ENC-THS25- High Resolution Hollow Differential Encoder

ANAHEIM AUTOMATION

FEATURES

- ***Tracks 0 to 200,000 Cycles per Second***
- ***Operating Temperature of -40˚ to + 125˚ C***
- ***100 to 2,560 Cycles per Revolution***
- ***Up to 10,000 Pulses per Revolution (PPR)***
- ***2-Channel Quadrature (Differential Squarewave Outputs)***
- ***NEMA 23 to 42 Compatible***
- ***Third and Fourth Index Channel (with Index option)***
- ***RoHS Compliant***

DESCRIPTION

The THS25 high resolution, Magnetic Hollow-Shaft Incremental Encoder offers reliable performance at an economical price. Available in a large range of resolutions, the THS25 offers superior performance over an optical encoder when placed in high shock and vibration environments. This hollow shaft encoder can handle shaft sizes that range from 2.0” to 3.4”, and .25” to 1.125” when using an insulating sleeve. The patented EMI circuitry provides protection from high-frequency electrical noise and background magnetic fields. This low-profile design is perfect for feedback and vector control, robotics, web processing and printing. The THS25 comes enclosed in a rugged IP50 package for protection from debris, with the option of upgrading to an IP66 housing option.

CUSTOM ORDER LAYOUT

ENC-THS25**I** -**100** -**3** -**250** -**50** - **OC** - **G**

Model	
I	Index
N	No Index

Resolution (Lines)	
100	600
125	640
128	800
160	960
200	1000
240	1024
250	1200
256	1280
300	1600
320	1920
400	2000
480	2048
500	2400
512	2560

Mounting	
Type	Block
3	3 Point Flex Mount
4	4.5 in. C-Face Tether Arm
8	8.5 in. C-Face Tether Arm
BP	Block & Pin

Bore			
Type	Diameter	Type	Diameter
250	0.250 in	10mm	10 mm
312	0.3125 in	11mm	11 mm
375	0.375 in	12mm	12 mm
500	0.500 in	14mm	14 mm
625	0.625 in	15mm	15 mm
750	0.75 in	19mm	19 mm
875	0.875 in	20mm	20 mm
1000	1.00 in	24mm	24 mm
1125	1.125 in	25mm	25 mm
6mm	6 mm	28mm	28 mm
8mm	8 mm		

Electrical	
OC	Open Collector
LD	Line Driver

Seal	
50	Through Shaft IP50
66	Through Shaft IP66
B50	Blind Shaft IP50
B66	Blind Shaft IP66

Connections	
G	Gland w/24 in. Cable
6M	6 Pin MS Style
7M	7 Pin MS Style
1M	10 Pin MS Style
5M	5 Pin M12
8M	8 Pin M12
1B	10 Pin Bayonet

L010770

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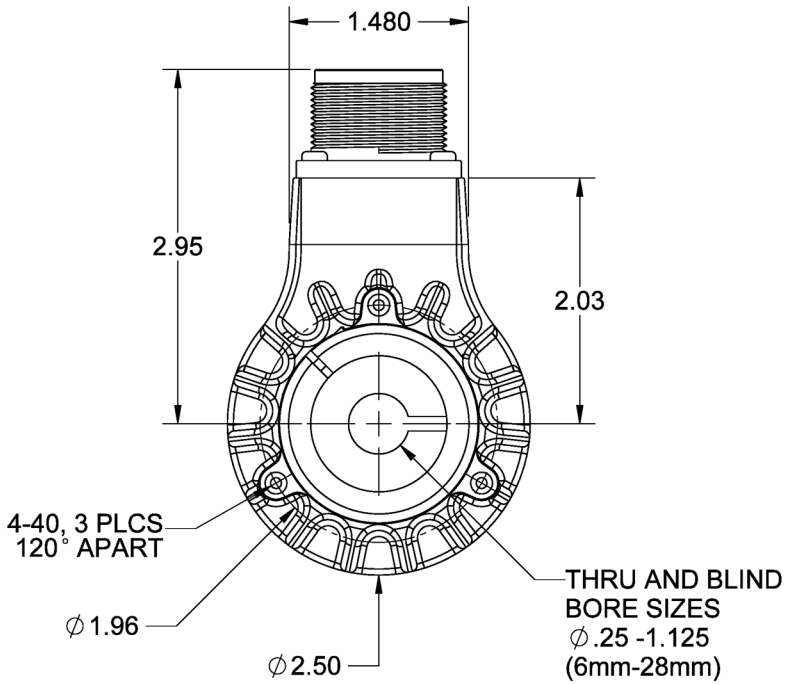
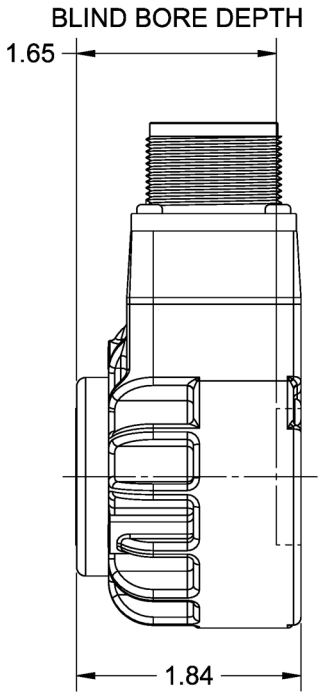
ADDITIONAL INFORMATION

Seal Options:	Description
50-Option	Through Shaft IP50
66-Option	Through Saft IP66
B50-Option	Blind Shaft IP50
B66-Option	Blind Shaft IP66

Connection Options:	Description
G	Gland with 24 in. Cable
6M	6 Pin MS Style
7M	7 Pin MS Style
1M	10 Pin MS Style
5M	5 Pin M12
8M	8 Pin M12
1B	10 Pin Bayonet

DIMENSIONS





All units are in inches

WIRING TABLE

Function	Gland Cable Wire Color	5-pin M12	8-pin M12	10-pin MS	7-pin MS OC	7-pin MS LD	6-pin MS	10-pin Bayonet
Com	Black	3	7	F	F	F	A,F	F
+VDC	White	1	2	D	D	D	B	D
A	Brown	4	1	A	A	A	D	A
A'	Yellow	---	3	H	C	---	---	H
B	Red	2	4	B	B	B	E	B
B'	Green	---	5	I	E	---	---	J
Z	Orange	5	6	C	---	C	C	C
Z'	Blue	---	8	J	---	---	---	K
Case	--	---	---	G	G	G	---	G
Shield	Bare	---	---	---	---	---	---	---

ELECTRICAL SPECIFICATION

Model #	Description
CPR(N):	The number of cycles per revolution
One Shaft Rotation:	360 mechanical degrees, N cycles
One Electrical Degree (°e):	1/360th of one cycle
One Cycle (C):	360 electrical degrees (°e). Each cycle can be decoded into 1 or 4 codes, referred to as X1 or X4 resolution mutiplication
Symmetry:	A measure of the relationship between (X) and (Y) in electrical degrees, nominally 180 °e
Quadrature (Z):	The phase lag or lead between channels A and B in electrical degrees, nominally 90°e
Index (CH I):	The index output goes high once per revolution, coincident with the low states of channels A and B, nominally 1/4 of one cycle (90°e)

Parameter	Max	Units
Supply Current	65	mA
Output Load	15	mA
Total Max Current	80	mA

Parameter	Max	Units
Vibration (5 to 2kHz)	30	gs
Shock	100gs for 6ms	gs for ms
Allowable Misalignment on mating shaft	0.005	in.
Allowable Misalignment from shaft end	0.75	in.

Recommended Operating Conditions	Min	Max	Units
Operating Temperature	-20	105	°C
Supply Volatage	5	28	Volts
Count Frequency	-	200	kHz

Encoder Output