



PART NUMBER: MEH50

DESCRIPTION: incremental encoder

ELECTRICAL SPECIFICATIONS

| | |
|-------------------------|---|
| output waveform | Square wave |
| output signals | A, B, Z phase |
| current consumption | ≤60 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 | 1: 5 V dc ±10% (line driver output only) 3: 5 V ~ 12 V dc ±10% 4: 24 V dc ±10% (open collector output only) |
| output resolution (ppr) | 500, 1000, 1024, 2000, 3000, 3600, 4096, 5000, 5400, 6000, 10000, 10800 |
| waveform rise/fall time | 2μ or less (output cable 1m or less) |

MECHANICAL SPECIFICATIONS

| | | |
|-------------------------|---|--------------------------------|
| max shaft load, radial: | 19.6N (2kgf) | 9.8N (1kgf) (5000-10800 ppr) |
| axial: | 9.8N (1kgf) | 4.7N (0.5kgf) (5000-10800 ppr) |
| starting torque | 10 x 10 ⁻³ N·m (100 gf·cm) (no oil seal) | |
| max slewing 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 | 220 g (with 1m cable) | |
| cable | 4.2mm outside diameter, 5 core vinyl wire insulated shield cable (1m) | |

ENVIRONMENTAL SPECIFICATIONS

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

ORDERING INSTRUCTIONS

MEH50 - XXXXXP - XX

Resolution (PPR):

- 500 = 500 PPR 4096 = 4096 PPR
- 1000 = 1000 PPR 5000 = 5000 PPR
- 1024 = 1024 PPR 5400 = 5400 PPR
- 2000 = 2000 PPR 6000 = 6000 PPR
- 3000 = 3000 PPR 10000 = 10000 PPR
- 3600 = 3600 PPR 10800 = 10800 PPR

Output Circuit:

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

Input Voltage:

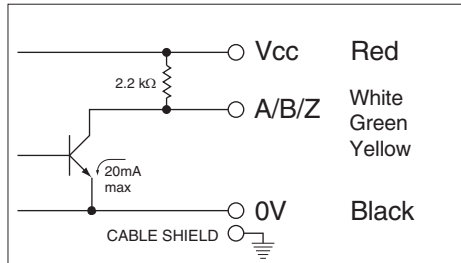
- 1 = 5VDC ±10% (line driver output only)
- 3 = 5 ~ 12VDC ±10%
- 4 = 24VDC ±10% (open collector output only)

PART NUMBER: MEH50

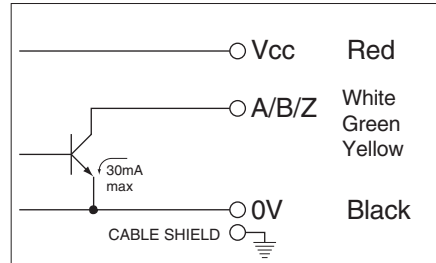
DESCRIPTION: incremental encoder

CIRCUIT CONNECTIONS

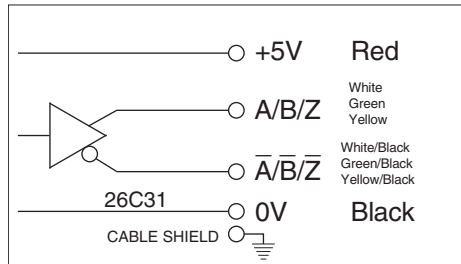
Voltage Output



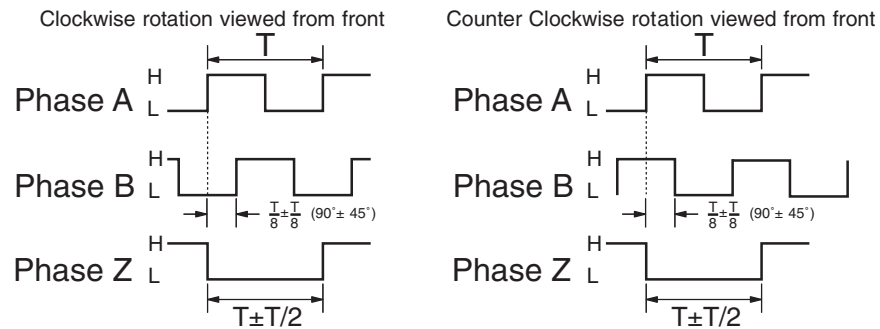
Open Collector Output (C)



Line Drive Output (E)

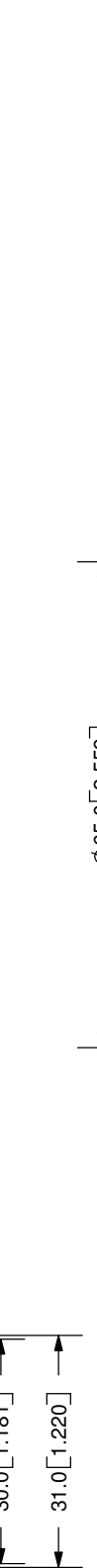
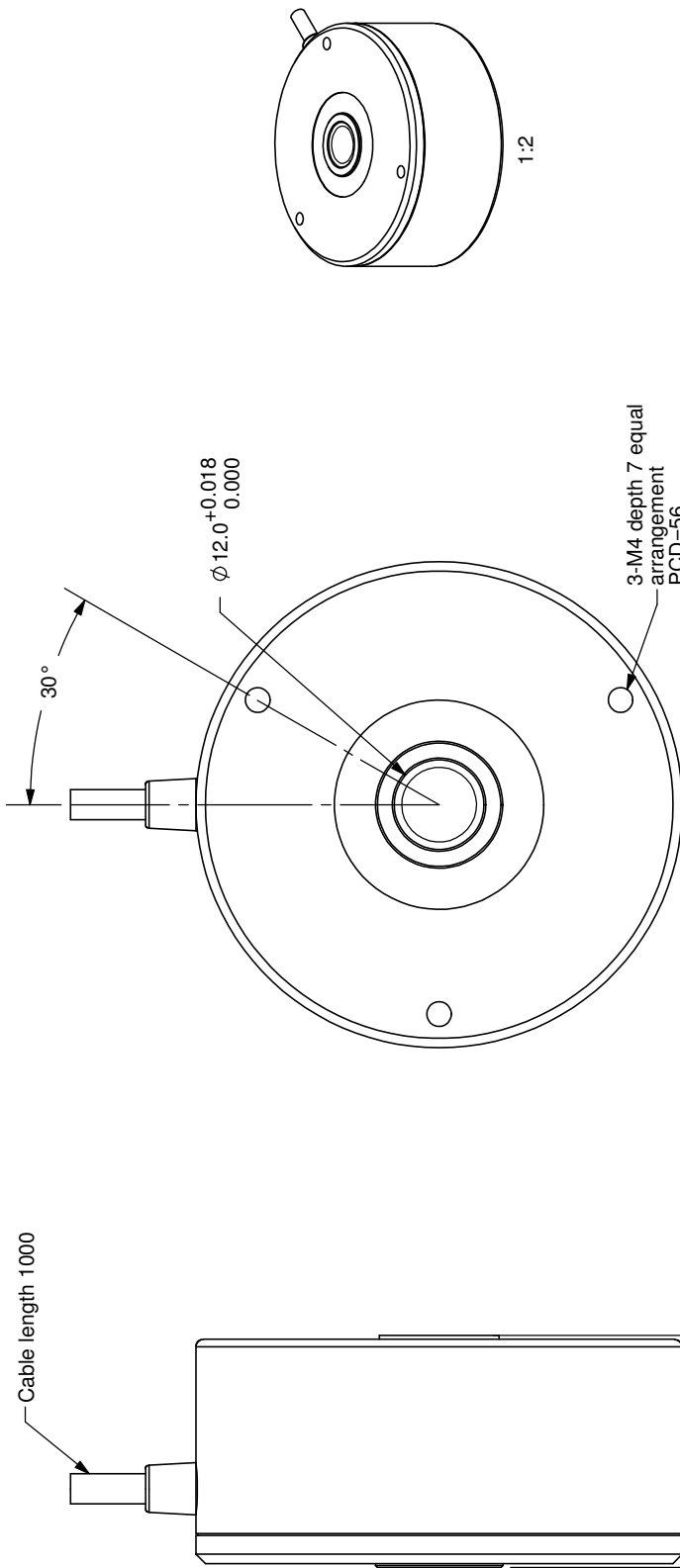


OUTPUT WAVEFORM



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



20050 SW 112th Ave.
Tualatin, OR 97062
Phone: 503-612-2300
800-275-4899
Fax: 503-612-2383
Website: www.cui.com

| | |
|----------------------------|--------------------|
| TITLE: Incremental Encoder | REV: A |
| PART NO: MEH50 | UNITS: MM [INCHES] |
| DRAWN BY: JMS | APPROVED BY: |
| SCALE: 1:1 | |

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

PC FILE NAME: MEH50
COPYRIGHT 2007 BY CUI INC.