



FEATURES

- Full 3 VA Output
- Transformer Isolated Output
- Short Circuit Protection
- Thermal Cutoff Protection
- Integral Heatsinking
- No +5V Supply Required
- Synchro/Resolver Inputs/Outputs

APPLICATIONS

- Synchro Amplification
- Resolver Amplification
- Resolver to Synchro Conversion
- Synchro to Resolver Conversion

GENERAL DATA

The 175A100 is a family of miniature modularized Synchro Amplifiers. The analog inputs and outputs can be specified as either synchro or resolver formats. The 175A100 amplifies the analog input and delivers a full 3 VA to CT or CDX loads while maintaining ± 2 minute accuracy. The Synchro Amplifier is current limited and features a thermal cutoff to prevent overheating. An integral aluminum top surface on the module provides all the necessary heat-sinking.

OVERTEMPERATURE PROTECTION

The top of the 175A100 consists of a metal top plate which provides all required heat sinking. Thermal resistance from top plate to free air is 15 degrees centigrade per VA. A thermal cutout is included in the design which disables the output power amplifiers when the temperature of the top plate reaches 115 degrees centigrade. Once the top plate temperature drops approximately 10 degrees, the output amplifiers are automatically enabled and normal operation is resumed. Sufficient air circulation should be provided for the metal top.

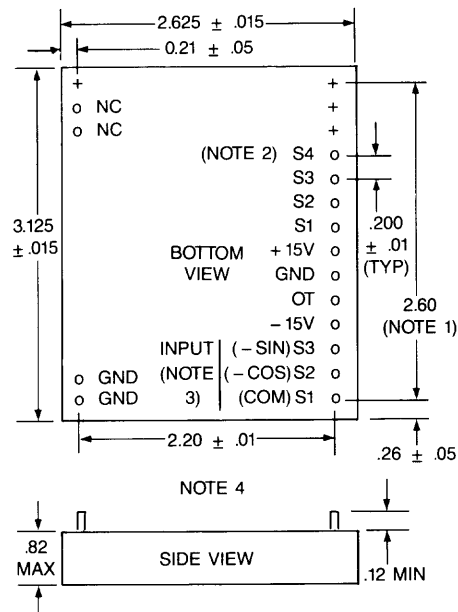
ELECTRICAL SPECIFICATIONS

Parameter	Value
Accuracy ⁽¹⁾	± 2 minutes
Analog Input ⁽²⁾	11.8 Vrms L-L 400 Hz into 100K 90 Vrms L-L 400 Hz into 600K 90 Vrms L-L 60 Hz into 600K
Analog Output ^{(3) (4)}	11.8 Vrms L-L 400 Hz @ 3VA max. 90 Vrms L-L 400 Hz @ 3VA max. 90 Vrms L-L 60 Hz @ 3VA max.
Overttemperature Output (OT)	Logic '1' = overtemperature 2 TTL loads max.
Power Supplies	
Voltage	$\pm 15V \pm 5\%$
Current	60 ma + load
Temperature Ranges	
Operating	0 to +70°C -55 to +85°C (ET)
Storage	-55 to +125°C

NOTES

1. Accuracy applies for:
 - (a) $\pm 5\%$ variation in power supplies
 - (b) $\pm 10\%$ signal amplitude variation
 - (c) 10% harmonic distortion
 - (d) any balanced load from no load to full load
 - (e) over operating temperature range
2. Synchro input is a solid state Scott "T"; any one stator may be grounded. Common mode voltages up to specified L-L voltage have no effect on operation.
3. Transformer isolated output; any one stator may be grounded.
4. For 60 Hz output, external transformers are required.

MECHANICAL OUTLINE



NOTES

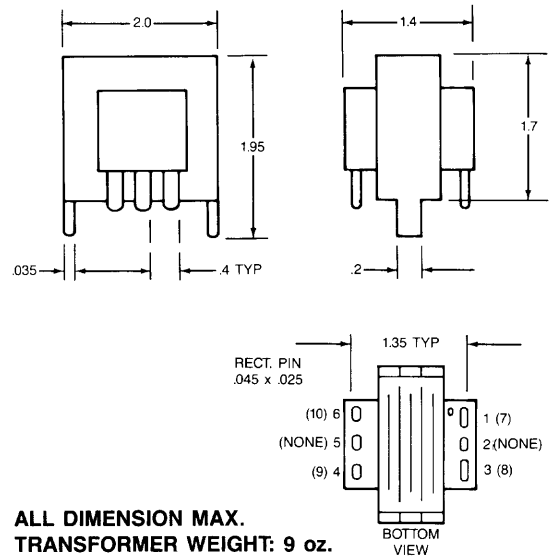
1. Non-cumulative
2. S4 appears on resolver output models only.
3. Designators in parenthesis are for resolver input units.
4. Rigid 0.040 diameter pins suitable for solder-in or plug-in applications.
5. Dimensions are in inches.

ORDERING INFORMATION

175A Suffix	Analog Input		Analog Output		Frequency (Hz)
	Type	Voltage	Type	Voltage	
100	Syn	11.8	Syn	11.8	400
101	Syn	11.8	Syn	90	400
102	Syn	90	Syn	90	400
103	Syn	90	Syn	11.8	400
104	Syn	90	Syn	90	60
105	Res	11.8	Res	11.8	400

Standard temperature range 0 to 70°C, add suffix ET to part number for extended range (-55 to +85°C). Additional inputs/outputs may be specified, consult factory.

EXTERNAL TRANSFORMERS (60 HZ ONLY)



ALL DIMENSION MAX.
 TRANSFORMER WEIGHT: 9 oz.

INTERCONNECTING DIAGRAM

