

# "One Module" 2 SPEED TRACKING SYNCHRO/RESOLVER TO DIGITAL CONVERTER

## FEATURES

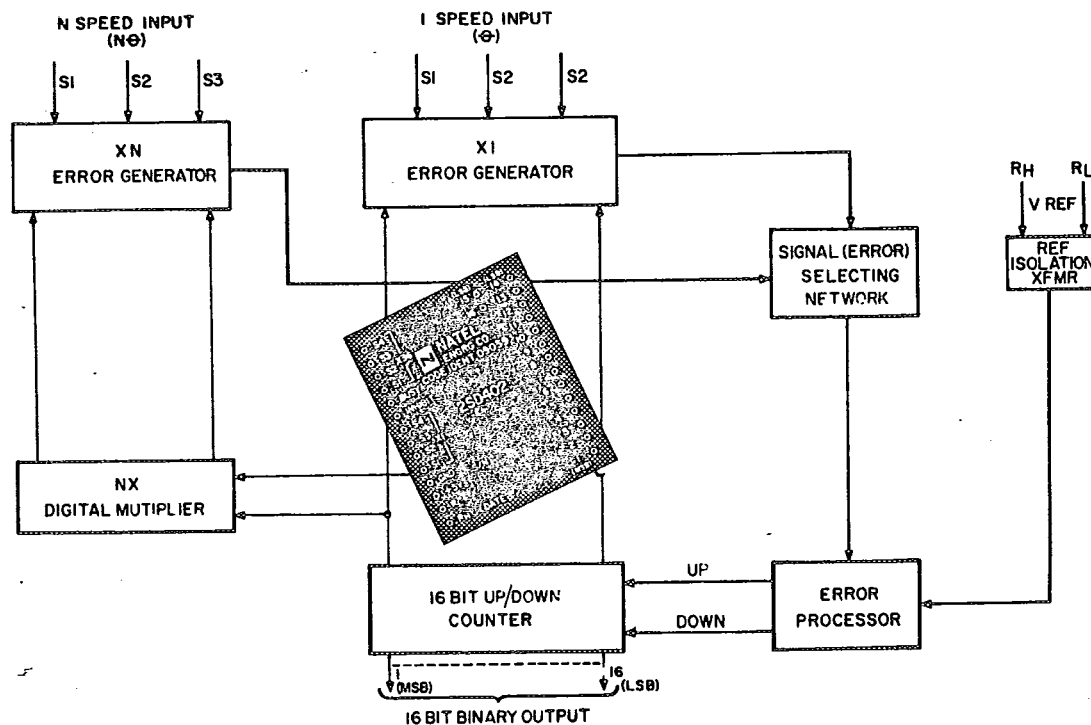
- Complete System in ONE Module
- Operates from only +5VDC, 3 watts
- Non Binary Ratios Accommodated
- Accuracy 0.01°
- 1,440°/sec. (4 Hz) Tracking Rate
- 16 Bits Output (TTL Compatible)
- Reference/Stator Transformer Isolation
- Insensitive to Line/Freq. Variation

## DESCRIPTION

Model 2SD402 is a complete two-speed continuous tracking type synchro/resolver to digital converter packaged in ONE encapsulated module (2.6" x 3.1" x .82"). The converter uses self-nulling, error-free tracking Type II servo-loop, thereby providing no lag and zero velocity error up to 1,440°/sec referred to the coarse (x1) synchro. Accuracy is maintained with  $\pm 10\%$  variation in synchro amplitude and frequency. The digital data is constantly available except during a converter update condition indicated by a logic "high" signal on the converter busy line. Updating can be prevented by applying a logic "low" on the inhibit line. The converter output is in the hold mode as long as an inhibit signal exists.

Synchro or resolver inputs and reference are transformer isolated. For 400 Hz operation the transformers are integral to the converter. At 60 Hz two separate transformer modules are required. Only +5VDC at 600 mA is used.

The 2SD402 is available in commercial, military, and hi-rel (883) versions.



## SPECIFICATIONS

### ELECTRICAL

Inputs: (xfmr isolated)	11.8 Vrms (A) 90 Vrms (B) 26 Vrms (C)
Reference Input: (xfmr isolated)	26 or 115 Vrms $\pm$ 10% @400 $\pm$ 40 Hz
Input/Reference Z:	100K min.
Speed Ratio:	1:36, 1:72, 1:16, and 1:32 std
Output:	16-Bit Parallel Binary Angle (TTL Compatible)
Accuracy:	0.01° for 1:36 inputs
Power Supply:	+5VDC @600mA

### MECHANICAL

Size: 2.625" x 3.125" x .82"

Mounting: PCB plug-in or solder interconnect  
pins on .2" spacing.

Busy/Input Signals:  
Busy = "0" Data O.K.  
= "1" converter Busy

Inhibit Input:  
Freeze Data = "0"  
Convert as needed = "1"

For 60 Hz Operation:  
2 xfmr modules (P/N STM532-60)  
are required.

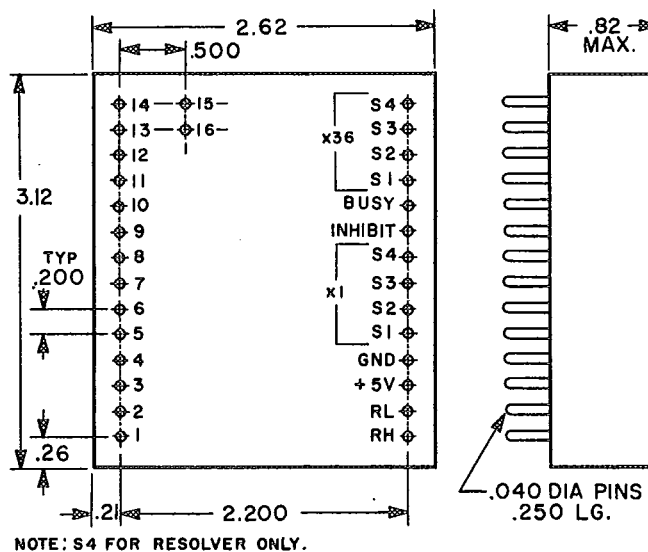
1.5" x 3.1" x 1.03" each

### ENVIRONMENTAL

Operating Temp. Range:	0° to 70°C std -55° to 105°C optional
Storage:	-55° to +125°C

### OPTIONS

-55° to 105°C temp. range	— add M to P/N
Hi-Rel 883 components	— add MR to P/N
Other non-std voltages, and speed ratios	— contact factory



### ORDERING INFORMATION

Example: 2SD402A — 1 X 36 — M

Input Voltage      Speed Ratio      Temperature Range -55° to +105°C

2SD402A-1X36 is a 2 speed synchro to digital converter with an input of 11.8 Vrms and a reference voltage of 26 Vrms with a 1:36 speed ratio.

For resolver inputs preface part number as 2RD402 with appropriate description for input and speed ratio. For options add appropriate ID letter(s).