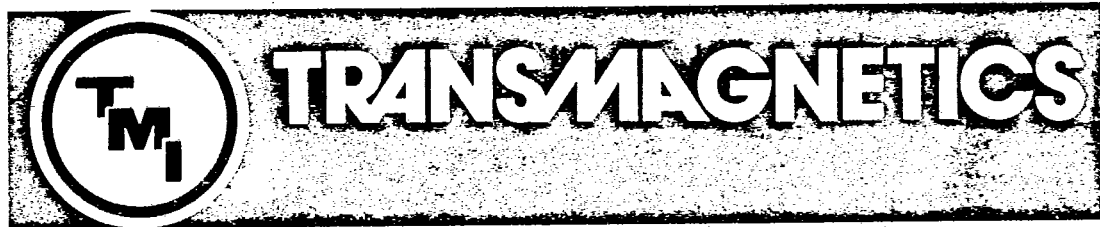


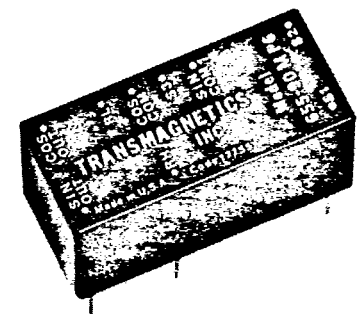
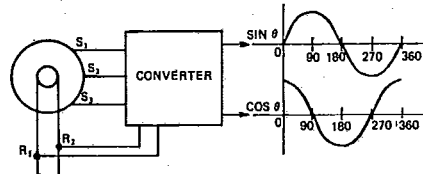
T-71-35-01


**SERIES
655/697**

REVISED JULY 1982

SYNCHRO/RESOLVER TO DC SINE/COSINE CONVERTERS

No DC Power Required



These miniature dual synchronous demodulators convert all standard synchro and resolver inputs into two output voltages that are proportional to the sine and cosine of the input angle. DC power is not required. These converters, in addition to other applications, are ideally suited to condition synchros and resolvers for multiplexing.

FEATURES

- Full transformer isolation
- No calibration or adjustments
- High accuracy
- Small and rugged
- Meets MIL-STD 202
- No DC required

Inputs

Model	Input	Freq. (Hz) ±5%	Ref. V _{RMS} ±10%	L-L V _{RMS}	Ref. Current (mA)
655-*P6	Synchro	400	26	11.8	5
655-90*P6	Synchro	400	115	90	5
655-60*P20	Synchro	50/60	115	90	5
697-*P6	Resolver	400	26	11.8	5
697-115*P6	Resolver	400	115	90	5

Other voltage and frequency levels are available.

*Operating Temp. (add C or M)

Model C: 0°C to +70°C

Model M: -55°C to +85°C

Storage Temperature: -65°C to +125°C

Input Impedance: 40K ohms minimum.

Static Angle Accuracy:	Code "C"	Code "M"
at 25°C	0° to +70°C	-55°C to +85°C
±5'	±10'	±15'

Angle Accuracy is determined by ratio of $\frac{\text{Sine Out}}{\text{Cosine Out}}$

Dynamic Lag: The output voltage will lag the input voltage as follows:

400Hz Models: 50 seconds/RPM

60Hz Models: 80 seconds/RPM

Output: Two DC voltages, each varying from -10 to +10 VDC, representing the Sine & Cosine of the input angle. 0 to +5 or +10 VDC output available.

Output Z: Approx. 4K ohms each output. Lower impedance units are available.

Recommended Load: 100K ohms ±1%.

Drive Capability: 0.1 mA max. for rated accuracy. Output is short circuit proof.

Ripple Output: 1% of DC output, or 10 mV, whichever is greater.

Null: 5 mV max.

Scale Factor: Output/input ratio is within ±0.2% of nominal from unit to unit.

Isolation: AC reference and line-to-line inputs are transformer isolated from each other. Insulation resistance from any AC input to output is greater than 100 megohms at 200 VDC.

Effects of Reference Amplitude Variation: Output will vary proportionally with variation in the AC reference or synchro input amplitude. However, the accuracy of the angle, as determined by the ratio of the outputs remains unaffected.

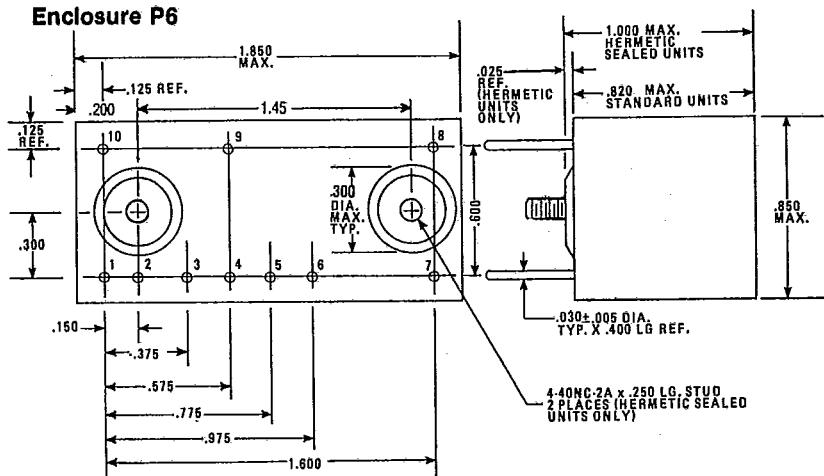
Power Requirements: None

Weight: 2.5 oz.

Potting: For high shock or vibration applications, units should be potted. Add "P" to part number. Hermetically sealed models are available. Add "H" to part number.

T-71-35-01

Enclosure P6

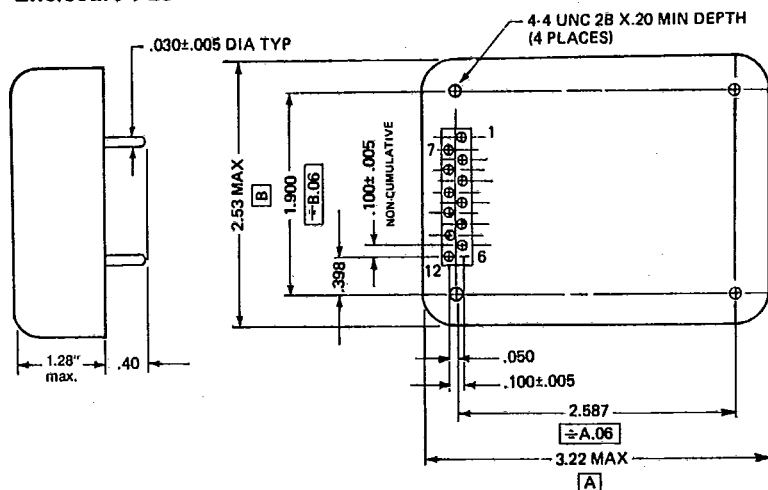


Pin Number	Models: 655-90CP6 655-90MP6
1	Cos Out
2	S4 (See Note 2)*
3	R Lo
4	Cos Out Com.
5	S3
6	Sin Out Com.
7	S2
8	S1
9	RHi
10	Sin Out

NOTES

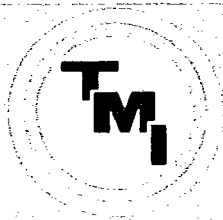
- NOTES
1. Pin numbers for ref. only. May not appear on unit.
 - *2. Pin 2 (S4) will be present only on resolver (697) units, left off on synchro (655) units.

Enclosure P20



Pin Connections	
1	10 Sin θ , HI
2	No Connection
3	10 Sin θ , Lo
4	S4
5	S3
6	S2
7	10 Cos θ , HI
8	No Connection
9	10 Cos θ , Lo
10	S1
11	REF, HI
12	REF, Lo

ALL DIMENSIONS IN INCHES



TRANS/MAGNETICS, INC.

210 ADAMS BOULEVARD, FARMINGDALE, NEW YORK 11735 U.S.A.
PHONE NO: 516 293-3100 TWX510-224-6420 FAX 516 293-3793