MODEL DSRS and DSRB

RATIO TRANSFORMERS

- 100° increment switching to simulate operation over a full 360°
- Selective output
- No warm-up time
- Age or environmental conditions have little effect
- Switches good for 100,000 turns
- One-year warranty

Decade Synchro/Resolver Bridges (DSRB)

The TEGAM DSRB combines the functions of a decade synchro bridge and a decade resolver bridge into a single unit. A front panel switch changes the unit from one mode of operation to the other. The units are designed for testing control transmitters, differentials (rotors), and torque transmitters as components or for simulating an incremental control transformer in a servo loop.

Because of the low output impedance, the bridge is essentially insensitive to pickup and loading errors. The high input impedance allows an actual load to be connected in parallel with the bridge input, providing a test of the component under actual load conditions.

As with all TEGAM bridges, operation consists of setting in the desired angle -no warm-up, no pre-use calibration.

The unit is essentially a decade resolver bridge. In the synchro mode, the three-wire input is converted to two voltage signals in a Scott-Tee transformer arrangement. After conversion, the voltage comparator operates in the same manner as in the resolver mode.

A Rack Mount Adapter is also available for bridges and standards.

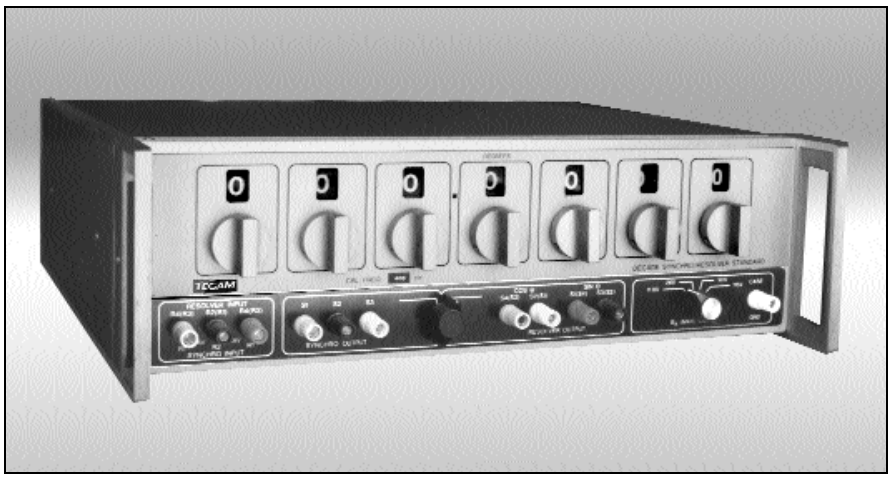
Decade Synchro/Resolver Standards (DSRS)

TEGAM's Decade Synchro/Resolver Standards combine the functions of a decade synchro standard and a decade resolver standard into a single unit. A front panel switch changes the unit from one mode to another. In system tests, the standard may be used to introduce accurately known inputs for testing auto pilots, aircraft indicators, etc. This technique can also be used to check the response of a servo loop. In component tests, the standard may be used to transmit precise angular data to the test component. As a synchro standard, the unit may be used to test CDX's, CT's, TDX's, TDR's and TR's. As a resolver standard, the unit may be used to test RD's and RC's.

The TEGAM DSRS is essentially a decade resolver standard with a Scott-Tee to convert the output to a synchro standard output. As a resolver standard, the DSRS generates two isolated outputs: one proportional to the sine of the angle displayed on the dials and the second proportional to the cosine.

In the synchro mode, the sine and cosine outputs are interconnected into a Scott-Tee. This transformer arrangement produces the three output voltages of an ideal synchro control transmitter.

Most commercially-available components may be tested without affecting the 2-seconds-of-arc accuracy. Low output impedance unbalance permits severe loading without introducing error. For testing components, either the proportional voltage gradient or the proportional voltage nulling method may be used. If the proportional voltage nulling method is used, the TEGAM DSRS may be adjusted to obtain a null instead of the dividing head. In this case, the angular error may be read directly from the setting of the control switches.



TEGAM

YOUR GLOBAL SOURCE FOR TEST AND MEASUREMENT SOLUTIONS

MODEL DSRS and DSRB

Specifications

	DSRS	DSRB
Angular Range	0 to 360 degrees continuous	0 to 400 degrees
Angular Accuracy	2 seconds-of-arc at nominal frequency	4 seconds-of-arc at nominal frequency
Angular Resolution	0.0001 degree	0.0001 degree (pot)
Readout	Direct readout in degrees 0.375" high readout numerals permits easy reading	Direct readout in degrees 0.375" high readout numerals permits easy reading
Nominal Frequency	400 Hz ±5%	400 Hz ±5%
Nominal Input Voltage	115 or 26 VRMS	0.35f (f in Hz) or 170 VRMS whichever is less
Maximum Stator Output Voltage	115, 90, 26, or 11.8 VRMS	N/A
Maximum Effective Output Impedance Unbalance at Nominal Frequency **115 and 90 VRMS** **26 and 11.8 VRMS**	 .05 + j.005 ohms. .01 + j.001 ohms**.**	 300 -j50
Maximum Input Voltage		0.35f (f in Hz) or 170 VRMS whichever is less
Error Voltage Gradient		4.85 x 10^{-6} E_S (max) V/second ± 1%
Input Impedance at Nominal Frequency		Synchro Mode: 1 megaohm (approx.) Resolver Mode: 750K ohm (approx)
Figure of Merit (Y) at Nominal Frequency		Synchro Mode: 100 (min) Resolver Mode: 75 (min)
Input and Output Connections	5-way binding posts. Separate synchro and resolver inputs (on front and rear) permit simultaneous connection of both a synchro and resolver. Mode switch determines which is selected.	5-way binding posts. Separate synchro and resolver inputs (on front and rear) permit simultaneous connection of both a synchro and resolver. Mode switch determines which is selected.
Isolation and Shielding	All inputs and outputs are electrostatically shielded and isolated from each other and case ground	All inputs and outputs are electrostatically shielded and isolated from each other and case ground.
Dimensions	17"W x 5 1/4"H x 15 3/8"D	17"W x 5 1/4"H x 13 3/8"D.
Dimensions With Rack Mount	19"W x 5 1/4 "H x 16 7/8"D	19 "W x 5 1/4"H x 14 7/8"D

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