

GURLEY MODEL A37H HOLLOW-SHAFT ABSOLUTE ENCODER

MOTION TYPE:

ROTARY

USAGE GRADE:

INDUSTRIAL

OUTPUT:

ABSOLUTE

MAX RESOLUTION:

23 BIT



SMALL ENCODER - HIGH RESOLUTION

The model **A37H** miniature encoder is a single-turn absolute rotary encoder with opto-electric technology that offers up to 21 bit serial output. Optional 1Vp-p sin/cos tracks (1024 cycles/rev) is also available for positioning and speed feedback. This encoder is used in a wide variety of position-sensing applications for the measuring of angles and distances in relatively small envelopes. Mechanical features include a 37.5mm dia aluminum housing, 8mm max dia hollow-shaft, and precision ball bearings.

ingenuity[®]@work

ISO
9001
CERTIFIED

Gurley Precision Instruments
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SPECIFICATIONS

	Units	Limiting Values	See Note
Mechanical Specifications			
Moment of Inertia	in-oz-s ² (kg-m ²)	0.42 x 10 ⁻⁴ (3.0 x 10 ⁻⁷)	
Starting Torque	in-oz(Nm)	0.83 (5.9 x 10 ⁻³)	
Radial Shaft Load	lb(N)	4.49 (20)	
Axial Shaft Load	lb(N)	2.25 (10)	
Bearing Arrangement		2 pre-loaded bearings	
Bearings		Grease-lubricated and sealed	
Code Disc Type		Etched chrome on glass	
Non-operating, Slew Speed	RPM	6000	
Max. Operating Speed at 21-bits	RPM	6000	
Acceleration	rad/s ²	8 x 10 ⁴	
Shock 10(ms)	m/s ²	≤2000	
Vibration (55-2000Hz)	m/s ²	≤100	
Sealing		IP40	2
Weight	lb(kg)	0.22 (0.1)	3
Environmental Specifications			
Operating Temperature	°F(°C)	-40 to +185(-40 to +85)	
Storage Temperature	°F(°C)	-40 to +185(-40 to +85)	
Relative Humidity	%	90	1
Electrical Specifications			
Supply Voltage	VDC	+5VDC ±0.1V	
Current Consumption	mA	≤140	
Output Code		Gray Code or Natural Binary	
Output Format		8-bits up to 23-bit SSI	
Output Device		RS-422	
Accuracy		±30 arc seconds	

Notes

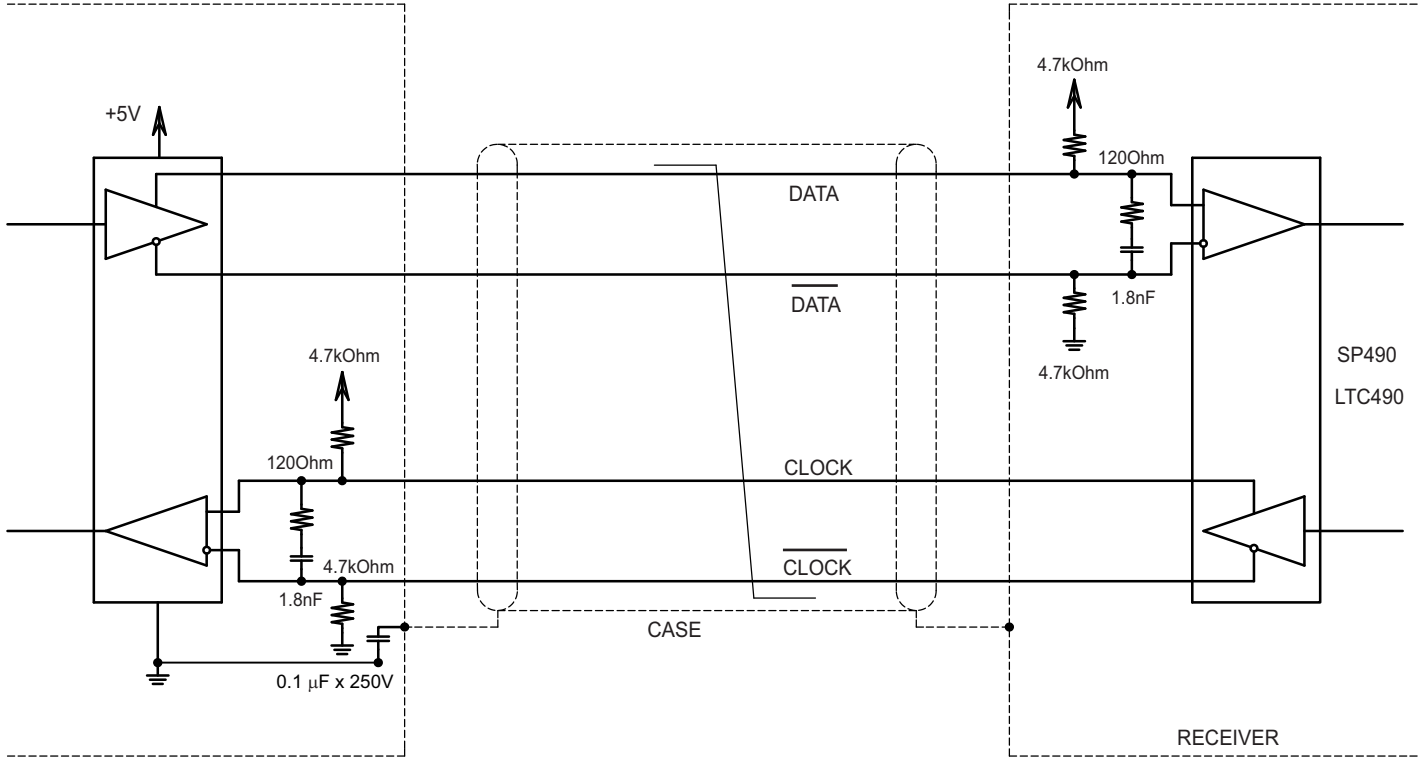
1. Non-condensing
2. Per CEI / IEC 529 - Degrees of protection provided by enclosures (IP Code)
3. Without cable

As part of our continuing product improvement program, all specifications are subject to change without notice.



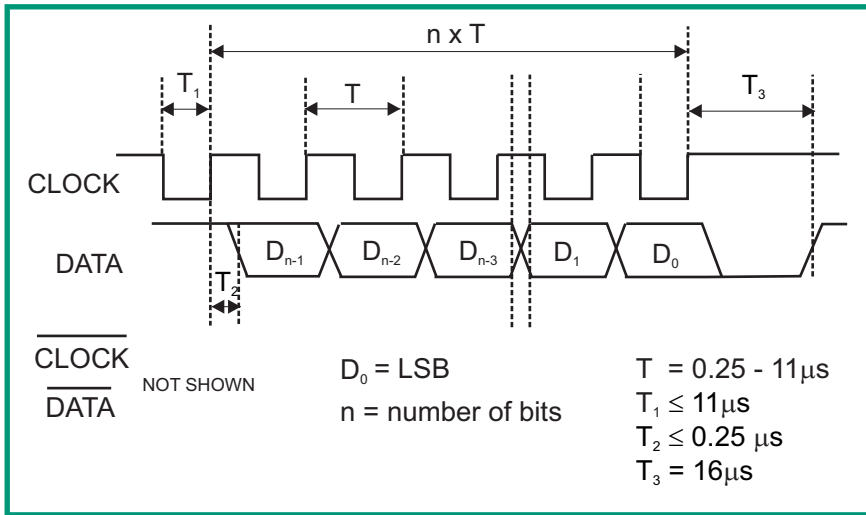
OUTPUT SIGNALS AND RECOMMENDED CIRCUIT INTERFACE

SSI CHANNEL



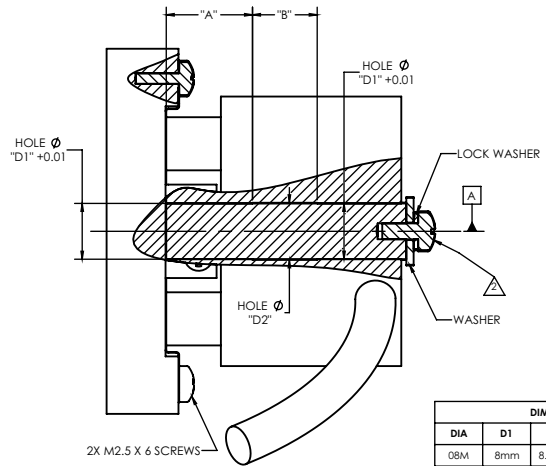
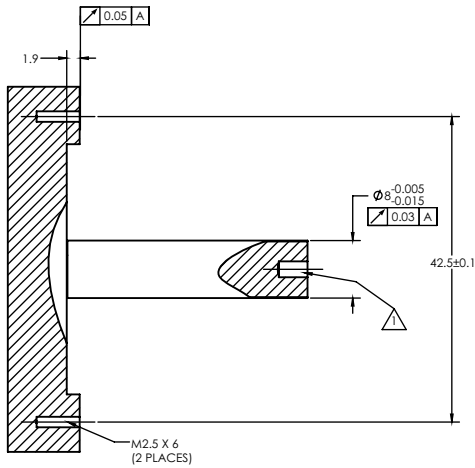
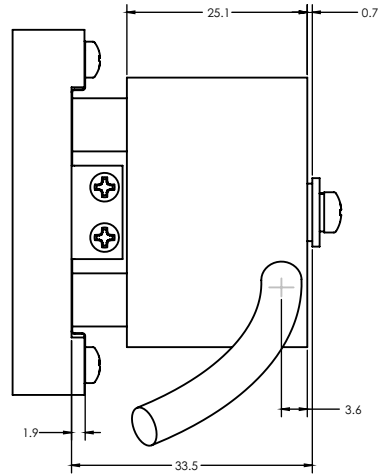
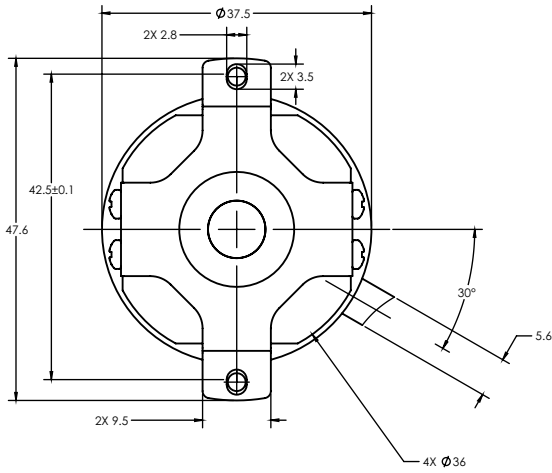
OUTPUT & SSI WIRING OPTIONS

Serial Output Gray code or Binary



Output Signal	Color
Case	Black
Clock	Green
/ Clock	Yellow
Data	Red
/ Data	Blue
0V	White
+5V	Brown
Sensor 0V	Grey
Sensor +5V	Pink

OUTLINE DIMENSIONS



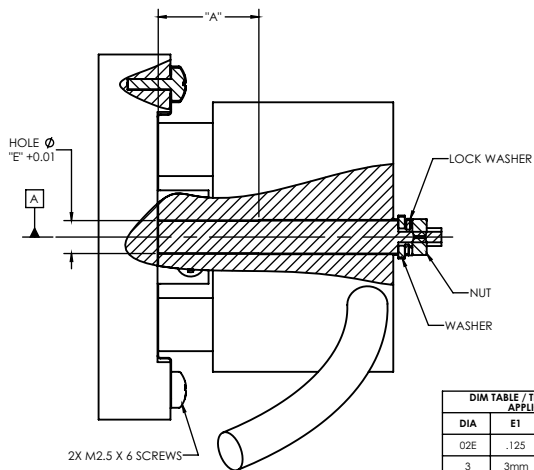
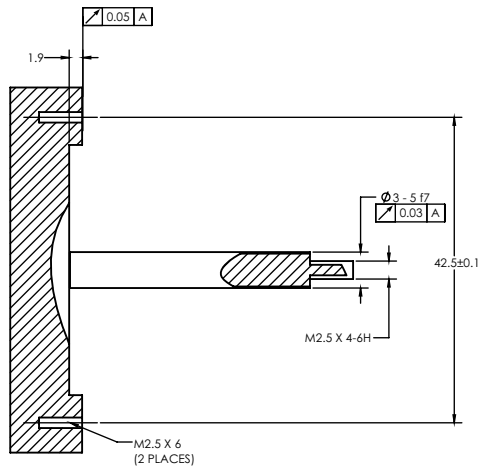
DIM TABLE				
DIA	D1	D2	A	B
Ø8M	8mm	8.2mm	12mm	9mm

△ SUGGESTED HOLE THREAD SIZES FOR METRIC: M3 - M4 X 6mm
 SUGGESTED HOLE THREAD SIZES FOR ENGLISH: 5-40 - 8-32 X .25" MAX

△ SUGGESTED SCREW SIZES FOR METRIC: M3 - M4
 SUGGESTED SCREW SIZES FOR ENGLISH: 5-40 - 8-32

Mounting info from customer's side

Encoder mount in the customer application



DIM TABLE / THREADED SHAFT APPLICATION			
DIA	E1	E2	A
Ø2E	.125	3.4mm	9mm
3	3mm	3.2mm	9mm
4	4mm	4.2mm	12mm
5	5mm	5.2mm	14mm

Mounting info from customer's side for exterior threaded shaft

Encoder mount in the customer application for threaded shaft



ORDERING INFORMATION

MODEL SHAFT RES OF OC OD VOLT TEMP BASE EXIT CAB CONN SHAFT SPEC

MODEL

A37

SHAFT - Shaft type

H Hollow Shaft

RES – Resolution

08 – 23 8-bits – 23-bits

OF – Output Format

S SSI

OC – Output Code

B Binary

G Gray code

OD – Output Device

RS RS Differential (RS-422)

VOLT – Voltage

05 5VDC Power Supply

TEMP – Temperature Range

E Extended (-40C to +85C)

BASE

H Hollow shaft external tether

EXIT– Cable Exit

S Side exit cable

CAB – Cable length, inches

39 Standard (1M)

XX 02” – 99”

CONN – Conector

P Pigtail

Q DA-15P

R DE-15P

S DE-9P

SHAFT

02E 1/8 inch

03M 3 mm

04M 4 mm

05M 5 mm

08M 8 mm

SPEC – Special features

N No Special Features

SPECIAL CAPABILITIES

For special situations, we can optimize catalog encoders to provide higher frequency response, greater accuracy, wider temperature range, reduced torque, non-standard line counts, or other modified parameters. In addition, we regularly design and manufacture custom encoders for user-specific requirements. These range from high-volume, low-cost, limited-performance commercial applications to encoders for military, aerospace and similar high-performance, high-reliability conditions. We would welcome the opportunity to help you with your encoder needs.

WARRANTY

Gurley Precision Instruments offers a limited warranty against defects in material and workmanship for a period of one year from the date of shipment.

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