

**SERIES: MES3-XXXPXXX**
**DESCRIPTION: INCREMENTAL ENCODER**

## ELECTRONIC SPECIFICATIONS

output waveform	square wave
output signals	A, B, Z phase (voltage output, open collector) A, B, Z, $\bar{A}$ , $\bar{B}$ , $\bar{Z}$ phase (line driver)
output voltage	$V_{OL} \leq 0.3 \text{ V}$ $V_{OH} \geq V_{CC} - 0.3 \text{ V}$
current consumption	$\leq 15 \text{ mA}$
output phase difference	A,B phase difference: $T/4 \pm T/8$ , Z phase width: $T \pm 0.5T$
supply voltage	3.2 V dc $\pm 5\%$ (open collector) 5 V dc - 5% ~ 12 V dc + 10% (voltage output, open collector)* 5 V dc $\pm 5\%$ (line driver)*
output capacity	20 mA max.
output resolution (ppr)	64, 100
frequency response	100 kHz max.
waveform rise/fall time	$\leq 2 \mu\text{s}$ (output cable 300 mm or less)

\* Requires I/F interface module (page 4)

## MECHANICAL SPECIFICATIONS

max. shaft load	radial; axial;	0.98 N (100 gf) 0.98 N (100 gf)
starting torque		$5 \times 10^{-4} \text{ N} \cdot \text{m}$ (5 gf · cm)
max. rotational speed		6000 rpm
shock resistance		$500 \text{ m/s}^2$ (50 G), 3 times each on XYZ
vibration proof		1.5 mm ,55 Hz, 2 hours each on XYZ
cable		flexible, 130 mm
weight		5 g (with cable)

## ENVIRONMENTAL SPECIFICATIONS

operating temp	$0^\circ$ to $+60^\circ \text{ C}$
storage temp	$-20^\circ$ to $+80^\circ \text{ C}$
humidity	30~95% no condensation

## PART NUMBER KEY

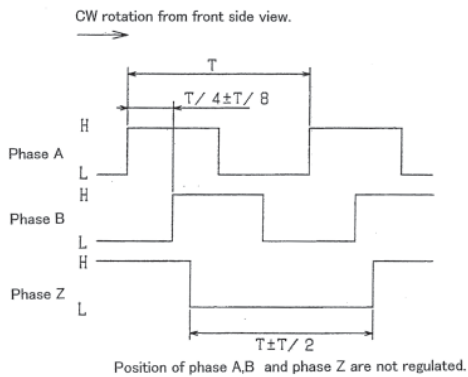
**MES3 - XXX P XXX**

Output Resolution:  
64 = 64 ppr  
100 = 100 ppr

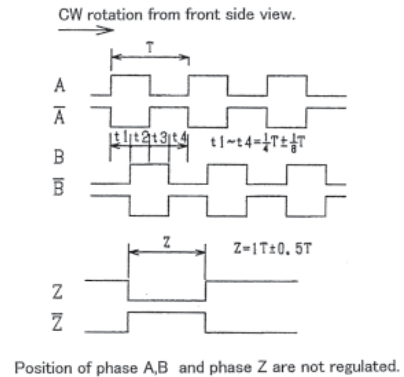
Output Options:  
P = 3.2 V Open Collector without I/F box  
P3 = Option 5 ~ 12 V Voltage Output with I/F box  
PC3 = Option 5 ~ 12 V Open Collector with I/F box  
PE = Option 5 V Line Driver with I/F box

## OUTPUT WAVEFORM

### Voltage Output / Open Collector Output

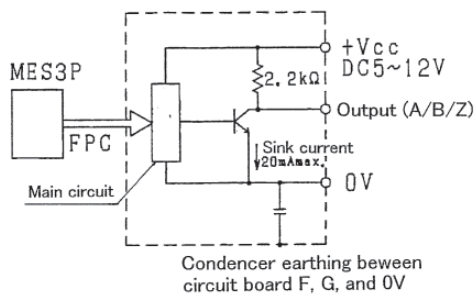


### Line Driver Output

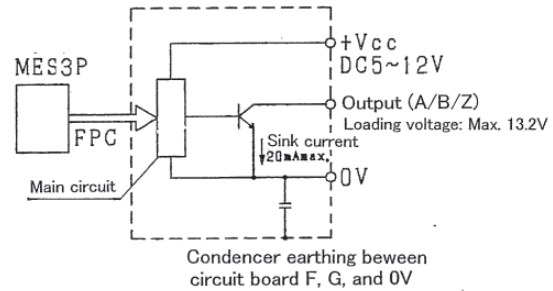


## OUTPUT CIRCUIT

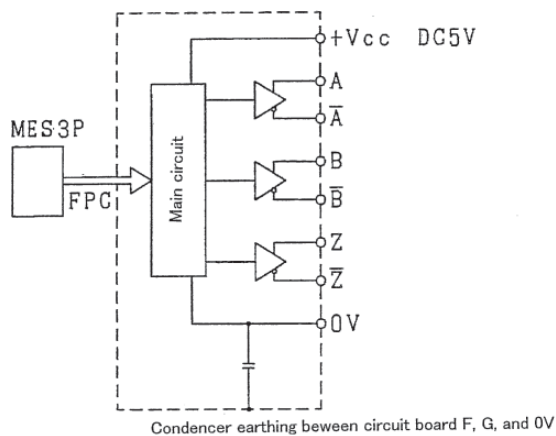
### Voltage output



### Open collector output

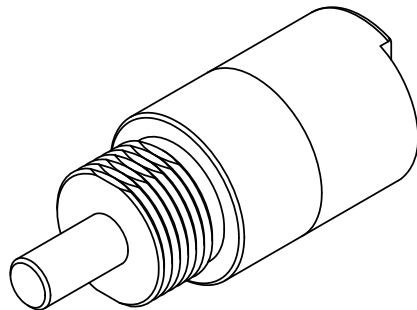
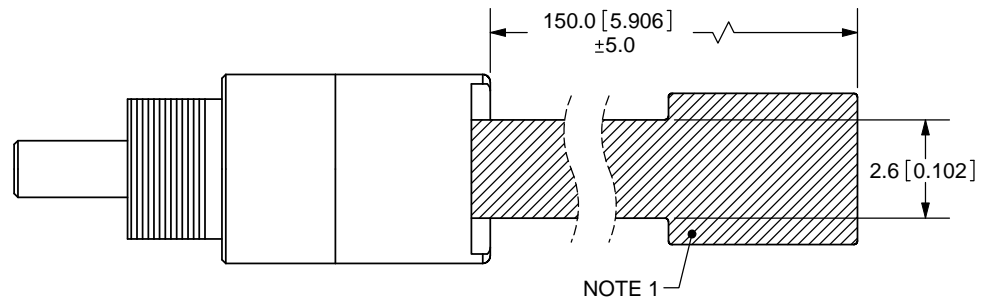
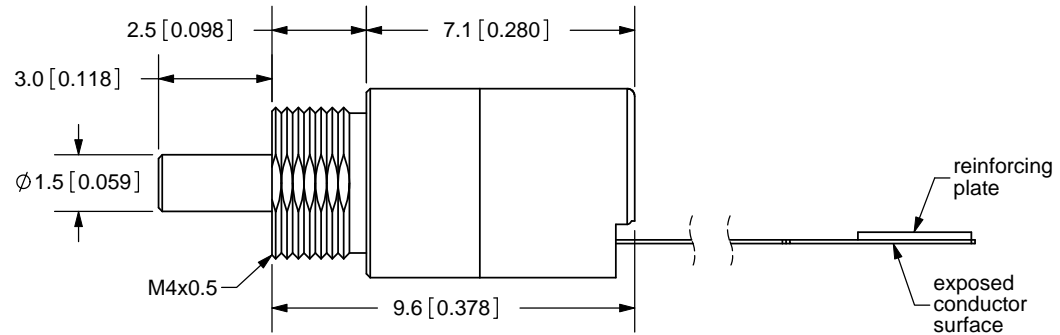
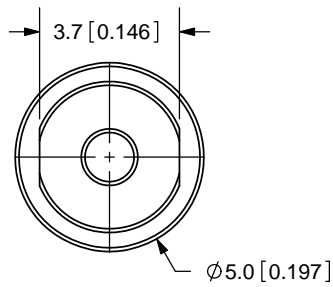


### Line driver output



Output IC  
 SN75ALS192(TI) or same kind

REV.	DESCRIPTION	DATE
A	NEW DRAWING	8/24/2009



TOLERANCE:  
 $\pm 0.3\text{mm}$  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

NOTES:

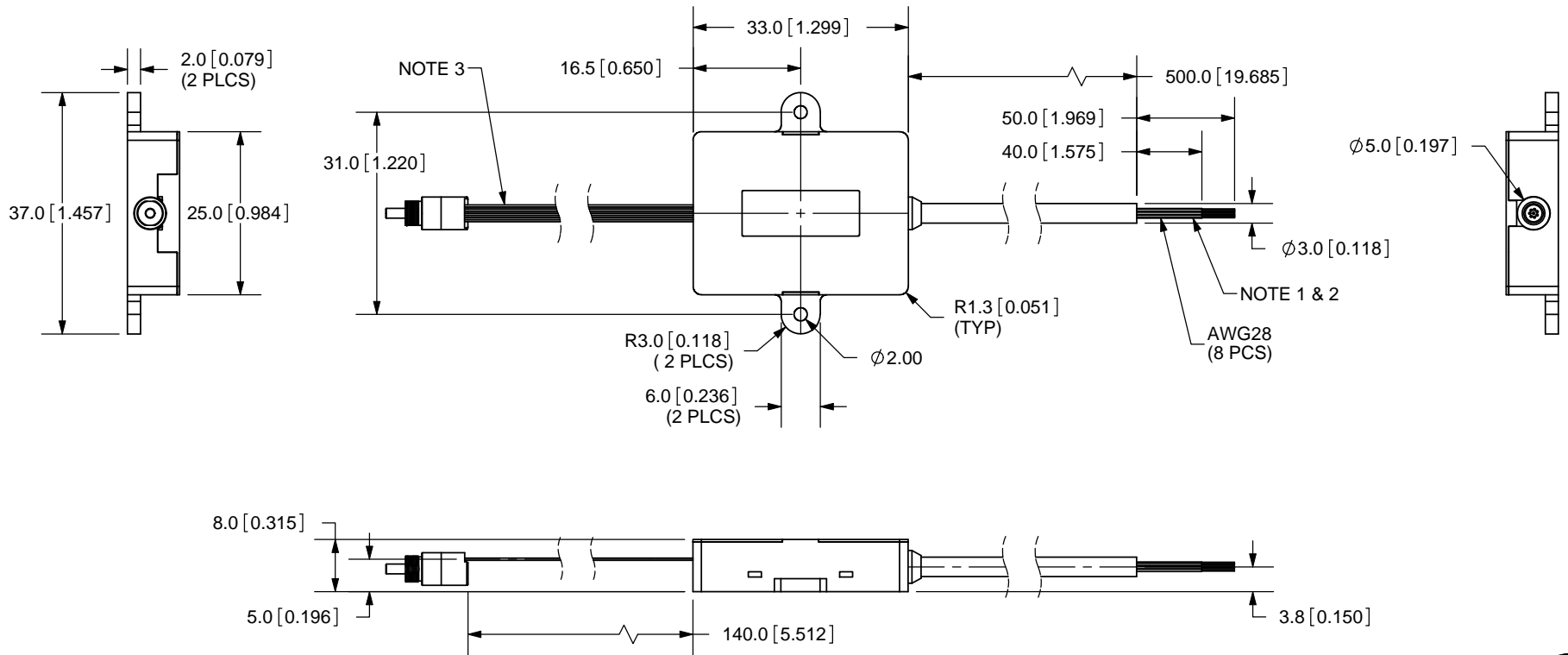
- conforms to JAE connector IL-FPR-6S-HF-N1

TITLE: MES3		REV: A
PART NO. MES3		UNITS: MM [INCHES]
DRAWN BY: ZRJ	APPROVED BY:	SCALE: 5:1

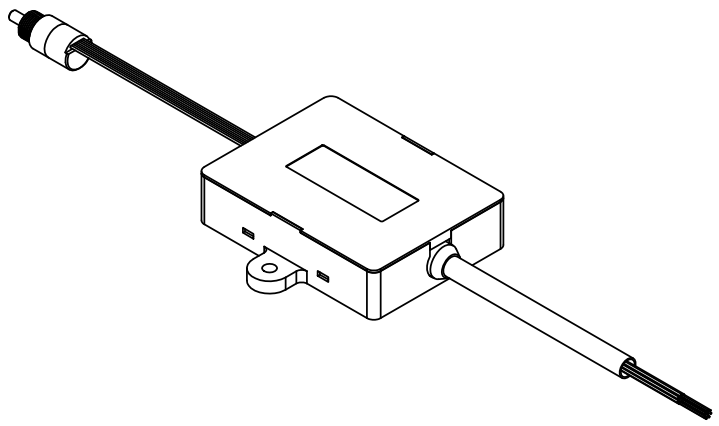
PC FILE NAME:  
 MES3

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REV.	DESCRIPTION	DATE
A	NEW DRAWING	8/24/2009



TOLERANCE:  
±0.3mm UNLESS OTHERWISE  
SPECIFIED



NOTES:

1. 8 core (line driver output)  
5 core (voltage output, open collector output)
2. twisted 2-3mm soldered tip finish
3. FPC cable (encoder side)

		<b>CUI INC</b>	
20050 SW 112th Ave. Tualatin, OR 97062 Phone: 503-612-2300 800-275-4899 Fax: 503-612-2383 Website: www.cui.com			
TITLE: I/F BOARD		REV: A	
PART NO. IF-board		UNITS: MM [INCHES]	
DRAWN BY: ZRJ		APPROVED BY:	
		SCALE: 1:1	

PC FILE NAME:  
IF-board

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