



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

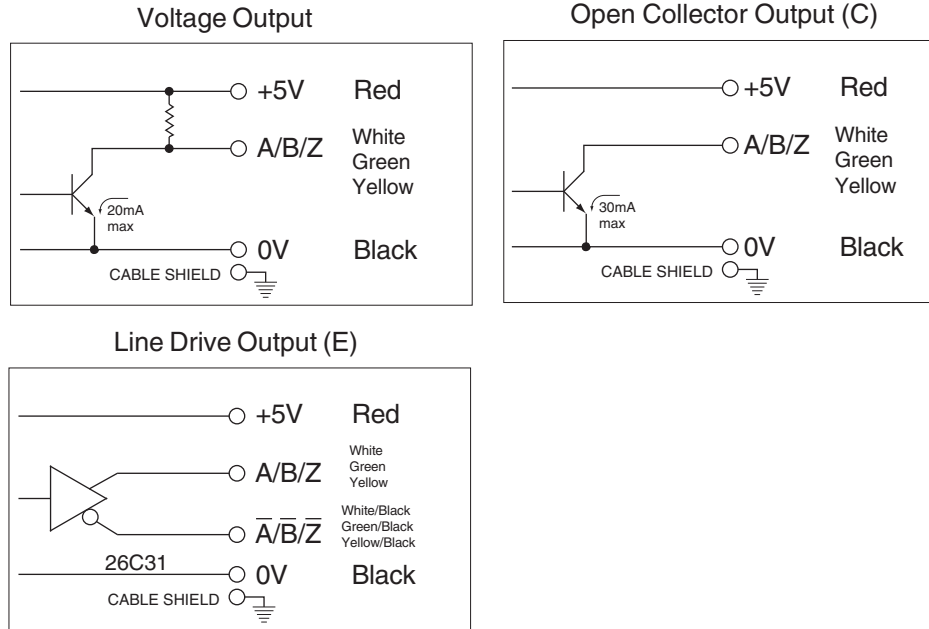
MES30 - XXXXP-XX

Resolution (PPR):	Output Circuit:	Input Voltage:
40 = 40 PPR	"no entry" = TTL voltage output	1 = 5V dc ± 10% (line driver output only)
50 = 50 PPR	C = Open collector output	3 = 5 ~ 12V dc ± 10%
60 = 60 PPR	E = Line driver output	4 = 24V dc ± 10% (open collector output only)
100 = 100 PPR		
200 = 200 PPR		
250 = 250 PPR		
300 = 300 PPR		
360 = 360 PPR		
400 = 400 PPR		
450 = 450 PPR		
500 = 500 PPR		
512 = 512 PPR		
600 = 600 PPR		
720 = 720 PPR		
800 = 800 PPR		
900 = 900 PPR		
1000 = 1000 PPR		
1024 = 1024 PPR		
1200 = 1200 PPR		
1500 = 1500 PPR		
1800 = 1800 PPR		
2000 = 2000 PPR		
2048 = 2048 PPR		
2500 = 2500 PPR		
3600 = 3600 PPR		
4500 = 4500 PPR		
9000 = 9000 PPR		

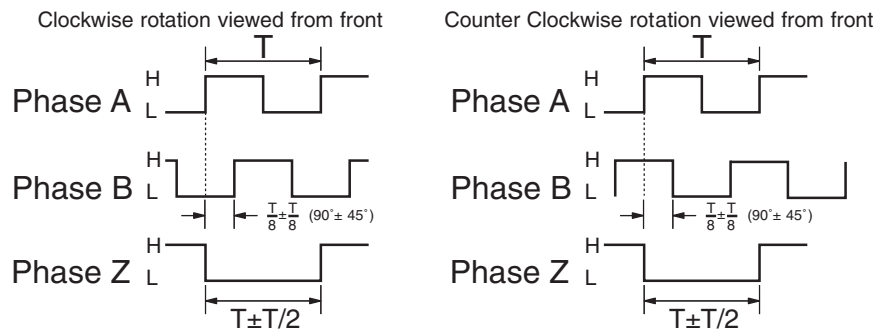
PART NUMBER: MES30

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CIRCUIT CONNECTIONS

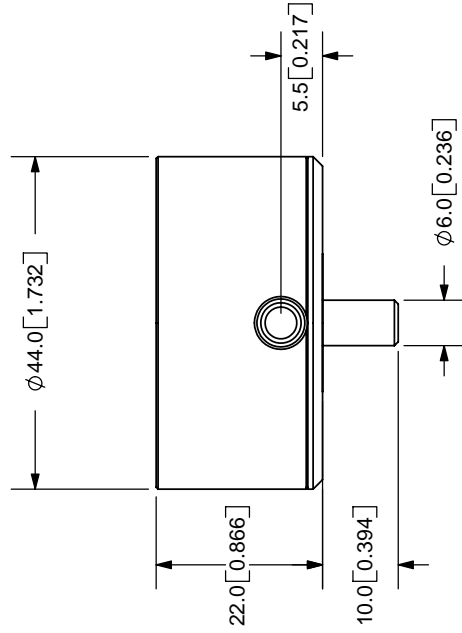
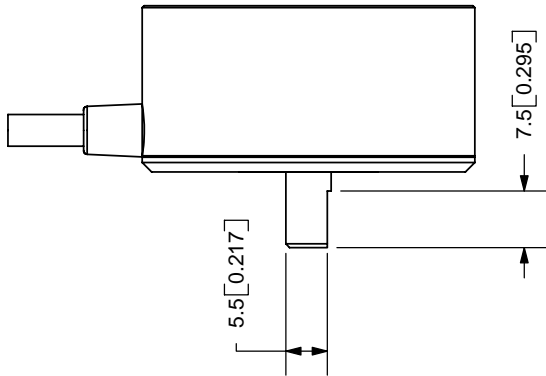
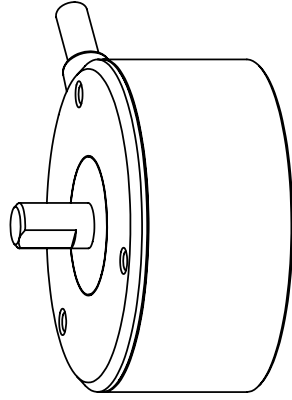
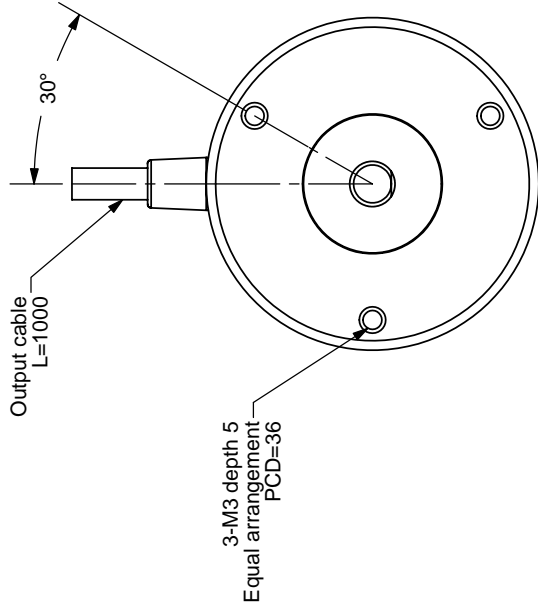


OUTPUT WAVEFORM



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: MES30
UNITS: MM [INCHES]

DRAWN BY: JMS
APPROVED BY: [Signature]
SCALE: 1:1

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

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PC FILE NAME: MES30