

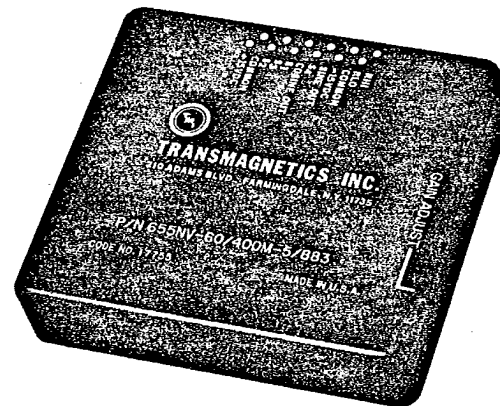
SERIES 655NV-5

Revised April 1988

TRACKING NON-VARIANT SYNCHRO/RESOLVER- TO-DC SINE/COSINE CONVERTERS

FEATURES:

- ± 5 arc minute accuracy
- No lag error to 10 rps
- True non-variance. 10:1 range
- $\pm 2\%$ gain adjust
- Available as a potted module or as a hermetically sealed unit (when adjustment is not required)
- Transformer isolated input and reference
- Meets MIL-STD-202D, Methods: 101C, 105B, 106C, 107C, 202D, 204B and 205D
- High reliability 883B or MIL-M-38510 units on request



DESCRIPTION:

This improved solid state module converts all standard synchro or resolver inputs into two DC output voltages that are proportional to the sine and cosine of the input angle. Unique circuitry has been incorporated to eliminate the lag error of previous models and to extend the non-variant range. The reference and input voltages may now vary independently of each other over a range of better than 10:1. This improved model is, however, a direct pin-for-pin replacement for the 655NV series. These unusual performance characteristics recommend this model for radar displays and X-Y plotters.

SPECIFICATIONS:

Accuracy:*	± 5 arc minutes
Magnitude Variation:*	$\pm 0.1\%$ F.S.
	Both sine and cosine outputs have their magnitude vs. angle variation corrected to less than 0.1%. Thus when used with PPI indicators, the resultant display will be distortion free.
Dynamic Response:	Units will track up to 10 rps with no lag error
Output:	Two DC voltages, each varying from -10 VDC to $+10$ VDC; one representing the sine and the other the cosine of input shaft angle from -180° to $+180^\circ$. Output voltages are independent of reference and input voltage variations with a 10:1 range.
Output Impedance:	1Ω max.
Output Load:	2K min.
Drive Capability:	5 mA max. Output is short circuit proof
Output Ripple:	10 mV max. peak-to-peak
Null:	10 mV max.
Isolation:	AC reference and line-to-line inputs are transformer isolated from each other and from D.C. power common. Insulation resistance from any A.C. input to output is greater than 50 megohms at 200 VDC.
Power:	± 15 VDC $\pm 5\%$ at 45 mA max.
Operating Temperature:	Model C: 0°C to $+70^\circ\text{C}$ Model M: -55°C to $+85^\circ\text{C}$
Storage Temperature:	-65°C to $+125^\circ\text{C}$
Potting:	For high shock or vibration applications, unit should be potted. See Part Number Designation.
Weight:	10 oz.

*Accuracy and Magnitude apply over a $\pm 5\%$ power supply variation, 10% frequency, and a 10:1 range of reference and signal inputs.

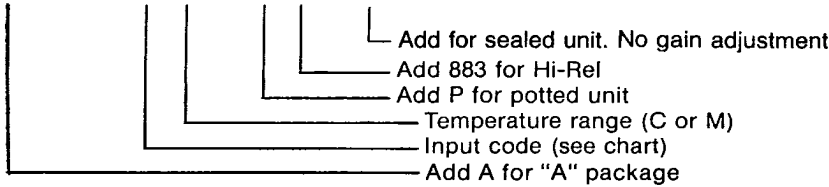
INPUT CODE:

Model	Input	Freq. (Hz ± 10%)	Ref. (V RMS)	L-L (V RMS)	L-L Imped. min.	Ref. Current (mA)
655NV-400-5	Synchro	400	26	11.8	40K	1
655NV-90-5	Synchro	400	115	90	40K	1
655NV-60/400M-5	Synchro	50/400	115	90	100K	1
697NV-400-5	Resolver	400	26	11.8	40K	1

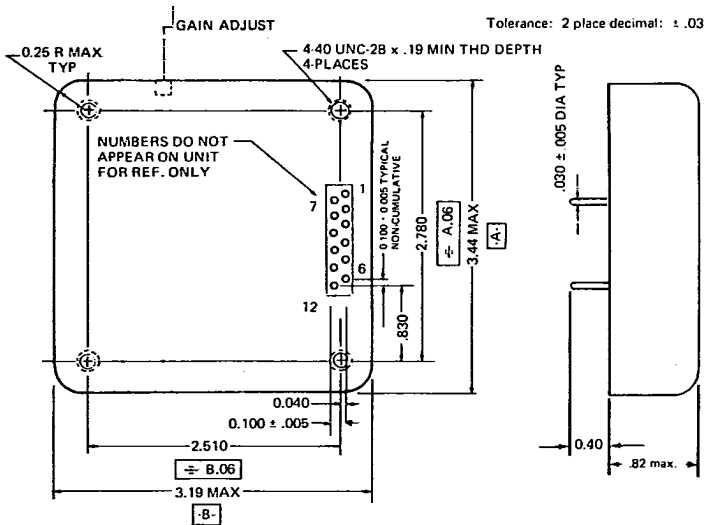
Other models available

PART NUMBER DESIGNATION:

* 655NV-* * -5 * * - S

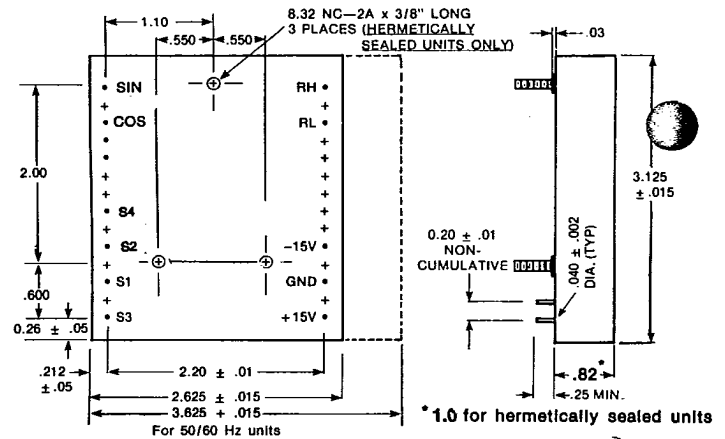


HERMETIC PACKAGE



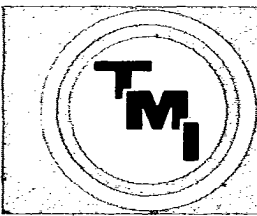
ALL DIMENSIONS IN INCHES

"A" PACKAGE



PIN CONNECTIONS

- | | | |
|---------------------|---------------------|-------------------|
| 1 R ₁ Hi | 5 S ₃ | 9 S ₄ |
| 2 Common | 6 Common | 10 S ₁ |
| 3 Sine out | 7 R ₂ Lo | 11 S ₂ |
| 4 Cosine out | 8 -15VDC | 12 +15VDC |



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