

# HEDM-55xx/560x & HEDS-55xx/56xx

## Quick Assembly Two and Three Channel Optical Encoders



## Data Sheet



### Description

The HEDS-5500/5540, HEDS-5600/5640, HEDM-5500/5540 and HEDM-5600 are high performance, low cost, two and three channel optical incremental encoders. These encoders emphasize high reliability, high resolution, and easy assembly.

Each encoder contains a lensed LED source, an integrated circuit with detectors and output circuitry, and a codewheel which rotates between the emitter and detector IC. The outputs of the HEDS-5500/5600 and HEDM-5500/5600 are two square waves in quadrature. The HEDS-5540/5640 and HEDM-5540 also have a third channel index output in addition to the two channel quadrature. This index output is a 90 electrical degree, high true index pulse which is generated once for each full rotation of the codewheel.

The HEDS series utilizes metal codewheels, while the HEDM series utilizes a film codewheel allowing for resolutions to 1024 CPR.

These encoders may be quickly and easily mounted to a motor. For larger diameter motors, the HEDM-5600, and HEDS-5600/5640 feature external mounting ears.

The quadrature signals and the index pulse are accessed through five 0.025 inch square pins located on 0.1 inch centers.

Standard resolutions between 96 and 1024 counts per revolution are presently available. Consult local Avago sales representatives for other resolutions.

### Features

- Two channel quadrature output with optional index pulse
- Quick and easy assembly
- No signal adjustment required
- External mounting ears available
- Low cost
- Resolutions up to 1024 counts per revolution
- Small size –40°C to 100°C operating temperature
- TTL compatible
- Single 5 V supply

### Applications

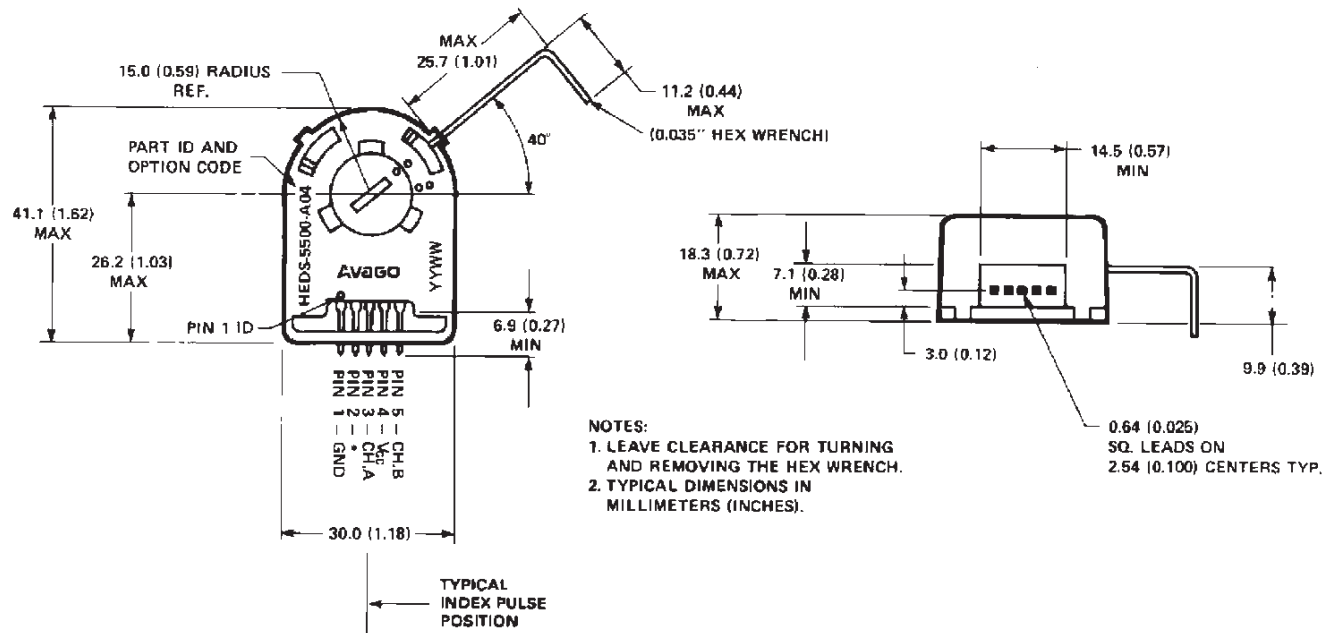
The HEDS-5500, 5540, 5600, 5640, and the HEDM-5500, 5540, 5600 provide motion detection at a low cost, making them ideal for high volume applications. Typical applications include printers, plotters, tape drives, positioning tables, and automatic handlers.

Note: Avago Technologies encoders are not recommended for use in safety critical applications. Eg. ABS braking systems, power steering, life support systems and critical care medical equipment. Please contact sales representative if more clarification is needed.

**ESD WARNING:** NORMAL HANDLING PRECAUTIONS SHOULD BE TAKEN TO AVOID STATIC DISCHARGE.

## Package Dimensions

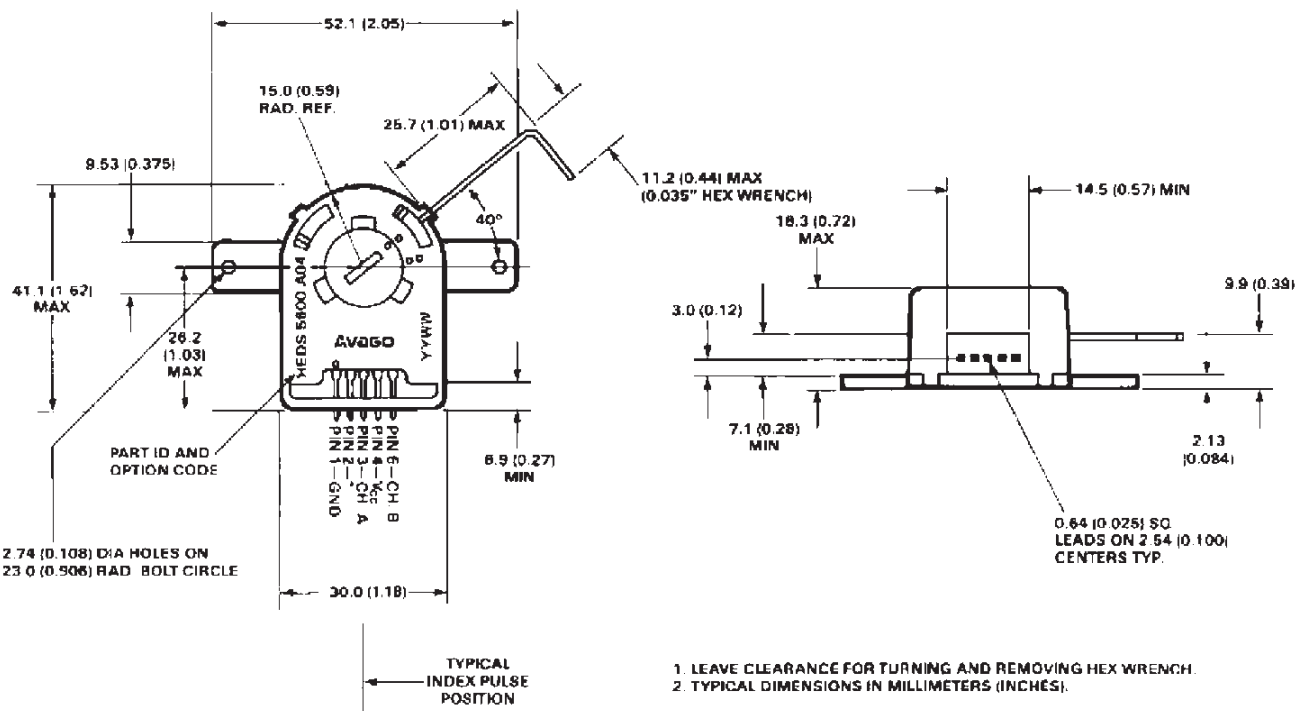
### HEDS-5500/5540, HEDM-5500/5540



\*Notes:

For the HEDS-5500 and HEDM-5500, Pin #2 is a No Connect.  
 For the HEDS-5540 and HEDM-5540, Pin #2 is CH. I, the index output.

### HEDS-5600/5640, HEDM-5600, HEDM-5640



\*Notes:

For the HEDS-5600 and HEDM-5600, Pin #2 is a No Connect.  
 For the HEDS-5640 and HEDM-5640, Pin #2 is CH. I, the index output.