



**PART NUMBER:** SES17

**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, 300, (360) (single phase only)

**MECHANICAL SPECIFICATIONS**

max shaft load, radial:	1.9N (200gf) (2); 4.9N (500gf) (4)
axial:	1.9N (200gf) (2); 4.9N (500gf) (4)
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> (50G), 11ms, 3 times each on XYZ
vibration proof	55 Hz, 1.5mm, 2 hours each on XYZ
weight	20g (with 130mm cable)
cable	Vinyl wire (AWG28) 130mm

**ENVIRONMENTAL SPECIFICATIONS**

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

**ORDERING INSTRUCTIONS**

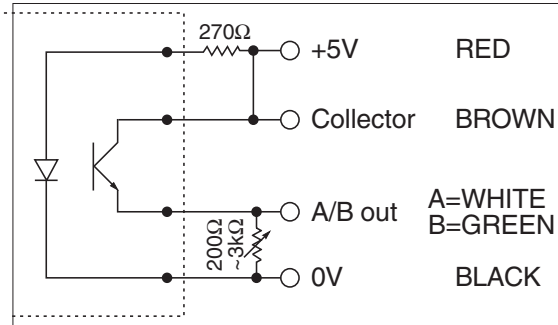
SES17(X) - XXXXX

Shaft Diameter:	Resolution (PPR):	Output Phase:
2 = 2mm shaft	100 = 100 PPR	A = Single Phase
4 = 4mm shaft	200 = 200 PPR	AB = Two-Phase
	300 = 300 PPR	
	360 = 360 PPR	

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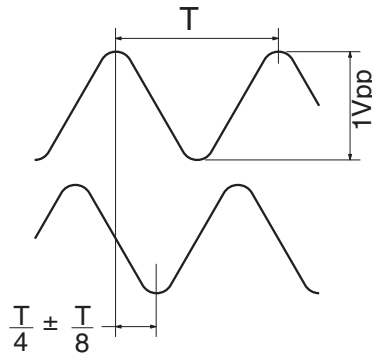
**DESCRIPTION:** sine wave

### CIRCUIT CONNECTIONS

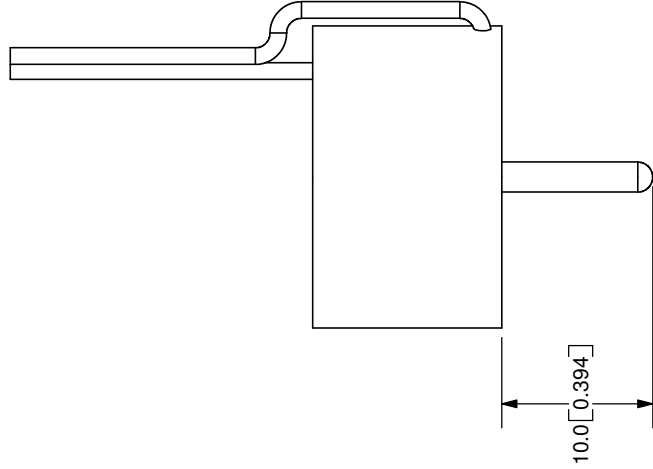
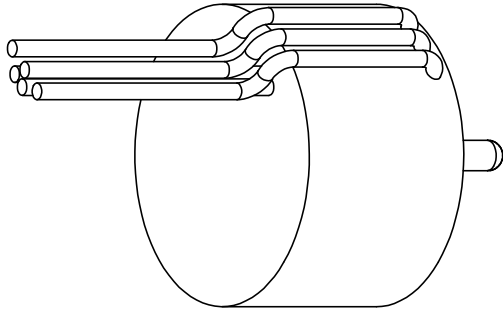
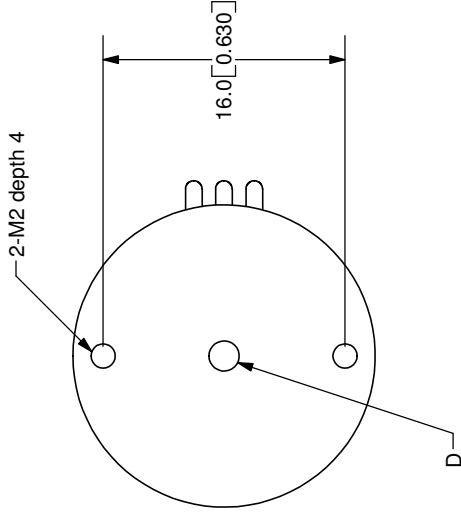
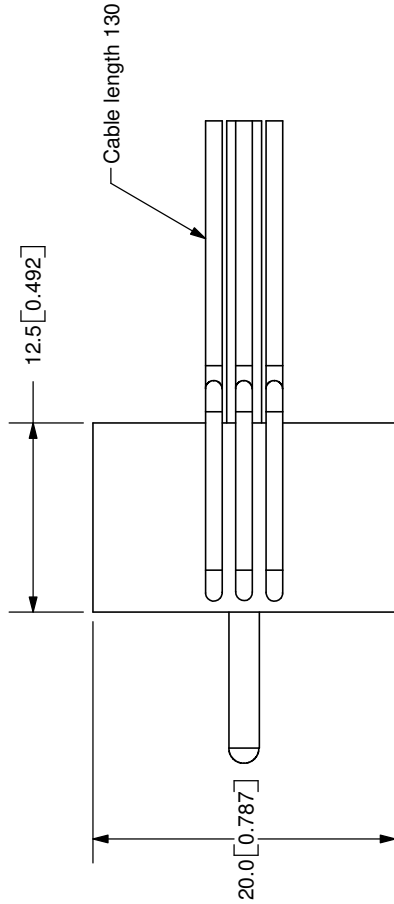


### OUTPUT WAVEFORM

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 17 shaft	UNITS:	MM [INCHES]
DRAWN BY:	JMS	APPROVED BY:	
		SCALE:	2:1

D	∅ 2 <sup>+0.01</sup> <sub>-0.015</sub>
D	∅ 4 <sup>+0.01</sup> <sub>-0.015</sub>
-	-
-	-

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

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PC FILE NAME:  
SES 17 shaft