



PART NUMBER: MES30-4500PST

DESCRIPTION: incremental encoder

ELECTRICAL SPECIFICATIONS

output waveform	Square Wave
output signals	A, B, Z phase
current consumption	≤40 mA
frequency response	0~50 KHz X (by multiplication) Voltage Output - 100KHz Open collector
output phase difference	See output waveform
supply voltage	5 V dc ±10% (line driver output), 5~12 V dc ±10% (TTL voltage output only), 5~24 V dc ±10% (open collector output only)
output resolution (ppr)	9000, 18000, 36000, 72000

MECHANICAL SPECIFICATIONS

max shaft load, radial:	14.7N (1.5kgf)
axial:	4.9N (0.5kgf)
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	140g (with 1m cable)
cable	4.2mm outside diameter 5-core vinyl wire, insulated shield cable (length 1m)

ENVIRONMENTAL SPECIFICATIONS

operating temp	0° to +50° C
storage temp	-20° to +80° C
humidity	RH 35%~90% non collecting

ORDERING INSTRUCTIONS

MES30 - 4500PSTXXX

Resolution (PPR):
 2 = 4500 X 2 (9,000 PPR)
 4 = 4500 X 4 (18,000 PPR)
 8 = 4500 X 8 (36,000 PPR)
 16 = 4500 X 16 (72,000 PPR)

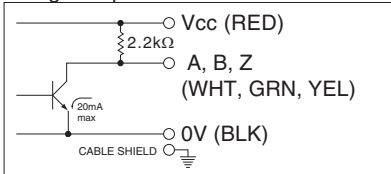
Output Circuit:
 "no entry" = TTL voltage output
 C = Open collector output
 E = Line driver output

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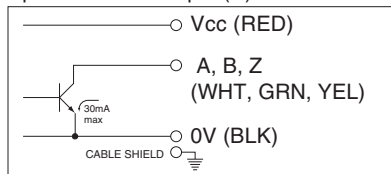
DESCRIPTION: incremental encoder

CIRCUIT CONNECTIONS

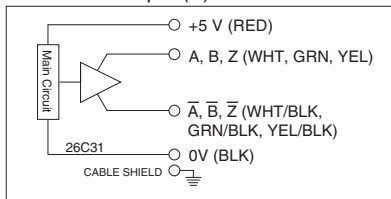
Voltage Output



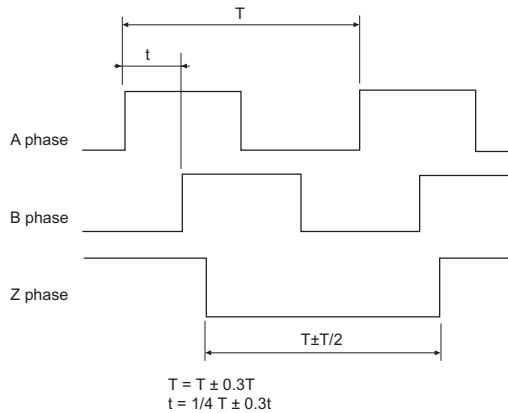
Open Collector Output (C)



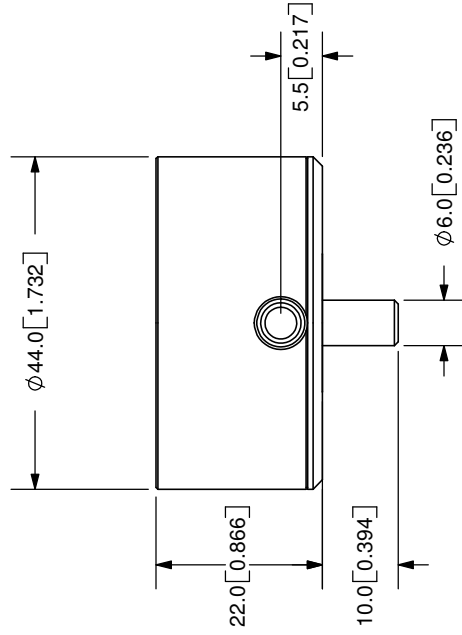
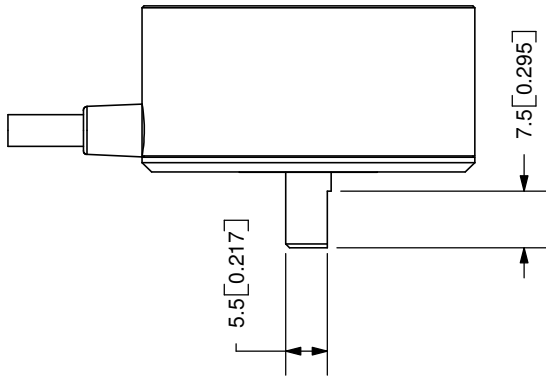
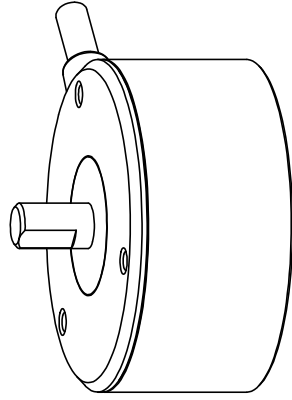
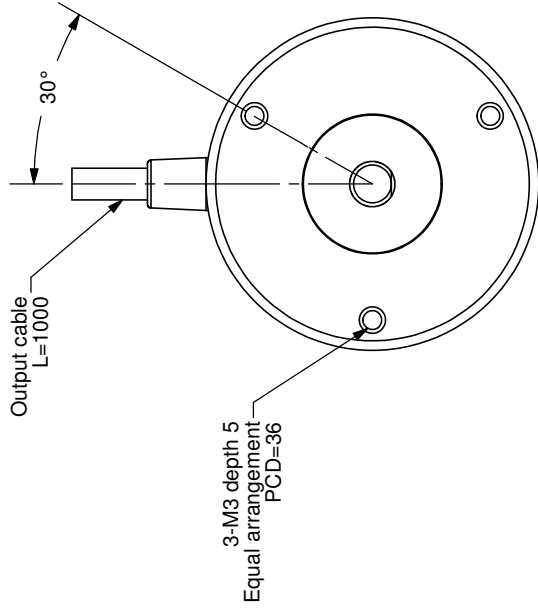
Line Driver Output (E)



OUTPUT WAVEFORM



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:
SCALE: 1:1

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

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PC FILE NAME:
MES30