## EnergyMax USB/RS Sensor System

Software Installation and Quick Start Guide





INNOVATIONS THAT RESONATE



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## TABLE OF CONTENTS

1.0 Safety Information	2
1.1 Signal Words in this Manual	3
1.2 Symbols	3
1.3 Laser Safety	4
1.4 Electrical Safety	4
2.0 Preface	5
2.1 Publication Updates	5
2.2 System Requirements	6
3.0 Software Installation	7
3.1 Install the EnergyMax PC Software	7
3.2 Install the EnergyMax Driver Manually	9
4.0 Setup Quick Start	10
5.0 Service and Support	14
5.1 Contact Product Support	14
5.2 International Support	15
5.3 Calibration	15
5.4 Obtain Service	16

## **1.0 Safety Information**

This documentation may contain sections in which particular hazards are defined or special attention is drawn to particular conditions. These sections are indicated with signal words in accordance with ANSI Z-535.6 and safety symbols (pictorial hazard alerts) in accordance with ANSI Z-535.3 and ISO 7010.

#### **1.1 Signal Words in this Manual**

Two signal words are used in this documentation: **WARNING** and **NOTICE**.

The signal word **WARNING** designates the degree or level of hazard when there is the risk of injury:

#### WARNING!

Indicates a hazardous situation that, if not avoided, <u>could</u> result in <u>death or serious</u> <u>injury</u>.

The signal word **NOTICE** is used when there is risk of property damage.

**NOTICE** Indicates information considered important, but not hazard-related.

Messages relating to hazards that could result in both personal injury and property damage are considered safety messages and not property damage messages.

## 1.2 Symbols

The signal word **WARNING** is always emphasized with a safety symbol that indicates a special hazard, regardless of the hazard level:



This symbol is intended to alert the operator to the presence of exposure to hazardous visible and invisible laser radiation.



This symbol is intended to alert the operator to the presence of important operating and maintenance instructions.

## 1.3 Laser Safety

Laser light that is emitted by lasers used with the EnergyMax sensors may be in the infrared area of the electromagnetic spectrum and may not be visible to the human eye. Safety precautions provided with lasers being used must be read and followed by anyone working with or near a laser.

At all times, make sure that all personnel are protected from accidental or unnecessary exposure to laser radiation.

## **1.4 Electrical Safety**

The EnergyMax sensor does not have dangerous voltages.

All units should be operated as assembled. The warranty is canceled if the enclosure is disassembled. See 'Contact Product Support' on page 14 for assistance.

## 2.0 Preface

This guide includes:

- Installation instructions for the EnergyMax PC software and driver—a program that provides an easy-to-use interface between a Coherent EnergyMax-RS or EnergyMax-USB meterless sensor, and a PC.
- A separate Quick Start section that explains how to connect an EnergyMax sensor to a PC and begin taking measurements within minutes.

For detailed information on EnergyMax PC software and the EnergyMax-USB/RS sensor system, refer to the *EnergyMax-USB/RS Sensor System User Manual* (part number 1186243), available in Adobe<sup>®</sup> PDF format at www.coherent.com/resources.

## 2.1 Publication Updates

To view information that may have been added or changed since this publication went to print, go to: <u>www.Coherent.com</u>.

### 2.2 System Requirements

#### **Operating System Requirements**

EnergyMax PC software will run on the following  ${\rm Microsoft}^{\circledast}$  operating systems:

Windows 10<sup>®</sup> 32- or 64-bit

#### **Minimum PC Requirements**

- Processor (based on number of EnergyMax sensors used)
  - (1 sensor): Dual Core 2.0 GHz, 2 GB RAM
  - (2 sensors): Quad Core 2.5 GHz, 4 GB RAM
  - (more than 2 sensors): Quad Core 3.0 GHz, 4 GB RAM
- 60 MB of free hard disk space
- USB or RS-232 port
- 1024x768 screen resolution
- 256 colors



#### NOTICE

Operation of EnergyMax PC software with a slower computer can cause the software to begin sampling laser pulses at a lower repetition rate versus analyzing every pulse.

## 3.0 Software Installation

The installation process includes installation of the EnergyMax PC software and, if necessary, manual installation the EnergyMax driver.

These procedures are shown next.

#### 3.1 Install the EnergyMax PC Software



**NOTICE** Install the EnergyMax PC software and driver <u>before</u> physically connecting an EnergyMax sensor to the computer.

- 1. Download the latest version of the software fro <u>www.cohrent.com/resources</u>.
- 2. Double-click the installation file to start the installation.

3. Follow the on-screen instructions.

#### NOTICE

## *If a window similar to the one shown below appears, click 'Install this driver software anyway' to continue the instal-lation.*



#### NOTICE

When the following pop-up appears, click the 'OK' button to complete the software installation.



- 4. When the software is installed on the system, connect the EnergyMax sensor to a port on the computer.
- 5. If an error message shows that the EnergyMax driver cannot be found, manually install the driver. Follow the

procedure in the next section 'Install the EnergyMax Driver Manually' on page 9.

#### 3.2 Install the EnergyMax Driver Manually

#### NOTICE

The following installation procedure is for USB sensors only.

Normally the driver automatically installs during the EnergyMax PC software installation process. If for any reason that does not happen, use this procedure to manually install the driver:

- 1. Download the latest version of the software from <u>www.cohrent.com/resources</u>.
- 2. Double click the driver file to install the driver.
- 3. Follow the on-screen instructions.

## 4.0 Setup Quick Start

This tutorial shows how to connect a EnergyMax-USB or EnergyMax-RS sensor to the PC and start to get energy measurements with the EnergyMax PC software.



#### WARNING!

Follow all laser safety procedures. The laser must be set to OFF or shuttered before running the tutorial presented in this section.



#### NOTICE

For instructions to communicate with the sensor directly through host commands, refer to the 'Host Interface' section of the EnergyMax USB/RS User Manual (1186243), available as a PDF file at

www.coherent.com/resources/.

- 1. Make sure that the EnergyMax PC software is installed. Refer to 'Install the EnergyMax PC Software' on page 9.
- 2. Connect the system components. The following figures show system components for EnergyMax-USB and

EnergyMax-RS sensors. Choose the one that's correct for the system being used.



- 3. Make sure that the blue LED is ON.
- 4. Start the EnergyMax PC software.
- 5. (EnergyMax-RS sensors only) Click Add a RS-232/Serial Port on the Settings drop-down menu.

6. (EnergyMax-RS sensors onlv) On the Add Serial Sensor menu, select the Com Port and Baud Rate parameters and then click the 'OK' button.

7. Select the sensor serial number from the Select Sensor drop-down menu. In the example at right, the selected sensor is 0438B10R





EnergyMax PC

Trigger

Set Y-Axis Add a RS-232/Serial Port

Sele

Se

File Settings View Help Resolution

> Log File Format Turbo (Higher Data rate)

> > Corn Port

₫K

**\$**1

Dual Sensor Synchronization

Please Select the COM port to add and its baud rate

Note: This COM port will be queried as a Coherent sensor and if the query is unsuccessful, it will not be added to the fist. To remove this sensor from the list, please restart the EnergyMax PC program

Baud Rate

Cancel

₫ 9600

- 🗆 ×

12

8. Click the 'Start Data Collection' button and then set the laser to ON to begin to take energy measurements.

EnergyMax PC							
File	Settings	View	Help				
Sel	ect Sensor						
"0	438B10R''	-	Start Data Collection				

9. When done, click 'Stop Data Collection'.

## 5.0 Service and Support

## 5.1 Contact Product Support

Coherent provides telephone and web-based technical assistance as a service to its customers and assumes no liability thereby for any injury or damage that can occur during such services.

For general Technical Support, contact your local Coherent Service Representative, or contact Coherent as follows:

- By phone: 1-800-367-7890 or 1-(408)-767-4042
- By e-mail: <u>Customer.Support@Coherent.com</u> or e-mail directly to Wilsonville: <u>LSMservice@coherent.com</u>

To view a list of contact names, telephone numbers, and addresses worldwide, visit: <u>www.Coherent.com</u>Telephone coverage is available Monday through Friday (except during U.S. holidays). Inquiries received outside normal office hours are tracked by our automatic answering system and promptly returned the next business day.



#### CAUTION!

Under no circumstances do these support services affect the terms of any warranty agreement between Coherent and the buyer.

Provide the following information:

- Model or part number of the unit
- Serial number of the unit
- A description of the problem
- Any corrective steps that may have been attempted

## **5.2 International Support**

Contact Technical Support directly, as follows:

- Germany: +49–6071–968–0
- Japan: +813–5635–8680

## 5.3 Calibration

Coherent laser power and energy meters are precision instruments, that can supply very accurate measurements. They can provide many years of useful service. To maintain this high level of performance, Coherent recommends that meters and sensors are serviced and re-calibrated once a year. Any necessary service must be done at a Coherent facility; refer to the *EnergyMax-USB/RS Sensor System User Manual* (part number 1186243), available in Adobe<sup>®</sup> PDF format at <u>www.coherent.com/resources</u>.

Calibration of a Coherent power and energy laser measurement product includes:

- Calibration to original uncertainty levels
- Minor repairs (see more information, below)
- Extended 12 month warranty, on eligible products
- Fast calibration turn around time.

## 5.4 Obtain Service

To obtain service under warranty, customers must notify the company of the defect before the expiration of the warranty period. Customers must make suitable arrangements for the performance of service.

The company shall, in its sole discretion, determine whether to perform warranty service at the customer's facility, at the company's facility, or at an authorized repair station.

If customer is directed by the company to ship the product to the company or a repair station. Refer to the *EnergyMax-USB/RS Sensor System User Manual* (part number 1186243), at <u>www.coherent.com/resources</u>.

# **C** HERENT

## **INNOVATIONS THAT RESONATE**

如件权称		有害物质 Hazardous Substances							
而作名称 Part Name	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)	20)		
印刷电路板组装 PCB Assembly	х	ο	ο	о	о	о			
硬件 Hardware	x	ο	ο	о	о	о	T		
电缆装配 Cable Assembly	x	0	0	о	о	о	∕.⊸&		
本表格依据SJ/T 11364的规定编制									
0:表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。 X:表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。									

Download software and manuals at https://www.coherent.com/resources:





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