

Better Performance. Higher Efficiency.

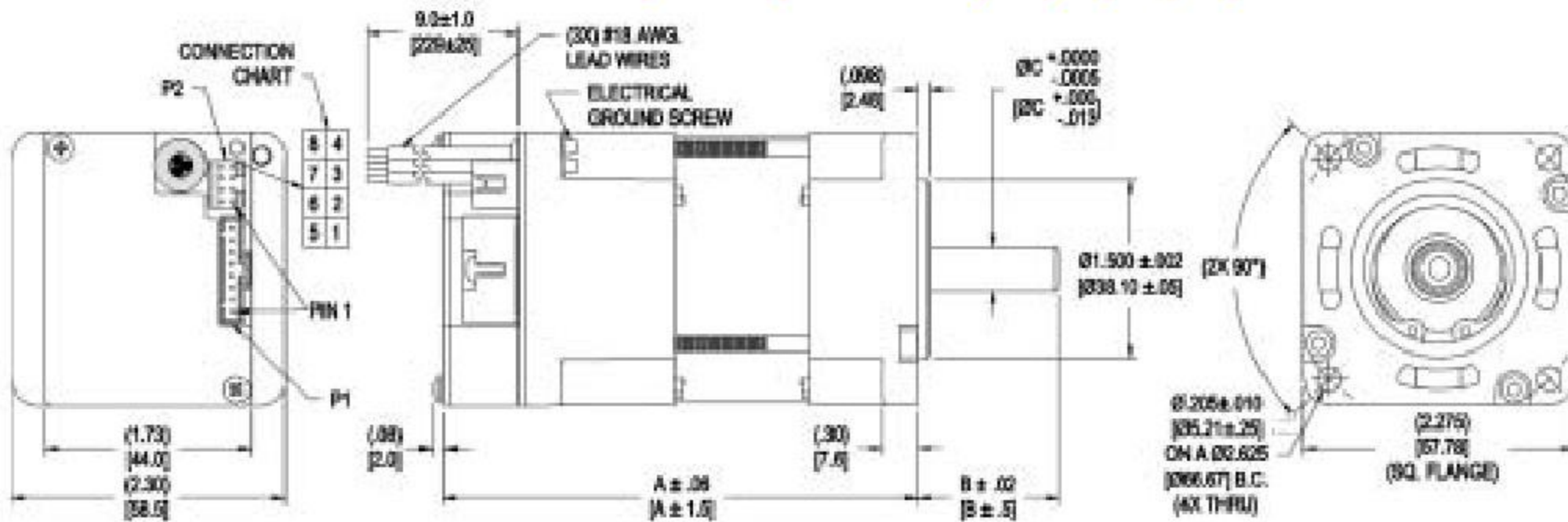
NTHST™



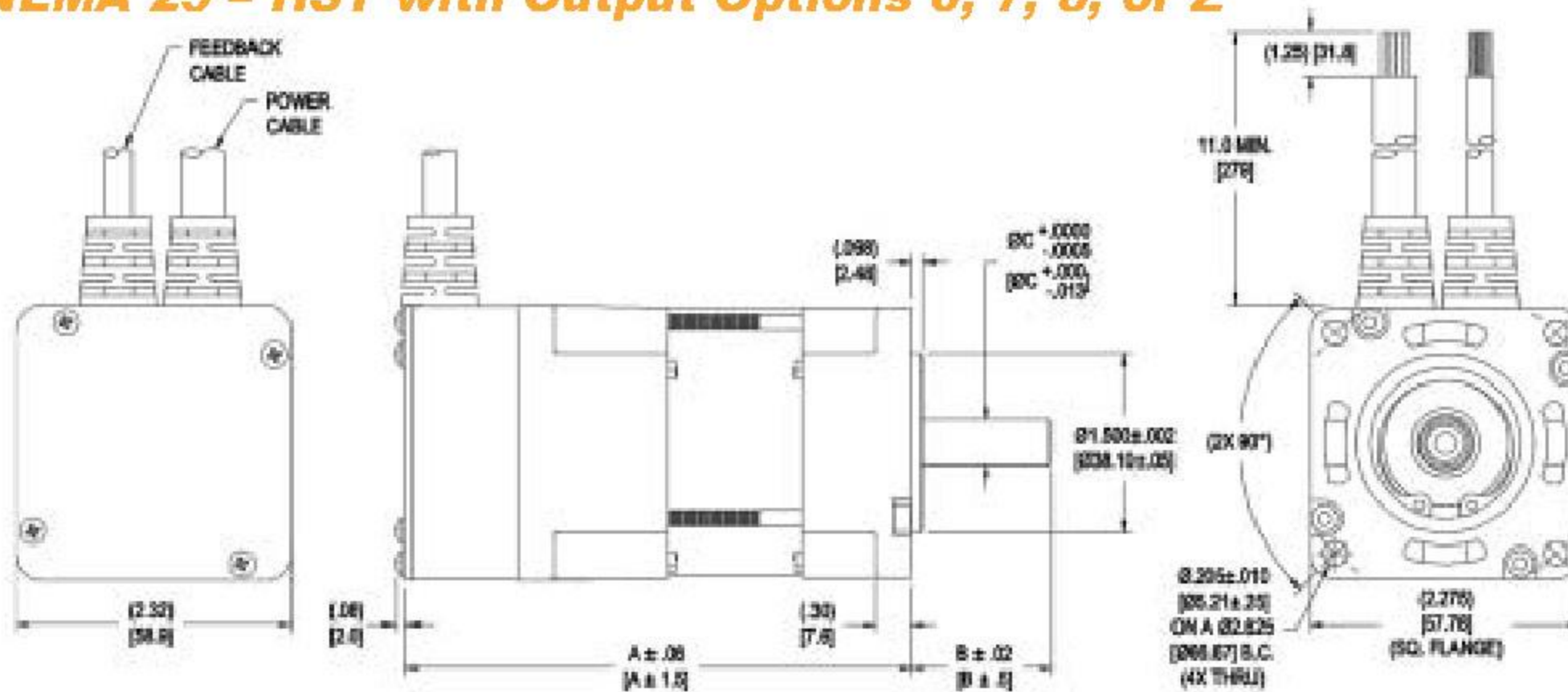
Typical Applications:

- Robotics
- High Speed Presses
- Office Automation
- Packaging
- Mail Handling Equipment
- X-Y Tables
- Conveyors
- Pumps
- Electric Mobility

NEMA 23 – HST with Output Options 0, 1, 2, 3, 4, or 5



NEMA 23 – HST with Output Options 6, 7, 8, or Z



Refer to 'Model Selection Guide'			'A' inches [mm]	'B' inches [mm]	'C' inches [mm]
Model	Output Option	Mechanical	Overall Length	Shaft Extension	Shaft Diameter
1	0, 1, 2, 3, 4, or 5	1	4.00 [101.6]	.81 [20.6]	.2500 [6.350]
		2	4.00 [101.6]	1.25 [31.8]	.3750 [9.525]
	6, 7, 8, or Z	1	4.26 [108.2]	.81 [20.6]	.2500 [6.350]
		2	4.26 [108.2]	1.25 [31.8]	.3750 [9.525]
2	0, 1, 2, 3, 4, or 5	1	5.00 [127.0]	.81 [20.6]	.2500 [6.350]
		2	5.00 [127.0]	1.25 [31.8]	.3750 [9.525]
	6, 7, 8, or Z	1	5.26 [133.6]	.81 [20.6]	.2500 [6.350]
		2	5.26 [133.6]	1.25 [31.8]	.3750 [9.525]

The information contained herein is subject to change without notice.

Connections for Output Option 0, 1, 2, 3, 4, or 5

Connector / Lead	Pin # or Color	Function
Motor Power Leads	Blue	Phase A
	Red	Phase B
	Black	Phase C
	Customer Supplied	Ground (Frame)
*Halls (P1)	1	V _S
	2	V _S (return)
	3	Hall S2
	4	Hall S1
	5	Hall S3
	6	No Connection
	7	No Connection
	8	No Connection
**Encoder (P2)	1	+5 V _S
	2	A
	3	B
	4	Index
	5	+5 V _S (return)
	6	A not
	7	B not
	8	Index not

Connections for Output Option 7 or 8

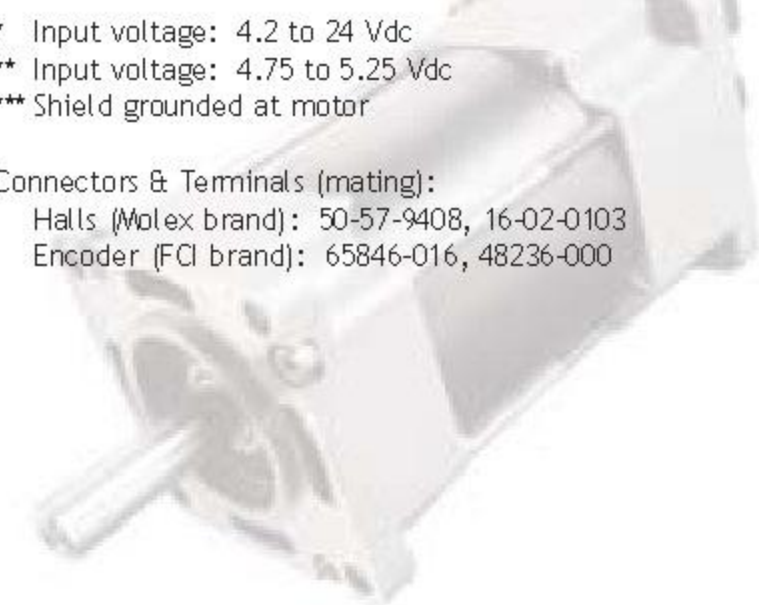
Connector / Lead	Pin # or Color	Function
Motor Power Leads	Red	Phase A
	Black	Phase B
	White	Phase C
	Customer Supplied	Ground (Frame)
	Shield***	Shield
**Encoder Power	Red	+5Vs
	Black	+5Vs (return)
	Black/White	Case Ground
	Shield***	Shield
Encoder Outputs	Brown	A
	White	A not
	Blue	B
	Green	B not
	Orange	Z
	Yellow	Z not
Commutation Outputs	Violet	U
	Gray	U not
	Brown/White	V
	Red/White	V not
	Orange/White	W
	Yellow/White	W not

Connections for Output Option 6

Connector / Lead	Pin # or Color	Function
Motor Power Leads	Red	Phase A
	Black	Phase B
	White	Phase C
	Customer Supplied	Ground (Frame)
	Shield***	Shield
Resolver	Red	Ref Hi
	Black	Ref Lo
	White	Sine+
	Light Brown	Sine-
	Dark Brown	Cos-
	Green	Cos+
	Shield***	Shield

- * Input voltage: 4.2 to 24 Vdc
- ** Input voltage: 4.75 to 5.25 Vdc
- *** Shield grounded at motor

Connectors & Terminals (mating):
 Halls (Molex brand): 50-57-9408, 16-02-0103
 Encoder (FCI brand): 65846-016, 48236-000



Hurst continually applies technology to provide our customers with innovative motion control solutions. These products deliver servo performance in a competitive package.

Combined with a precision bearing system and an insulation system using advanced magnet wire technology, the HST 2.3 is truly one of the most progressive motors in the industry.

Motor technology facilitating innovative motion control solutions.

The HST 2.3 is well suited for most servo applications demanding low rotor inertia, fast dynamic response, and high torque in a small package with low cogging torque. The standard flying leads, and the encoder or resolver

options, allow for easy installation regardless of the brand of amplifier utilized. Other lead configurations and feedback devices can be accommodated to meet user specifications.

Performance specifications are based on trapezoidal amplifier input. Increased performance can be achieved with the use of a sinusoidal amplifier.

Model Selection Guide

To construct a motor part number, substitute the appropriate digits for the x's as shown below.

H S T 2 3 x x x x x x x x

Output Options	
0	= Hall Sensor Outputs only
1	= 100 Line encoder w/ Hall Outputs
2	= 250 Line encoder w/ Hall Outputs
3	= 400 Line encoder w/ Hall Outputs
4	= 1000 Line encoder w/ Hall Outputs
5	= 256 Line encoder w/ index & Hall Outputs
6	= Resolver
7	= 1024 Line encoder w/ Hall Outputs
8	= 2048 Line encoder w/ Hall Outputs
Z	= No Feedback Options (Power Leads only)

Model	
	Refer to Speed Torque Curves
1	
2	

Voltage	
	VDC Buss
012	= 12V
024	= 24V
036	= 36V
048	= 48V
160	= 160V
320	= 320V

Curve	
	Refer to Speed Torque Curves
A	
B	
C	
D	
E	
*Consult Factory for Speed Torque Curves	

Cables	
0	= None
1	= Hall Output
2	= Hall Output & Encoder
*Cables required with Output Options 0 through 5. Additional Cables not required with Options 6, 7, 8 and Z.	

Mechanical	
1	= NEMA 23 (23D025)
2	= NEMA 23 (23D038)



Features

- Brushless DC
- High Power Density for Demanding Applications
- Compact Package Size
- High Dynamic Performance
- Low Rotor Inertia
- Encoder and Resolver Options
- Gearing Available
- NEMA 23 Mounting

Electrical

- High Efficiency
- Precision Motion Quality
- UL Approved Insulation System
- 100% Final Tested
- Custom Windings Available
- Up to 140 oz-in Torque (without gearing)
- 12 Vdc to 320 Vdc Buss Voltage
- Pulse Resistant Magnet Wire
- Trapezoidal or Sine Drive Input Power

Mechanical

- Long Life Ball Bearing System
- Neodymium Ring Magnets (not arcs)
- Stainless Steel Shaft (custom sizes available)
- NEMA 23 Mounting
- Fast Dynamic Response
- Up to 4000 RPM Operation Direct Drive
- Cable and Connector Options Available

Encoders and Resolvers

- Encoder Line Counts Available:
 - 100
 - 250
 - 256 w/ Index Pulse
 - 400
 - 1000
 - 1024
 - 2048
- Resolver Options Available
- Encoders and Resolvers are Integrated into a Housing on the Rear of the Motor
- Hall Output Signals are Available for an Inexpensive Solution for Speed Control

Gearing Options

- Planetary
 - Wide Selection of Gear Ratios and Features
 - Inline, Right Angle, and Metric
 - High Torque and Low Backlash
- Integrated Design
- High Shaft Loading Capacity
- NEMA 23 Mounting



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