



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 ouput 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

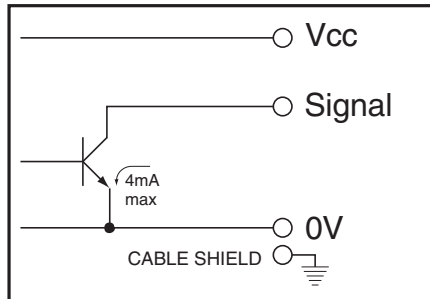
Output Type:

- G = Gray Code
- N = Natural Binary
- B = BCD (1000ppr only)

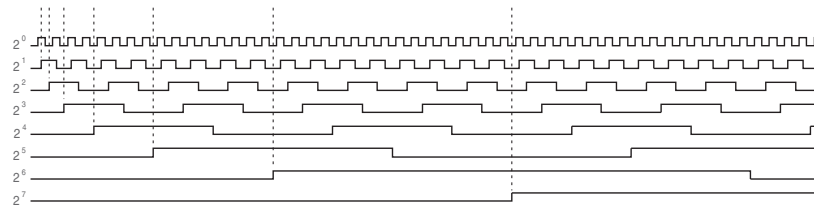
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CIRCUIT CONNECTIONS



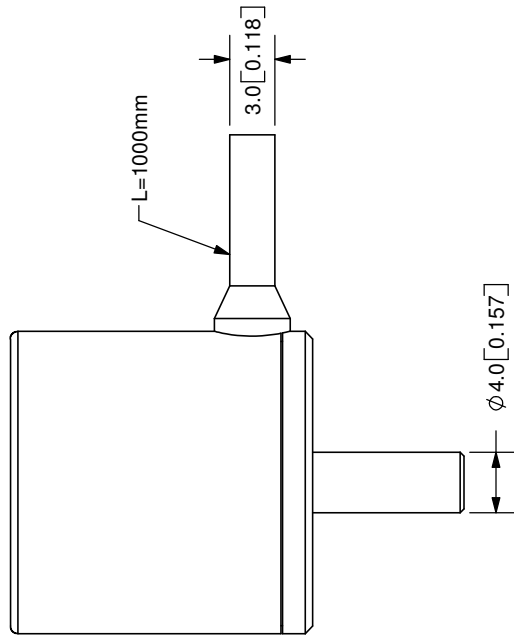
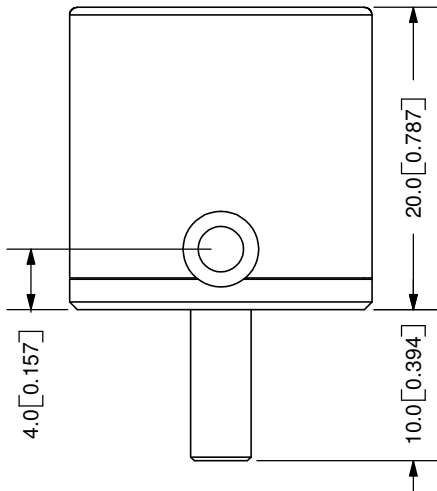
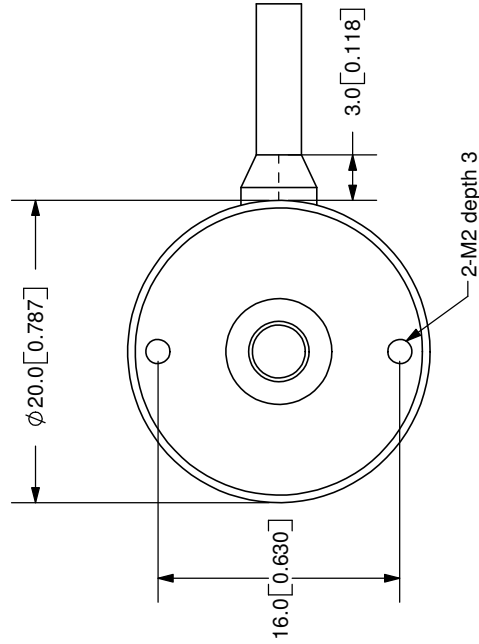
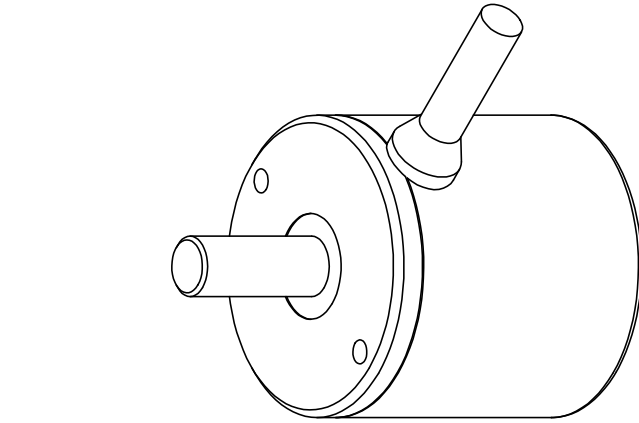
OUTPUT WAVEFORM



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