

SERIES HT55

NorthStar™ brand

Hollow Shaft Encoder

Key Features

- Redesigned Circuitry for On-Board Diagnostics with LED
- Hollowshaft Design with Heavy-Duty Bearings Ideal for TEFC AC Motor Mounting
- Expanded Resolution up to 4096 PPR
- Accommodates Shaft Sizes from 1/2" to 2-7/8"
- Stainless Steel and Anodized Aluminum Construction
- Single or Dual Isolated Outputs Available with Field-Serviceable Connector

HD
Heavy Duty



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental, Magnetic
Pulses per Revolution: 256-4096 PPR
Phasing Sense: A leads B for CW shaft rotation viewing the shaft clamp end of the encoder
Quadrature Phasing: 90° ± 45°
Symmetry: 180° ± 54°
Index: Less than A/B pulse width
Number of Output Modules: Single or Dual

ELECTRICAL

Input Voltage Requirement: 5-26 Volts DC
Current Requirement: 120 mA typical per sensor module plus line driver load
Output Signals:
 IC-WE Differential Line Driver: 150 mA, 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; MS connector or pig-tail

MECHANICAL

Bore Size: 1/2" to 2-7/8"
Mounting Configuration: Hollow Shaft mount with Anti-Rotation Tether
Max. Shaft Speed:
 Shaft Size ≤ 1.250 = 5000 RPM,
 Shaft Size > 1.250 = 3600 RPM
Torque:
 Shaft Size ≤ 1.250: Typical 6 oz-in
 Shaft Size > 1.250: Typical 15 oz-in
Shaft Length Required: 2.00" Minimum
Acceleration Rate: 3,600 rpm/sec max
Housing Material: Hard Anodized Aluminum, W/Stainless Steel Shaft.
Weight: 5 lbs.

ENVIRONMENTAL

Operating Temperature Range: -40°C to +85°C
Storage Temperature Range: -40°C to +120°C
Shock: 100 G's Min.
Vibration: 20 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	F
B	2	Green	B
A	3	Blue	A
Z *	4	Violet	C
No Connection	5	—	E
Vcc (5-26 VDC)	6	Red	D
B̄	7	Yellow	I
Ā	8	Gray	H
Z̄ *	9	Orange	J
Shield	10	Braid	G

* Index (Z) optional. See Ordering Information

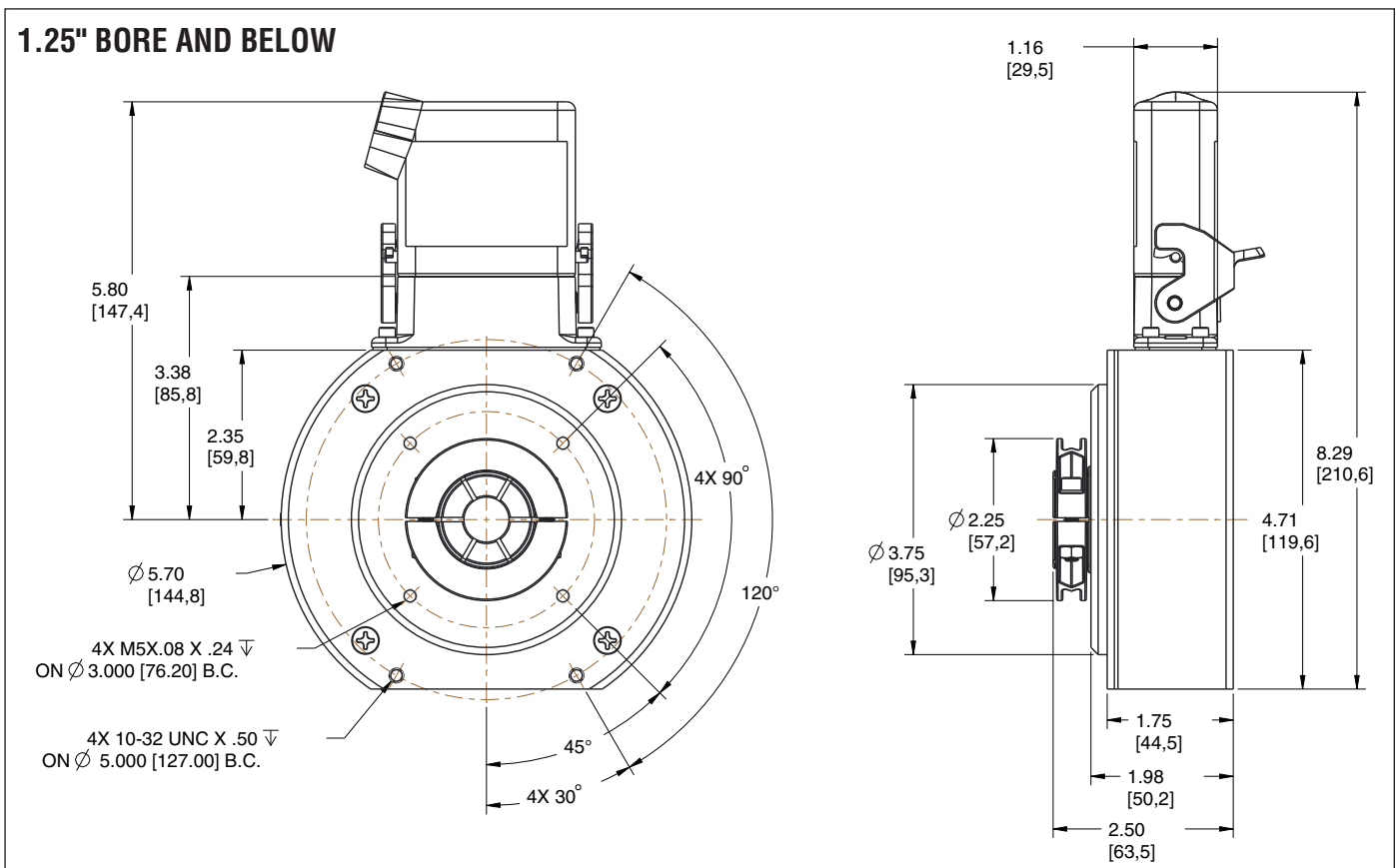
Ordering Information

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: Termination	Code 6: Electrical	Code 7: Output	Code 8: Fixing	
□□□	□□□□	□	□□□	□	□	□		
HT5 Hollow Shaft Mount	0256 0512 1024 2048 4096	L No Index Z With Differential Index	J03 1/2" J04 5/8" J24 3/4" J05 7/8" J06 1.000" J07 1.125" J08 1.250" J09 1.375" J10 1.500" J11 1.625" J12 1.750" J13 1.875" J14 2.000" J15 2.125" J16 2.250" J17 2.375" J18 2.500" J20 2.625" J19 2.875" For additional bore sizes available, please consult factory.	M12 12mm M14 14mm M15 15mm M16 16mm M18 18mm M20 20mm M25 25mm M45 45mm M50 50mm M55 55mm	C Latching Industrial Connector with 1/2" NPT M 10 Pin MS Connector P 18" Pigtail Cable Q Latching Industrial Connector on 18" Pigtail Cable	V 5-26V in, 5-26V Line Driver (IC-WE) out 5 5-26V in, 5V out Line Driver (IC-WE)	1 Single 2 Dual (Isolated) Differential, bidirectional signals (A, \bar{A} , B, \bar{B})	Stamped Metal Available when shaft is 1.25" or smaller 1 4.5" C-Face Tether 2 8.5" C-Face Tether 3 Slotted Tether Swivel Rod A Rod Tether

DIMENSIONS inches

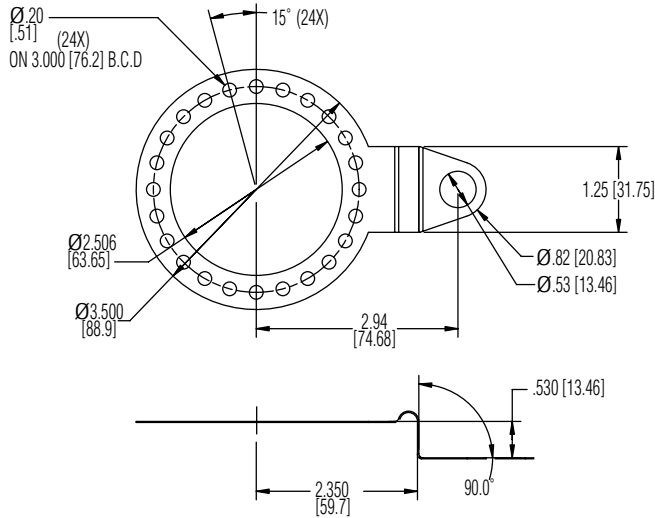
1.25" BORE AND BELOW



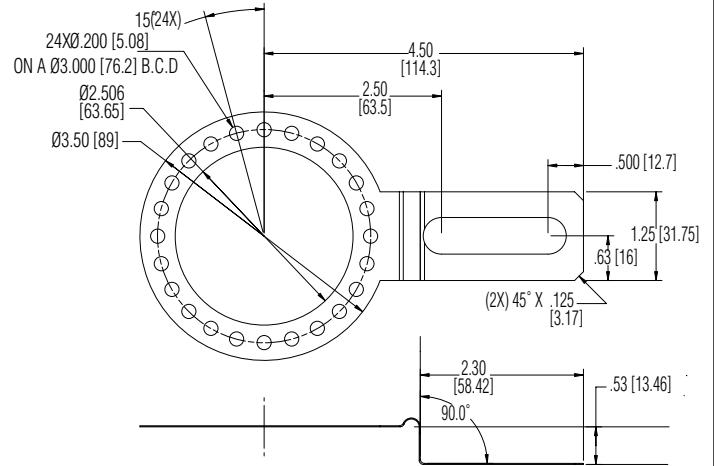
SERIES HT55

DIMENSIONS inches

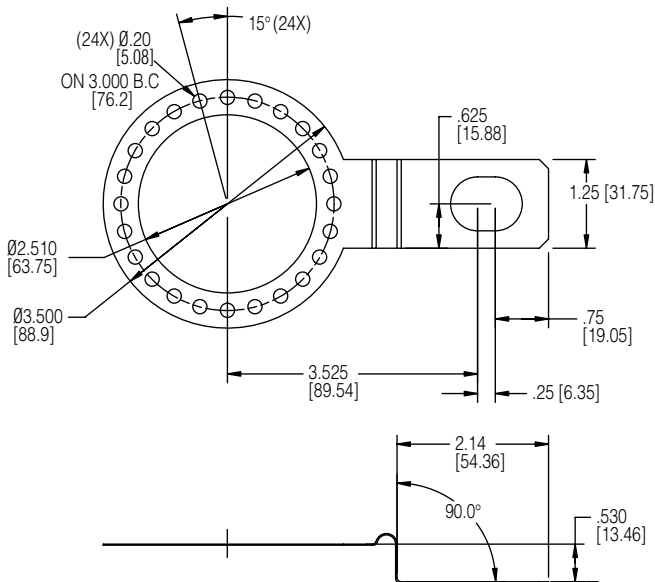
4.5" C-Face Tether



Slotted Tether



8.5" C-Face Tether

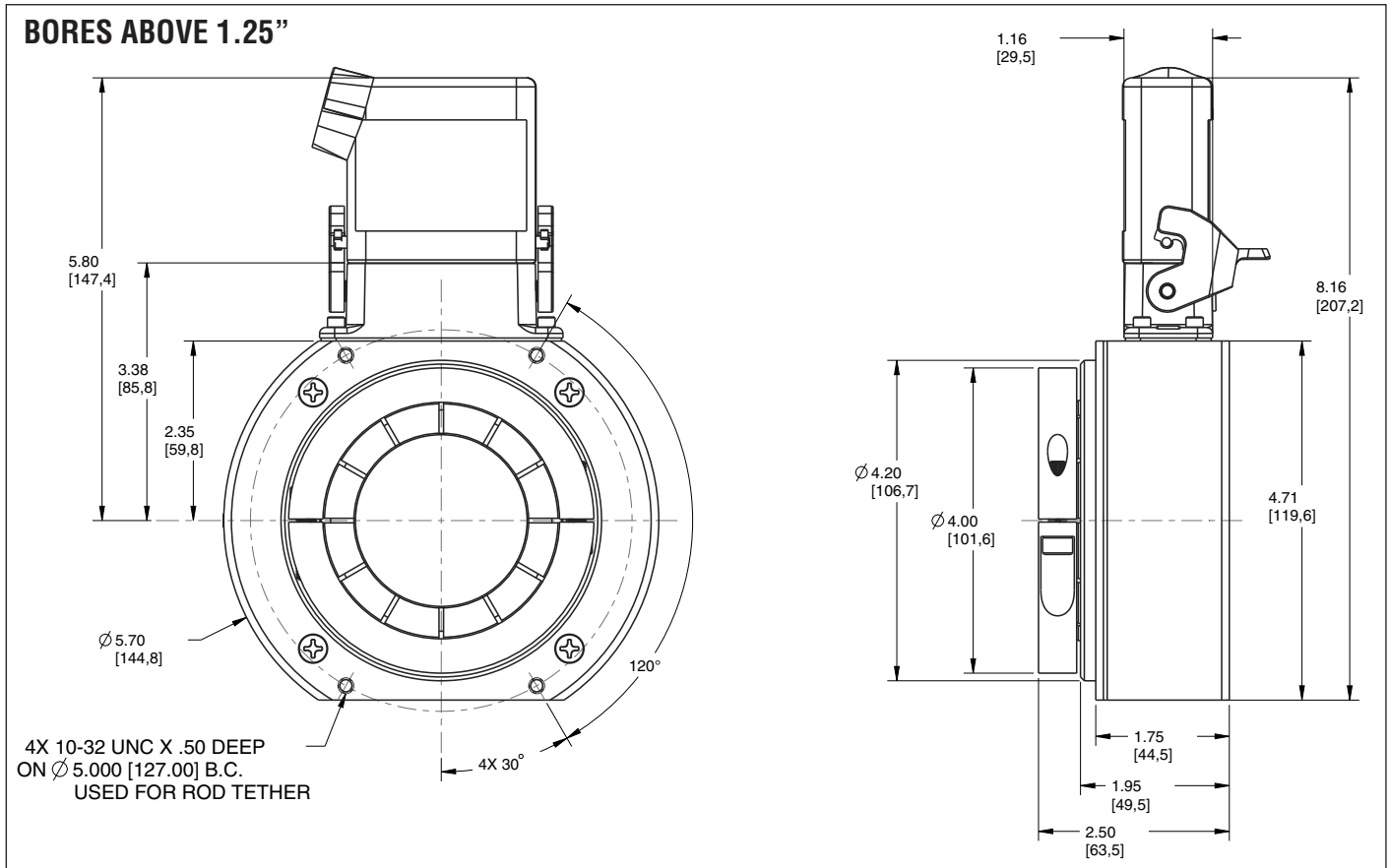


Tether Kit Number	Description
117788-0001	KIT, TETHER, HT55, SLOTTED
117789-0001	KIT, TETHER, HT55, NEMA 4.5
117790-0001	KIT, TETHER, HT55, NEMA 8.5
117791-0001	KIT, TETHER, HT55, ROD END

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DIMENSIONS inches

BORES ABOVE 1.25"



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