



# NorthStar™



## SERIES HDP30 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
- Incredibly Small Package
- Standard Proximity Sensor form factor
- LED Indicators make installation and troubleshooting a breeze

## SPECIFICATIONS

### MECHANICAL

- Enclosure Diameter: 30mm
- Enclosure Height: 31mm, 50mm with M12 connector
- Mounting: 30mm thread (standard prox thread)
- Weight: 1.0 oz without mounting nuts, 2.2 oz with typical mounting nuts
- Speed: 3000 RPM max

### ELECTRICAL

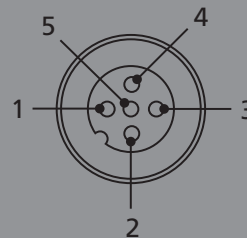
- Input Power: 6vdc min to 30vdc max at 60mA max, not including output loads
- Outputs: 7272 Push-Pull : 40mA sink or source
- Electrical Protection: Overvoltage, Reverse Voltage, Output short Circuit protected
- LED Indicators: Power, A, B, Z

### ENVIRONMENTAL

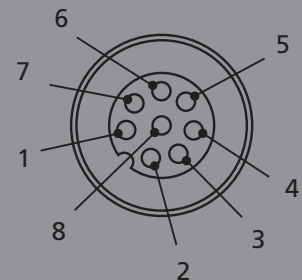
- Operating Temperature: -25 to +80 degrees C (-13 to 176 degrees F)
- Storage Temperature: -40 to +90 degrees C
- Enclosure Rating: Connector dependent
  - M12 on pigtail – IP68
  - Cable with flying leads – IP68

## CONNECTIONS

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



Male 5-pin M12



Male 8-pin M12

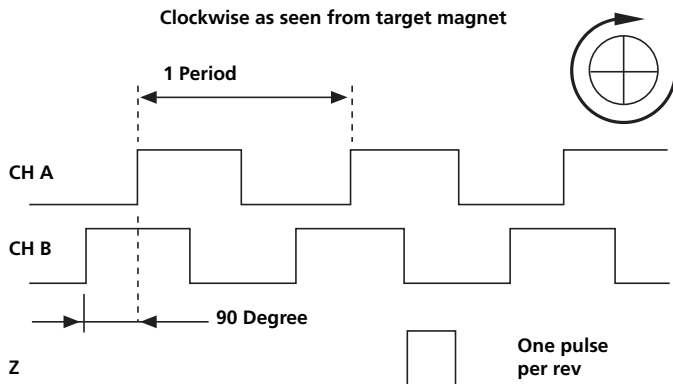


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## HDP30 ORDERING INFORMATION

Code 1: Model	Code 2: Resolution	Code 3: Output	Code 4: Connection	Code 5: Target Magnet
<b>HDP30T</b>	0008 0050 0250	<b>0</b> Single Ended A,B,Z Push-pull (7272) (Code 4 must be - 0, 1 or 2)	<b>0</b> 5 pin M12	<b>0</b> No magnet, customer supplied
	0010 0064 0256			
	0016 0080 0400	<b>1</b> Differential line Driver A,B,Z (7272) (Code 4 must = 4, 5, or 6)	<b>2</b> 5 conductor cable	<b>1</b> Dual magnet w/Nylon bolt, 1/4-20
	0020 0100 0500		<b>4</b> 8 pin M12	<b>2</b> Dual magnet w/Aluminum bolt, 1/4-20
	0025 0125 0512		<b>5</b> 8 pin M12 on pigtail	<b>3</b> Dual magnet nylon collar, 1/2" bore
	0032 0128 1024		<b>6</b> 8 conductor cable	<b>4</b> Dual magnet nylon collar, 3/4" bore
	0040 0200 2048			<b>5</b> Dual magnet nylon collar, 1" bore
		<b>6</b> Dual magnet nylon collar, 1-1/2" bore		

## HDP30 OUTPUT FORMAT



## HDP30 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