

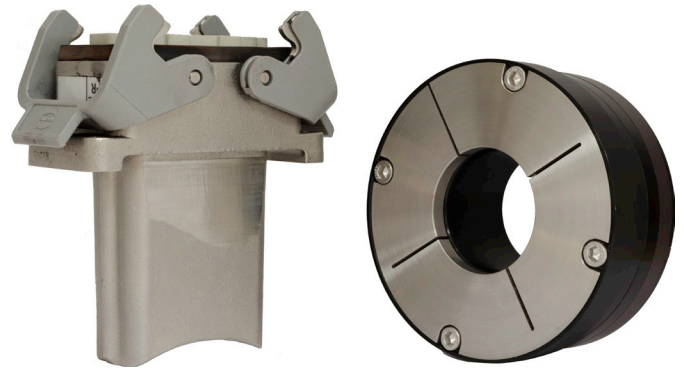
# NRTK RIM TACH UPGRADE KIT

**NorthStar™ brand**

## Wheel and Sensor NexGen Upgrade Kit for Legacy RIM Tach 8500 and RIM Tach 1250 Models

### Key Features

- New Sensor Provides up to 0.075" of Air Gap, Over 50% More Than Competitive Models
- “Best in Class” Durable Replacement Wheel Options
- Protective Magnetic Wheel Edge Guard
- Stainless Steel Sensor Modules
- Higher Resolutions up to 2400 PPR



## SPECIFICATIONS

### STANDARD OPERATING CHARACTERISTICS

**Code:** Incremental, Magnetic  
**Pulses per Revolution:** 60 to 2400 PPR  
**Phasing Sense:** A leads B for Counter-Clockwise rotation (CCW) viewing male C-face end  
**Quadrature Phasing:** 90° ± 45°  
**Symmetry:** 50% ± 15%  
**Number of Output Modules:** Single or Dual

### ELECTRICAL

**Input Power Requirements:** 5-26VDC, 95mA typical per sensor module, plus line driver load  
**Output Signals:** IC-WE Differential Line Driver: 150mA, sink or source  
**Frequency Response:** 0 - 180kHz Data & Index  
**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. Optional MS3102 10 pin, Pigtail Cable, or Latching connector on cable extension

### MECHANICAL

**NexGen RIM Tach RT8 (RIM Tach 8500):**  
**Bore Sizes:** 5/8" to 2-7/8"  
**Mounting Configuration:** 8.5" 180 C-Face Mount for NEMA MG1 Standards  
**Shaft Length Required:** 2.5" min

**NexGen RIM Tach RT1 (RIM Tach 1250):**  
**Bore Sizes:** 5/8" to 2-7/8"  
**Mounting Configuration:** 12.5" C-Face Mount for NEMA MG1 Standards  
**Shaft Length Required:** 2.88" min

### MECHANICAL (CONT.)

**Shaft Speed:** 7,000 RPM, max.  
**Radial Air Gap:**  
*1200 PPR or lower:*  
 0.075", +0.015" / -0.070"  
*Above 1200 PPR:*  
 0.050", +0.015" / -0.040"  
**Allowable Shaft End-Play:** ±0.150"  
**Allowable Shaft Runout:** 0.005" TIR  
**Acceleration Rate:** 3600 rpm/sec max  
**Sensor Module Material:** Stainless Steel

### ENVIRONMENTAL

**Operating Temperature Range:** -40°C to +100°C  
**Storage Temperature Range:** -40°C to +125°C  
**Shock:** 200 G's Min.  
**Vibration:** 18 G's @ 5-2000 Hz spectrum  
**Humidity:** Up to 98% (non-condensing)

### 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
Alarm †	5	n/a	F
Vcc (5-24 VDC)	6	Red	B
B̄	7	Yellow	H
Ā	8	Gray	G
Z*	9	Orange	I
Shield	10	Braid	J

\* Index (Z) optional. See Ordering Information

† Alarm not available with Pigtail cable. See Ordering Information

### Ordering Information

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

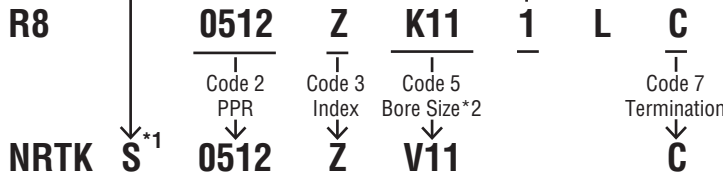
Code 1: Model	Code 2: PPR	Code 3: Index	Code 4: Wheel Bore	Code 5: Termination
<b>NRTK</b> □	□□□□	□	□□□	□
<b>NRTKS</b> Upgrade Kit for RIM Tach 8500 and 1250 Single Sensor Unit (Includes 1 Sensor & 1 Wheel) <b>NRTKD</b> Upgrade Kit for RIM Tach 8500 and 1250 Dual Sensor Unit (Includes 2 Sensors & 1 Wheel)	<b>0060 0480</b> <b>0064 0512</b> <b>0075 0600</b> <b>0120 0960</b> <b>0128 1024</b> <b>0150 1200</b> <b>0240 1920</b> <b>0256 2048</b> <b>0300 2400</b>	<b>L</b> No Index  <b>Z</b> With Index Signal Output	<b>V04</b> 5/8" <b>V05</b> 7/8" <b>V06</b> 1.00" <b>V07</b> 1-1/8" <b>V09</b> 1-3/8" <b>V10</b> 1-1/2" <b>V11</b> 1-5/8" <b>V12</b> 1-3/4" <b>V13</b> 1-7/8" <b>V14</b> 2.00" <b>V15</b> 2-1/8" <b>V16</b> 2-1/4" <b>V17</b> 2-3/8" <b>V18</b> 2-1/2" <b>V20</b> 2-5/8" <b>V19</b> 2-7/8"  <b>End Of Shaft</b> <b>F01</b> 1-1/8" EOS <b>F06</b> 2-1/8" EOS <b>F08</b> 2-3/8" EOS <b>F10</b> 2-7/8" EOS <b>F44</b> 4400 Series Motors <b>F47</b> 4700 Series Motors <b>F60</b> 6000 Series Motors <b>F68</b> 680 Series Motors	<b>C</b> Latching Industrial Connector with 1/2" NPT <b>F</b> Latching Industrial Connector without Mating Connector <b>M</b> 10 pin MS Connector <b>P</b> 18" Pigtail (Not available with Alarm output) <b>Q</b> Latching industrial connector on 18" cable <b>R</b> Latching Industrial Connector on 18" Pigtail Cable without Mating Connector

### HOW TO CONFIGURE

When configuring an upgrade kit from a RIM Tach Series to the NexGen RIM Tach Series, please review the appropriate family data sheet and use the following methodology: Use "NRTKS" for a single sensor kit or "NRTKD" for a dual sensor kit followed by Code 2 (PPR) & Code 3 (Index) & Code 4 (Bore Size) & Code 7 (Termination). All single sensor upgrade kits (S) come with a 1 sensor and 1 wheel. All dual sensor upgrade kits (D) come with 2 sensors and 1 wheel.

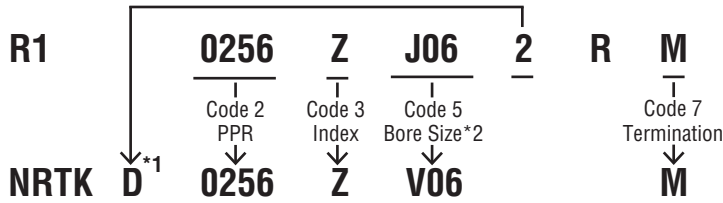
#### CONFIGURATION EXAMPLE 1

RIM Tach R8 Part Number: R80512ZK111LC



#### CONFIGURATION EXAMPLE 2

RIM Tach R1 Part Number: R10256ZJ062RM



\*1 Note: For single output, legacy part decode is 1 and NexGen part decode is S. For dual output, legacy part decode is 2 and NexGen part decode is D.

#### \*2 LEGACY TO NEXGEN BORE SIZE LOOKUP

Legacy Wheel	NexGen Wheel	Bore Size
J04	V04	5/8"
J05	V05	7/8"
J06	V06	1.00"
J07	V07	1-1/8"
K09	V09	1-3/8"
K10	V10	1-1/2"
K11	V11	1-5/8"
K12	V12	1-3/4"
K13	V13	1-7/8"
K14	V14	2.00"
K15	V15	2-1/8"
K16	V16	2-1/4"
K17	V17	2-3/8"
K18	V18	2-1/2"
K20	V20	2-5/8"
K19	V19	2-7/8"



Headquarters: 1675 Delany Road • Gurnee, IL 60031-1282 • USA

**Customer Service:**  
 Tel.: +1.800.873.8731  
 Fax: +1.847.662.4150  
 custserv@dynapar.com

**Technical Support**  
 Tel.: +1.800.234.8731  
 Fax: +1.847.662.4150  
 northstar.techsupport@dynapar.com

**European Sales Representative**  
 Hengstler GmbH  
 Uhlandstrasse 49, 78554 Aldingen  
 Germany  
 www.hengstler.com