



# 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  $\mu$ 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  $\mu$ 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



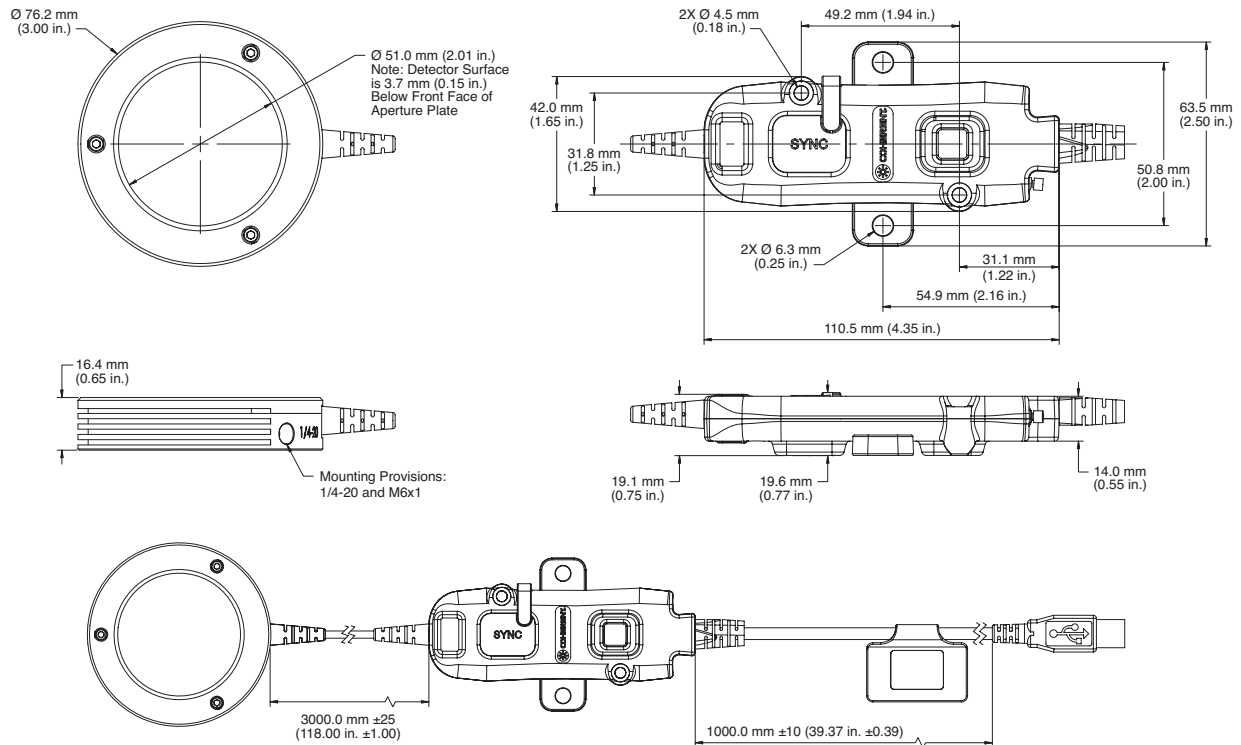
SPECIFICATIONS	J-50MB-HE	J-50MB-LE	J-25MB-HE	J-25MB-LE	J-10MB-HE	J-10MB-LE
Energy Range	1.6 mJ to 2 J	400 µJ to 500 mJ	850 µJ to 1 J	50 µJ to 50 mJ	12 µJ to 20 mJ	500 nJ to 600 µJ
Noise Equivalent Energy	<160 µJ	<40 µJ	<85 µJ	<5 µJ	<1.2 µJ	<50 nJ
Wavelength Range (µm)	0.19 to 12					
Active Area Diameter (mm)	50		25		10	
Maximum Average Power <sup>1</sup> (W)	10		5		4	
Maximum Pulse Width (µs)	57		17			
Maximum Repetition Rate (pps)	300		1000			
Maximum Energy Density (mJ/cm <sup>2</sup> )	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 <sup>2</sup>	1191436	1191435 <sup>2</sup>
RS	1191432	–	–	1191431	1191429	1191428

<sup>1</sup> Extend average power range with optional heat sink.

<sup>2</sup> 1 Day Ship program: eligible for next business day shipment.

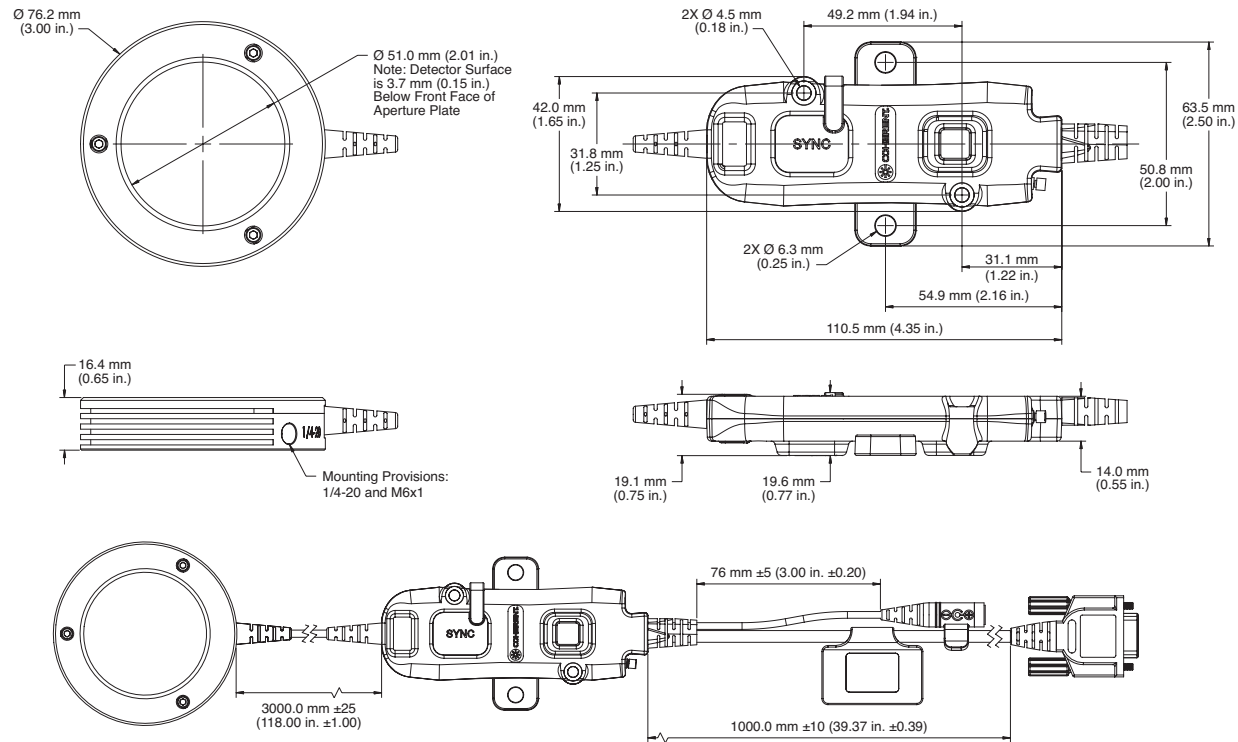
## MECHANICAL SPECIFICATIONS

### J-50MB-HE and -LE USB

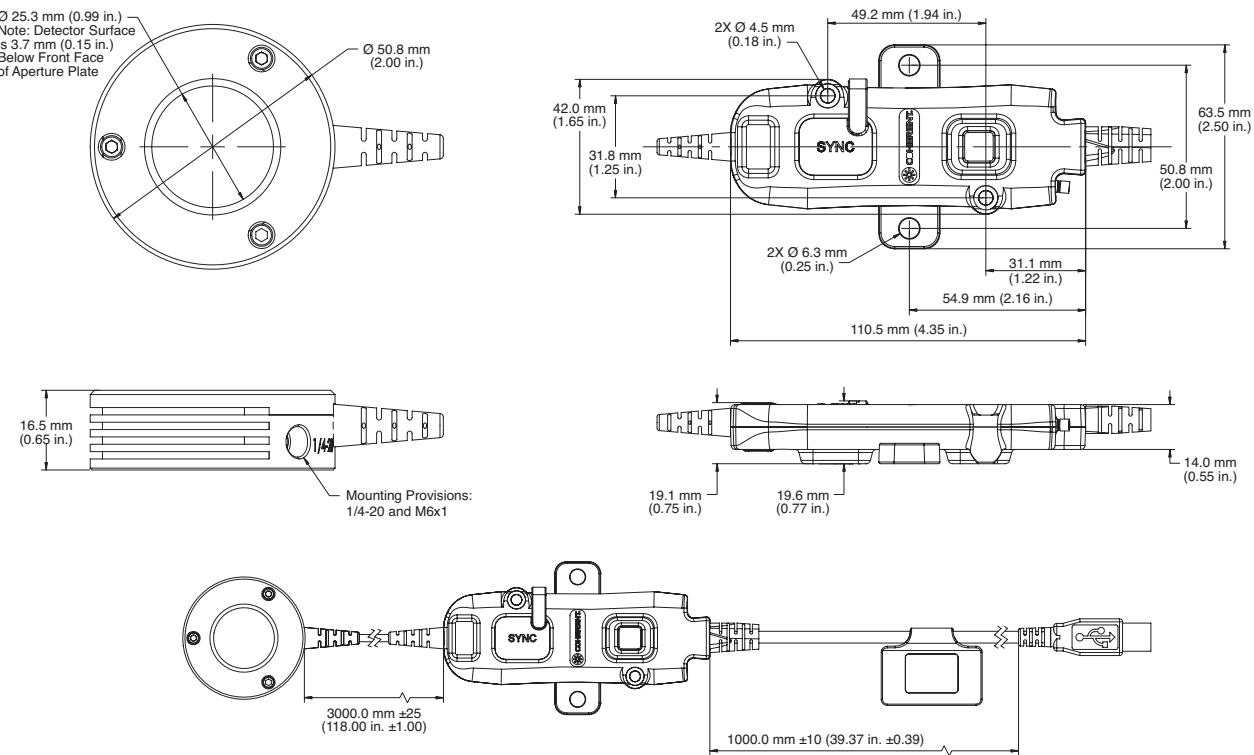


MECHANICAL SPECIFICATIONS

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

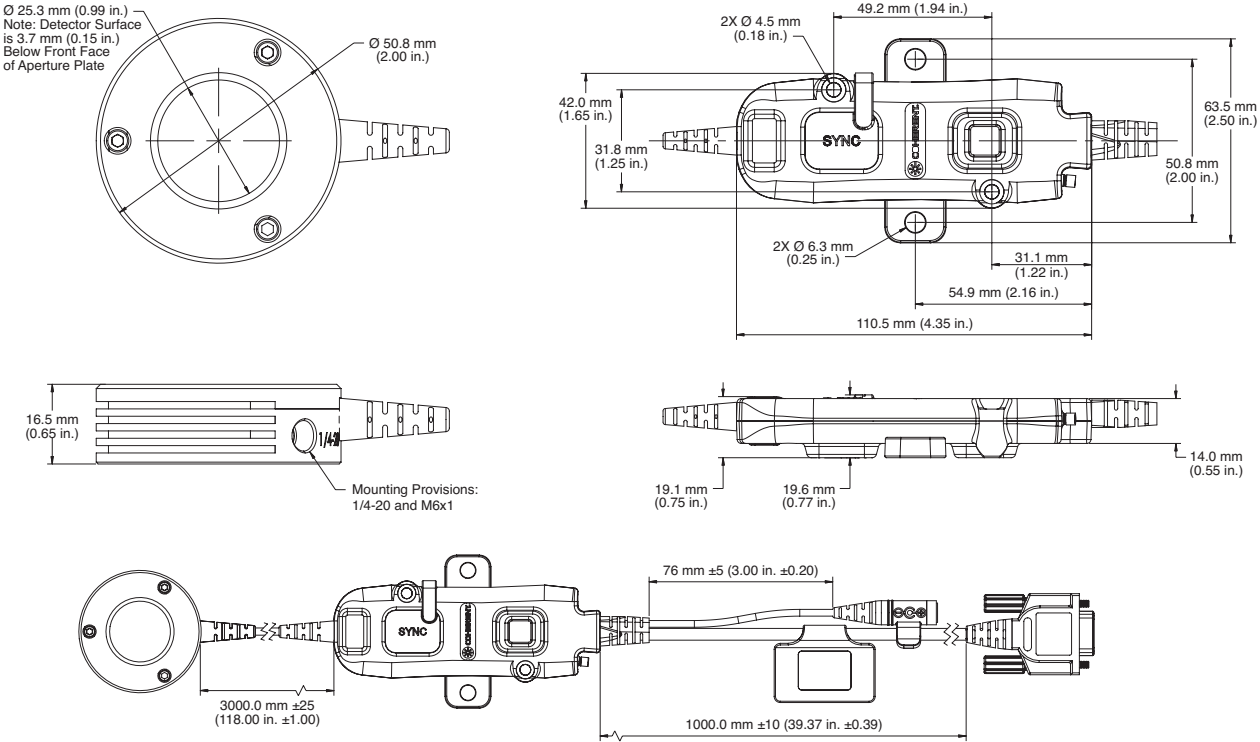


J-25MB-HE and -LE USB

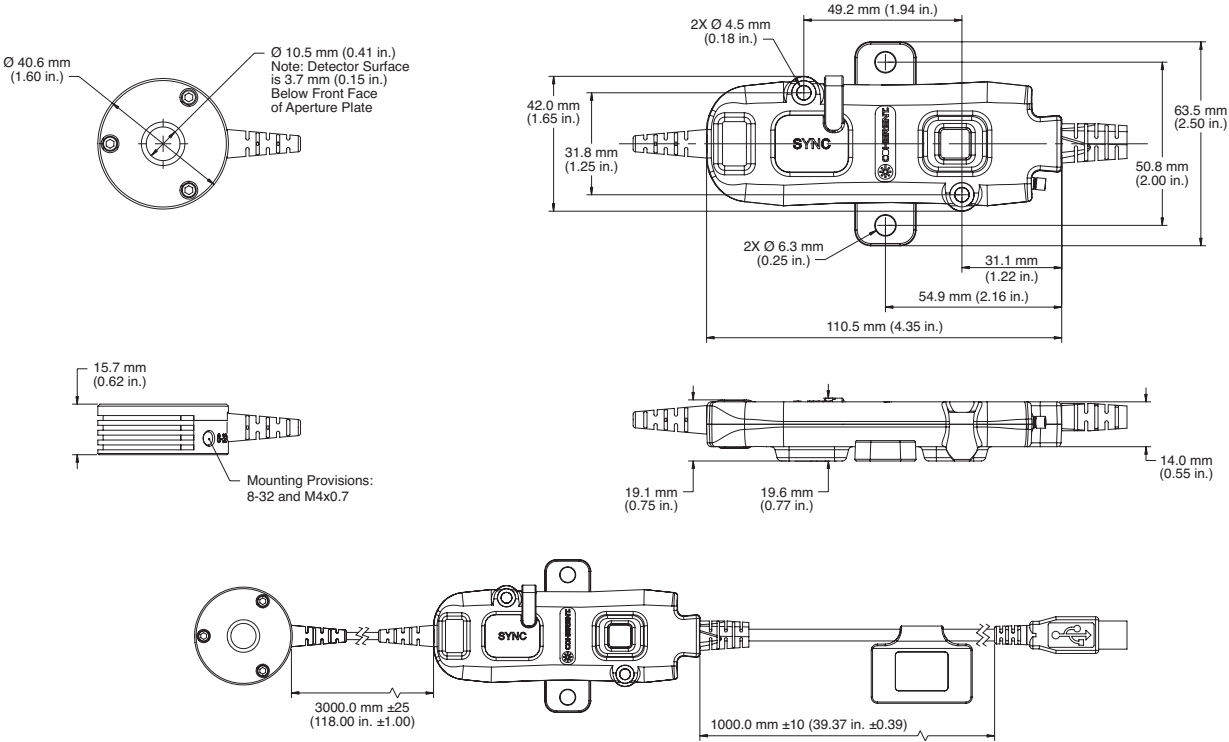


MECHANICAL SPECIFICATIONS

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



J-10MB-HE and -LE USB

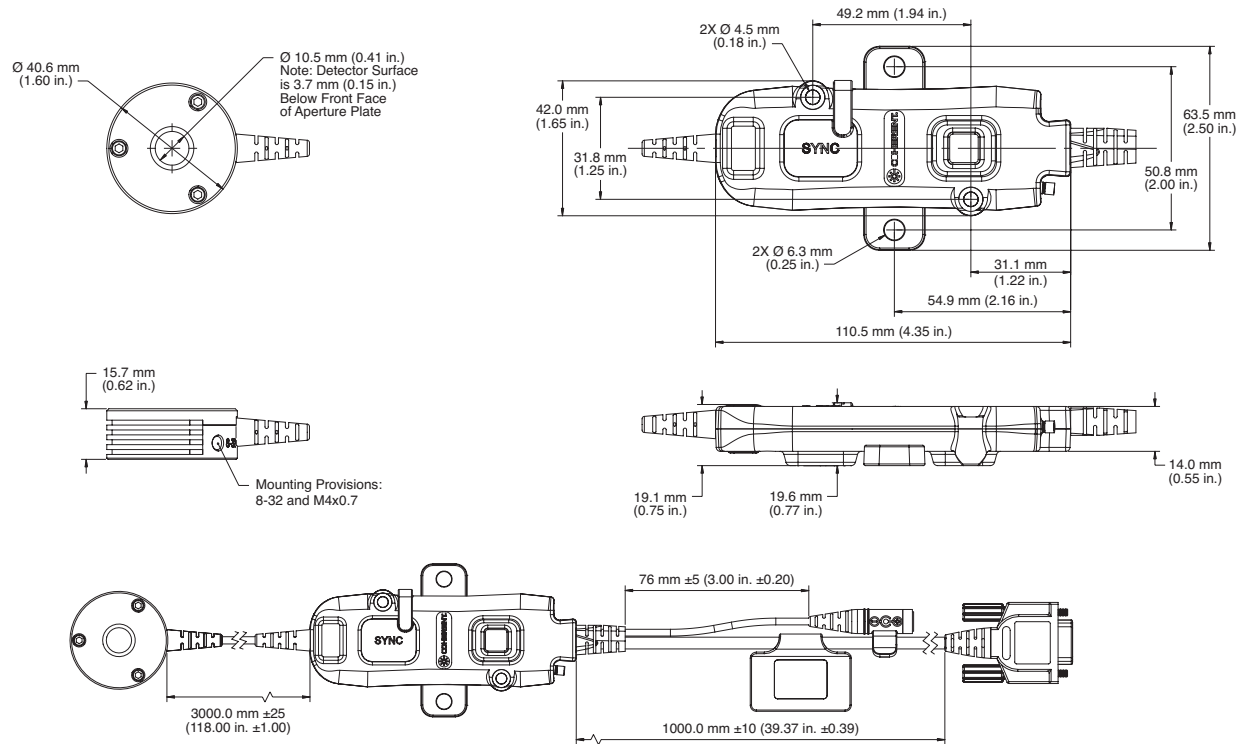




## Multipurpose EnergyMax USB-RS Sensors Datasheet

### MECHANICAL SPECIFICATIONS

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



Coherent, Inc.,  
5100 Patrick Henry Drive Santa Clara, CA 95054  
p. (800) 527-3786 | (408) 764-4983  
f. (408) 764-4646

[tech.sales@coherent.com](mailto:tech.sales@coherent.com) [www.coherent.com](http://www.coherent.com)

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](http://www.coherent.com) or contact your local Sales or Service Representative.  
MC-027-21-0M0821 Copyright ©2021 Coherent, Inc.