



PART NUMBER: MEH20

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 V ~ 12 V dc ±10%, 24 V dc ± 10% (open collector output only) |
| output resolution (ppr) | 40, 50, 60, 100, 200, 250, 256, 300, 360, 400, 500, 512, 600, 800, 1000, 1024, 1200, 1800, 2000, 2048, 2500, 3600 |
| waveform rise/fall time | 2μ or less (outout cable 1m or less) |

MECHANICAL SPECIFICATIONS

| | | |
|-------------------------|---|-------------------------------|
| max shaft load, radial: | 19.6N (2kgf) | 14.7N (1.5kgf) (600-3600 ppr) |
| axial: | 9.8N (1kgf) | 4.9N (0.5kgf) (600-3600 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

MEH20 - XXXXP-XX-XX

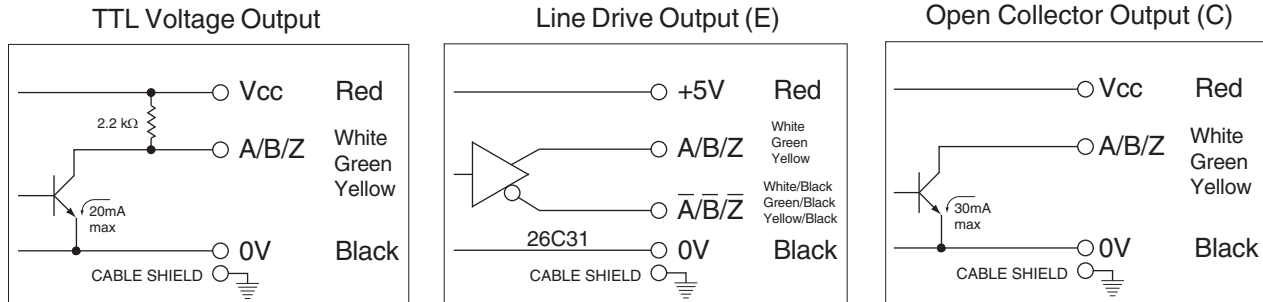
| | | | | | |
|---|---|--|--|---|---|
| 40 = 40 PPR 50 = 50 PPR 60 = 60 PPR 100 = 100 PPR 200 = 200 PPR 250 = 250 PPR 256 = 256 PPR 300 = 300 PPR 360 = 360 PPR | Resolution (PPR): 400 = 400 PPR 500 = 500 PPR 512 = 512 PPR 600 = 600 PPR 800 = 800 PPR 1000 = 1000 PPR 1024 = 1024 PPR 1200 = 1200 PPR 1800 = 1800 PPR | 2000 = 2000 PPR 2048 = 2048 PPR 2500 = 2500 PPR 3600 = 3600 PPR | Output Circuit: "no entry" = 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) | Bore/Hub: "no entry" = Through/No Hub F1 = Through/Hub/Set Screw |
|---|---|--|--|---|---|

*F1 Bore/Hub is available only in resolutions below and not including 400PPR, see attached mechanical drawing

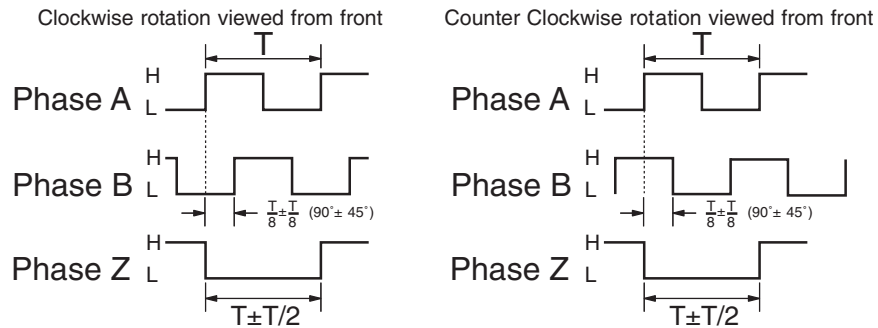
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CIRCUIT CONNECTIONS

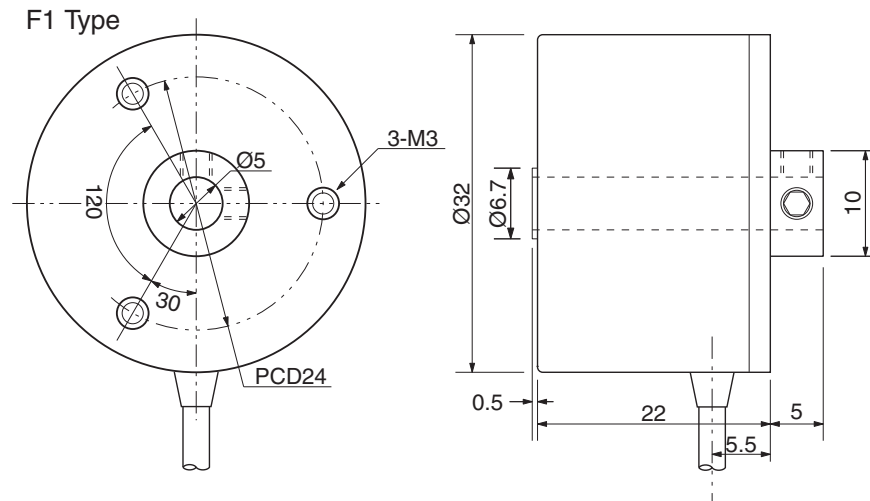


OUTPUT WAVEFORM

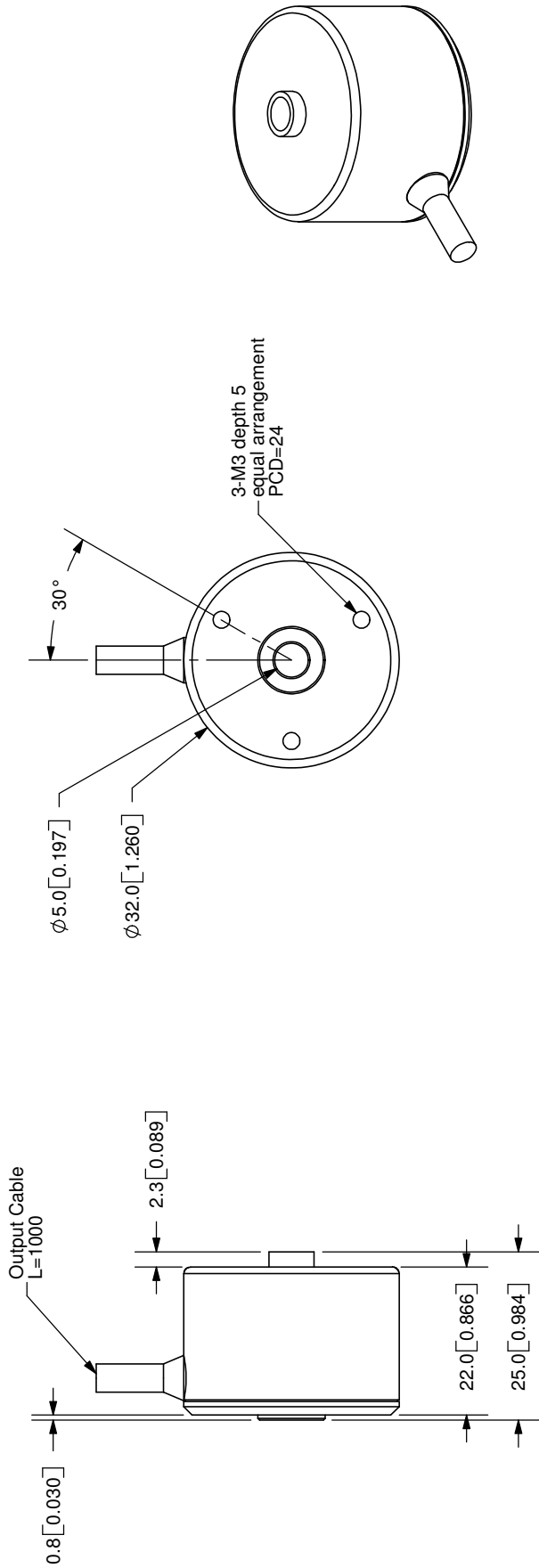


The position of Z phase against A, B phase is not specified

F1 MECHANICAL DRAWING



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



TOLERANCE:
±0.3mm UNLESS OTHERWISE
SPECIFIED



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TITLE: Incremental Encoder
REV: A

PART NO: MEH20
UNITS: MM [INCHES]

DRAWN BY: JMS
APPROVED BY: [Signature]
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:
MEH20