



Multipurpose EnergyMax USB-RS Sensors

High Damage Threshold, Large Area, Laser Energy Sensors for a Wide Variety of Uses

The Multipurpose EnergyMax measure laser pulse energy over a wide range of wavelengths (190 nm to 12 μ m), beam diameters, average power levels and repetition rates. They incorporate Coherent's unique MaxBlack coating, which offers high damage resistance and mechanical durability characteristics.

These sensors have USB and RS-232 interfaces for use with a PC or industrial controller. DB25 models are also available for use with stand-alone energy meters.

FEATURES

- MaxBlack coating delivers high damage threshold and mechanical durability
- Operate over the 190 nm to 12 μ m range
- Enable pulse energy measurements from 300 nJ to 2 J
- Measure single shot to 1 kHz repetition rate
- USB and RS-232 interfaces

APPLICATIONS

- Medical
- Scientific
- Industrial



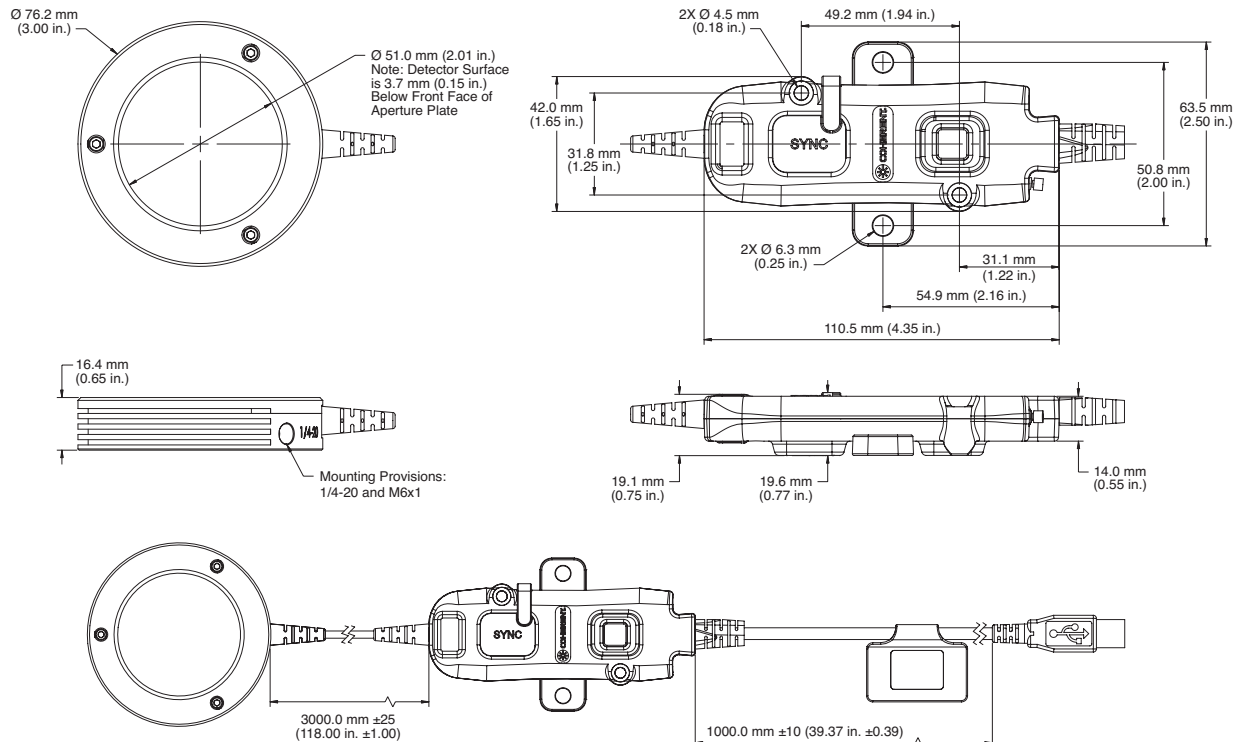
| SPECIFICATIONS | J-50MB-HE | J-50MB-LE | J-25MB-HE | J-25MB-LE | J-10MB-HE | J-10MB-LE |
|----------------------------------------------|-------------------------|------------------|---------------|----------------------|----------------|----------------------|
| Energy Range | 1.6 mJ to 2 J | 400 µJ to 500 mJ | 850 µJ to 1 J | 50 µJ to 50 mJ | 12 µJ to 20 mJ | 500 nJ to 600 µJ |
| Noise Equivalent Energy | <160 µJ | <40 µJ | <85 µJ | <5 µJ | <1.2 µJ | <50 nJ |
| Wavelength Range (µm) | 0.19 to 12 | | | | | |
| Active Area Diameter (mm) | 50 | | 25 | | 10 | |
| Maximum Average Power ¹ (W) | 10 | | 5 | | 4 | |
| Maximum Pulse Width (µs) | 57 | | 17 | | | |
| Maximum Repetition Rate (pps) | 300 | | 1000 | | | |
| Maximum Energy Density (mJ/cm ²) | 500 (at 1064 nm, 10 ns) | | | | | |
| Detector Coating | MaxBlack | | | | | |
| Diffuser | No | | | | | |
| Calibration Wavelength (nm) | 1064 | | | | | |
| Calibration Uncertainty (%) (k=2) | ±2 | | | | | |
| Energy Linearity (%) | ±3 | | | | | |
| Cable Length (m) | 3 | | | | | |
| Cable Type | USB and RS | | | | | |
| Part Number | | | | | | |
| USB | 1191444 | 1191443 | 1191442 | 1191441 ² | 1191436 | 1191435 ² |
| RS | 1191432 | – | – | 1191431 | 1191429 | 1191428 |

¹ Extend average power range with optional heat sink.

² 1 Day Ship program: eligible for next business day shipment.

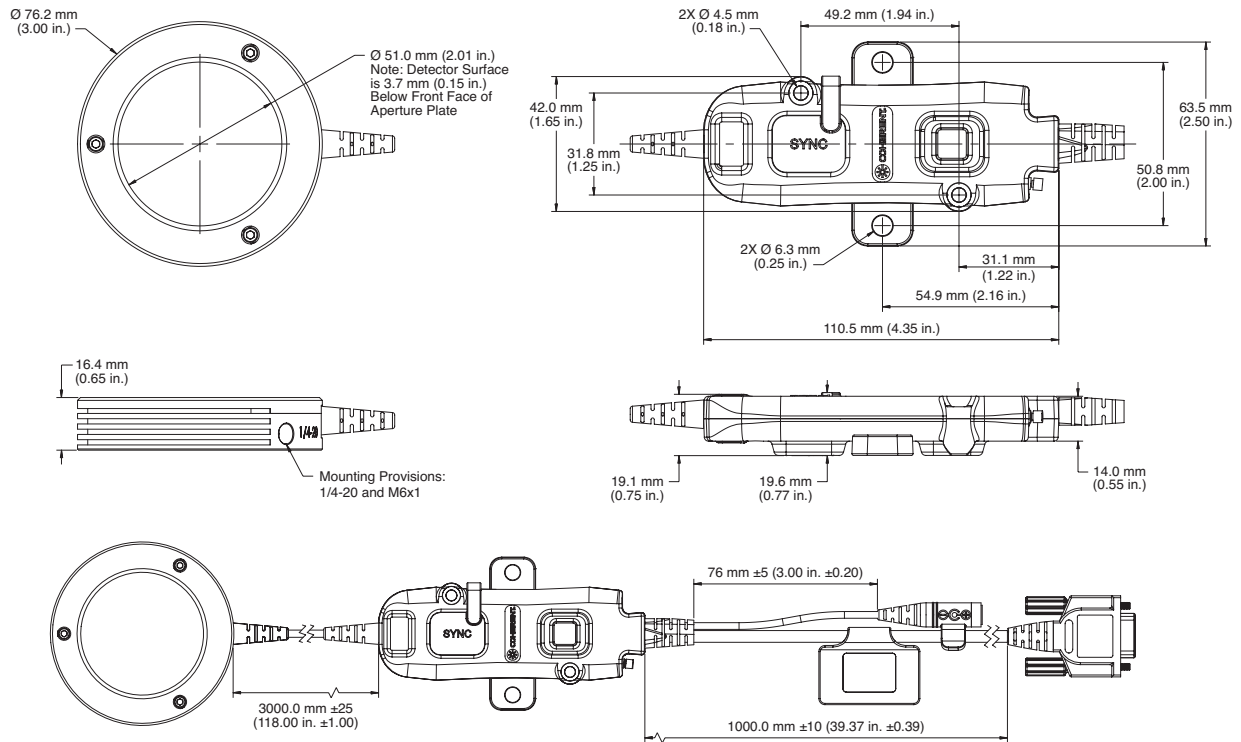
MECHANICAL SPECIFICATIONS

J-50MB-HE and -LE USB

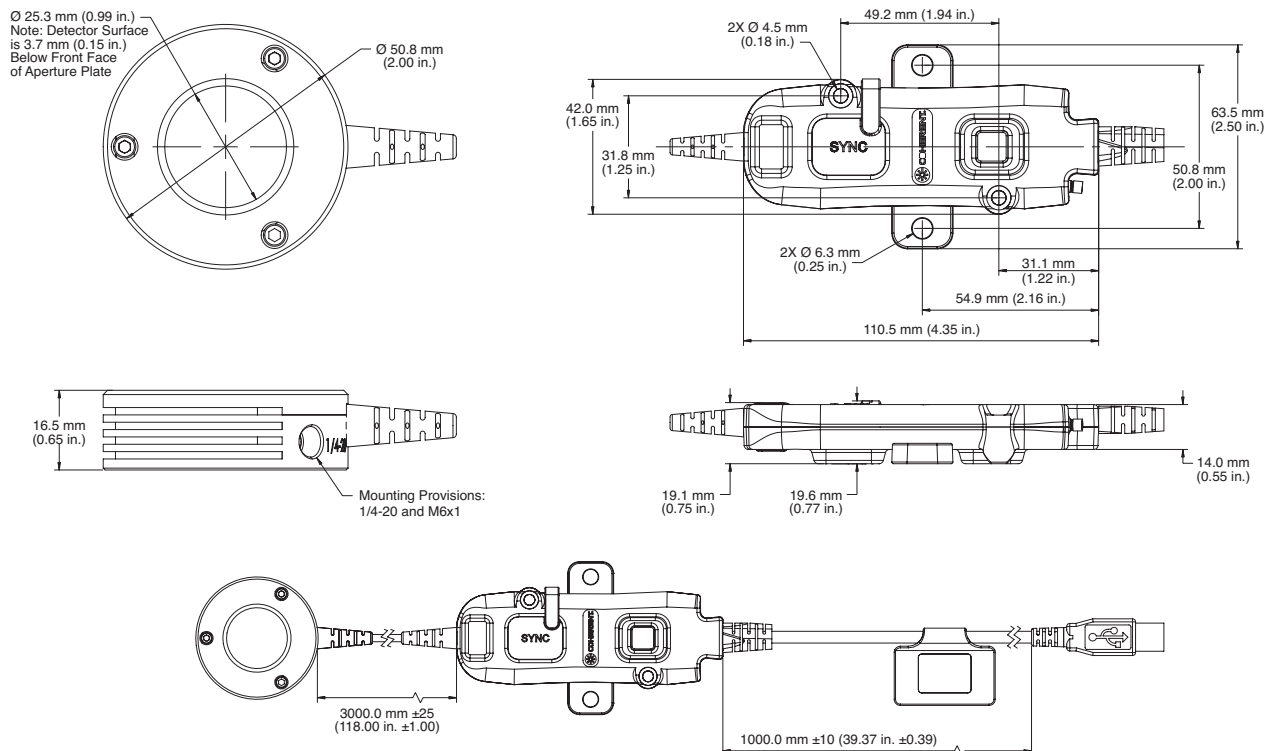


MECHANICAL SPECIFICATIONS

J-50MB-HE and -LE RS-232

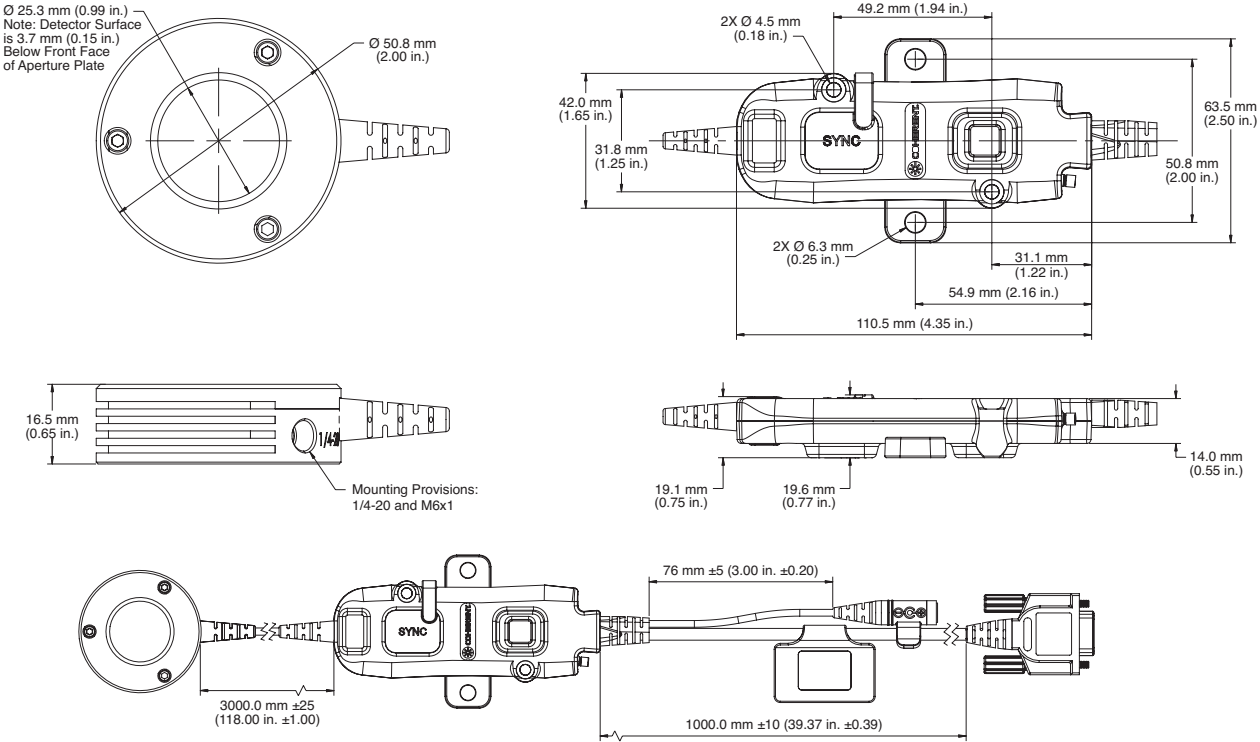


J-25MB-HE and -LE USB

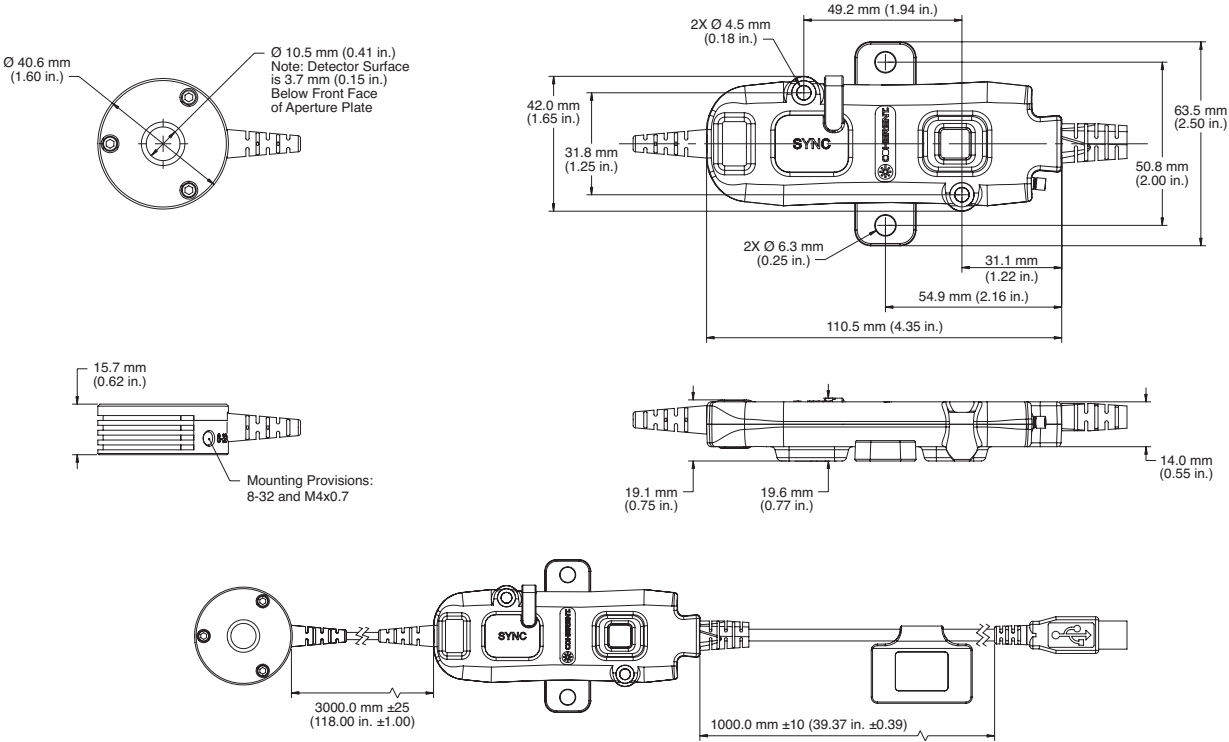


MECHANICAL SPECIFICATIONS

J-25MB-HE and -LE RS-232



J-10MB-HE and -LE USB

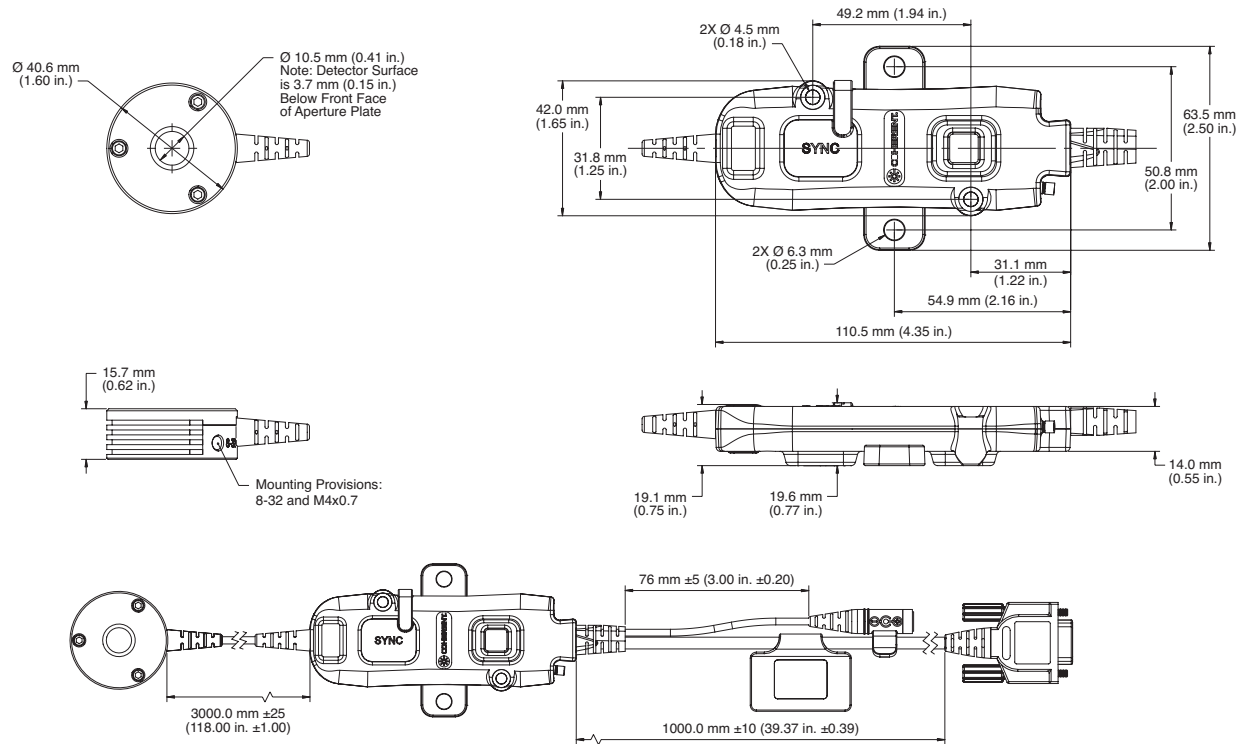




Multipurpose EnergyMax USB-RS Sensors Datasheet

MECHANICAL SPECIFICATIONS

J-10MB-HE and -LE RS-232



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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 EnergyMax 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.
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