

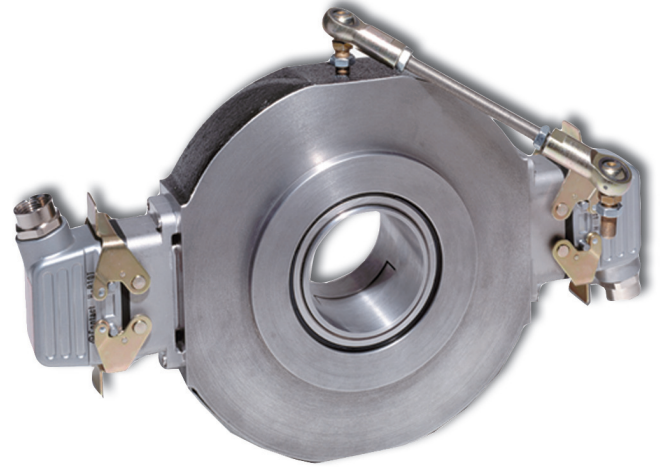
SERIES HS85

NorthStar™ brand

Hollow Shaft Encoder

Key Features

- **Hollowshaft Design Mounts Easily to Large Motor Shafts, up to 4.5" in Diameter**
- **Magneto-Resistive Technology with Removable On-The-Fly Sensor Modules**
- **Multiple Bore Sizes Available, Including Tapered Shafts**
- **Stainless Steel and Ductile Cast Iron Construction**



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental, Magnetic
Pulses per Revolution: 60-2048 PPR
Phasing Sense: A leads B for Counter-Clockwise rotation (CCW) viewing encoder-mounted end
Quadrature Phasing: 90° ± 22°
Symmetry: 180° ± 54°
Index: 270°, ungated (optional gated to falling B edge)
Number of Output Modules: Single or Dual

ELECTRICAL

Input Voltage Requirement: 5-15 VDC, 15-26 VDC
Current Requirement:
 With Electrical Option L: 45mA typical per sensor module plus line driver load
 With Electrical Option R and 5: 65mA typical per sensor module plus line driver load
Output Signals:
 4428 Differential Line Driver: 150mA, sink or source
Noise Immunity: Tested to EN61326-1
Electrical Immunity: Reverse polarity and short circuit protected
Connector: 10 pin industrial duty latching, sealed NEMA 4 & 12, IP65; MS connector or pig-tail

MECHANICAL

Bore Diameter: 1-1/8" to 4-1/2", straight or tapered bore
Mounting Configuration: Hollow Shaft mount with Anti-Rotation Tether
Shaft Speed: 3,600 RPM
Shaft Length Required: 2.5" min
Acceleration Rate: 3,600 rpm/sec max
Allowable Shaft End-Play: 0.25" (Subject to RPM Limitation)
Allowable Shaft Runout: 0.010" TIR (Subject to RPM Limitation)
Housing Material: Cast Iron/Stainless Steel
Weight: 30 lbs

ELECTRICAL CONNECTIONS

Signal	Connector Pin	Pigtail Cable	MS 3102E18-IT#
Common	1	Black	A
B	2	Green	E
A	3	Blue	D
Z *	4	Violet	C
No Connection	5	—	—
Vcc +	6	Red	B
B̄	7	Yellow	H
Ā	8	Gray	G
Z̄ *	9	Orange	I
Shield	10	Braid	J

* Index (Z) optional. See Ordering Information

ENVIRONMENTAL

Operating Temperature Range: -20°C to +70°C
Storage Temperature Range: -40°C to +120°C
Shock (Sensor Module): 30 G's Min
Vibration: 18 G's @ 5-2000 Hz spectrum
Humidity: Up to 98% (non-condensing)

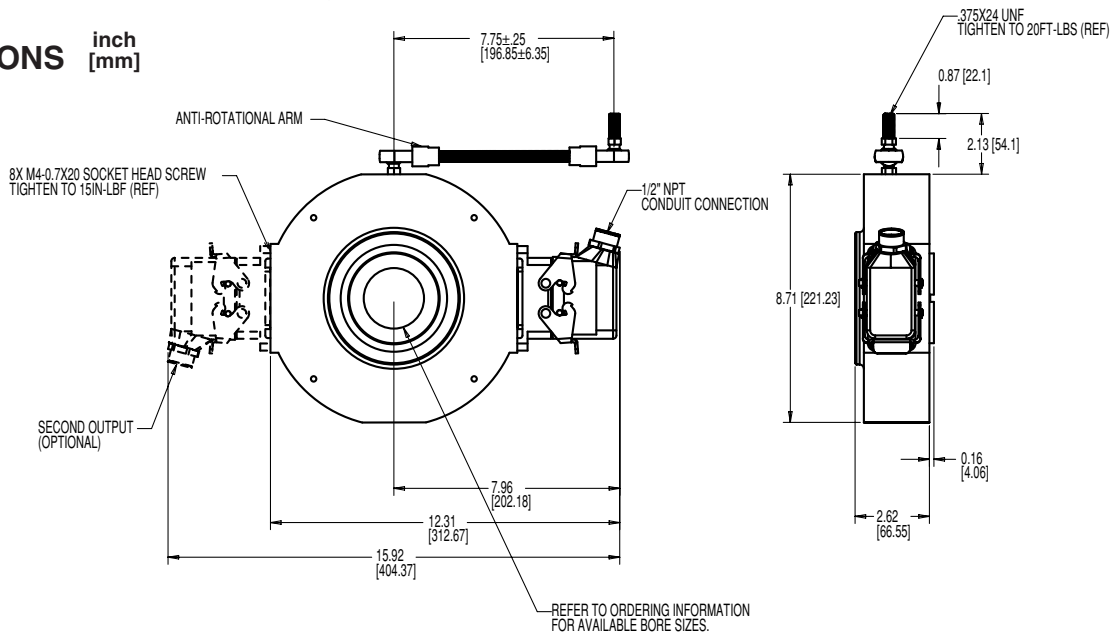
Ordering Information

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

Code 1: Model	Code 2: PPR	Code 3: Index	Code 4: Wheel Bore	Code 5: Output	Code 6: Electrical	Code 7: Termination	
H8	□□□□	□	□□□	□	□	□	
Ordering Information							
H8 Hollow Shaft	0060	0300	L No Index	Thru-bores T01 1-1/8" M25 25 mm T02 1-3/8" M40 40 mm T03 1-5/8" M48 48 mm T04 1-7/8" M55 55 mm T05 2.00" M65 65 mm T06 2-1/8" M70 70 mm T07 2-1/4" T08 2-3/8" T09 2-1/2" T10 2-7/8"	1 Single 2 Dual (Isolated) Differential, bidirectional signals (A, \bar{A} , B, \bar{B})	L 5-15V in, 5-15V Line Driver (4428) out R 15-26V in, 15V Line Driver (4428) out 5 5-15V in, 5V Line Driver (4428) out	C Latching Industrial Connector with 1/2" NPT F Latching Industrial Connector without Mating Connector M 10 pin MS Connector P 18" Pigtail
	0064	0480	Available when Code 2 is 0480, 0512, 0600, 0960, 1024, 1200 or 2048				
	0075	0512	G Gated Index (Z, \bar{Z})				
	0120	0600	Z Differential Index (Z, \bar{Z})				
	0128	0960					
	0150	1024					
	0240	1200					
	0256	2048					
			Bores with 1.25" per foot taper P01 1-1/8" P02 1-3/8" P03 1-5/8" P04 1-7/8" P05 2.00" P06 2-1/8" P07 2-1/4" P08 2-3/8" P09 2-1/2" P10 2-7/8" For Additional Bore Sizes Up to 4.50" Maximum, Please Consult Factory.				

Note: See ACCESSORIES Section for Connectors and Spare Parts

DIMENSIONS inch [mm]



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