

**rev.** A**page** 1 of 3**date** 12/2008**PART NUMBER:** MAS10**DESCRIPTION:** absolute encoder**ELECTRICAL SPECIFICATIONS**

|                         |                               |
|-------------------------|-------------------------------|
| output code             | G: gray code                  |
| current consumption     | ≤40 mA                        |
| frequency response      | 0~20 KHz                      |
| logic                   | Negative logic (H=0, L=1)     |
| output circuit          | Voltage output                |
| output capacity         | sink current each bit 4mA max |
| supply voltage          | 5 V ± 5%                      |
| output resolution (ppr) | 256 (8 bits/rotation)         |

**MECHANICAL SPECIFICATIONS**

|                         |  |
|-------------------------|--|
| max shaft load, radial: | 0.98N (100gf)                                      |
| axial:                  | 0.98N (100gf)                                      |
| max rotational speed    | 6000 RPM   |
| shock resistance        | 500 m/s <sup>2</sup> (50G), 3 times each on XYZ    |
| vibration proof         | 55 Hz, double amplitude 1.5mm, 2 hours each on XYZ |
| weight                  | 10g (with 300m cable)                              |
| cable                   | 10 core vinyl wire insulated shield cable (300mm)  |

**ENVIRONMENTAL SPECIFICATIONS**

|                |                           |
|----------------|---------------------------|
| operating temp | 0° to +60° C              |
| storage temp   | -20° to +80° C            |
| humidity       | RH 35%~90% non collecting |

**ORDERING INSTRUCTIONS**

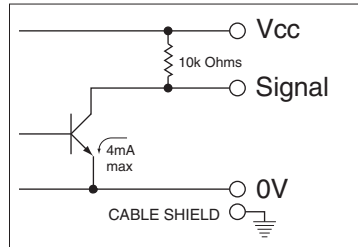
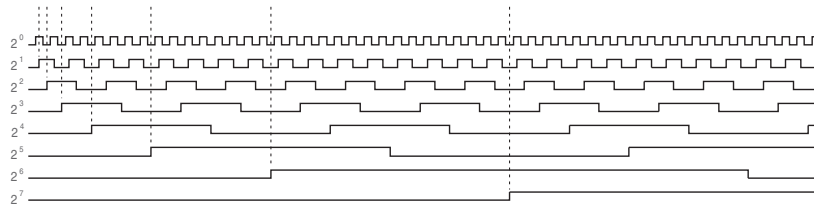
# MAS10-256G



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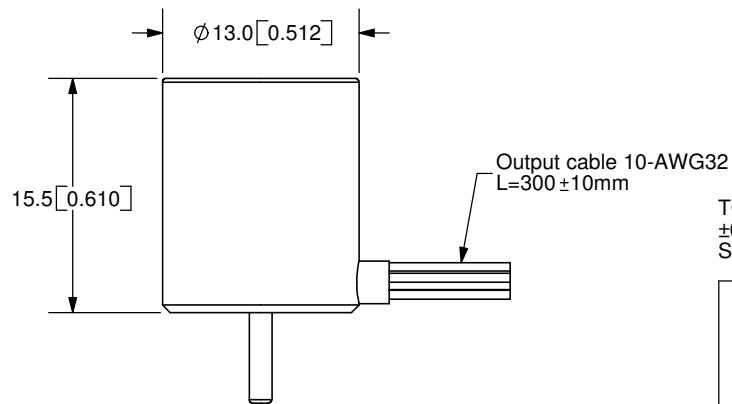
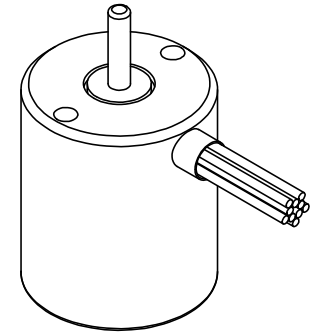
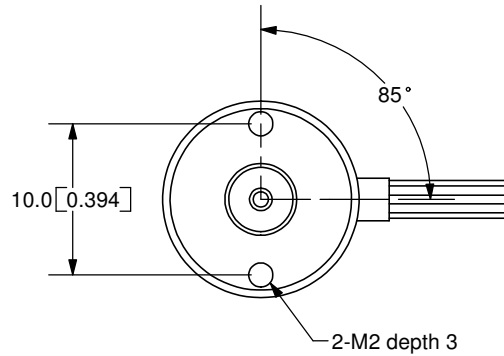
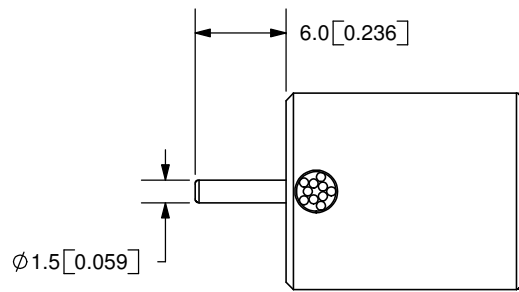
date 12/2008

**PART NUMBER:** MAS10**DESCRIPTION:** absolute encoder**CIRCUIT CONNECTIONS****OUTPUT WAVEFORM**

## Wiring Guide

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

|      |             |           |
|------|-------------|-----------|
| 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. MAS10             |              | UNITS: MM [INCHES] |
| DRAWN BY: JMS              | APPROVED BY: | SCALE: 2:1         |

|             |                |                |                |                |                |                |                |                |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Cable Color | Black          | Red            | Brown          | Orange         | Yellow         | Green          | Blue           | Purple         |
| Output Type | 0V             | 5V±5%          | 2 <sup>0</sup> | 2 <sup>1</sup> | 2 <sup>2</sup> | 2 <sup>3</sup> | 2 <sup>4</sup> | 2 <sup>5</sup> |
| Cable Color | Gray           | White          | -              | -              | -              | -              | -              | -              |
| Output Type | 2 <sup>6</sup> | 2 <sup>7</sup> | -              | -              | -              | -              | -              | -              |

PC FILE NAME:  
MAS10

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