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Incremental Optical Encoders
Transmissive Housed



HEDL-5xxx, HEDS-550x/554x, HEDS-560x/564x, HEDM-550x/560x Series

Description

HEDS-550X/HEDM-550X/HEDS-560X and HEDS-554X/HEDS-564X Series

- High-performance, two and three channel incremental optical encoders
- High reliability, high resolution, easy assembly
- Contains a lensed (LED) source or emitter, an integrated circuit with detectors and output circuitry, and a codewheel which rotates between the emitter and detector IC
- HEDS-550X/HEDM-550X/HEDS-560X output is two square waves in quadrature
- HEDS-554X/HEDS-564X output has a third channel index output in addition to the two channel quadrature
- The index output is a 90 electrical degree, high true index pulse which is generated once for each full rotation of the codewheel
- Features quick and easy motor mounting

HEDM-55XX/56XX Series

- Features same as listed above
- Comes with film codewheels

HEDS-56XX and HEDM-56XX Series

- Features same as listed above
- Features mounting ears HEDL-55XX Series
- Features differential output
- Utilizes an industry-standard line driver IC (26C31), which provides complementary output for each encoder channel, offering enhanced performance when the encoders are used in a noisy environment, or when required to drive long distances
- Suggested line receivers: 26C32 and 26C33
- Quadrature signals are accessed through a cable and 10-pin female connector, manufactured by FCI, part number: 66900-310. Mating connectors are made by FCI; for straight type part number: 71912-010, right angle type part number: 71913-010

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 1,024 CPR
- Small size
- Up to100°C operating temperature
- TTL compatible
- Single 5 V supply
- Count frequency of 100 KHz

Applications

Ideal for high-volume applications, including:

- Printers
- Plotters
- Tape drives
- Positioning tables and automatic handlers

Package Dimensions

- Refer to product datasheet for package dimensions

Ordering Information

Note: Please contact sales/factory to confirm up to date option availability

Mid-Sized Housed Encoders with Film Codewheels – HEDM-550x/560x series

HEDM-5		0			Option			

Mounting Type
- 5 - Standard
- 6 - External Mounting Ears

Outputs
- 0 - 2 Channel
- 4 - 3 Channel

Through Hole
- 0 - None
- 5 - 8.9 mm (0.35 in)

Resolution (Cycle/Rev)
- B - 1000
- J - 1024
- M-800

Shaft Diameter

01 - 2 mm	06 - 1/4 in
02 - 3 mm	11 - 4 mm
03 - 1/8 in	14 - 5 mm
04 - 5/32 in	12 - 6 mm
05 - 3/16 in	13 - 8 mm

HEDS-8910	0			Alignment Tool

(Included with each order of HEDM-550x/560x two channel encoders and HEDM-554x three channel encoders)

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Ordering Information

Mid-Sized Housed Encoders with Metal Codewheels – HEDS-550x/554x/564x Series

HEDS-5 [ ][ ][ ]

Mounting Type
5 - Standard
6 - External Mounting Ears

Outputs
0 - 2 Channel
4 - 3 Channel

Option [ ][ ][ ]

Through Hole
0 - None
5 - 8.9 mm (0.35 in)

Resolution Options (Cycle/Rev)	
(HEDS-550X, 560X 2 Channel)	
S - 50 CPR	F - 256 CPR
K - 96 CPR	G - 360 CPR
C - 100 CPR	H - 400 CPR
D - 192 CPR	A - 500 CPR
E - 200 CPR	I - 512 CPR
(HEDS-554X, 564X 3 Channel)	
S - 50 CPR	E - 200 CPR
K - 96 CPR	F - 256 CPR
C - 100 CPR	

Shaft Diameter	
01 - 2 mm	06 - 1/4 in
02 - 3 mm	11 - 4 mm
03 - 1/8 in	14 - 5 mm
04 - 5/32 in	12 - 6 mm
05 - 3/16 in	13 - 8 mm

HEDS-8910 0 [ ][ ] **Alignment Tool**

Mid-Sized Housed Encoders with Line Drivers – HEDL-5xxx series

HEDL-5 [ ][ ][ ]

Mounting Type
5 - Standard
6 - External Mounting Ears

Outputs
0 - 2 Channel
4 - 3 Channel
6 - 2 Channel

Option [ ][ ][ ]

Through Hole
0 - None
5 - 8.9 mm (0.35 in)
1 - 8.9 mm (0.35 in)

Resolution Options (Cycle/Rev)	
(HEDL-55XX, 560X 2 Channel)	
A - 500 CPR	I - 512 CPR
H - 400 CPR	B - 1000 CPR
C - 100 CPR	J - 1024 CPR
E - 200 CPR	G - 360 CPR
(HEDL-554X, 564X 3 Channel)	
A - 500 CPR	G - 360 CPR
C - 100 CPR	I - 512 CPR
E - 200 CPR	

Shaft Diameter	
01 - 2 mm	11 - 4 mm
02 - 3 mm	14 - 5 mm
04 - 5/32 in	12 - 6 mm
05 - 3/16 in	13 - 8 mm
06 - 1/4 in	

HEDS-8910 0 [ ][ ] **Alignment Tool**

Available Options

Available Options											
Part Number		Options									
		01	02	03	04	05	06	11	12	13	14
HEDL-5540	A	•	•			•	•	•	•	•	•
	C		•			•			•		
	E						•	•			
	G							•			
	I	•					•	•		•	
HEDL-5640	A						•		•	•	
HEDL-5645	A						•			•	
	G						•				
HEDL-5500	A		•				•				
	E						•				
	G					•			•		
	H						•				
	I				•						
HEDL-5505	A						•				
	I									•	
HEDL-5560	B		•					•		•	•
HEDL-5561	J						•				•
HEDL-5600	A						•				
	H						•				
HEDL-5605	A						•				
	C										•
HEDM-5500	B	•	•				•	•	•	•	•
	J		•				•		•	•	•
HEDM-5505	B				•						
	J			•			•			•	
HEDM-5540	B	•	•			•		•		•	•
HEDM-5545	B									•	
HEDM-5600	B						•			•	
	J						•				
HEDM-5605	B						•			•	
	J						•				
HEDS-5500	A	•	•	•	•	•	•	•	•		•
	C	•	•	•	•	•	•	•	•	•	•
	E		•		•	•	•	•	•		•
	F	•	•		•	•	•	•	•		•
	G		•			•	•	•	•		•
	H					•	•		•		•
	I	•	•	•	•	•	•	•	•	•	•
	K				•	•	•	•			
	S									•	

Available Options

Available Options											
Part Number		Options									
		01	02	03	04	05	06	11	12	13	14
HEDS-5505	A				•		•			•	•
	C				•		•		•		•
	E				•		•				•
	F				•		•				•
	G				•		•				
	H						•				•
	I				•		•			•	
	K				•						
HEDS-5540	A	•	•	•	•	•	•	•	•	•	•
	C	•	•				•	•	•	•	•
	E						•	•	•		
	F	•						•			•
	G						•				
	H						•				•
	I	•	•				•	•	•	•	•
HEDS-5545	A						•		•		•
	C								•		
	H						•				•
	I						•				
HEDS-5600	A						•		•	•	•
	C						•		•		•
	E						•				
	G						•			•	
	H						•		•		
	I	•						•			
HEDS-5605	A						•			•	
	C						•				
	E						•				
	F									•	
	G						•				
	H						•				•
	I						•				
HEDS-5640	A						•		•	•	
	E						•		•		
	F						•				
	H						•				
HEDS-5645	A						•		•	•	
	C									•	
	E									•	
	F									•	
	G									•	
	H						•		•		•
	I									•	