COHERENT

PowerMax-Pro USB and RS Sensors

100 mW to 150W

PowerMax-Pro USB and RS sensors incorporate LabMax-Pro instrumentation directly within the sensor cable. Similar to other Coherent USB and RS sensors, this configuration offers a smaller form factor for use inside laser processing systems or production lines. Additionally, the cost of annual calibration is half that of a separate meter and sensor system. The PowerMax-Pro USB and RS sensors operate with LabMax-Pro PC applications software (included).

PowerMax-Pro (Patent #9,012,848) represents a dramatic technological advancement in laser power sensing that utilizes a thin-film detector only microns thick which rapidly senses thermal changes due to incident laser energy. The result is a measurement response time below 10 µs, as compared to over 1 second for traditional thermopiles. These detectors can operate at high power over a spectral range as broad as 300 nm to 11 µm, and incorporate a large 30 mm x 30 mm active area.

The high response speed of PowerMax-Pro sensors is particularly advantageous in a wide range of commercial and medical applications. It enables nearly instant measurement of CW laser power, resulting in increased throughput, and also supports high resolution analysis of modulated laser pulse shapes resulting in improved laser characterization and process control.

Superior Reliability & Performance

PowerMax-Pro USB/RS Features:

- **Includes USB and RS-232 instrumentation in cable**
- **Measures power in tens of microseconds**
- **Capable of tracing pulse shape of modulated and long pulse lasers**
- **High power up to 150W**
- **Large 30 x 30 mm active area**

PowerMax-Pro USB/RS Applications:

- **Laser Processing including Cutting, Drilling, and Welding**
- **Medical Systems including Long Pulse Aesthetic applications**
- **Diode LIV Testing - increase resolution and shorten test time**
- **Scientific and Engineering**
- **Production and QA Testing**

www.Coherent.com/PowerMax-Pro

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System Specifications	PowerMax-Pro USB/RS 150 HD	PowerMax-Pro USB/RS 150F HD
Wavelength Range	355 nm to 1100 nm; 9 µm to 11 µm	355 nm to 1100 nm; 9 µm to 11 µm
Average Power Range	200 mW to 150W	200 mW to 150W (17W max air-cooled, cont.) (65W max air-cooled, 5 min.)
Max. Pulsed Peak Power (W)	200	200
Noise Equivalent Power (mW) Standard Mode (10 Hz) High Speed Mode (20 kHz) Snapshot Mode (625 kHz)	 <4 <8 <16	 <4 <8 <16
Max. Power Density (kW/cm^2)	0.2 (150W)	0.2 (150W)
Max. Peak Power Density (kW/cm^2)	14	14
Max. Energy Density (J/cm^2)	0.700 (10 ns; 355 nm)	0.700 (10 ns; 355 nm)
Rise Time (µs)	≤10	≤10
Fall Time (µs)	≤10	≤10
Detector Coating	HD	HD
Diffuser	None	None
Active Area (mm)	30 x 30	30 x 30
Min. Beam Size (mm)	2.0 1.0 (up to 3% error)	2.0 1.0 (up to 3% error)
Max. Beam Size (mm)	30	30
Calibration Uncertainty (%)(k=2) at 810 nm	±2	±2
Spectral Compensation Accuracy (%)	±5	±5
Power Linearity (%)	±3	±3
Spatial Uniformity (%)(center 75% of aperture; 2.5 mm beam)	±5	±5
Calibration Wavelength (nm)	810	810
Cooling Method	Water/Air (intermittent)	Fan
Cable Type	USB/RS-232	USB/RS-232
Cable Length	4.2m (13.8 ft.)	4.2m (13.8 ft.)
Part Number	1295920 (USB) 1295921 (RS-232)	1295922 (USB) 1295923 (RS-232)

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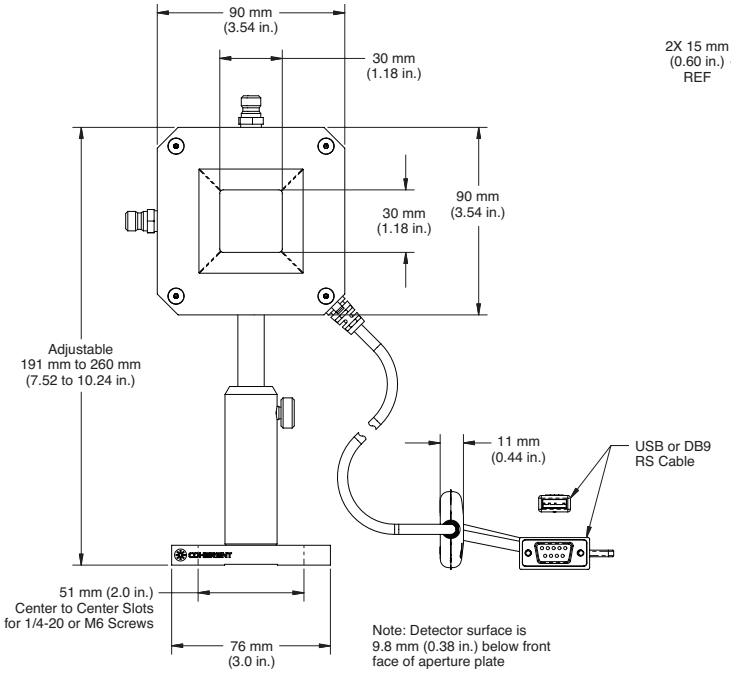
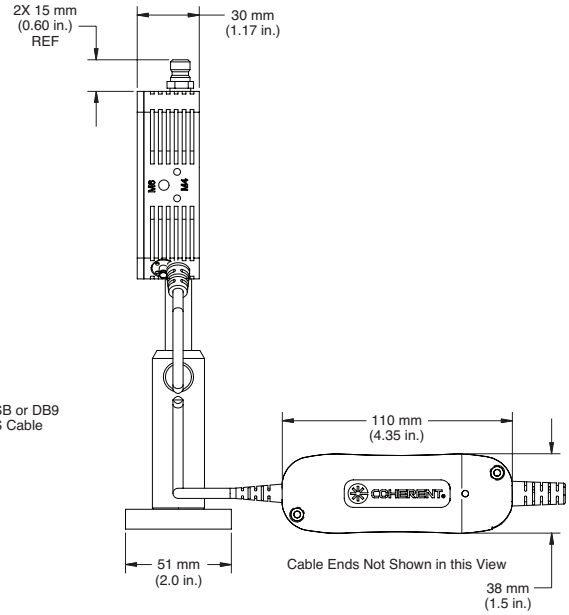
Mechanical Specifications

PowerMax-Pro USB/RS 150 HD

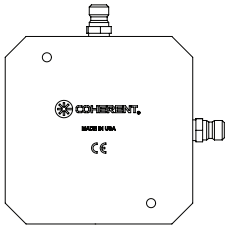


Front View

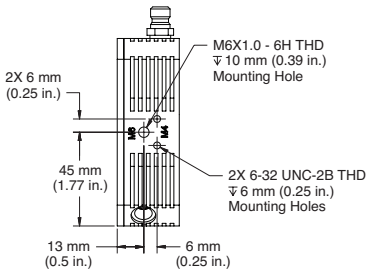


Side View

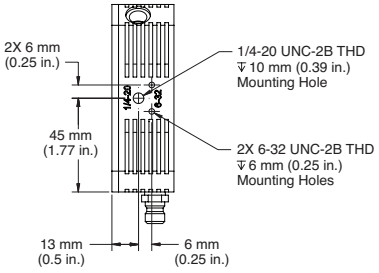
Rear View



Side View



Bottom View

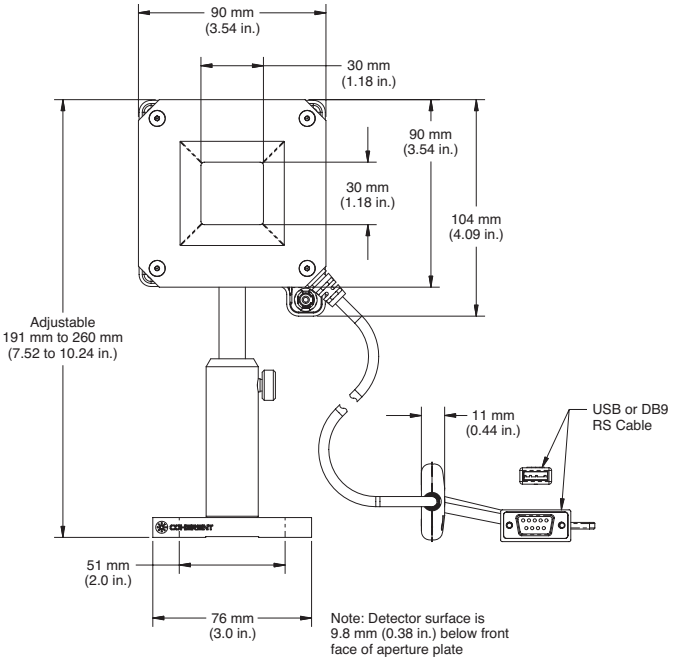


PowerMax-Pro USB and RS Sensors

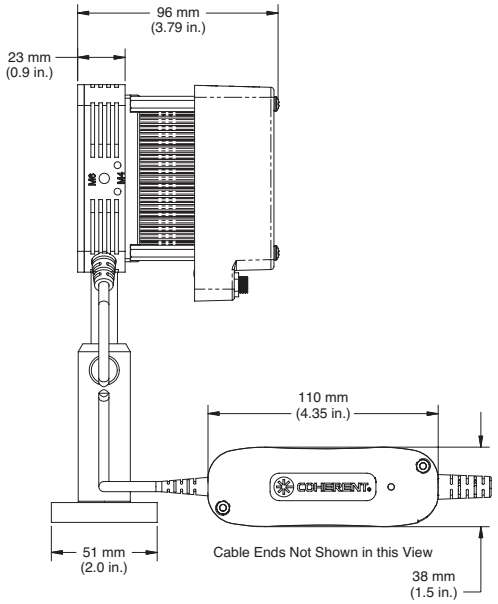
100 mW to 150W

Mechanical Specifications

PowerMax-Pro USB/RS 150 HD

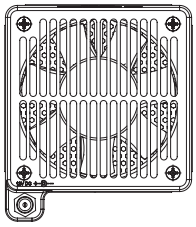


Front View

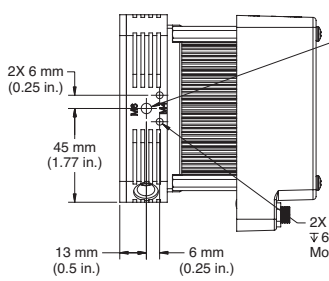


Side View

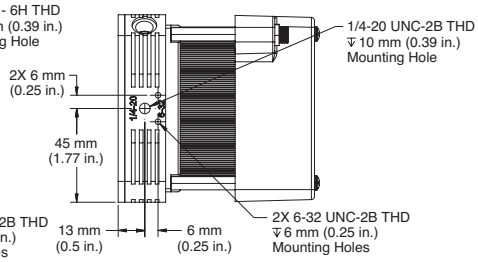
Rear View



Side View



Bottom View



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all PowerMax-Pro sensors. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.