

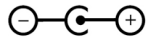
ERGOMAT INC.

FIXED-ZONE 180° FORKLIFT LIDAR

CAUTION: NOT INTENDED FOR SAFETY CRITICAL APPLICATIONS.

SPECIFICATIONS

POWER



Center-positive, 5.5x2.1mm barrel jack

12-24VDC (9-36 VDC max)

OUTPUT

Solid-state output: 10A

DETECTION RANGE

Detection zone shape/dimensions hard-coded at the factory prior to final assembly

LIDAR range up to 35ft (10.5m)

DIMENSIONS

3.7 x 4.9 x 2.8 in.,

94 x 125 x 72 mm.

THEORY OF OPERATION

This device utilizes a spinning LIDAR beam to detect objects within a user-definable 2D plane – the Detection Box. The shape and dimensions of the Detection Box are set at the factory prior to final assembly in consultation with the client. A graphical representation of the detection box is included in the documentation supplied with the device. If any objects enter the LIDAR field within the prescribed detection zone, the device's output will activate. The output may be used to drive an LED caution sign, external wireless transmitter, audible alert, or other low-voltage device.

INSTRUCTIONS

Apply power to the left barrel jack (when viewed from the back) labeled "POWER IN". Power may be sourced from a 12-24VDC battery pack or auxiliary power from a forklift, for example. The LIDAR sensor housed within the device will begin spinning while rapidly taking distance measurements from the sensor to objects struck by the sensor's laser as it rotates.

Connect the output device (LED caution sign, audible alert, etc.) to the sensor's right barrel jack (when viewed from the back) labeled "OUTPUT". NOTE: if a 12V LED caution light is to be used with the device, be sure to supply the sensor with the same voltage power source (i.e. 12V).

Mount the device with the front of the sensor facing the area intended to be monitored (for example, if the area behind a forklift is to be monitored, mount the device on the back of the forklift facing rearward). The supplied magnet base may be used to mount the device to a metal surface, or can be removed if bolts are to be used to secure the sensor.

Once setup is complete, test to verify that the output device activates when a person or object is placed in front of the sensor, within the detection zone. If LEDs are connected to the sensor output, they will illuminate or flash when something is detected in front of the LIDAR sensor.

OUTPUT

Driving LED Sign

Connect the low voltage electronic device, such as an LED sign, to be controlled to the connector labeled “OUTPUT” via a 5.5x2.1mm barrel connector. This solid-state output activates when a person or object is detected within the Detection Box, and is capable of delivering up to 10 amps of power to the load.

Using an External Wireless Transmitter

A wireless transmitter may be connected to the output to wirelessly trigger a device, such as a LED sign, when an object is detected within the Detection Box. To allow the Low-Overhead LIDAR to control the wireless transmitter, use a male-to-male 5.5x2.1mm jumper to connect the LIDAR “OUTPUT” terminal to the power input of the transmitter.



WARNING

This device is not intended to be used in any safety critical applications. Installations of this product should be carried out by professionals with care taken to ensure any failure, including but not limited to loss of power or failure to receive signal, does not result in injury.

This device is only a navigational aid and should never be solely relied upon for safely operating a vehicle. The use of this system should never replace normal operational and safety precautions needed for operating a vehicle. Always use caution during any vehicle operation. Those responsible for the application and use of this sensor equipment must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards.

ERGOMAT SHALL NOT BE RESPONSIBLE FOR ANY SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.