

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
Pulses per Revolution: 60-2048
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)

ELECTRICAL

Input Voltage Requirement: 5-15 or 15-26 Volts DC

Current Requirement:

With Electrical Option L: 45mA typical per sensor module plus line driver load
 With Electrical Option R: 65mA typical per sensor module plus line driver load
 With Electrical Option 5: 65mA typical per sensor module plus line driver load

Output Signals:

With Elec Option L: 5-15 V Line Driver, 150mA
 With Elec Option R: 15 V Line Driver, 150mA
 With Elec Option 5: 5V Line Driver, 150mA

Electrical Immunity: 2kV ESD, Reverse Polarity, Short Circuit

Connector: 10 pin industrial duty latching, sealed NEMA 4 & 12, IP65; MS connector or pig-tail

MECHANICAL

Mating shaft sizes: 1-1/8" to 4-1/2", straight or tapered bore

Shaft Speed: 3,600 RPM

Mounting Configuration: Hollow Shaft mount with Anti-Rotation Tether

Housing Material: Cast Iron/Stainless Steel

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)

ENVIRONMENTAL

Operating Temperature Range: -20°C to +70°C

Storage Temperature Range: -40°C to +120°C

Humidity: to 98% RH (non-condensing)

Shock (Sensor Module): 1 meter drop test, 30 G's Min

Vibration: 18 G's @ 5-2000 Hz spectrum

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
B	7	Yellow	H
A	8	Gray	G
Z *	9	Orange	I
Shield	10	Braid	J

* Index (Z) optional. See Ordering Information

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 Note: See ACCESSORIES Section For Connectors, Spare Parts and Pulse Wheels	0060 0300 0064 0480 0075 0512 0120 0600 0128 0960 0150 1024 0240 1200 0256 2048	L No Index Available when Code 2 is 0480, 0512, 0600, 0960, 1024, 1200 or 2048 G Gated Index (Z, \bar{Z}) Z Differential Index (Z, \bar{Z})	Thru-bores T01 1-1/8" bore T02 1-3/8" bore T03 1-5/8" bore T04 1-7/8" bore T05 2.00" bore T06 2-1/8" bore T07 2-1/4" bore T08 2-3/8" bore T09 2-1/2" bore T10 2-7/8" bore Bores with 1.25" per foot taper P01 1-1/8" bore P02 1-3/8" bore P03 1-5/8" bore P04 1-7/8" bore P05 2.00" bore P06 2-1/8" bore P07 2-1/4" bore P08 2-3/8" bore P09 2-1/2" bore P10 2-7/8" bore Additional Shaft Sizes Up to 4.50" Maximum Available (thru and taper shaft) Call factory for details	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 M 10 pin MS Connector P 18" Pigtail
---	--	---	--	---	---	--

DIMENSIONS inch [mm]

