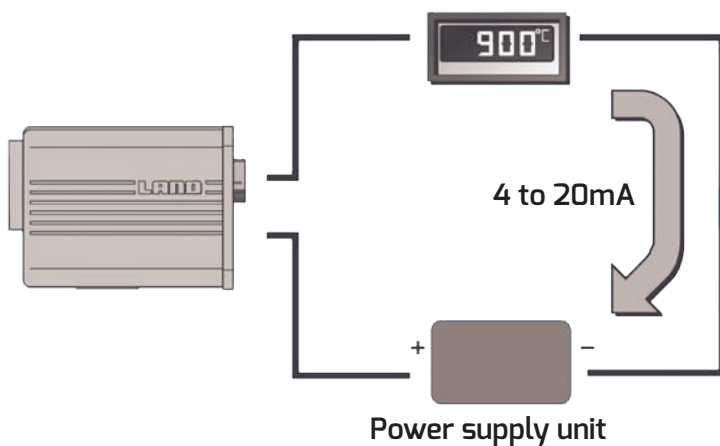
## TYPICAL APPLICATIONS

Glass Float Lines

Glass Tin Bath

Glass Annealing Lehr

## SCHEMATIC DIAGRAM



## FEATURES & BENEFITS

### WIDE MEASUREMENT RANGE

- Providing a spectral response from 4.8 to 5.2  $\mu\text{m}$ , the FLT5B measures from 250 to 1300 °C / 482 to 2372 °F. This means the thermometer can be used at more points on the line, reducing the number of different types of device needed.

**ACCURATE RESULTS** - With low 'penetration' into the glass, the thermometer's 50:1 optics and fixed 1m focus ensure 98% energy from the 20mm target spot. This gives precise, stable results for surface temperature, even in conditions of high atmospheric humidity.

### SUITABLE FOR HOSTILE ENVIRONMENTS

- The 4-20 mA loop-powered thermometer is quickly demountable from a cooling jacket, and is compatible with an extensive range of mountings and accessories including System 4 range, enabling use in harsh conditions.

# FLT5B

GLASS FLOAT LINE THERMOMETER

## SPECIFICATIONS

<b>Models</b>	<b>Measurement Range:</b>
FLT5/B C	250 °C - 1100 °C
FLT51/B C	400 °C - 1300 °C
FLT5/BF	500 °F - 2000 °F
<b>Spectral Response:</b>	4.8 to 5.2 µm
<b>Field of View:</b>	50:1 (98% energy) at 1m focus (fixed)
<b>Output:</b>	4 to 20 mA current loop
<b>Response Time (0-95%):</b>	1 to 10 seconds adjustable
<b>Emissivity Adjustment:</b>	0.3 to 1.10 in 0.01 steps
<b>Interchangeability :</b>	1 °C
<b>Resolution:</b>	0.2 °C
<b>Stability:</b>	0.023 % of span per 1 °C change in ambient temperature
<b>Accuracy (Absolute):</b>	0.25 %T (K) + 1 °C
<b>Ambient Limits:</b>	0 to 60 °C specified; -10 to 80 °C operating
<b>EMC:</b>	EN 50 082-2 (immunity) EN 50 081-1 (emission) IEC 1010 (safety)
<b>Sealing:</b>	To requirements of IP65/NEMA 4X
<b>Vibration:</b>	3g (10 to 300Hz)
<b>Power Supply:</b>	12 to 45 V d.c.



AMETEK Land's AMECare Performance Services ensure peak performance and maximum return on investment over the life of your equipment.

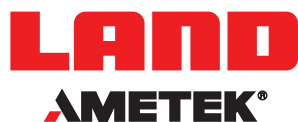
We will deliver this by:

- Proactively maintaining your equipment to maximize availability.
- Optimizing solutions to meet your unique applications.
- Enhancing user skills by providing access to product and application experts.

AMETEK Land's global service network provides unparalleled after-sales services to ensure you get the best performance and value from your AMETEK Land products. Our dedicated service centre teams and on-site engineers are trained to deliver the highest standard of commissioning, maintenance and after-sales support.

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

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### CONTACT US



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