

**PART NUMBER:** NLM2 series**DESCRIPTION:** manual encoder**ELECTRICAL SPECIFICATIONS**

output waveform	square wave
output signals	A, B phase, inverse A, B phase
current consumption	≤60 mA (voltage output Z1), ≤80 mA (voltage output Z9), ≤150 mA (line driver output)
frequency response	≤5 kHz
supply voltage	4.5 V ~ 13.2 V dc (voltage output Z1), 5 V dc ± 10% (voltage output Z9), 12 V dc ± 10% (voltage output H), 5 V dc ± 5% (line driver output)
output current	≤20 mA
output voltage	“H” VCC-1 (voltage output Z1, Z9), 2.5V or more (line driver output) “L” 0.5V max.
output resolution (ppr)	100
waveform rise/fall time	1 μs max. (voltage output Z1, Z9), 200 ns max. (line driver output)

MECHANICAL SPECIFICATIONS

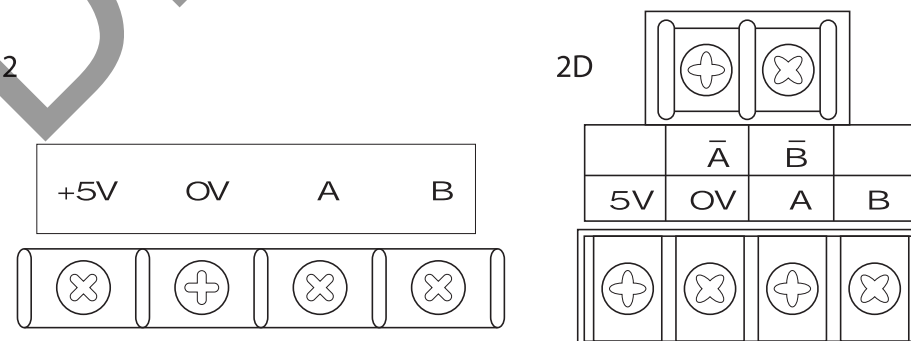
max shaft load, radial:	19.6N
axial:	9.8N
starting torque	1.96×10^{-2} N·m ~ 5.88×10^{-2} N·m
max rotational speed	600 RPM max., 200 RPM continuous
shock resistance	490 m/s ² , 11 ms, 3 times each on XYZ
vibration proof	10 ~ 55 Hz, double amplitude 1.5mm
weight (without cable)	200g max

ENVIRONMENTAL SPECIFICATIONS

operating temp	-10° C to +60° C
storage temp	-20° C to +70° C
humidity	RH 85% max., non-collecting

NOTE:

- at maximum output current

ELECTRICAL CONNECTIONS

PART NUMBER: NLM2 series

DESCRIPTION: manual encoder

ORDERING INSTRUCTIONS

NLM2-XX-2XX

Resolution:
01 = 100PPR

Signals:
AB90°
Phase difference

Output mode:
Z1 = output voltage (NPN Tr.)
insulation resistance 2kΩ
Z9 = output voltage (NPN Tr.)
internal resistance 330Ω FANUC spec.
D = line driver output

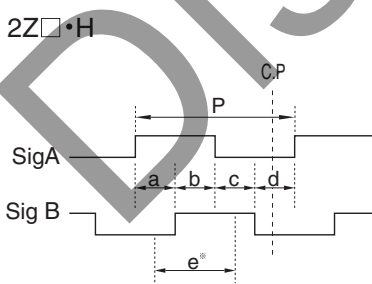
CIRCUIT CONNECTIONS



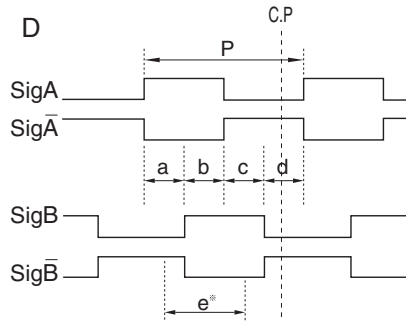
OUTPUT WAVEFORM

CW Rotation → Clockwise rotation looked from front side $P = 1/1 \text{ Resolution}$ $a, b, c, d = P/4 \pm P/8$

2Z□•H

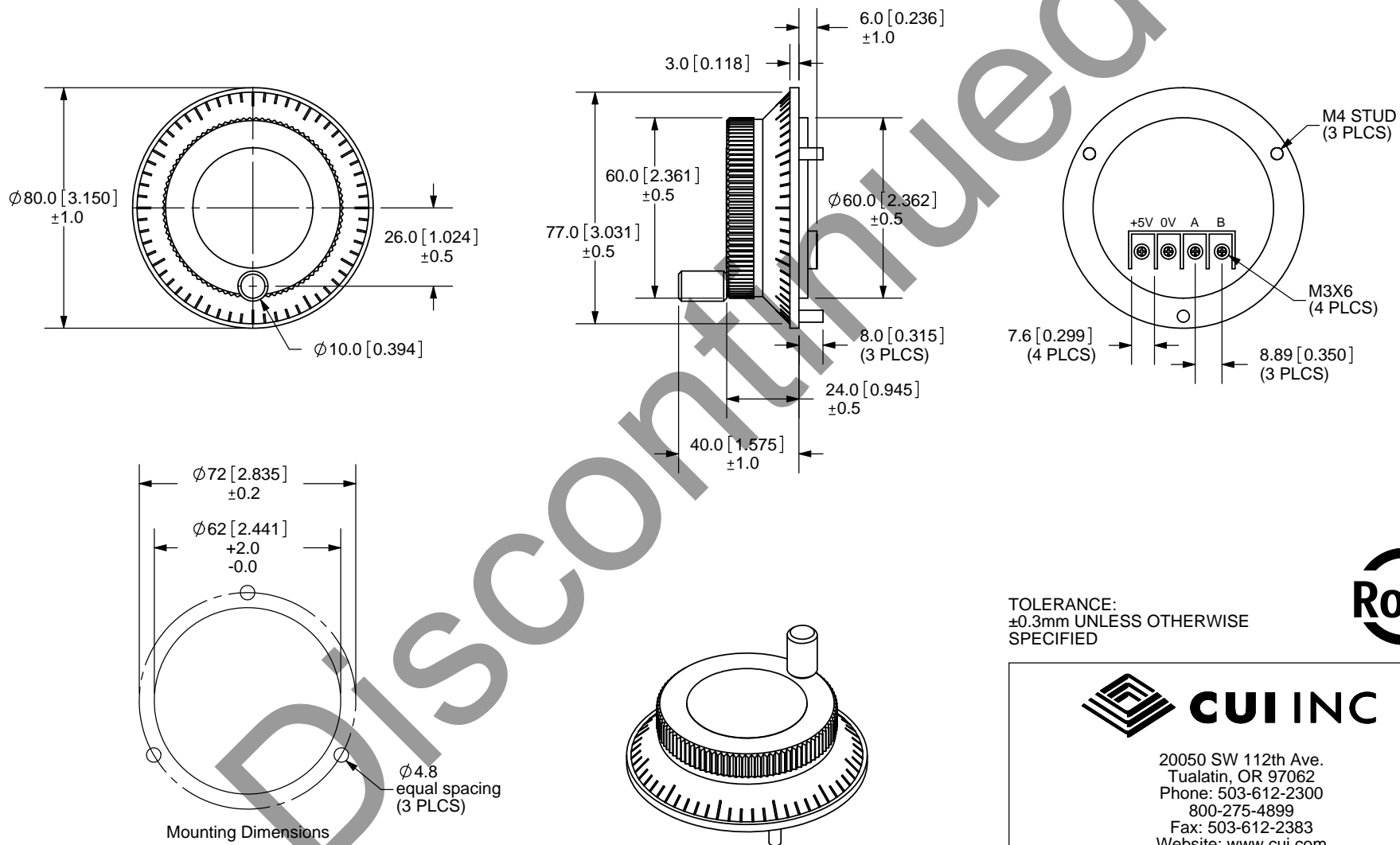


C.P = Click points



※ Point "e" is recommended as the system switching timing.

REV.	DESCRIPTION	DATE
A	NEW DRAWING	6/20/2008



TOLERANCE:
 $\pm 0.3\text{mm}$ UNLESS OTHERWISE
 SPECIFIED



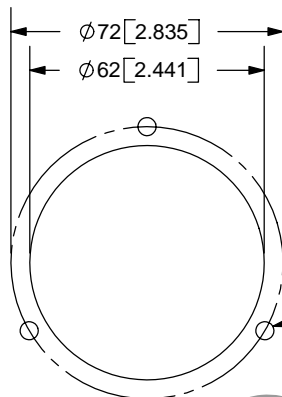
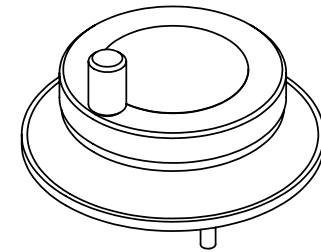
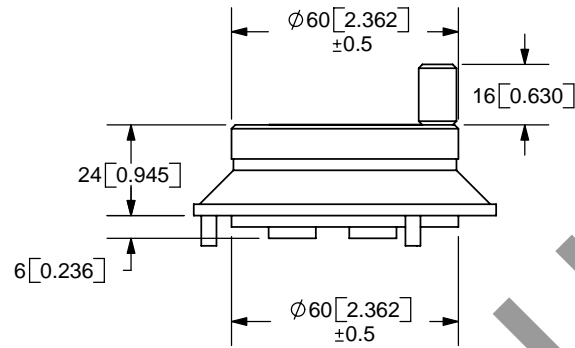
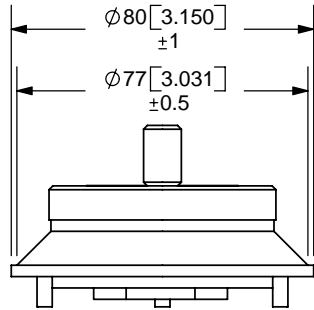
20050 SW 112th Ave.
 Tualatin, OR 97062
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 800-275-4899
 Fax: 503-612-2383
 Website: www.cui.com

TITLE: Manual Pulse Generator		REV: A
PART NO. NLM2	UNITS: MM [INCHES]	
DRAWN BY: ZRJ	APPROVED BY:	SCALE: 1:2

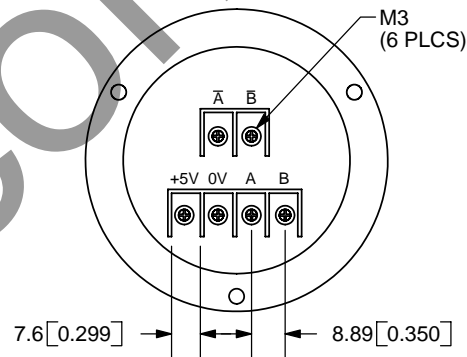
PC FILE NAME:
 NLM2

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REV.	DESCRIPTION	DATE
A	NEW DRAWING	9/4/2007



Mounting Dimensions



TOLERANCE:
±0.3mm UNLESS OTHERWISE
SPECIFIED



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Website: www.cui.com

TITLE: Manual Pulse Generator		REV: A
PART NO. NLM2 Line Driver	UNITS: MM [INCHES]	
DRAWN BY: JMS	APPROVED BY:	SCALE: 1:2