

SERIES HDN58

NorthStar™ brand

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 Diameter: 58mm
Max. Speed: 3000 RPM

ELECTRICAL

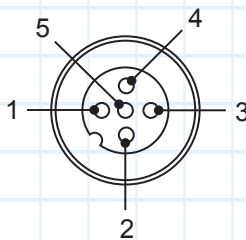
Input Power: 6vdc min to 30vdc max at 60mA max, not including output loads
Outputs: 7272 Push-Pull : 40mA sink or source
Output Resolution: 8 to 2048 quadrature pulses per revolution (13 bit)
Electrical Protection: Reverse polarity, Spike, Noise, Open circuit, Short circuit
Electrical Connections: 5-pin terminal strip, 5-pin M12, 8-pin M12, cable (see Connections)
LED Indicators: Power, Channel and Index

ENVIRONMENTAL

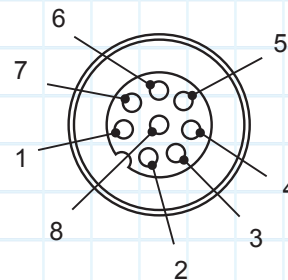
Operating Temperature: -25 to +70 degrees C (-13 to 158 degrees F)
Humidity: 100% relative humidity
Potting Compound: Non-porous, water and chemical resistant, RoHS compliant
Shock & Vibration: Meets MIL-STD-202
 Shock— half sine, 50g, 11ms Thermal
 Shock— -40 to +125 degrees, one hour dwell
 Vibration— 10 to 500hz at 10g
Enclosure Rating: Connector dependent IP65, IP67 or IP68

CONNECTIONS

| Function | 5 Pin Terminal Strip | 5 Pin M12 | 5 Conductor Cable | 8 Pin M12 | 8 Conductor Cable |
|----------------------------------|----------------------|-----------|-------------------|-----------|-------------------|
| | Pin | Pin | Wire Color | Pin | Wire Color |
| +Vdc | 1 | 1 | BRN | 2 | BRN |
| Common | 2 | 3 | BLU | 7 | BLU |
| Data A | 3 | 4 | BLK | 1 | WHT |
| Data B | 4 | 2 | WHT | 4 | GRN |
| Data Z | 5 | 5 | GRY | 6 | GRY |
| Data \bar{A} | | | | 3 | YLW |
| Data \bar{B} | | | | 5 | RED |
| Data \bar{Z} | | | | 8 | PNK |



Male 5-Pin M12



Male 8-Pin M12

Ordering Information

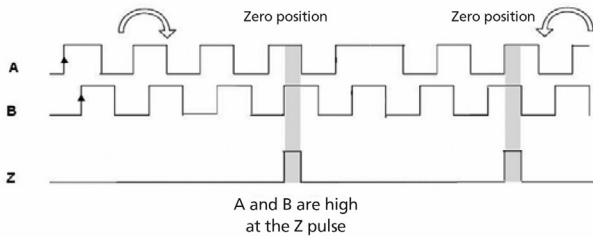
To order, complete the model number with code numbers from the table below:

| Code 1: Model | Code 2: Resolution | Code 3: Output | Code 4: Connections | Code 5: Target Magnet |
|---------------|--------------------|----------------|---------------------|-----------------------|
| HDN58 | □□□□ | □ | □ | □ |

| Ordering Information | | | | |
|----------------------|---|-------------|-------------|---|
| HDN58 | 0008 | 0050 | 0250 | 0 Single Ended A,B,Z Push-pull (7272) (Code 4 must = 0,1, or 2) 1 Differential line Driver A,B,Z (7272) (Code 4 must = 4, 5, or 6) Code 2 must =ABS0 and code 4 must =3) 2 13 bit-Absolute 0-5VDC Code 4 must = 0) and Code 2 must = ABS0) J CANbus J1939 Protocol |
| | 0010 | 0064 | 0256 | |
| | 0016 | 0080 | 0400 | |
| | 0020 | 0100 | 0500 | 0 5 pin M12 1 5 pin M12 on pigtail 2 5 conductor cable 4 8 pin M12 5 8 pin M12 on pigtail 6 8 conductor cable |
| | 0025 | 0125 | 0512 | |
| | 0032 | 0128 | | |
| | 0040 | 0200 | | 0 No magnet, customer supplied 3 Dual magnet nylon collar, 1/2" bore 4 Dual magnet nylon collar, 3/4" bore 5 Dual magnet nylon collar, 1" bore 6 Dual magnet nylon collar, 1-1/2" bore 8 Dual magnet nylon collar, 5/8" bore R Ring magnet w/knurled aluminum bolt, 1/4-20 |
| | Code 3 Must be J ABS0 | | | |
| | Other resolutions available. Contact factory for details. | | | |

HDN58 OUTPUT FORMAT

18MM: QUADRATURE INCREMENTAL OUTPUT



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

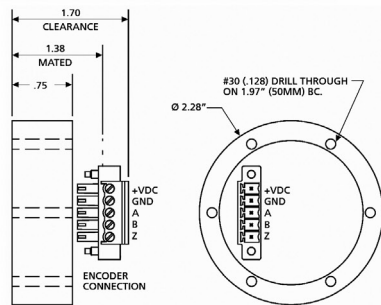


Dual magnet, Nylon collar

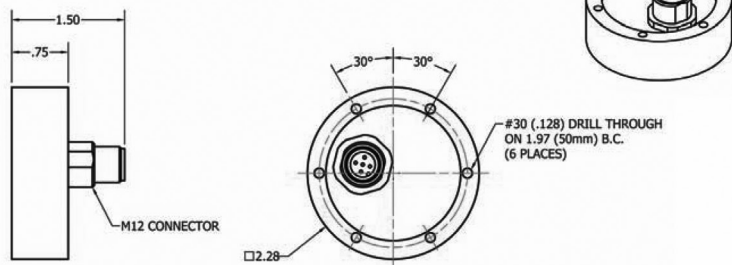


1/4 Bolt Magnet with Knurl

HDN58 DIMENSIONS



M12 CONNECTIONS



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