



**PART NUMBER:** MEH9-1000PST

**DESCRIPTION:** incremental encoder

**ELECTRICAL SPECIFICATIONS**

output waveform	Square Wave
output signals	A, B, Z phase
current consumption	≤40 mA
frequency response	0~100 KHz
output phase difference	A, B phase difference 90° ± 45° (T/4±T/8) Z phase T±T/2 (see output waveform)
supply voltage	5 V dc ± 10%
output resolution (ppr)	2000, 4000, 8000, 16000
waveform rise/fall time	1µ or less (outout cable 140mm or less)

**MECHANICAL SPECIFICATIONS**

max shaft load, radial:	0.98N (100gf)
axial:	0.98N (100gf)
starting torque	1 x 10 <sup>-3</sup> N·m (10 gf·cm max.)
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	10g (with 140mm cable)
cable	Vinyl wire (AWG 30) 140mm cable

**ENVIRONMENTAL SPECIFICATIONS**

operating temp	0° to +60° C
storage temp	-20° to +80° C
humidity	RH 35%~90% non collecting

**ORDERING INSTRUCTIONS**

**MEH9 - 1000PSTXXX**

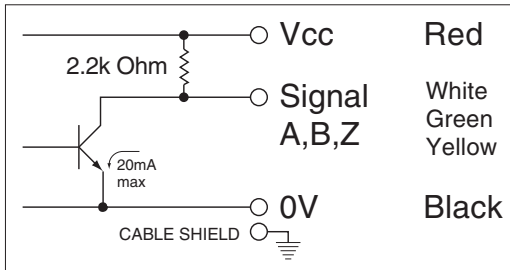
<p>Resolution (PPR):</p> <p>2 = 1000 X 2 (2,000 PPR)</p> <p>4 = 1000 X 4 (4,000 PPR)</p> <p>8 = 1000 X 8 (8,000 PPR)</p> <p>16 = 1000 X 16 (16,000 PPR)</p>	<p>Output:</p> <p>"no entry" = TTL voltage output</p> <p>C = Open collector output</p>
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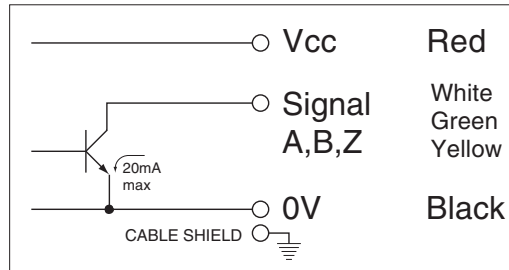
**DESCRIPTION:** incremental encoder

### CIRCUIT CONNECTIONS

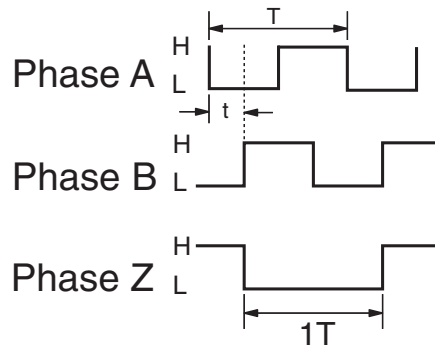
Voltage Output



Open Collector Output



### OUTPUT WAVEFORM

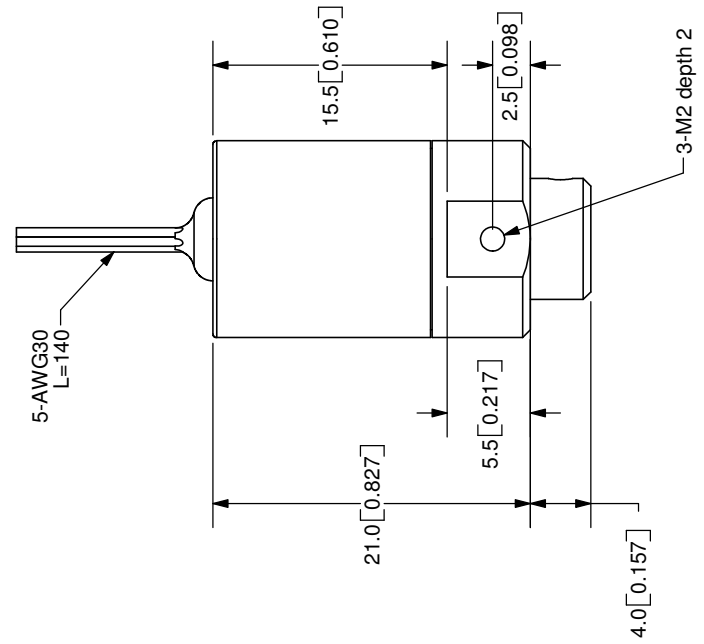
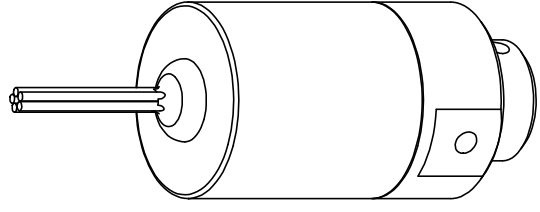
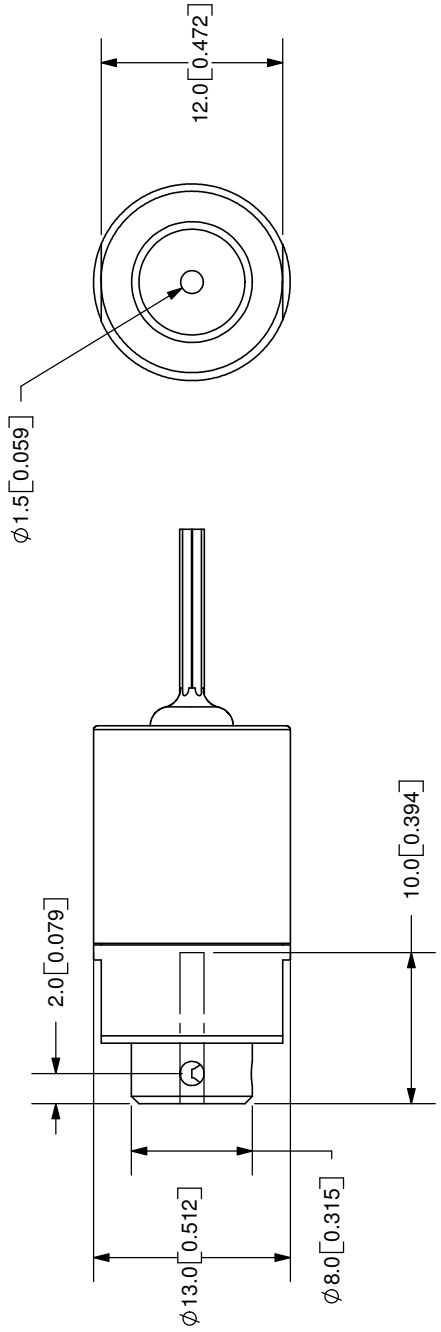


Synchronous with 1T of B phase

T: Waveform ratio of 1T       $T = T \pm 0.5$  (-T16)  
 $T \pm 0.4$  (-T8)  
 $T \pm 0.3$  (-T4, -T2)

t: Phase difference between adjacent A and B phases  
 $t = T/4 \pm 1/8T$

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



TOLERANCE:  
±0.3mm UNLESS OTHERWISE  
SPECIFIED



20050 SW 112th Ave.  
Tualatin, OR 97062  
Phone: 503-612-2300  
800-275-4899  
Fax: 503-612-2383  
Website: www.cui.com

TITLE:	Incremental Encoder	REV:	A
PART NO:	MEH9	UNITS:	MM [INCHES]
DRAWN BY:	JMS	APPROVED BY:	
SCALE:	2:1		

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

PC FILE NAME: MEH9  
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