

SYNCHRO/RESOLVER ANGLE POSITION INDICATOR

DESCRIPTION

The AP-30711 and the AP-30712 are both high resolution, dual input, synchro/resolver angle position indicators. These units convert analog synchro or resolver position information into a digital word. The digital word is used to display angular information on the front panel of the unit. Each unit's standard display angular range is decimal degrees from 0.000° to 359.999°. Bipolar $\pm 179.995^\circ$ is available as a low-cost option. Both units are available in two frequency ranges of 360 to 1200 Hz or 47 to 440 Hz. The digital word is also available for use from the rear panel of both units through a parallel BCD interface.

The AP-30711's small size and remote programming feature makes it

ideal for automatic test, panel mount applications. The bench top AP-30712 has input terminals and controls on the front panel, and is available with an optional IEEE-488 or MATE/CIIL interface in the rear.

APPLICATIONS

The AP-30711 and the AP-30712 can be used wherever high accuracy synchro or resolver angle information is required for display, control, testing purposes or computation. Applications include development or production testing of synchro/resolver based systems, information translators in quality control systems, machine tool controls, motion feedback, and automatic test equipment.

FEATURES

- **Transformer-Isolated Synchro and Resolver Inputs**
- **Auto-Leveling of Any Input Between 10 and 100 V L-L**
- **Resolution: 0.001°**
- **Auto Phase Shift Compensation**
- **IEEE-488 or MATE/CIIL Interface Option**



AP-30711 AND AP-30712 SPECIFICATIONS			
PARAMETER	UNIT	VALUE	
Resolution Standard ±179.995 Option	degrees	0.001	
	degrees	0.005	
Accuracy Standard ±179.995 Option	degrees	±0.004	
	degrees	±0.010	
Angular Ranges Standard ±179.995 Option	degrees	0° - 359.999°	
	degrees	±179.995°	
Display Number of digits Size of digits	digits	Standard 6 decimal	±179 Option 5½ decimal
	inches	0.55	0.55
Reference Input Voltage Frequency Impedance	V rms	3 to 115	
	Hz	47 to 400, or 360 to 1200	
	Ohms	100k minimum	
Signal Input Input Type AP-30711 AP-30712 Voltage Levels Frequency Allowable Phase Shift Impedance		synchro or resolver Channel 1: synchro Channel 2: resolver	
	V L-L	10 to 100 (AGC)	
	Hz	47 to 440, or 360 to 1200	
	degrees	±30 maximum	
	Ohms	1 Meg minimum	
Dynamic Characteristics Tracking Rate 47-440 Hz unit 360-1200 Hz unit Settling Time (for 180° step) 47-440 Hz unit 360-1200 Hz unit		0°-359.999°	±179.995°
	deg/sec	75	180
	deg/sec	200	1000
	sec max	3.0	1.5
	sec max	1.5	0.4

AP-30711 AND AP-30712 SPECIFICATIONS (con't)		
PARAMETER	UNIT	VALUE
Digital Inputs (TTL Compatible) Level Logic "1" Logic "0" Loading Data Freeze DF \overline{DF} Channel Select	V	2.4 minimum
	V	0.8 maximum
		1 standard TTL
	(pin 42)	"1" Freeze, "0" or Open-Track
	(pin 27)	"0" Freeze, "1" or Open - Track
(pin 43)	"0" CHAN 1 "1" or open - CHAN 2	
Digital Outputs Digital Output Data Drive Capability Logic "1" Logic "0" Converter Busy		6 decade BCD (1; 2; 4; 8 code) 10 TTL loads IEEE-488 GPIB (optional)
	V	+2.5 minimum
	V	+0.6 maximum
		TTL compatible pulses, 1 µs wide; transfer data 2 µs after trailing edge of pulse
Power Input Voltage Frequency Power	V rms	115 ±10%, or
	V rms	230 ±10%
	Hz	47 - 440
	VA	25 maximum
Temperature Range Operating	°C	0 - 70
Physical Characteristics Size AP-30711 AP-30712 Weight AP-30711 AP-30712	inches	1.75 x 9.50 x 12.50
	(cm)	(4.45 x 24.13 x 31.75)
	inches	3.50 x 9.50 x 12.50
	(cm)	(8.89 x 24.13 x 31.75)
	lbs (kg)	6 (2.72)
lbs (kg)	8 (3.63)	

ORDERING INFORMATION

AP-30711PX-301 X

Operating Voltage:

V = factory set for 230VAC line cord operation
 Blank = factory set for 115VAC line cord operation

Frequency and Display Ranges:

1 = 360-1200 Hz, 0.000 Deg.
 -359.999 Deg.
 2 = 47-440 Hz, 0.000 Deg.
 -359.999 Deg.
 3 = 360-1200 Hz, ±179.995 Deg.
 4 = 47-440 Hz, ±179.995 Deg.

AP-30712BX-30X X

Operating Voltage:

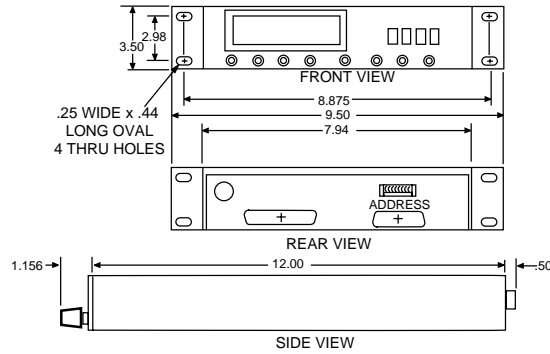
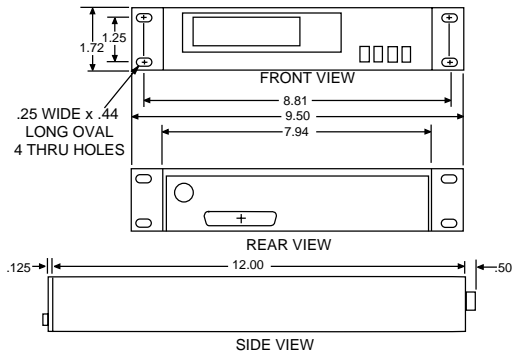
V = factory set for 230VAC line cord operation
 Blank = factory set for 115VAC line cord operation

Interface:

1 = Parallel BCD
 2 = IEEE 488 With Parallel BCD
 3 = MATE/CIIL With Parallel BCD

Frequency And Display Range:

1 = 360-1200 Hz, 0.000 Deg.
 -359.999 Deg.
 2 = 47-440Hz, 0.000 Deg.
 -359.999 Deg.
 3 = 360-1200 Hz, ±179.995 Deg.
 4 = 47-440Hz, ±179.995 Deg.



AP-30711/12 MECHANICAL OUTLINE

The information provided in this data sheet is believed to be accurate; however, no responsibility is assumed by Data Device Corporation for its use, and no license or rights are granted by implication or otherwise in connection therewith. Specifications are subject to change without notice.



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