

**PART NUMBER:** MAS17**DESCRIPTION:** absolute encoder**ELECTRICAL SPECIFICATIONS**

| | |
|-------------------------|--|
| output signals | G: gray code, N: natural binary, B: BCD (1000ppr only) |
| output circuit | NPN open collector |
| logic | negative logic (H=0, L=1) |
| current consumption | 70mA or less (under no load) |
| frequency response | 20 KHz |
| supply voltage | 5 V dc \pm 5% |
| output resolution (ppr) | 256 (8 bit), 512 (9 bit), 1000, 1024 (10 bit) |
| max output current | sink current each bit 4mA (output voltage resistance 7V) |

MECHANICAL SPECIFICATIONS

| | |
|----------------------------|--|
| max shaft loading, radial: | 1.9N (200gf) |
| thrust: | 1.9N (200gf) |
| max rotational speed | 6000 RPM |
| shock resistance | 500m/s ² (50g), X, Y, Z each 3 times |
| vibration proof | 55 Hz / 1.5mm 2h each X, Y, Z |
| weight | 30g (with 300mm cable) |
| cable | 256: outside diameter 3mm, 10-core vinyl wire insulated shield cable (length 1m) |
| | 1024: vinyl wire (AWG32) cable length 300mm |

ENVIRONMENTAL SPECIFICATIONS

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

ORDERING INSTRUCTIONS

MAS17 - XXXX - X1

Resolution (PPR):

256 = 256 PPR

512 = 512 PPR

1000 = 1000 PPR

1024 = 1024 PPR

Output Type:

G = Gray Code

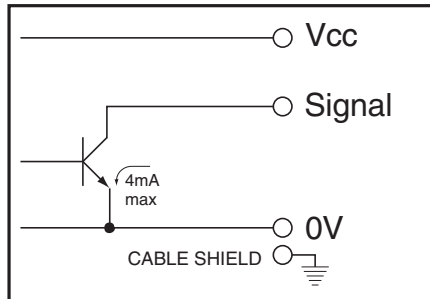
N = Natural Binary

B = BCD (1000ppr only)

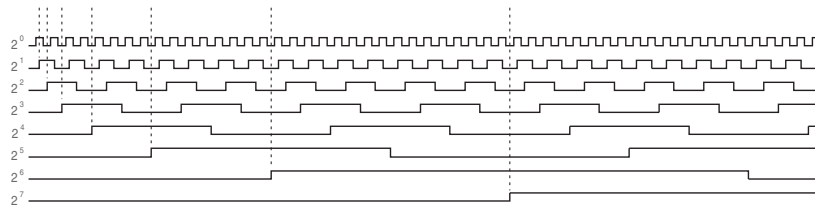
PART NUMBER: MAS17

DESCRIPTION: absolute encoder

CIRCUIT CONNECTIONS



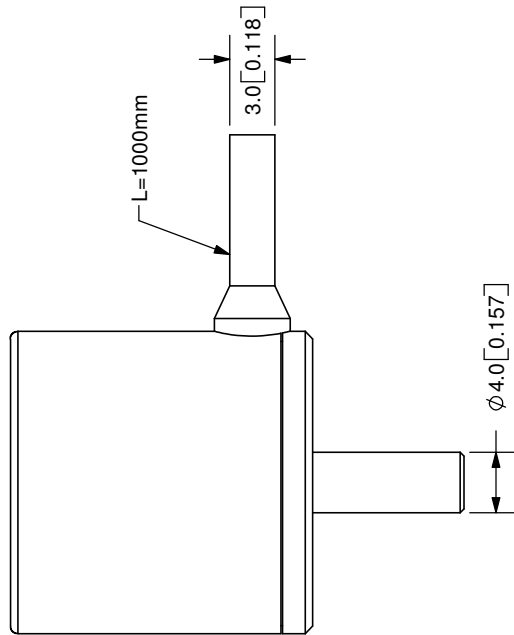
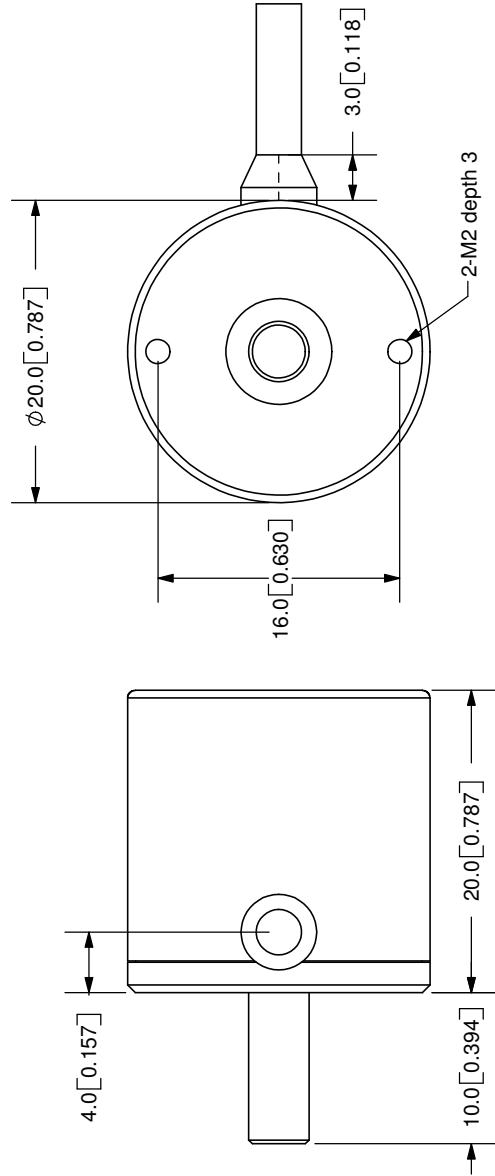
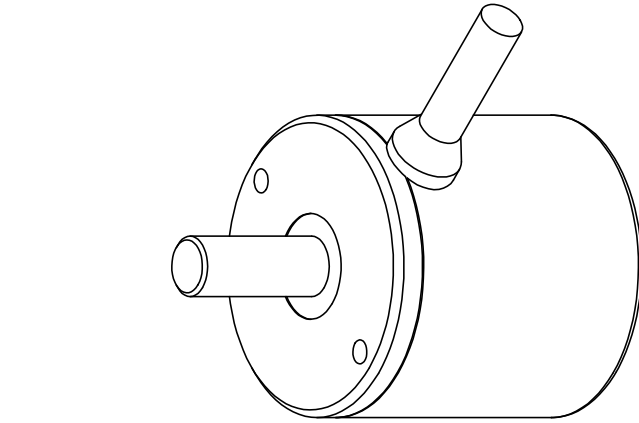
OUTPUT WAVEFORM



Wiring Guide

| | |
|-------------------------|-------------------------|
| Black ~ 0V(com) | Green ~ 2 ³ |
| Red ~ 5V +/- 5% | Blue ~ 2 ⁴ |
| Brown ~ 2 ⁰ | Purple ~ 2 ⁵ |
| Orange ~ 2 ¹ | Gray ~ 2 ⁶ |
| Yellow ~ 2 ² | White ~ 2 ⁷ |

| | | |
|------|-------------|-----------|
| 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. | MAS17 | UNITS: | MM [INCHES] |
| DRAWN BY: | JMS | APPROVED BY: | |
| | | SCALE: | 2:1 |

| Cable Color | Black | Red | Brown | Brown/Black | Orange | Orange/Black | Yellow | Yellow/Black |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Output Type | 0V | Power | 2 ⁰ | 2 ¹ | 2 ² | 2 ³ | 2 ⁴ | 2 ⁵ |
| Cable Color | Green | Green/Black | Blue | Blue/Black | - | - | - | - |
| Output Type | 2 ⁶ | 2 ⁷ | 2 ⁸ | 2 ⁹ | - | - | - | - |

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PC FILE NAME:
MAS17