

SERIES: MES3 | **DESCRIPTION:** INCREMENTAL ENCODER

FEATURES

- 5 mm diameter
- 64, 100, or 1024 ppr resolution
- square wave output


ELECTRICAL

parameter	conditions/description	min	nom	max	units
power supply	3.2 Vdc ±5% (open collector) 5 Vdc - 5% ~ 12 Vdc + 10% (voltage output, open collector) ¹ 5 Vdc ±5% (line driver) ¹				
current consumption	P models PST models			15 20	mA mA
output signals	A, B, Z (voltage output, open collector) A, \bar{A} , B, \bar{B} , Z, \bar{Z} (line driver)				
output waveform	square wave				
output resolutions	P models PST models	64, 100 1024 (64 x 16)			PPR PPR
output voltage	V_{OL} V_{OH}	$V_{CC}-0.3$		0.3	V V
output current				20	mA
output phase difference	A,B phase difference: $T/4 \pm T/8$ Z phase width: $T \pm 0.5T$				
frequency response				100	kHz
waveform rise/fall time	output cable 300 mm or less			2	μ s

Notes: 1. Requires I/F interface module (page 4)

MECHANICAL

parameter	conditions/description	min	nom	max	units
max. shaft load	radial and axial			0.98 100	N gf
starting torque			5×10^{-4} 5		N·m gf·cm
max. rotational speed				6,000	RPM

ENVIRONMENTAL

parameter	conditions/description	min	nom	max	units
operating temperature		0		60	°C
storage temperature		-20		80	°C
humidity	non-condensing	30		95	%
vibration	1.5 mm, 55 Hz, 2 hours each on XYZ				
shock	3 times each on XYZ			50	G

PART NUMBER KEY

MES3 - XXX P XX XX

Base Number

Output Resolution:

64(P) = 64 ppr
 100(P) = 100 ppr
 64(P)ST = 1,024 ppr

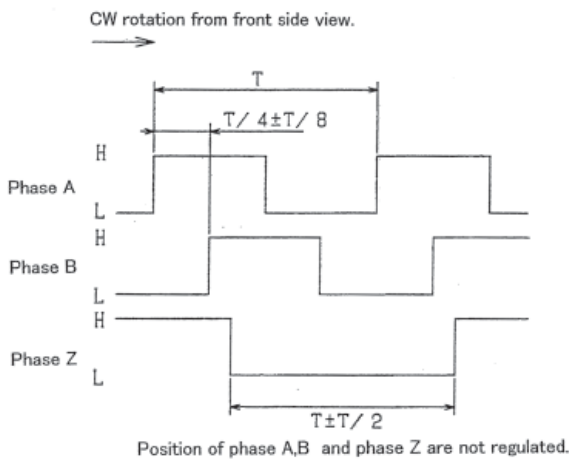
Output Options:

"blank" = 3.2 V Open Collector without I/F box
 3 = Option 5 ~ 12 V Voltage Output with I/F box
 C3 = Option 5 ~ 12 V Open Collector with I/F box
 E = Option 5 V Line Driver with I/F box

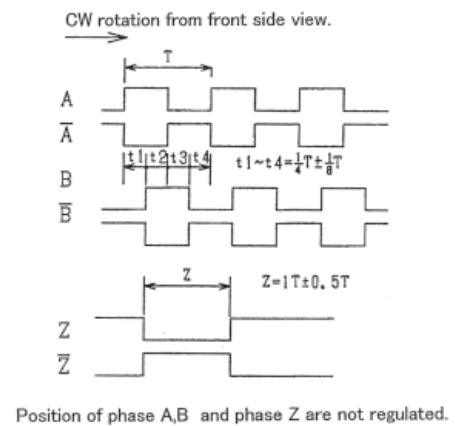
OUTPUT WAVEFORM

MES3-P

voltage output / open collector output

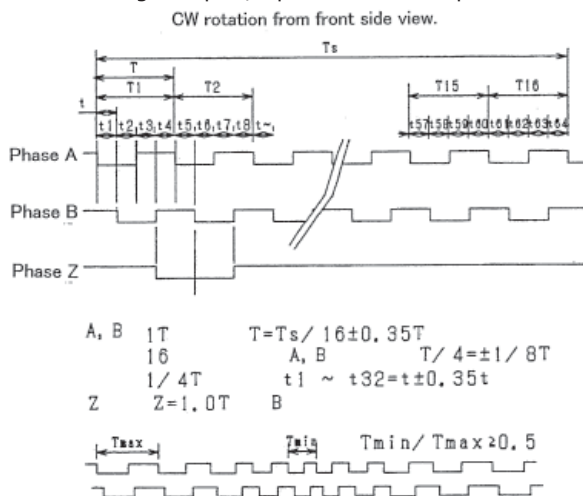


line driver output

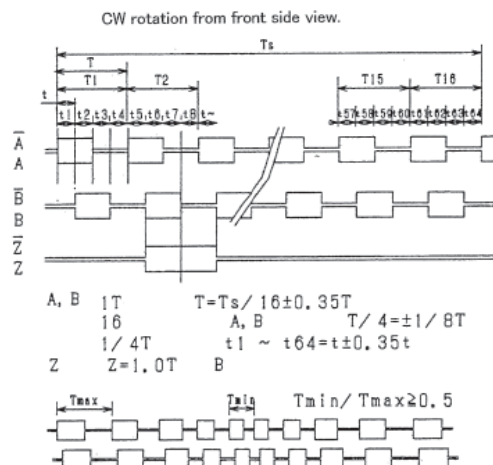


MES3-PST

voltage output / open collector output

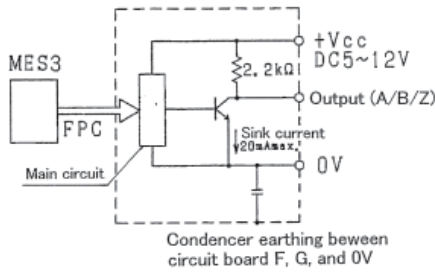


line driver output

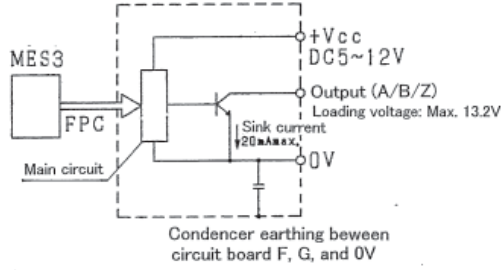


CIRCUIT DIAGRAM

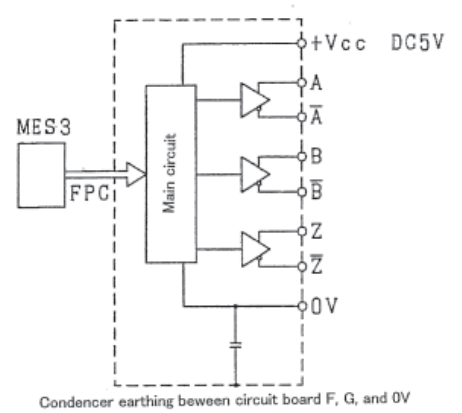
Voltage output



Open collector output



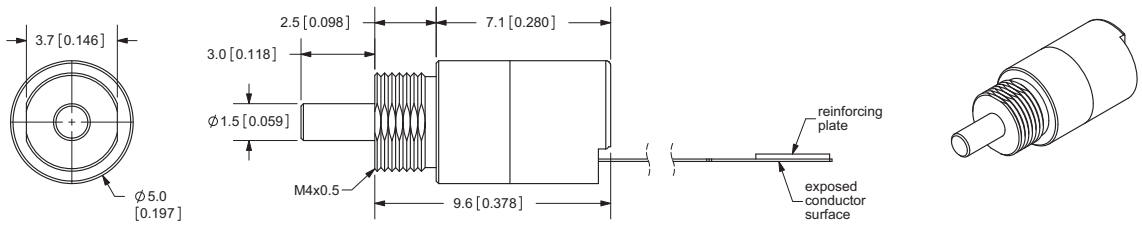
Line driver output



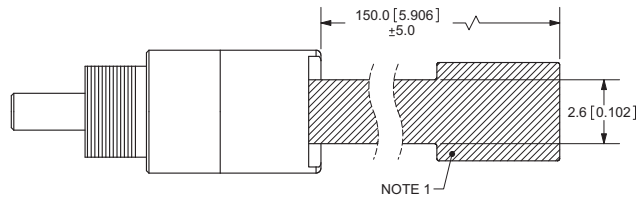
Output IC
SN75ALS192(TI) or same kind

MECHANICAL DRAWING

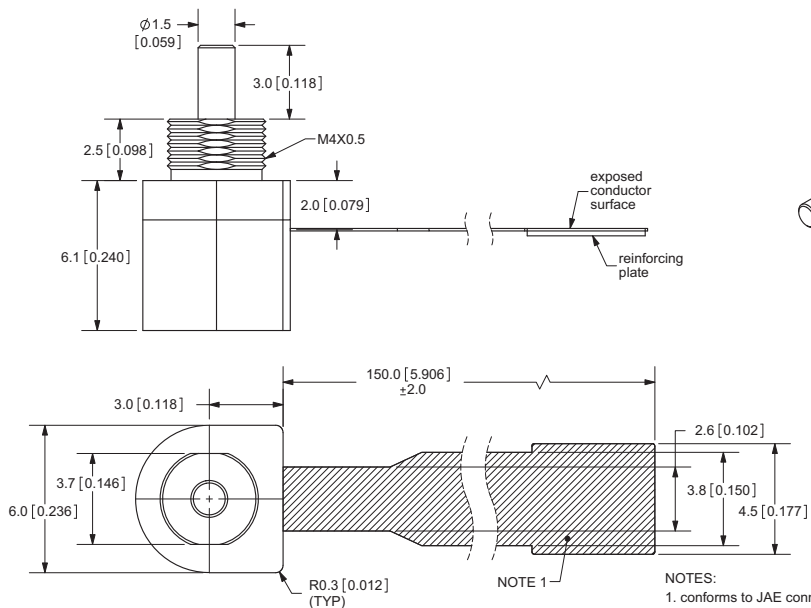
units: mm[inches]
TOLERANCE: $\pm 0.3\text{mm}$



MES3-P



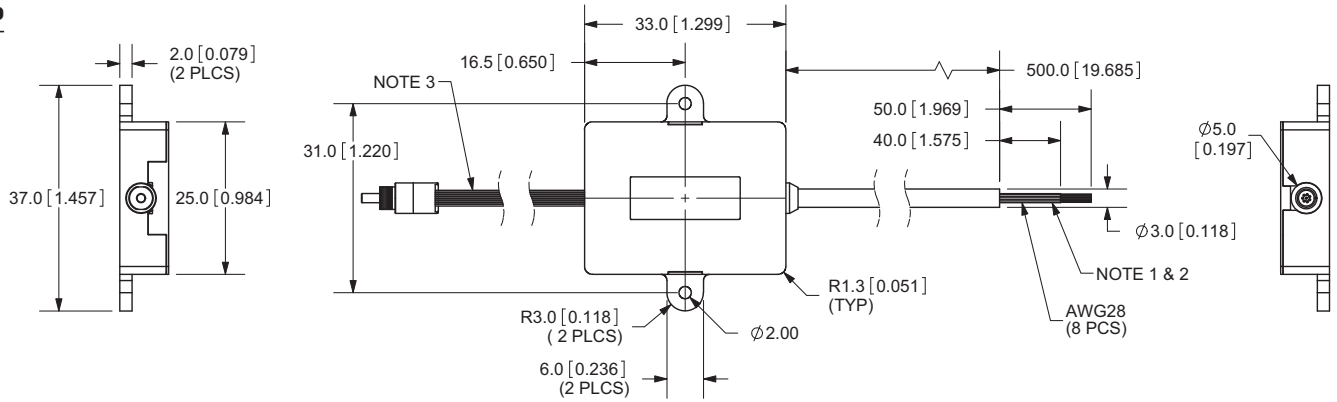
MES3-PST



NOTES:
1. conforms to JAE connector: IL-FPR-6S-HF-N1

I/F BOARD

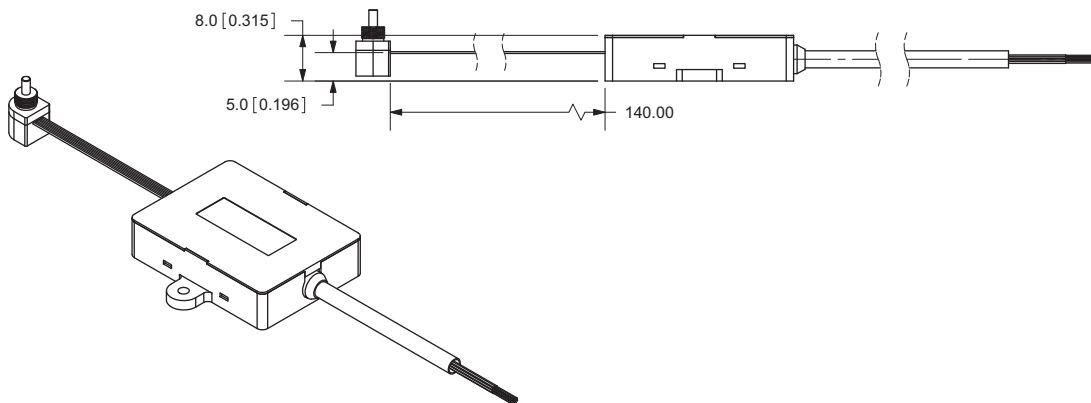
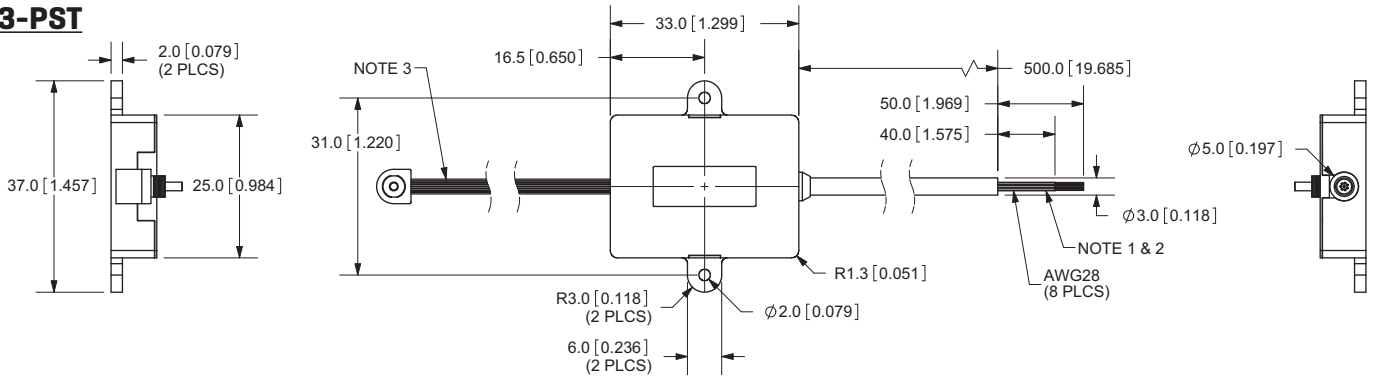
MES3-P



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)

MES3-PST



REVISION HISTORY

rev.	description	date
1.0	initial release	10/08/2009
1.01	applied new template	05/14/2012

The revision history provided is for informational purposes only and is believed to be accurate.



Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com

CUI offers a one (1) year limited warranty. Complete warranty information is listed on our website.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.