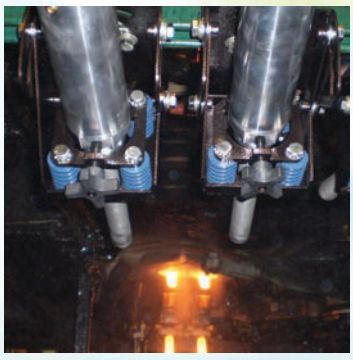
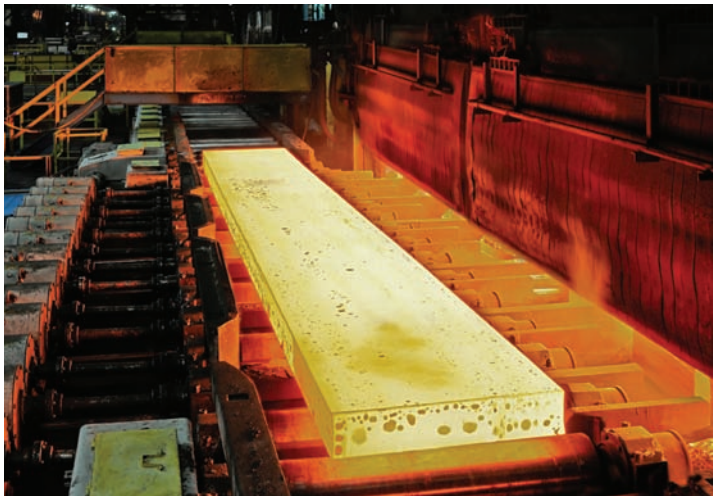
BASF
We create chemistry

Industrial Solutions

EXACTUS®
Temperature Sensors

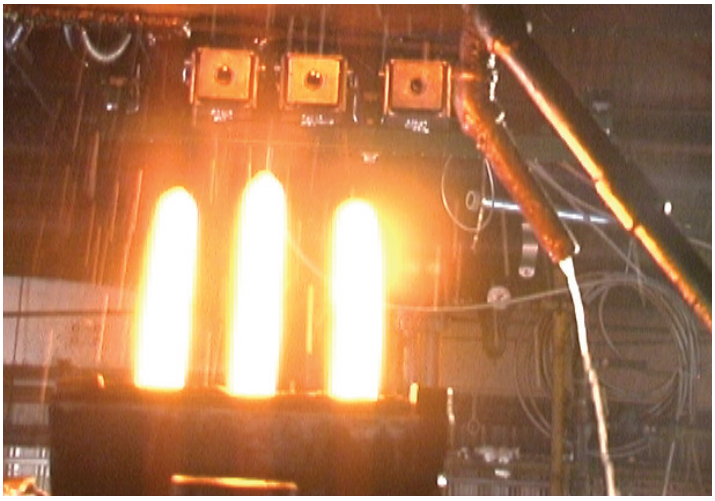


Metal



Accurate optical temperature measurements by Exactus® optical sensors in each step of metal fabrication enable optimized product quality, which eliminates product down-grades and reduces waste.

Glass



For glass bottling and fiberglass facilities, Exactus® optical temperature sensors have demonstrated value-driven results, which enable more profit from existing processes by accurately measuring gob, mould, forehearth, and crown temperatures.

Petrochemical

By utilizing Exactus® temperature sensors for measurements of coil outlet, tube metal, and gas temperatures, cracking operations achieve higher profit by minimizing maintenance, optimizing product mix, and correcting coke cycles.

Kilns

Exactus® temperature sensors provide unique solutions for accurate product temperature measurements in dusty kilns, as well as gas and kiln shell temperature measurements, resulting in optimized controls for the most critical process variables.

Applications

Utilizing patented electronics, BASF Exactus® technology provides the fastest, most precise optical temperature sensors in the world.

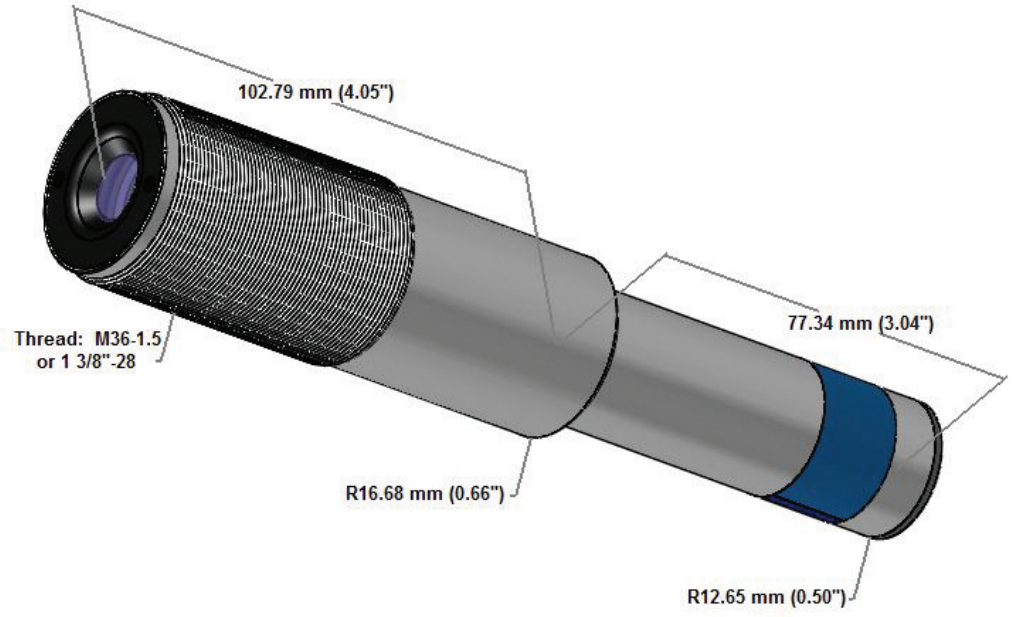
- Measurement stability over time of 0.1 °C per year, with ambient change of 0.05 °C per °C
- A dynamic range which enables one instrument to measure the entire process range
- The ability to perform complex data analysis and output results at less than 1 millisecond

For industrial processes, Exactus® is changing the way the world thinks about process control.

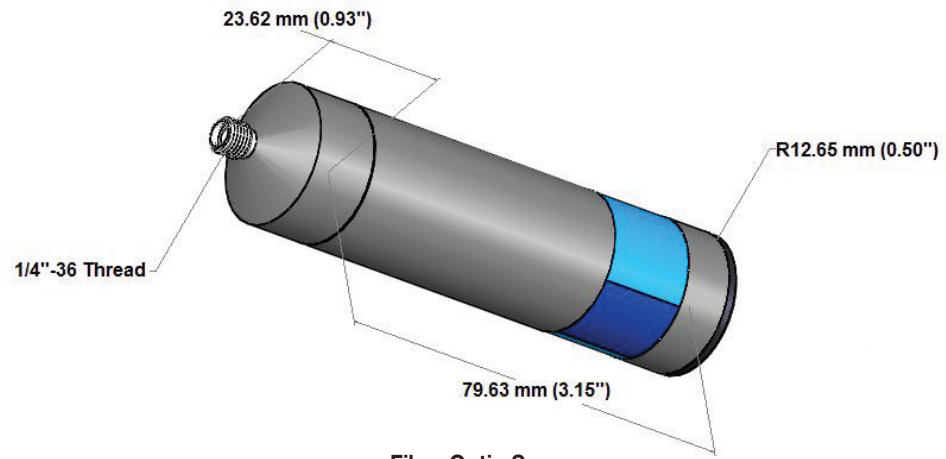
		Sensor			Configuration		
		Long Wavelength	Short Wavelength	Dual Wavelength	Fixed Optics	Fiber Optic Lens Assembly	Optical Thermowell
Metal	Rolling Mills			✸	✸		
	Continuous Casting			✸	✸		
	Re-heat Furnaces			✸	✸		
	Smelting		✸				✸
Glass	Gob			✸	✸		
	Mould	✸					
	Forehearth		✸			✸	
	Crown/Bottom		✸				✸
	Sidewall		✸		✸		
Fiberglass	Spinner		✸		✸		
	Stream		✸		✸		
	Bushing		✸		✸		
	Forehearth		✸			✸	
Petrochemical	Coil Outlet	✸				✸	
	Tube Metal		✸			✸	
	Bridge Wall/Gas		✸				✸
Kilns	Product	✸		✸	✸		
	Gas	✸					✸
	Kiln Shell		✸			✸	

Physical Specifications	
Power Supply	12 – 28 VDC, 3W
Storage temperature	-20 to 70 °C
Ambient Temperature	Electronics: 0 to 60 °C Hostile Environment Lens Assembly: 0 to 250 °C High-Temperature Optical Fiber: 0 to 250 °C
Housing Material	Sensor and Optics: 304 Stainless Steel/Aluminum Purge Housing: Aluminum Hostile Environment Lens Assembly: 304 Stainless Steel
Weight	Fixed Optics Pyrometer: 0.510 kg (1.125 lbs.) Fiber Optic Sensor: 0.198 kg (7 oz.)
Electronics Ratings	EN 61326-1, EN 61326-1, EN 61000-3-2, EN 61000-3-3

Physical Dimensions



Fixed Optics



Fiber Optic Sensor

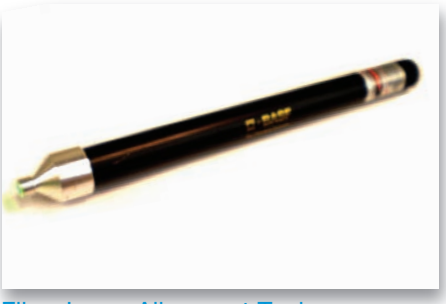
Accessories

Industrial Purge Housing

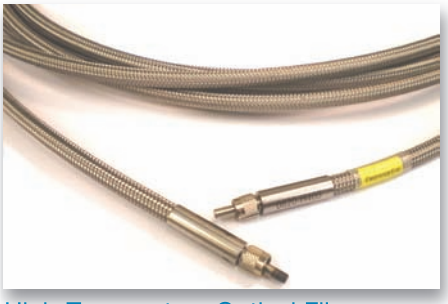
Gimbal Mount

NEMA Housings

Laser Alignment Tool



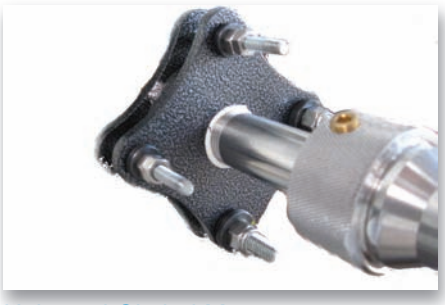
Fiber Laser Alignment Tool



High-Temperature Optical Fiber

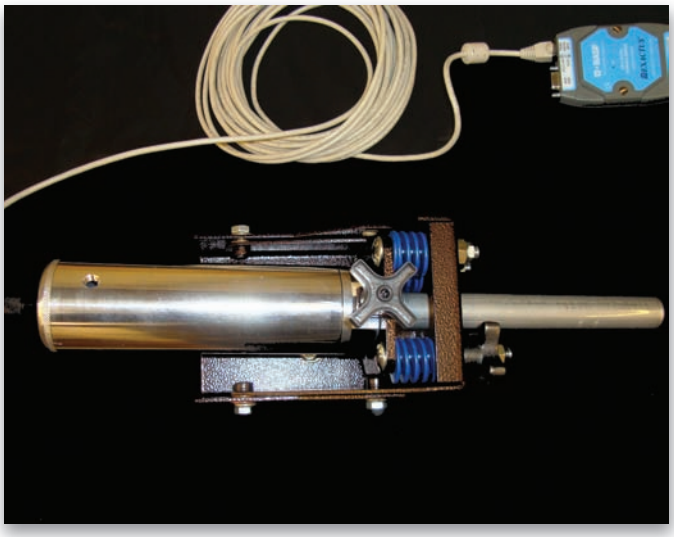
Hostile Environment Lens Assembly (HELA)

Industrial Lens Adapter



Universal Gimbal Mount

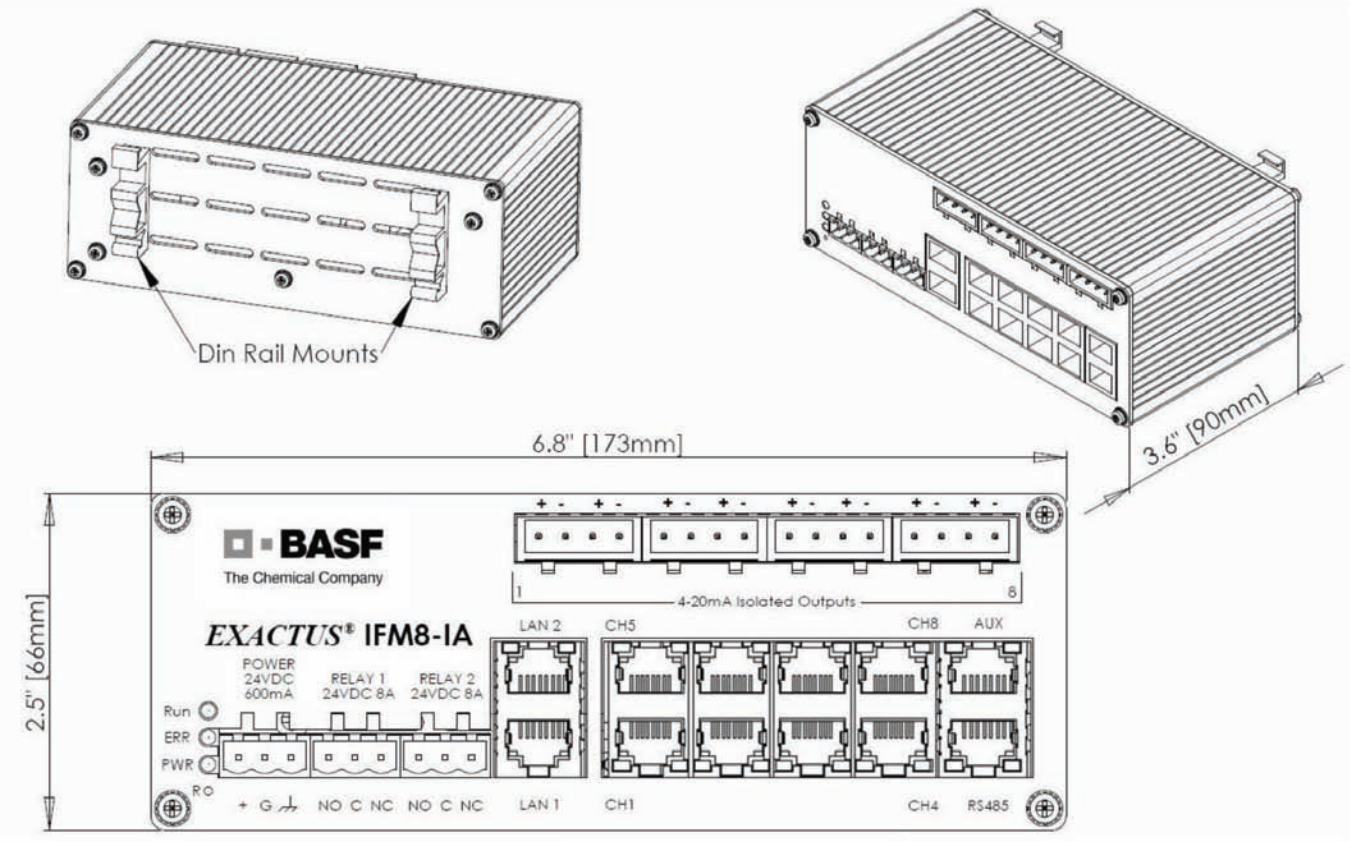
Example Configurations



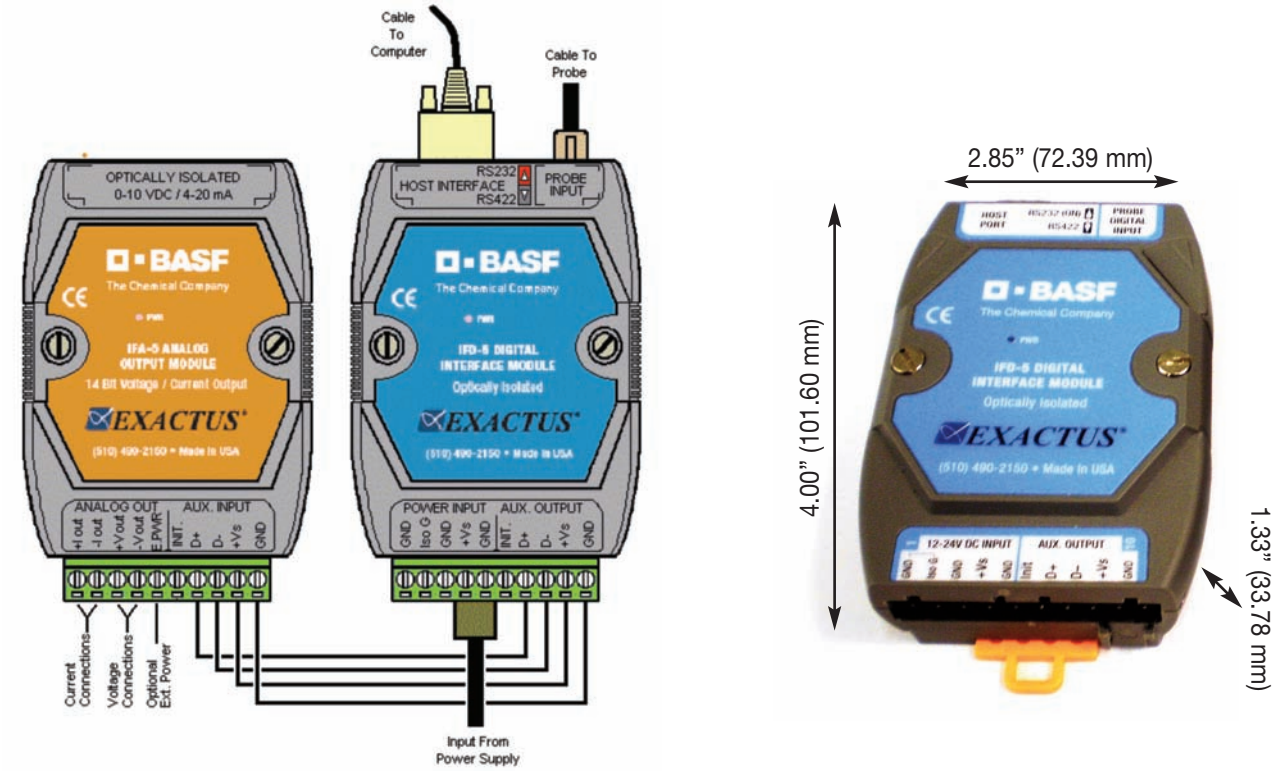
Gob Measurement Assembly

Optical Thermowell Assembly

Modules – Output Options



Industrial Mux – 8 sensor inputs with digital and analog outputs

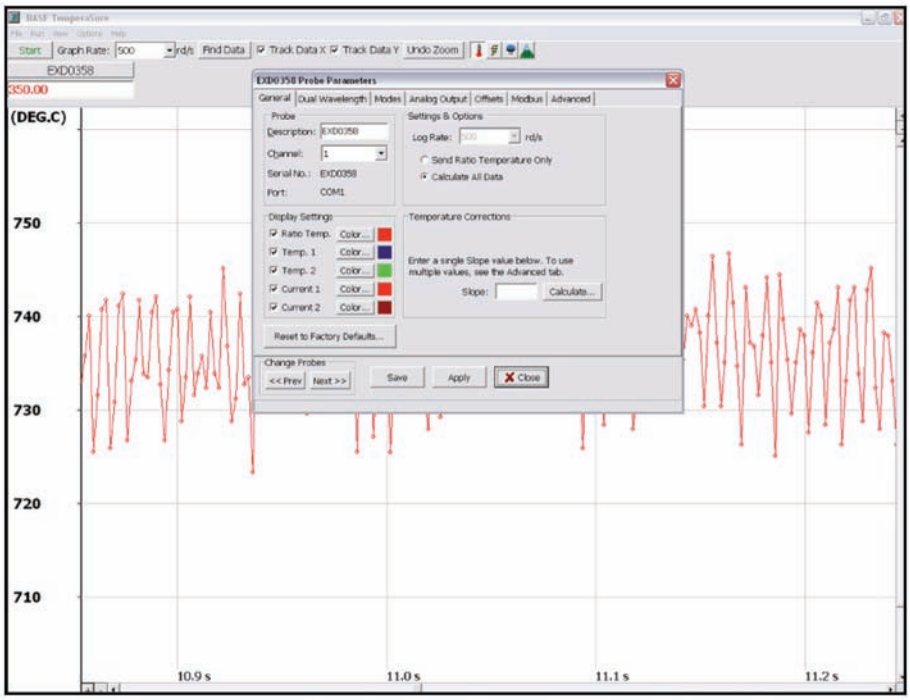


Interface Digital (IFD)/Interface Analog (IFA) – Single channel input with digital and analog outputs

Software

TemperaSure® software is included with the purchase of any Exactus® product. The software is intuitive and user-friendly. It is easily installed onto any PC with a Microsoft® Windows® operating system.

- Plot temperature data for up to 8 sensors simultaneously
- Configure sensor output parameters, including:
  - Averaging
  - Peak-picking
  - Emissivity/E-slope
  - Data interpolation



Performance Specifications	
Measurement Ranges	Long Wavelength: 150 – 2000 °C Short Wavelength: 500 – 3000 °C Dual Wavelength: 400 – 2500 °C (Cross-over mode: >200 °C)
Repeatability	0.10°C
Resolution	Up to 0.001°C
Stability	Max 0.10°C per year (maximum) Ambient: 0.05°C/°C for 20-45°C, 0.10 °C/°C rest of range
Accuracy	± 1.5°C or 0.15% of measured temperature
Speed	Up to 1000 readings per second
Digital Output	RS 485 Full Duplex, RS 232 (Modbus Protocol)
Analog Output	Option User Configurable 0-10V, 4-20mA, 0-20mA (Max 100 reading/sec)

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About Us

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