



PART NUMBER: MEH12

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)	60, 100, 125, 200, 256, 300, 360, 500, 600, 900, 1000, 1500, 1800, 2000, 2048
waveform rise/fall time	2μ or less (output cable 1m or less)

MECHANICAL SPECIFICATIONS

max shaft load, radial:	1.9N (200gf)	0.98N (100gf) (1500-2048 ppr)
axial:	1.9N (200gf)	0.98N (100gf) (1500-2048 ppr)
starting torque	1 x 10 ⁻³ N·m (10 gf·cm max.)	
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	40 g (with 1m cable)	
cable	3mm outside diameter 5-core vinyl wire, insulated shield cable (length 1m)	

ENVIRONMENTAL SPECIFICATIONS

operating temp	-10° to +70° C
storage temp	-20° to +80° C
humidity	RH 35%~90% non collecting

ORDERING INSTRUCTIONS

MEH12 - (X)XXXXPX

Bore options:

- 1.5 = 1.5mm
- 2 = 2mm
- 3 = 3mm

Resolution (PPR):

- 60 = 60 PPR
- 100 = 100 PPR
- 125 = 125 PPR
- 200 = 200 PPR
- 256 = 256 PPR
- 300 = 300 PPR
- 360 = 360 PPR
- 500 = 500 PPR
- 600 = 600 PPR
- 900 = 900 PPR
- 1000 = 1000 PPR
- 1500 = 1500 PPR
- 1800 = 1800 PPR
- 2000 = 2000 PPR
- 2048 = 2048 PPR

Output Circuit:

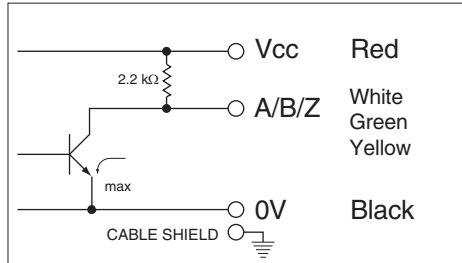
- "no entry" = TTL voltage output
- C = Open collector output
- E = Line driver output

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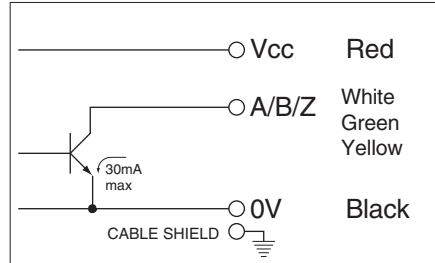
DESCRIPTION: incremental encoder

CIRCUIT CONNECTIONS

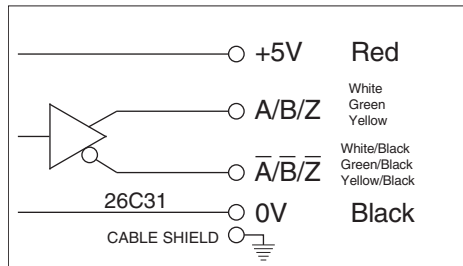
Voltage Output



Open Collector Output (C)

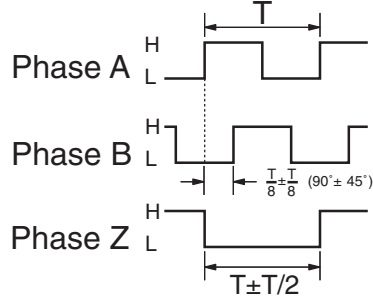


Line Drive Output (E)

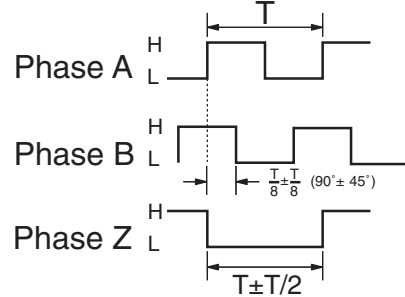


OUTPUT WAVEFORM

Clockwise rotation viewed from front

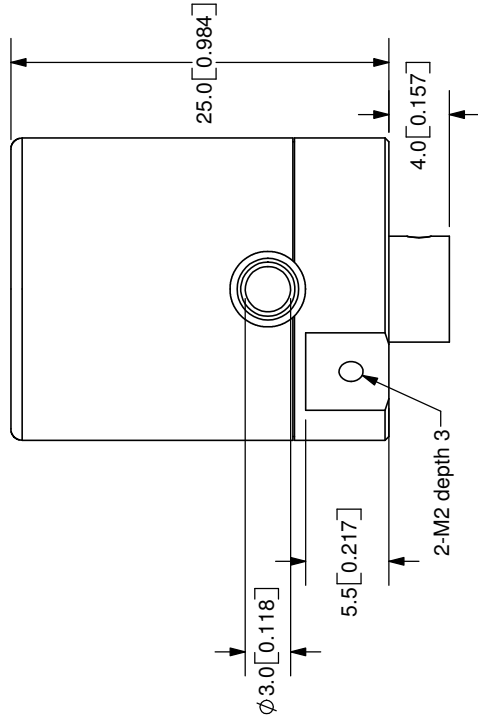
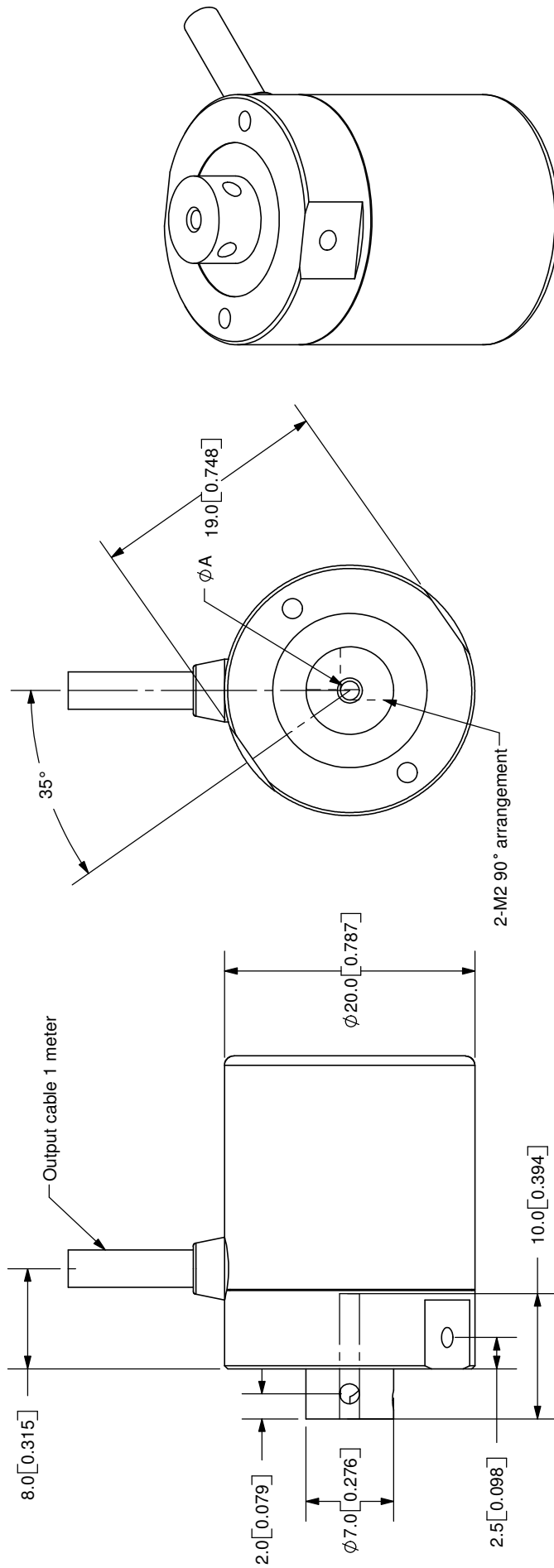


Counter Clockwise rotation viewed from front



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

REV.	DESCRIPTION	DATE
A	NEW DRAWING	7/27/2007



Hole ϕ A	
ϕ 1.5	ϕ 2.0
-	ϕ 3.0
-	-
-	-

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

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PC FILE NAME:
MEH12



TOLERANCE:
±0.3mm UNLESS OTHERWISE
SPECIFIED



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TITLE: Incremental Encoder	REV: A
PART NO: MEH12	UNITS: MM [INCHES]
DRAWN BY: JMS	APPROVED BY:
	SCALE: 2:1