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# Motion Encoder Long Track Strip

Order Code: **METS-LONG**



The Motion Encoder Track Strip is an add-on product to be used with an existing Vernier Motion Encoder System\*. It cannot be used on its own. This is a 2.2 m long label for application to a Combination 2.2 m Track/Optics Bench or Combination 1.2 m Track/Optics Bench. For use with the Combination 1.2 m Track/Optics Bench, you will need to cut the label after application.

The strip is part of the Vernier Motion Encoder System, and it is also included with the Motion Encoder Upgrade Kit, the Motion Encoder Cart and Receiver, and the Combination Dynamics Track/Optics Benches.

The encoder system allows the precise study of dynamics cart motion without the use of ultrasonic motion detectors. The system consists of several parts:

- A track with an encoder strip along the length of the track
- A dynamics cart with an optical encoder and infrared (IR) transmitter
- A receiver, attached to the end of a track

The encoder strip consists of alternating black and white bars with a 4 mm period, allowing the optical sensor to detect the passage of the bars as the cart moves. With two sensors appropriately placed, a change in position with 1 mm resolution can be determined, as well as the direction of travel. A narrow infrared beam transmits motion data to a receiver.

## One-Time Assembly Instructions

### Motion Encoder Strip Application

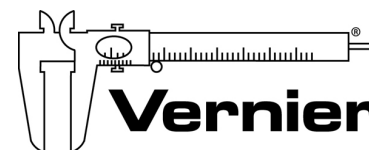
The track must have an encoder strip applied for the cart to determine its motion. The strip is applied immediately next to the center slot, between the slot and the numeric scale on the top surface of the track.

1. Clean the track surface with a damp cloth, and allow it to dry.
2. Pull about 10 cm of backing off of the strip.
3. Align the strip next to the center slot, within 1 cm of the track end. The strip need not extend all the way to the end of the track, but it can.
4. Carefully press down the strip, working your way along the track and removing the backing as you go. Keep the strip edge right next to, but not hanging over, the center slot. Do not stretch the strip.
5. Remove the rest of the backing, and press the strip down on full length of the track.
6. Trim any excess strip from the track end.

If a track is to be used with a second encoder system, apply a second strip to the other side of the center slot.

## Warranty

Vernier warrants this product to be free from defects in materials and workmanship for a period of five years from the date of shipment to the customer. This warranty does not cover damage to the product caused by abuse or improper use.



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\* Patent Pending