



PART NUMBER: MES9-1000PST

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	2μ or less (output cable 140mm or less)

MECHANICAL SPECIFICATIONS

max shaft load, radial:	0.98N (100gf)
axial:	0.98N (100gf)
starting torque	1 x 10 ⁻³ Nm (10 gf.cm)
max rotational speed	6000 RPM
shock resistance	500 m/s ² (50G), 3 times each on XYZ
vibration proof	55 Hz, 1.5mm, 2 hours each on XYZ
weight	10g (with 140mm cable)
cable	Vinyl wire (AWG30) cable length 140mm

ENVIRONMENTAL SPECIFICATIONS

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

ORDERING INSTRUCTIONS

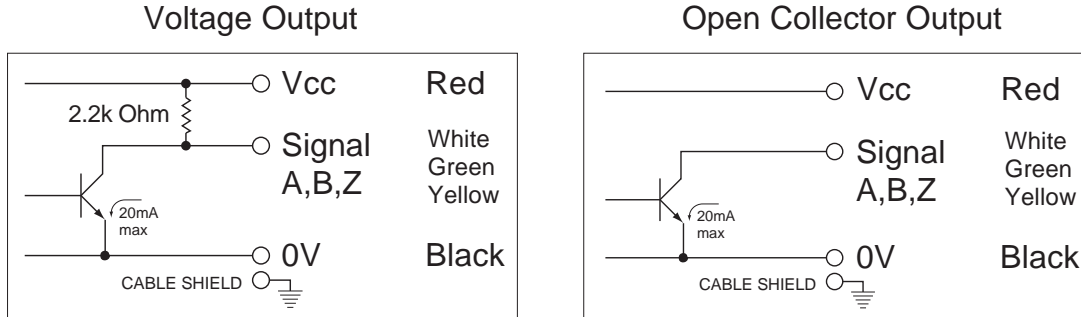
MES9 - 1000PSTXXX

- | | |
|--|---|
| <p>Resolution (PPR):</p> <ul style="list-style-type: none"> 2 = 1000 X 2 (2,000 PPR) 4 = 1000 X 4 (4,000 PPR) 8 = 1000 X 8 (8,000 PPR) 16 = 1000 X 16 (16,000 PPR) | <p>Output:</p> <ul style="list-style-type: none"> "no entry" = TTL voltage output C = Open collector output |
|--|---|

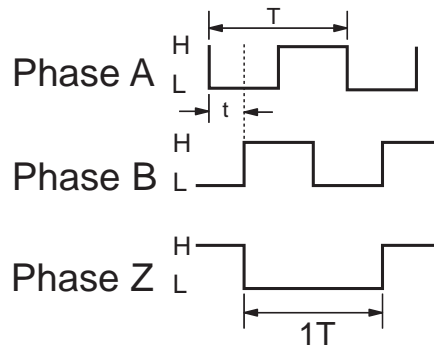
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CIRCUIT CONNECTIONS



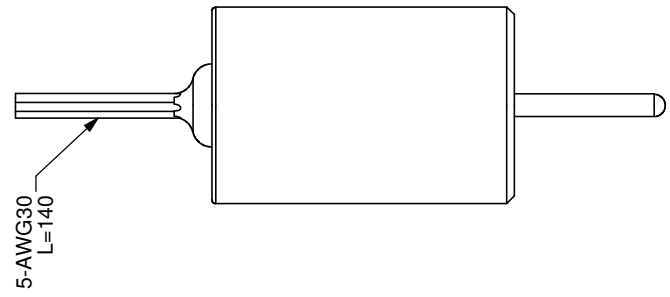
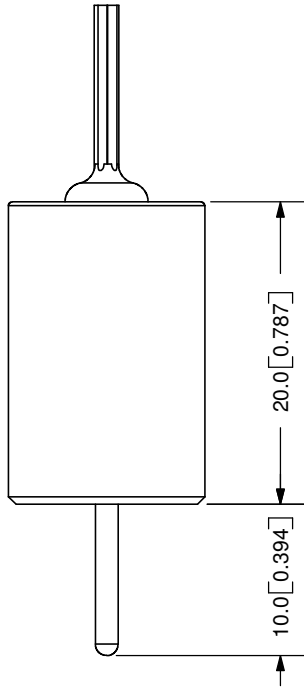
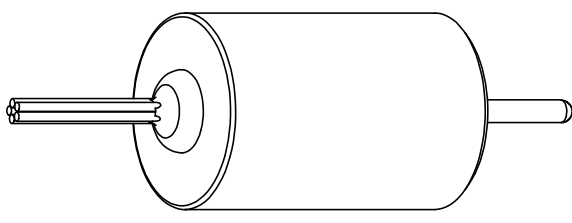
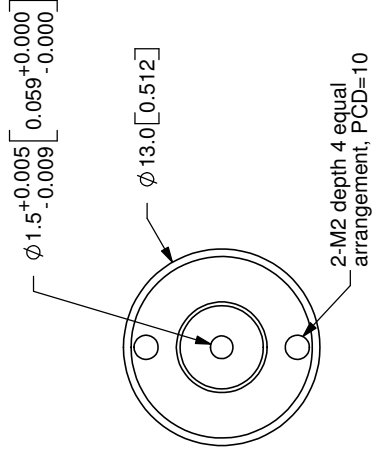
OUTPUT WAVEFORM



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



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TITLE:	Incremental Encoder	REV:	A
PART NO:	MES9	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
	-	-	-	-	-

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PC FILE NAME:
MES9