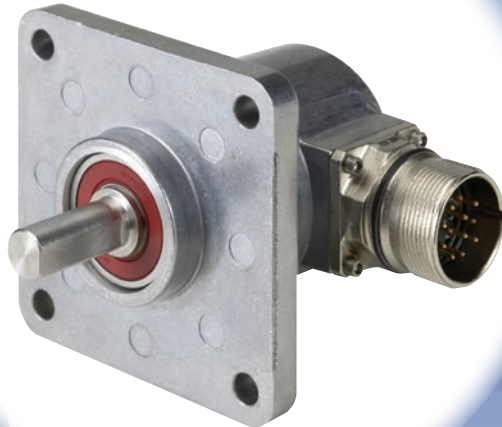


RHDI Series



The **RHDI Series** is a rugged encoder designed for industrial applications. This encoder features a robust aluminum housing with heavy duty sealed bearings and a $\frac{3}{8}$ inch diameter steel shaft. This heavy duty encoder is designed to provide extremely reliable positioning information under adverse industrial environmental conditions. Typical applications are NC machine tools, synchronization of flow lines, solar trackers, material processing equipment, oil drill equipment, automated assembly line transfer machines and many more.

Features:

- Rugged die cast aluminum flange and cover
- Line count up to 8192
- 2 data channels in quadrature
- Once around index pulse
- 500 KHz frequency response
- IP65 Protection

Environmental:

Operating Temp	-30° to 100°C
Excursion Limits:	
Storage Temp	-40° to 115°C
Shock	150 G's for 6 mS with metal disk
Vibration	20–2000 Hz @ 20 G's
IP Rating	IP65

Mechanical:

Weight	.255 kg [9 oz]
Base Material	Aluminum
Housing Material	Aluminum
Disc Material	Metal 0.05 THK TYP for 250-4096 resolutions Chrome on Glass for 8000 & 8192 resolutions
Bearing Life	10 ⁸ Revolution: Min.
Shaft Size	9.5097mm – 9.5225mm [0.3744" – 0.3749"]
Shaft Load	Radial 100 lb Max.
Mounting Hardware	Not Supplied

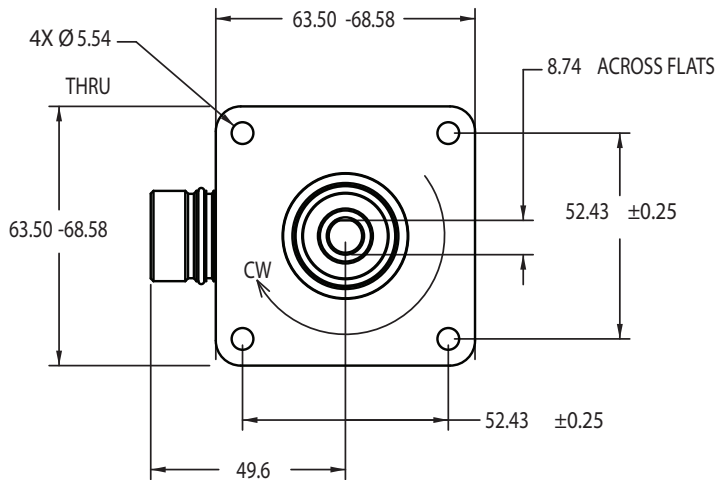
Electrical:

Signals	Incremental Incremental plus once around index pulse
Input Voltage	5.0 VDC ± 10% Single Supply
Current	150 mA @ 5 VDC
Output Format	A/B in phase quadrature. INDEX width & location gated with respect to data
Output Type	LD = AM26C31 20 mA Source or Sink Max. PP = Source or Sink 4 mA Max.
Output Logic Levels	Logic 0 = 0.5 V Max, Logic 1 = 2.5 V Min.
Operating Frequency	To 500 KHz

Resolution:

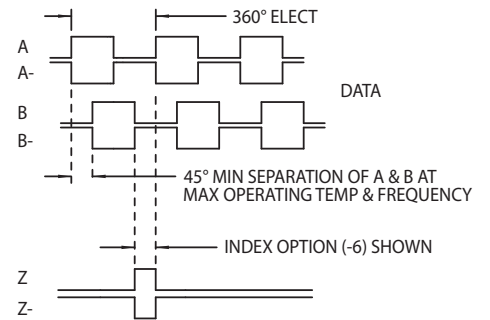
Line Count	250, 256, 500, 512, 1000, 1024, 2000, 2048, 4000, 4096, 8000, 8192
Index Gating	1 = Index Gated with A & B, Index width 90° ± 45° 6 = Index Gated with A- & B-, Index width 90° ± 45° 7 = Centered on A & B, Index width 270° ± 45° 8 = Centered on A- & B-, Index width 270° ± 45°

Mounting Requirements

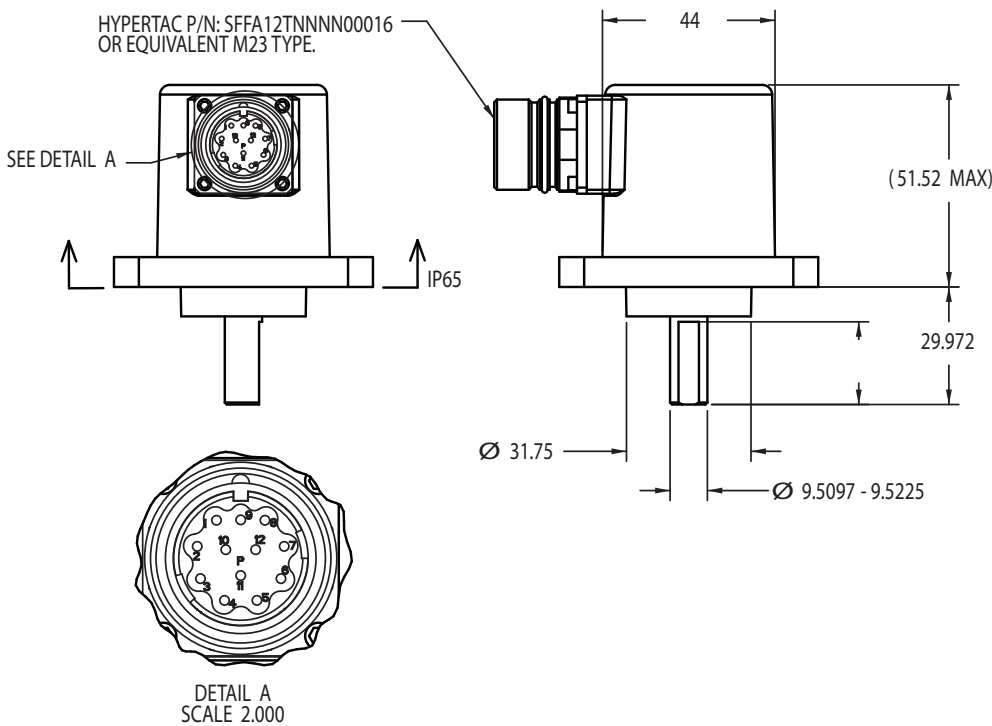


Phase Quadrature

CCW VIEWING ENCODER TOP LD OPTION SHOWN



Mechanical Dimensions



Pin Function

PIN NO.	FUNCTION	
	LD OUTPUT	PP OUTPUT
1	B-	N/C
2	N/C	N/C
3	Z	Z
4	Z-	N/C
5	A	A
6	A-	N/C
7	N/C	N/C
8	B	B
9	N/C	N/C
10	GND	GND
11	N/C	N/C
12	+5V	+5V
CURRENT (mA)	100	48

Output Format

LD = Line Driver
PP = Push/Pull

Ordering Information

RHDi - _____ - **3/8** - _____ - **5** - _____ - **M2**
RESOLUTION SHAFT SIZE* OUTPUT VOLTAGE INDEX GATING
See Front Page FORMAT See Front Page

*Consult factory for special shaft sizes