

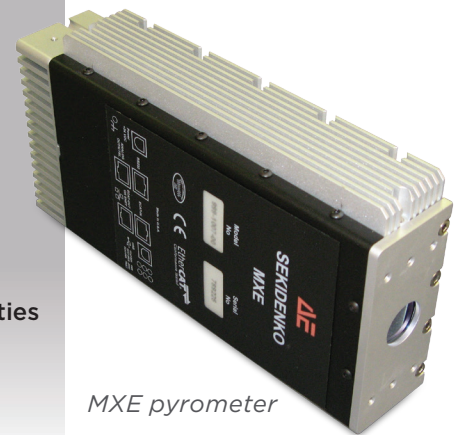
The Sekidenko MXE pyrometer combines speed and precision, enabling accurate, non-contact, repeatable measurement and control of demanding applications. Its high-speed (up to 10 kHz) performance is ideal for processes with moving targets, such as rotating susceptors. It is also extremely well suited for dynamic processes, including laser-based processing or rapid anneals. For easy integration and flexible control options, the MXE unit is remarkably compact and supports a variety of I/O protocols.

## Features

- › In-situ, non-contact temperature and emissivity measurement
- › High-speed measurement ideal for a variety of applications
- › Variety of available temperature + reflectance wavelengths
- › EtherCAT®, USB, and analog output options

## Benefits

- › Increased process insight
- › Highly configurable platform
- › Improved temperature-measurement accuracy and repeatability
- › Enhanced uniformity
- › Increased productivity, yield, and throughput
- › Decreased development time
- › Comprehensive measurement capabilities
- › Easy integration and flexible control



### INCREASED PROCESS INSIGHT

Temperature control is increasingly critical in a variety of applications. The MXE pyrometer is ideally suited to measure temperature in tightly controlled applications where uniform, repeatable measurements are required.

### HIGHLY CONFIGURABLE PLATFORM

The MXE pyrometer is configurable to suit a variety of applications. Features such as measurement wavelength, active reflectance, optical interface, and I/O protocols can be optimized for a specific application. Measurements up to 10 kHz are possible.

In addition, a variety of spot sizes and working distances can be supported. Use of fiber-coupled collection optics can also be supported for applications requiring remote placement of the electronics.

### ACCURATE, REPEATABLE PERFORMANCE

High-speed measurement allows collection of multiple data points and ensures statistically significant temperature determination. Moreover, built-in compensation algorithms allow stable operation over the full ambient temperature range for repeatable and consistent measurement.

### COMPREHENSIVE MEASUREMENT CAPABILITIES

Measurement wavelength can be selected specifically for the target and temperature range of interest, ensuring optimal results. Reflectance is also available, allowing for emissivity-corrected measurements on opaque targets.

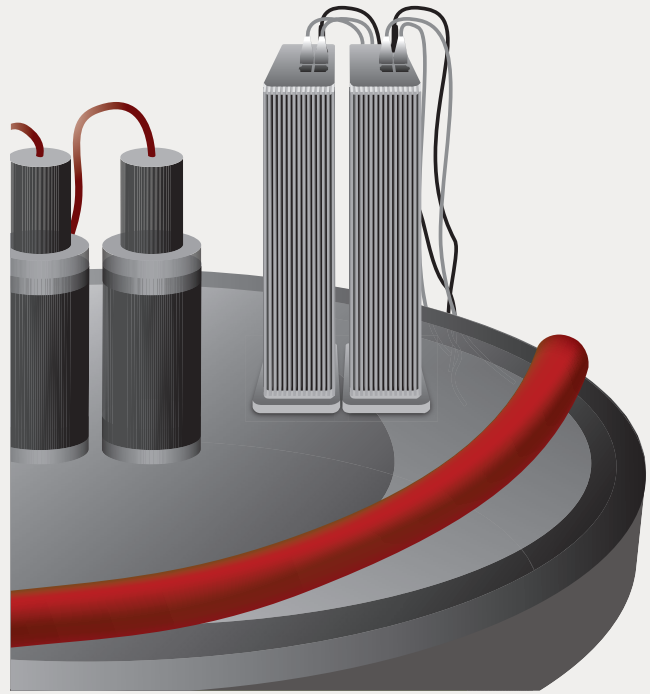
## EASY INTEGRATION AND FLEXIBLE CONTROL

**Compact Design**—Multiple units may be positioned side-by-side.

**Multiple Interface Options**—The availability of a variety of data output formats, along with buffering options, allows data to be used for both closed-loop temperature control and process monitoring. In particular, EtherCAT® protocol allows multiple devices to be chained and operated by a single controller, saving on the required infrastructure. I/O options include:

- › EtherCAT®
- › RS-232
- › USB

**Mounting Options**—Optional tilt and XY translation stages allow easy integration, as well as customization of working distance to suit your specific needs.



*MXE pyrometers mounted side-by-side on tool*

## SPECIFICATIONS

<b>Configurations</b>	Temperature only
	Temperature + reflectance
	Reflectance only
<b>Temperature Range</b>	Application dependent
<b>Read Rate</b>	Up to 10 kHz
<b>Accuracy</b>	±1.5°C, typical
<b>Repeatability</b>	±0.1°C, typical
<b>Resolution</b>	0.001°C
<b>Reflectance Accuracy</b>	±1 %
<b>Reflectance Repeatability</b>	±0.5 %
<b>Working Distance Range</b>	100 to 450 mm
<b>Spot Size</b>	2 to 8 mm
<b>Power Requirements</b>	AC: 90 to 263 VAC, 47 to 63 Hz
	DC: +24 VDC
<b>Environmental</b>	Operational: 18 to 40°C (64 to 104°F), non-condensing
<b>Physical Dimensions</b>	229 mm (D) x 127 mm (W) x 46 mm (H)
	9.0" (D) x 5.0" (W) x 1.8" (H)
<b>Weight</b>	< 1.54 kg (3.4 lb)
<b>Mounting</b>	Tilt stage and XY stage optional
<b>EtherCAT® Protocol</b>	EtherCAT® standard conformance
<b>USB 2.0</b>	Up to 2 kHz transfer rate for 10 kHz data
<b>RS-232</b>	Selectable baud rate up to 460,800; 7E1 or 8N1
<b>Analog Output</b>	0 to 10 V or 4 to 20 mA outputs
<b>Control I/O</b>	Sync out, alarms out, source interlock
<b>System Requirements</b>	I5 or equivalent processor with Beckhoff qualified NIC card recommended for EtherCAT® support