CUI INC

date 12/14/2007

PART NUMBER: MES30 **DESCRIPTION:** incremental encoder

ELECTRICAL SPECIFICATIONS

output waveform	Square Wave
output signals	A, B, Z phase
current consumption	≤50 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% (line driver output only), 5 ~ 12 V dc ± 10%, 24 V dc ± 10% (open collector output only)
output resolution (ppr)	40, 50, 60, 100, 200, 250, 300, 360, 400, 450, 500, 512, 600, 720, 800, 900, 1000, 1024, 1200, 1500, 1800, 2000, 2048, 2500, 3600, 4500, 9000
waveform rise/fall time	2μ or less (output cable 1m or less)

MECHANICAL SPECIFICATIONS

max shaft load, radial:	19.6N (2kgf) 14.7N (1.5kgf) (800-9000 ppr)
axial:	9.8N (1kgf) 4.9N (0.5kgf) (800-9000 ppr)
starting torque	2 x 10^{-3} N·m (20 gf·cm)
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	70g (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

MES30 - XXXXP-XX

Resolution (PPR):

40 = 40 PPR	450 = 450 PPR	1200 = 1200 PPR
50 = 50 PPR	500 = 500 PPR	1500 = 1500 PPR
60 = 60 PPR	512 = 512 PPR	1800 = 1800 PPR
100 = 100 PPR	600 = 600 PPR	2000 = 2000 PPR
200 = 200 PPR	720 = 720 PPR	2048 = 2048 PPR
250 = 250 PPR	800 = 800 PPR	2500 = 2500 PPR
300 = 300 PPR	900 = 900 PPR	3600 = 3600 PPR
360 = 360 PPR	1000 = 1000 PPR	4500 = 4500 PPR
400 = 400 PPR	1024 = 1024 PPR	9000 = 9000 PPR

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

Input Voltage:
1 = 5V dc ± 10%
(line driver output only)
3 = 5 ~ 12V dc ± 10%
4 = 24V dc ± 10%
(open collector output only)

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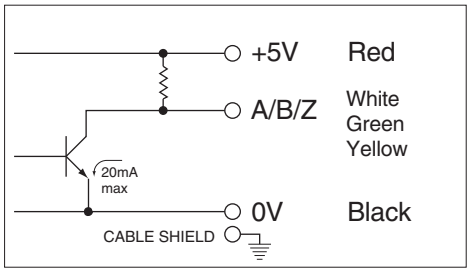
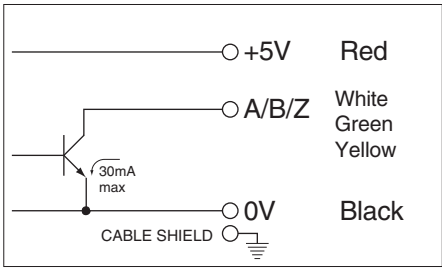
CIRCUIT CONNECTIONS

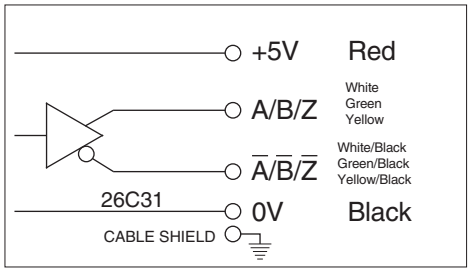
Voltage Output



Open Collector Output (C)

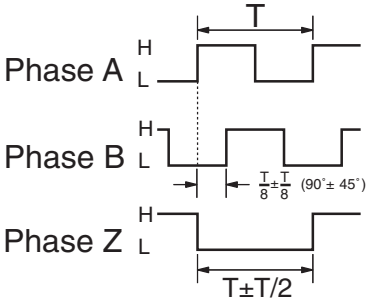


Line Drive Output (E)

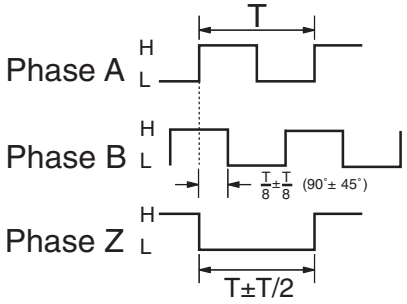


OUTPUT WAVEFORM

Clockwise rotation viewed from front

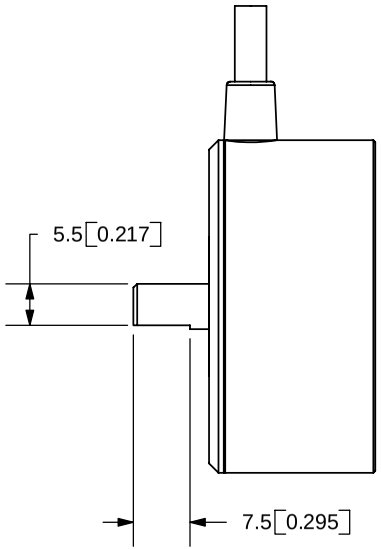


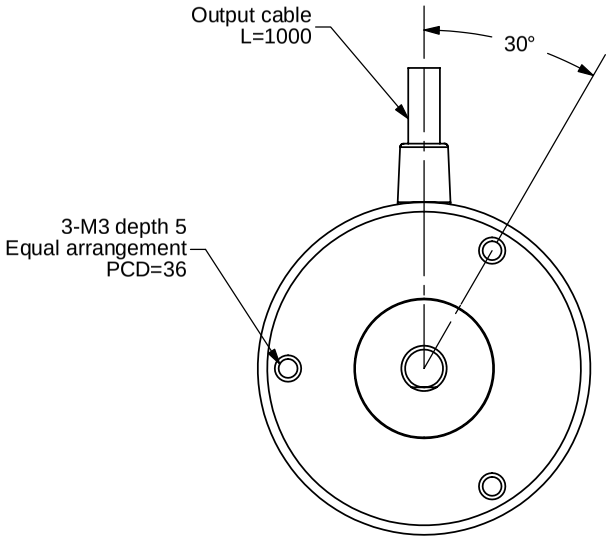
Counter Clockwise rotation viewed from front

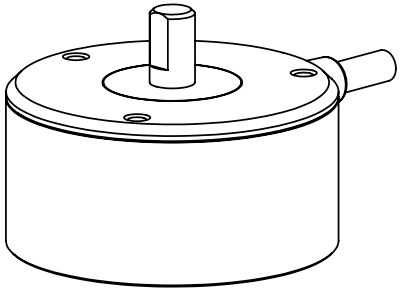


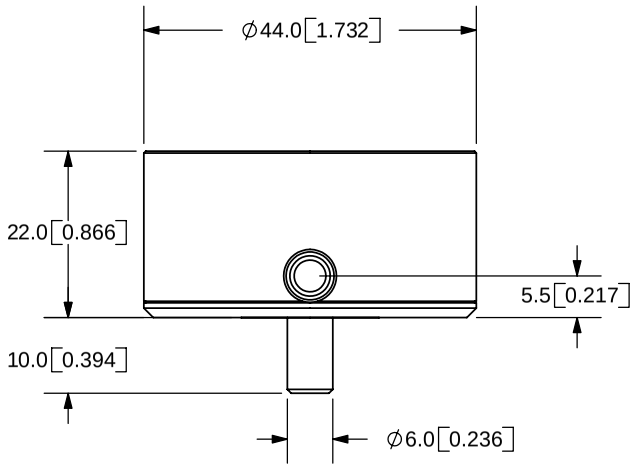
The position of Z phase against A, B phase is not specified

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









TOLERANCE:
±0.3mm UNLESS OTHERWISE SPECIFIED

RoHS

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TITLE: Incremental Encoder	REV: A
PART NO. MES30	UNITS: MM [INCHES]
DRAWN BY: JMS	APPROVED BY:
	SCALE: 1:1

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

PC FILE NAME: MES30

For more information, please visit the product page.