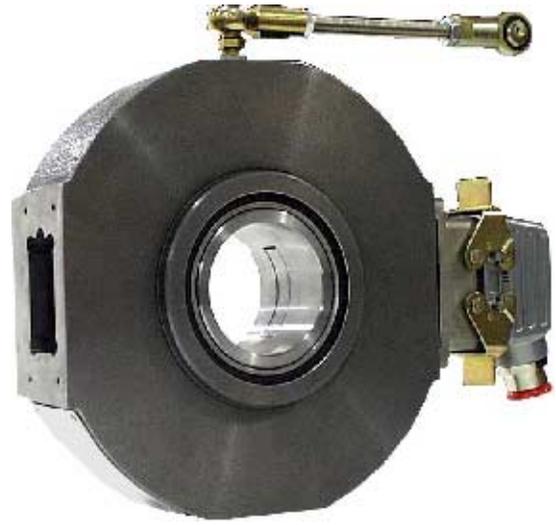


RIM Tach[®] HS85

Features:

- Mounts easily to roller, sleeve, or ball bearing motors and can be used on non-motor applications, such as line shafts and conveyor shafts.
- Accepts motor shafts sizes up to 4.500" (115mm) dia., including tapered shafts.
- Rugged, cast-iron and steel enclosure.
- Rugged, zero-speed, magnetoresistive sensing technology immune to grease, salt water, dust, and other contaminant.
- Designed with heavy duty, double sealed, deep groove, radial ball bearings to tolerate axial and radial runouts.



The ©NorthStar RIM Tach HS85 is a mill duty, digital tachometer that accommodates large thru-shaft sizes (up to 4.500" or 115mm) and can easily mount to most AC or DC fan cooled motors. This digital tachometer offers the same reliability, resolution, and flexibility characteristic of NorthStar's products. The HS85 provides for reduction of downtime and ease of maintenance.

Reliable Magnetoresistive Technology

The HS85 digital tachometer incorporates state-of-the-art magnetoresistive sensing technology. The magnetically encoded signals provide pulse codes of A, B, and an optional index pulse Z, with complements (A, B, Z). These signals are solid for the life of the encoder. They do not exhibit the unreliable signal drift that requires a fault check on other digital tachometers. In addition, this technology is immune to common contaminants such as water, oil, grease, dirt, vibration, and overall harsh conditions of operation.



Rugged Construction

The HS85 was created as a solution to roller or sleeve bearing motors with excessive axial and radial play. This digital tachometer is ruggedly designed with steel flanges, heavy duty motor style bearings, and cast iron housing. The mill duty construction is ideal for motor and non-motor applications, or where the motor casting is otherwise unavailable. As an example, the HS85 is perfect for mounting as a line shaft reference encoder. By virtue of design, the HS85 is more forgiving of older motors which are unable to hold precise tolerances.

Easy Installation

The HS85 is shipped pre-assembled. The installation is quick and easy; just slip the unit over the motor shaft, tighten the clamp, and add the anti-rotation arm. The sensor alignment of the HS85 is entirely independent of the motor frame. Wiring is simple due to the industrial duty connectors. No field soldering or crimp pins are required. Simply strip conductor ends, insert and tighten the connector screws. The interchangeable stainless steel sensor modules are available in a wide variety of pulse counts. There are no field gap checks, axial alignments, or radial run-out checks required.

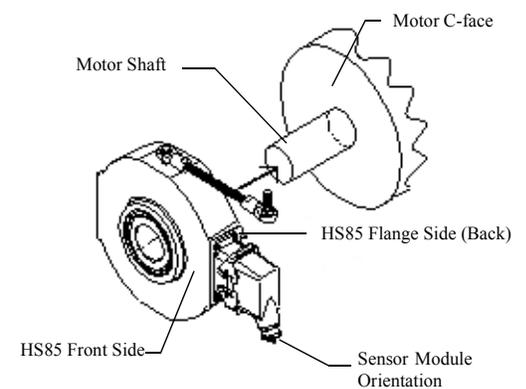
Electrical Specifications	
Resolution	60, 64, 75, 120, 128, 150, 240, 256, 300, 480, 480Z, 512, 512Z, 600, 600Z, 960, 960Z, 1024, 1024Z, 1200, 1200Z, 2048, 2048Z
Frequency Response	0 - 120 kHz
Pulse Code	A, B, Z (Index), and complements (A, B, Z)
Output Phases	A phase, B phase @ quadrature 90°; Z phase: One per rev. (gated)
Pulse Duty Cycle	50 ± 15% (within defined mechanical specifications)
Quadrature Accuracy	90 ± 22° (within defined mechanical specifications)
Output Type	High speed, differential line driver
Rise and Fall Time	Less than 1µs @ 10,000 pF typical load
Current Consumption	45mA typical plus line driver load
Output Current Capability	150mA maximum continuous
ESD Protection	2kV
Mechanical Specifications	
Maximum Operational Speed	3,600 RPM
Enclosure Material	Ductile iron casting, steel flanges
Radial Runout	.010" (.260mm) Total Indicated Runout
Allowable Axial Movement	0.25" (6.4mm) max.
Unit Weight	25 lbs. Typical (11.4 kg)
Box Dimensions/ Weight	33.5"(851 mm) x 23"(585 mm) x 7.25"(185 mm)/5.10 lbs. (2.40 kg)
Environmental Specifications	
Operating Temperature	-40° to +70° C
Operating Humidity	Maximum 90%
Vibration	Minimum 18 g's RMS, 5 - 2000 Hz shock spectrum
Shock	1 meter drop tested, min. 30g's
Chemical Resistance	Salt spray, most solvents, mild acids and bases
Interface Specifications	
Power	+5.0 to +15.0 VDC
Output	Differential output swinging between Vcc - 0.6V and ground
Connector	10 pin industrial latching connector with ½ inch NPT fitting, IP-65 NEMA 4, 12 rated
Suggested Cable	22 - 14 AWG, 6 conductor, shielded, twisted pair
* Specification subject to change without notice.	

Ordering Information	
A Tachometer Type	
HS85	HS85
HS85 Quad Output	HS85Q
B Pulse Count	
60, 64, 75, 120, 128, 150, 240, 256, 300, 480, 480Z, 512, 512Z, 600, 600Z, 960, 960Z, 1024, 1024Z, 2048, 2048Z	
C Shaft Size (Thru-shaft)	
1.125	T01
1.375	T02
1.625	T03
1.875	T04
2.000	T05
2.125	T06
2.250	T07
2.375	T08
2.500	T09
2.625	T19
2.875	T10
40.0mm	M40
55.0mm	M55
Non-standard thru-shaft sizes (1.00-4.500, 24-115mm)	TXX
D Number of Sensor Modules	
Single module	1
Second isolated module	2
For Quad Output	(contact factory)

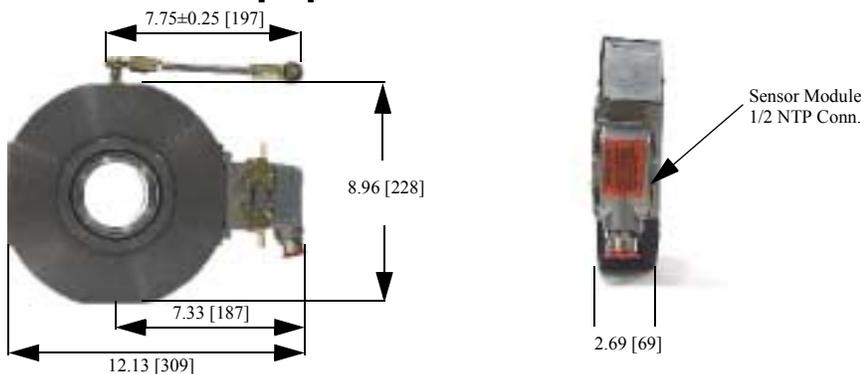
Example:

HS85	1024Z	T07	2LD
A	B	C	D

Installation:



Dimensions inches [mm]:



Also from NorthStar:



Intellitach™ feedback monitoring system eliminates downtime from encoder failure. Continuously analyzes encoder signals and automatically switches to back-up encoder. Accepts input from any line driver, incremental encoder, or digital tachometer. Line driver outputs.



Also available in the **HS85** model, the **RIM Tach® 8500 Quad** digital, mill duty tachometer (left) with four sensor outputs provides up to 1200 PPR, magneto-resistive technology, and a thin pancake design. Mounts without bearing/couplings.



RIM Tach® Power Supply is an automatically switching, universal input, (4) x 12VDC output supply for tachometers, encoders, and accessories. Accepts 90-264VAC or 370VDC input. Provides 12 volt, 300mA per output channel. Aluminum case.