



# NorthStar™



## SERIES HDN58 SHAFT-LESS ENCODER

### KEY FEATURES

- No shaft, bearings, or seals to wear out
- Eliminates shaft coupling issues
- Completely sealed & encapsulated electronics
- Wide sensing envelope is tolerant to misalignment
- Incremental or absolute output

## SPECIFICATIONS

### MECHANICAL

- Enclosure: 58mm diameter delron
- Weight: 2oz
- Maximum RPM: 3000 PRM

### ELECTRICAL

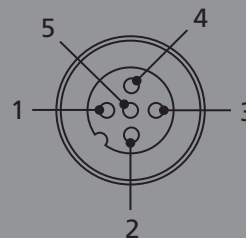
- **Supply Voltage:** 6 to 30 VDC, 60mA
- **Output Format:** Incremental quadrature (Ch A and Ch B, with optional Index)
- **Output Resolution:** 8 to 2048 quadrature pulses per revolution (13 bit)
- **Output Driver:** Push/Pull (OLP7272)
- **Protection:** reverse polarity, spike, noise, open circuit, short circuit
- **Electrical Connections:** 5-pin terminal strip, 5-pin M12, 8-pin M12, cable (see Connections)
- **LED Indicators:** Power, Channel and Index

### ENVIRONMENTAL

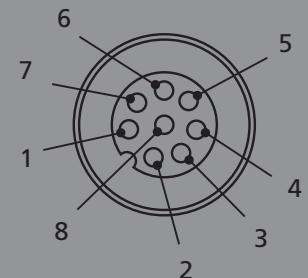
- **Temperature:** -25 to +70 degrees C
- **Humidity:** 100% relative humidity
- **Potting Compound:** Non-porous, water and chemical resistant, RoHS compliant
- **Shock & Vibration:** Meets MIL-STD-202  
Shock—half sine, 50g, 11ms Thermal  
Shock—-40 to + 125 one hour dwell  
Vibration—10 to 500 hz at 10g
- **Enclosure Rating:** IP65, 67 or 68 (depending on connection style)

## CONNECTIONS

Pin Designation	5-pin Terminal Strip	5-pin M12	8-pin M12	Cable
	Pin	Pin	Pin	Wire Color
+Vdc	1	1	2	BRN
Common	2	3	7	BLU
Data A	3	4	1	BLK
Data B	4	2	4	WHT
Data Z	5	5	6	GRY
Data A'			3	YLW
Data B'			5	RED
Data Z'			8	PNK



Male 5-pin M12



Male 8-pin M12

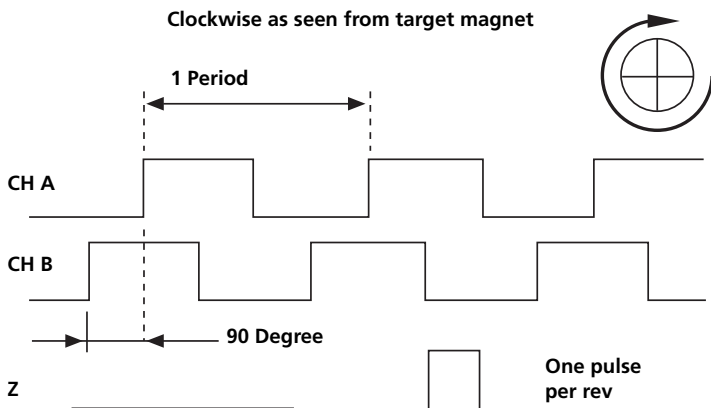


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## HDN58 ORDERING INFORMATION

Code 1: Model	Code 2: Resolution	Code 3: Output	Code 4: Connection	Code 5: Target Magnet
<b>HDN58</b>	0008 0050 0250	<b>0</b> Single Ended A,B,Z Push-pull (7272) (Code 4 must = 0, 1, 2, or 3) <b>1</b> Differential line Driver A,B,Z (7272) (Code 4 must =4,5, or 6) <b>2</b> 13 bit-Absolute 0-5VDC (code 2 must = 2048 and code 4 must = 3) <b>J</b> CANbus J1939 Protocol (code 4 must = 0)	<b>0</b> 5 pin M12 <b>1</b> 5 pin M12 on pigtail <b>2</b> 5 conductor cable <b>3</b> 5 pin terminal strip <b>4</b> 8 pin M12 <b>5</b> 8 pin M12 on pigtail <b>6</b> 8 conductor cable	<b>0</b> No magnet, customer supplied <b>1</b> Dual magnet w/Nylon bolt, 1/4-20 <b>2</b> Dual magnet w/Aluminum bolt, 1/4-20 <b>3</b> Dual magnet nylon collar, 1/2" bore <b>4</b> Dual magnet nylon collar, 3/4" bore <b>5</b> Dual magnet nylon collar, 1" bore <b>6</b> Dual magnet nylon collar, 1-1/2" bore
	0010 0064 0256			
	0016 0080 0400			
	0020 0100 0500			
	0025 0125 0512			
	0032 0128 1024			
0040 0200 2048				

## HDN58 OUTPUT FORMAT



## HDN58 TARGET MAGNETS

- Neodymium
- Distance from user magnet to face of encoder: 0.01 to 0.5 inches
- Center alignment: 0 to 0.10 inches
- Planar tilt: 30 degrees



Aluminum bolt, 1/4-20

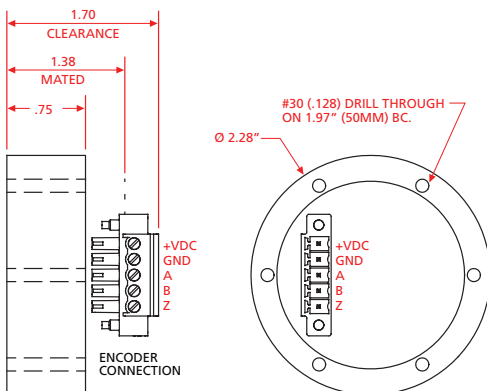


Nylon bolt, 1/4-20



Dual magnet, Nylon collar

## HDN58 DIMENSIONS



For additional information, contact your Dynapar representative at 1.800.873.8731 or visit our web site at: [www.dynapar.com](http://www.dynapar.com)

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