



**PART NUMBER:** MES40-5000PST

**DESCRIPTION:** incremental encoder

**ELECTRICAL SPECIFICATIONS**

output waveform	Square Wave
output signals	A, B, Z phase
current consumption	≤40 mA
frequency response	0~50 KHz X (by multiplication) Voltage Output 100KHz Open collector
output phase difference	See output waveform
supply voltage	5 V dc ± 10% (line driver output only), 5~12 V dc ±10% (TTL voltage output only), 24 V dc ± 10% (open collector output only)
output resolution (ppr)	10000, 20000, 40000, 80000

**MECHANICAL SPECIFICATIONS**

max shaft load, radial:	49N (5kgf)
axial:	29.4N (3kgf)
starting torque	2 x 10 <sup>-3</sup> N·m (20 gf·cm) 5 x 10 <sup>-3</sup> N·m (50 gf·cm)
max rotational speed	6000 RPM
shock resistance	500 m/s <sup>2</sup> (50G), 3 times each on XYZ
vibration proof	55 Hz, double amplitude 1.5mm, 2 hours each on XYZ
weight	200g (with 1m cable)
cable	4.2mm outside diameter, 5 core vinyl wire insulated shield cable (1m)

**ENVIRONMENTAL SPECIFICATIONS**

operating temp	0° to +50° C
storage temp	-20° to +80° C
humidity	RH 35%~90% non collecting

**ORDERING INSTRUCTIONS**

**MES40 - 5000PSTXXX**

Resolution (PPR):  
 2 = 5000 X 2 (10,000 PPR)  
 4 = 5000 X 4 (20,000 PPR)  
 8 = 5000 X 8 (40,000 PPR)  
 16 = 5000 X 16 (80,000 PPR)

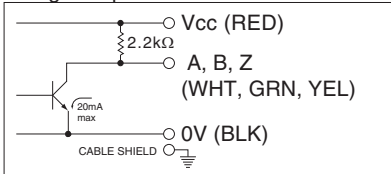
Output:  
 "no entry" = TTL voltage output  
 C = Open collector output  
 E = Line driver output

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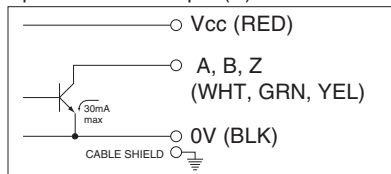
**DESCRIPTION:** incremental encoder

## CIRCUIT CONNECTIONS

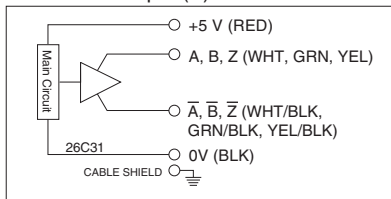
Voltage Output



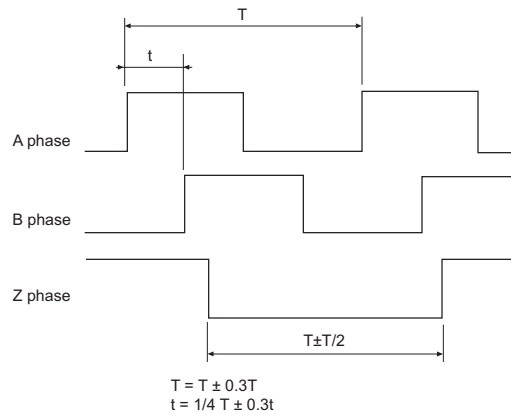
Open Collector Output (C)



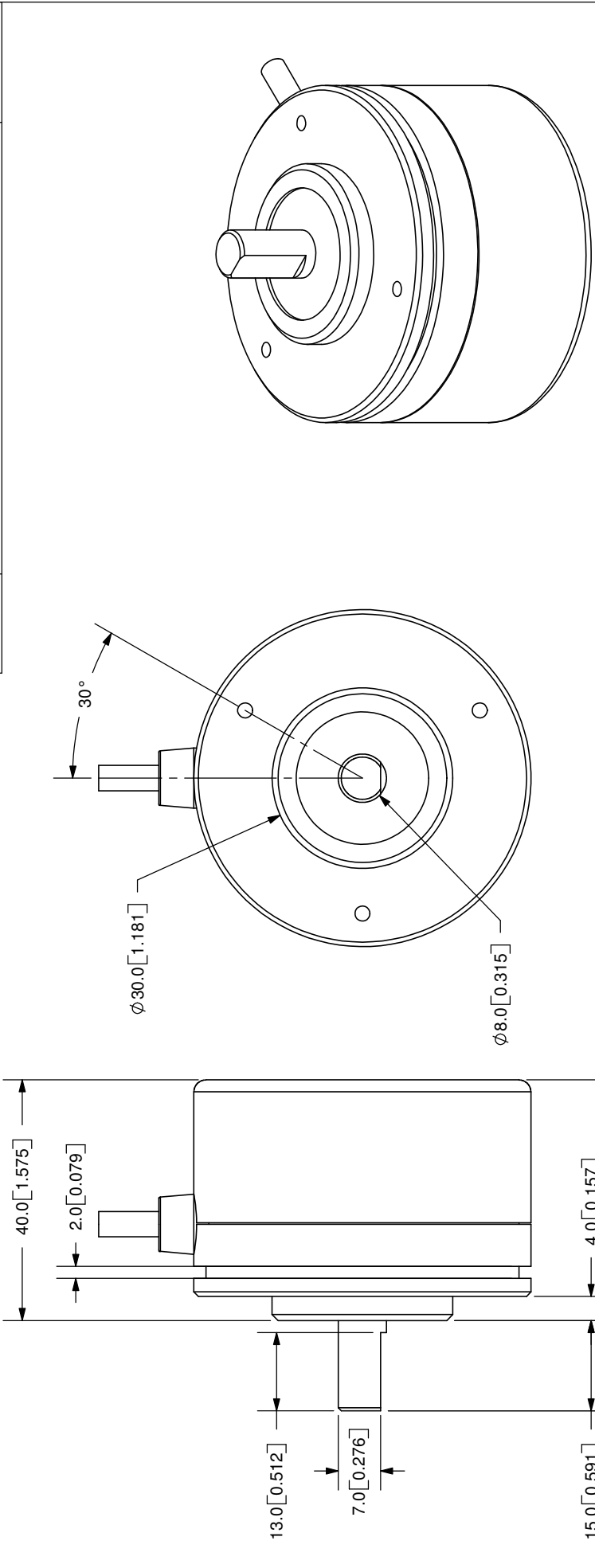
Line Driver Output (E)



## OUTPUT WAVEFORM



REV.	DESCRIPTION	DATE
A	NEW DRAWING	7/30/2007



TOLERANCE:  
±0.3mm UNLESS OTHERWISE  
SPECIFIED



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TITLE: Incremental Encoder	REV: A
PART NO: MES40	UNITS: MM [INCHES]
DRAWN BY: JMS	APPROVED BY:
	SCALE: 1:1

Cable Color	Red	White	Green	Yellow	Black
Output Type	A-Phase	B-Phase	Z-Phase	0V	-

PC FILE NAME: MES40  
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