

PART NUMBER: MES40

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 $90^\circ \pm 45^\circ$ (T/4±T/8) Z phase $T \pm T/2$ (see output waveform)
supply voltage	5 V dc $\pm 10\%$ (line driver output only), 5~12 V dc $\pm 10\%$, 24 V dc $\pm 10\%$ (open collector output only)
output resolution (ppr)	100, 200, 300, 360, 400, 500, 512, 600, 1000, 1024, 2000, 3600, 5000, 10000

MECHANICAL SPECIFICATIONS

max shaft load, radial:	49N (5kgf)
axial:	29.4N (3kgf)
starting torque	2×10^{-3} NM (20 gf·cm) 5×10^{-3} NM (50 gf·cm) (drip-proof)
max rotational speed	6000 RPM
shock resistance	500 m/s ² (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	-10° to +70° C
storage temp	-20° to +80° C
humidity	RH 35%~90% non collecting

ORDERING INSTRUCTIONS

MES40 - XXXXP-XX

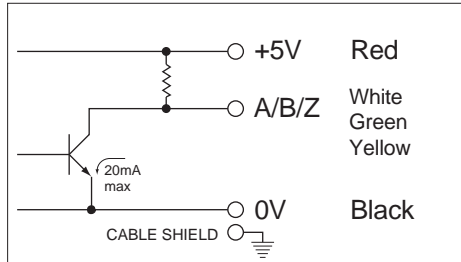
<p>Resolution (PPR):</p> <p>100 = 100 PPR 600 = 600 PPR 200 = 200 PPR 1000 = 1000 PPR 300 = 300 PPR 1024 = 1024 PPR 360 = 360 PPR 2000 = 2000 PPR 400 = 400 PPR 3600 = 3600 PPR 500 = 500 PPR 5000 = 5000 PPR 512 = 512 PPR 10000 = 10000 PPR</p>	<p>Output Circuit:</p> <p>"no entry" = TTL voltage output C = Open collector output E = Line driver output</p>	<p>Input Voltage:</p> <p>1 = 5V dc $\pm 10\%$ (line driver output only) 3 = 5 ~ 12V dc $\pm 10\%$ 4 = 24V dc $\pm 10\%$ (open collector output only)</p>
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PART NUMBER: MES40

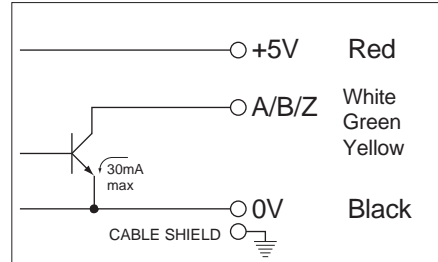
DESCRIPTION: incremental encoder

CIRCUIT CONNECTIONS

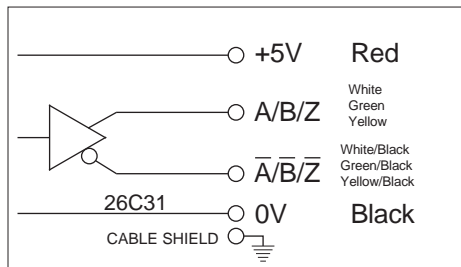
Voltage Output



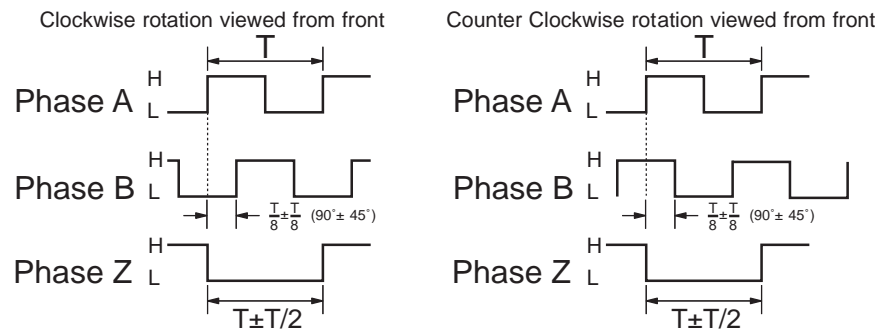
Open Collector Output (C)



Line Drive Output (E)

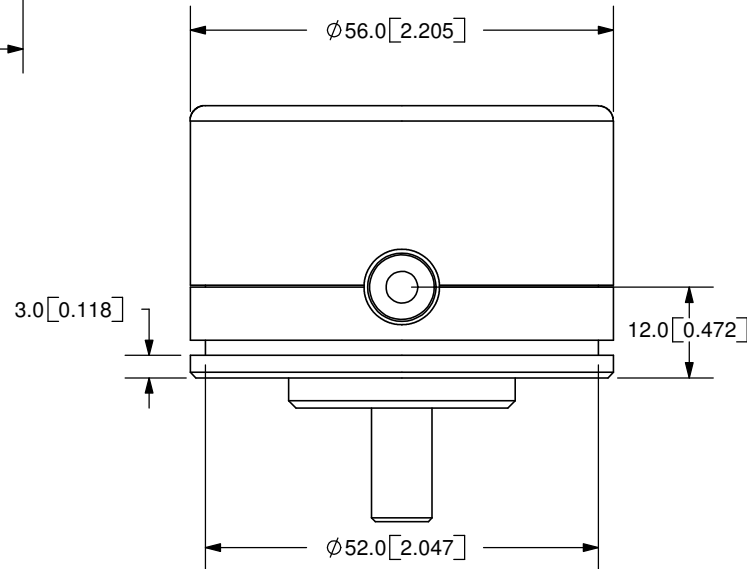
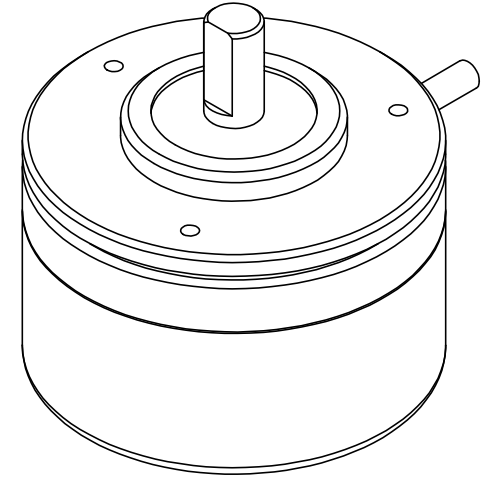
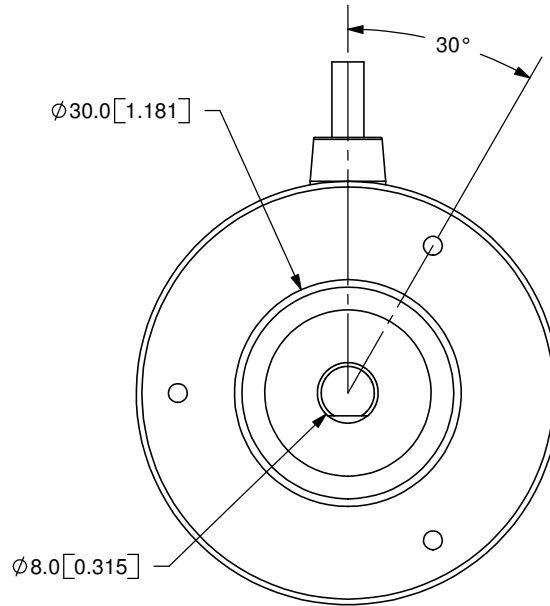
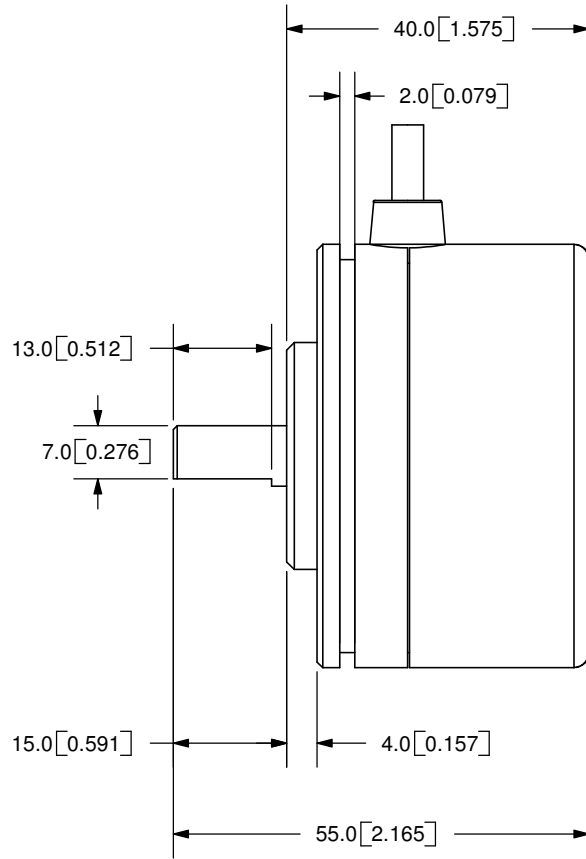


OUTPUT WAVEFORM



The position of Z phase against A, B phase is not specified

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

PC FILE NAME:
MES40

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