



**PART NUMBER:** SES10

**DESCRIPTION:** sine wave

**ELECTRICAL SPECIFICATIONS**

output waveform	Sine Wave
output signals	A phase, A,B phase
current consumption	≤30 mA (LED: maximum 20mA)
frequency response	0~20 KHz
output phase difference	A, B phase difference 90° ± 45°
supply voltage	5 V dc ± 10%
output resolution (ppr)	100, 200

**MECHANICAL SPECIFICATIONS**

max shaft load, radial:	1.9N (200gf)
axial:	1.9N (200gf)
starting torque	0.3 x 10 <sup>-3</sup> N·m (3 gf·cm)
max rotational speed	6000 RPM
shock resistance	500m/s <sup>2</sup> (about 50G) 3 times each on XYZ
vibration proof	55 Hz, double amplitude 1.5mm, 2 hours each on XYZ
weight	10g (with 130mm cable)
cable	Vinyl wire (AWG 30) 130mm

**ENVIRONMENTAL SPECIFICATIONS**

operating temp	0° to +50° C
storage temp	-20° to +80° C
humidity	90% max. non collecting

**ORDERING INSTRUCTIONS**

SES10 - XXXXXX

Resolution (PPR):

100 = 100 PPR

200 = 200 PPR

Output Phase:

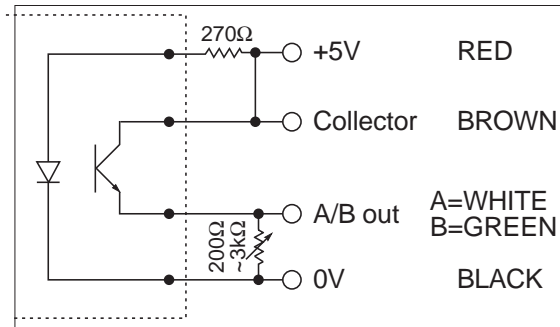
A = Single Phase

AB = Two-Phase

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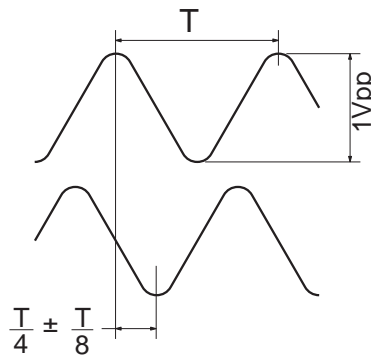
**DESCRIPTION:** sine wave

### CIRCUIT CONNECTIONS

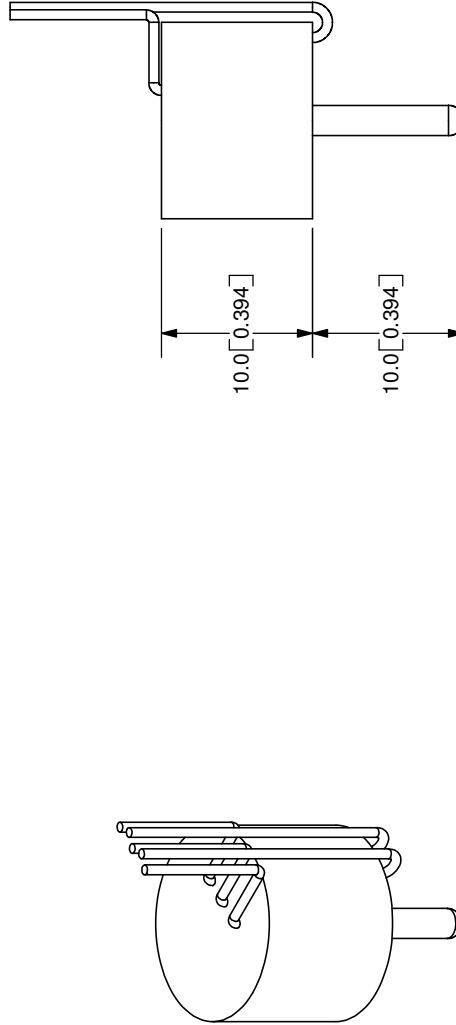
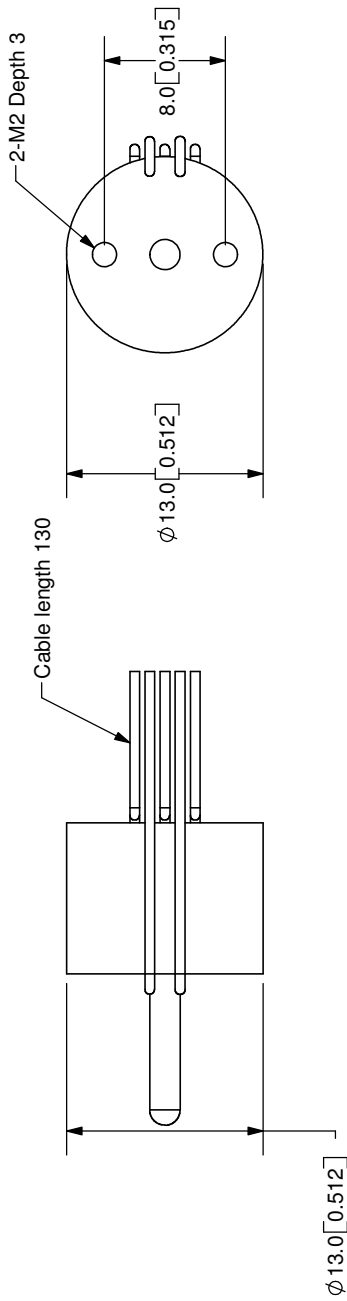


### OUTPUT WAVEFORM

Clockwise rotation viewed from front



REV.	DESCRIPTION	DATE
A	NEW DRAWING	7/27/2007



TOLERANCE:  
±0.3mm UNLESS OTHERWISE  
SPECIFIED



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TITLE: Incremental Encoder  
REV: A

PART NO: SES 10  
UNITS: MM [INCHES]

DRAWN BY: JMS  
APPROVED BY:  
SCALE: 2:1

Cable Color	Red	Brown	White	Green	Black	-	-	-
Output Type	Anode	Collector	Emitter A	Emitter B	Cathode	-	-	-

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PC FILE NAME: SES 10