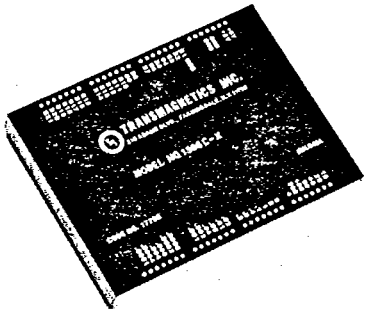
TRANSMAGNETICS

SERIES 1505-X

BINARY ANGLE TO SCALED BCD ANGLE
(TO 21 BITS)

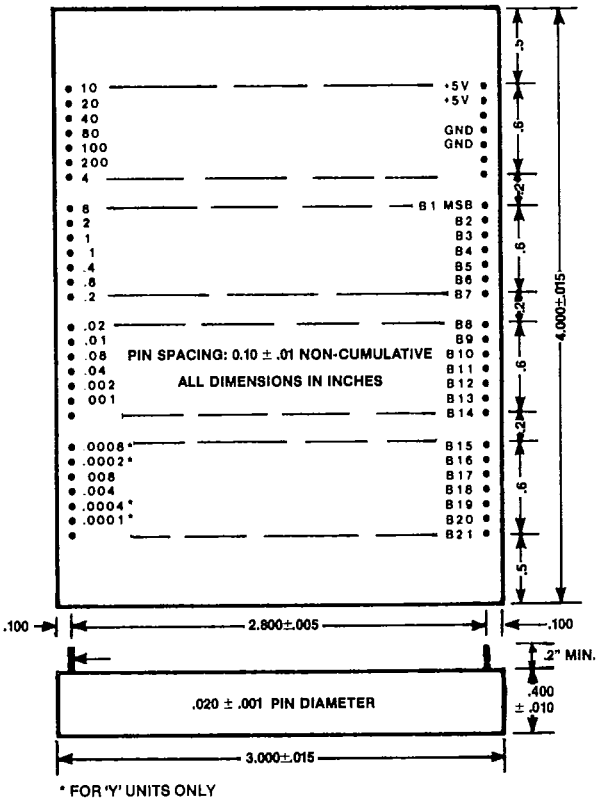
FEATURES
- Accuracy: To 0.00033°
- TTL/DTL Compatible
- Available for either 0 to +70°C or -55°C to +100°C
- Meets MIL-STD-202D; Methods 101C, 105B, 106C, 107C, 202D, 204D and 205D
- High reliability 883B or MIL-M-38510 units on request



DESCRIPTION
These miniaturized all solid state devices accept either 20 or 21 bits of parallel binary angle data and deliver, depending on model, up to 26 lines of BCD outputs. Input and output are scaled to represent an angular range of 0.0 to 359.9995 degrees.

SPECIFICATIONS

	Model 1505-X	Model 1505-Y
Accuracy:	±0.00055°	±0.00033°
Input Resolution:	*20 bits	21 bits
Input Logic:	Parallel, Positive TTL level, Binary Coded Angle	
Fan In:	2 TTL Loads	
Output Resolution:	0.001°	0.0005°
Fan Out:	5 TTL Loads	
Translation Time:	500 nanoseconds	
Power Requirement:	+5 VDC ±5% at 500 mA	
Weight:	4 oz.	
Potting:	Units are potted	
Operating Temperature:	"C": 0°C to +70°C	
	"M": -55°C to +100°C	
Storage Temperature:	-62°C to +125°C	



*NOTE
A reduction in the input resolution will cause a corresponding decrease in the output resolution. The accuracy, however, remains unchanged. Thus: for 19 bits in, the resolution will be .001° for 18 bits in, the output resolution will be .002° for 17 bits in, the output resolution will be .003°. The 21 bit model is essentially a 6½ digit device. Resolution of the last digit is 0.0005° and full scale range is 359.9995°. The .0004° and .0001° pins are internally connected. The .0008° and .0002° pins are internally grounded.

APPLICATION NOTES
Unused inputs should be grounded.

Unused outputs should be left disconnected.

Externally parallel both Ground and both +5 VDC pins.

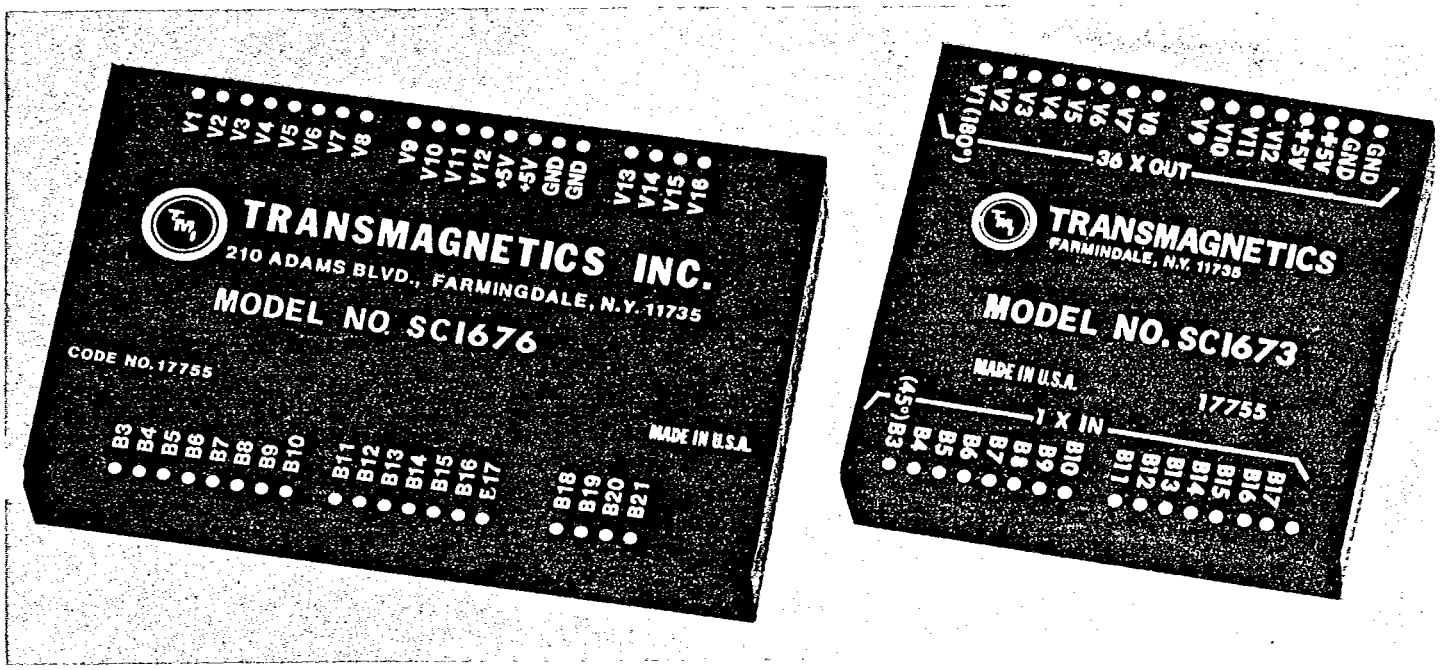
PART NUMBER DESIGNATION
1505 * - * *
- Add 883 for Hi-Rel
- "X" for 20 bits in; "Y" for 21 bits in
- Temperature range (C or M)

TRANSMAGNETICS

Model SC1676
Model SC1673

Revised September 1987

1:36 SPEED MULTIPLIER



DESCRIPTION:

These solid state modules accept a binary input angle and provide a x36 vernier output angle, whose angular velocity is 36 times the velocity of the input angle. Other multiples, such as 1:9, 1:18, 1:72 and 1:144, can be selected by simply shifting the position of the x1 input angle.

All operations are performed in parallel, thus the computation time is limited only by the propagation delay. No timing or control circuits are required.

The SC1676 accepts up to 21 input bits and outputs 16 bits. The SC1673 accepts up to 17 input bits and outputs 12 bits. When used in conjunction with two D/S converters, a two-speed 1:36 synchro system is produced that offers high accuracy and resolution.

SPECIFICATIONS:

	SC1676	SC1673
Input x1 Angle:	21 bits (MSB = 180°)	17 bits (MSB = 180°)
Output x36 Angle:	16 bits	12 bits
Output Logic:	Parallel, positive logic, TTL levels, binary coded angle.	
Fan In:	1 TTL load	1 TTL load
Fan Out:	4 TTL loads	4 TTL loads
Translation Speed:	120 nanoseconds	50 nanoseconds
Power:	+5 VDC ±5% at 60mA	+5 VDC ±5% at 60mA
Operating Temperature:	"C" 0°C to +70°C; "M" -55°C to +85°C	
Storage Temperature:	-55°C to +125°C	-55°C to +125°C
Weight:	2.5 oz.	2 oz.
Size:	2 x 3 x 0.4"	2 x 2 x 0.4"