

SYNCHRO/RESOLVER TO DC CONVERTER

- Series 426 Synchro Converters are designed to convert 3-wire synchro or 4-wire resolver input signals to a linear analog output proportional to the shaft angle. Designed to operate on a ratio principle, accuracy is maintained with up to a 10% variation in the reference amplitude/frequency. The secondaries of the input transformer are proportional to the sine and cosine of the input angle. The full scale (0° to 360°) sawtooth is developed by adding constants derived from a precision dc-voltage reference.

SYNCHRO
OR
RESOLVER

NATEL
ENGRG CO.
CODE IDENT 09059

SDC426

0-15V
0GND
0-15V

S1 0
S2 0
S3 0

VOLTS

ANGULAR ROTATION

NATES049

ELECTRICAL

Input/Reference (I):
(Vrms @ 400 Hz
xfmr isolated)

11.8/26
11.8/115
26/26
26/115
90/115

Code
(1)
(2)
(3)
(5)
(9)

Input Impedance: 100 k-ohms, lo level
500 k-ohms, high level

Isolation: Transformer coupled

Output Voltage (V):

0 to +5 V-dc
for 0 to 360°

Code
A

0 to +10 V-dc
for 0 to 360°

B

0 to ±5 V-dc
for 0 to ±180°

C

0 to ±10 V-dc
for 0 to ±180°

D

Output Impedance: < 1 ohm

Accuracy: ±6 arc-minutes
at 25 C

Resolution: 1.3 arc-minutes

Tracking Rate: 2880°/sec

Ripple: 0.05% p-p of FS

Temp Coeff: 0.15 arc-min/C

Power: +15 V-dc ±10% (@ 70 mA)
-15 V-dc ±10% (@ 70 mA)

General: Isolation, 50 M-ohms I/O
Hysteresis, 0.1° max (0 to FS)
Input Overvoltage 140 V-rms
or 2 x FS (whichever is less)
Short Circuit Protected
Reverse Polarity Protected

Synchro Format:

SDC XXX

— T V I

Input/Reference Code

Output Voltage Code

Temperature/Reliability Code

Model Number

Resolver Format:

RDC XXX — T V I

All codes are the same as for Synchro Format

MECHANICAL

Size: (400Hz) 2.625" x 3.125" x 0.82"
(50/60Hz) Two Modules
1 = 2.6" x 3.1" x 0.82"
2 = 1.5" x 3.1" x 0.92"

Mounting: PCB plug-in or solder
Interconnect pins on 0.2" spacing

ENVIRONMENTAL

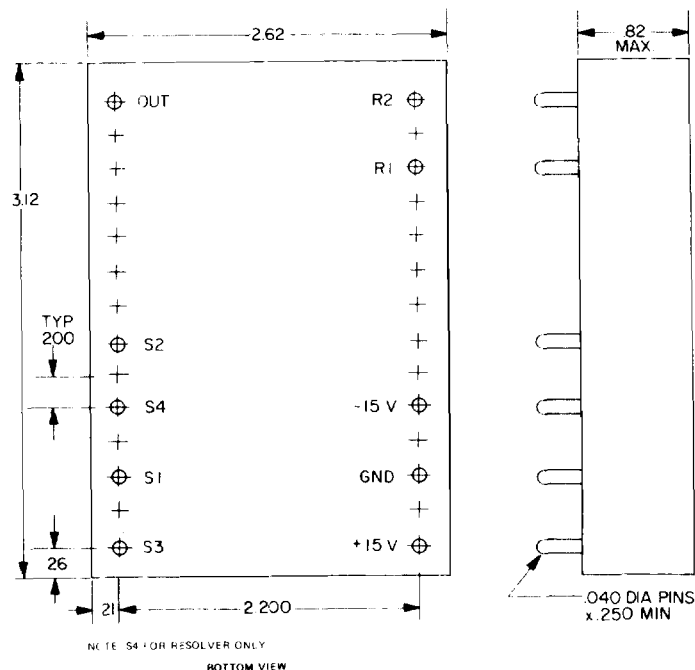
**Operating Temperature
Range/Reliability (T):**

Code
0 to 70 C/Commercial (1)
-55 to 85 C/Military (2)
-55 to 105 C/Military (3)
0 to 70 C/MIL-STD-883C (5)
-55 to 105 C/MIL-STD-883C (7)
0 to 70 C/MIL-STD-883B (8)
-55 to 105 C/MIL-STD-883B (9)

Storage Temp: -55 to 125 C

Vibration: 20 g's 50-2000 Hz

Shock: 100 g's 11 msec



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