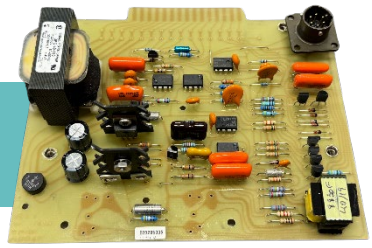
CD101 CIRCUIT BOARD CARRIER DEMODULATOR



FEATURES:

- ✓ ± 10 Vdc Output
- ✓ Carrier Excitation for Variable Reluctance and Differential Transformer Transducers
- ✓ Optional Mounting Configurations
- ✓ Optional Input, Output and Control Connections
- ✓ Optional Power Sources

The CD101 is a complete carrier demodulator, designed to be used in a large variety of individual channel or multi-channel system applications.

Using the latest integrated circuit techniques, this unit supplies a 5 volt, 5kHz carrier excitation for variable reluctance and variable differential transformer transducers, demodulators their output and provides a ±10 volt DC signal for static and dynamic measurements.

The small compact size printed circuit board construction makes it possible to package the CD101 inside recorders, behind panels, in multi-channel systems, etc. Complete adaptability to any single unit or system application is provided by optional bracket, standoff or card guide mounting; remote, board or bracket mounted zero and span control option; a choice of trimmer pots or 10-turn potentiometers with calibrated dials, for zero and span controls; optional printed circuit board connector or terminal strip for all connections, with an additional optional of a circuit board mounted Cannon connector for the transducer connections, and finally a choice, which can be made in the field, of operation from 115 or 230VAC, 50-400 Hz, or ± 15V DC power

Low input impedance allows operation with transducers at a distance of over a thousand feet from the CD101 with no degradation of signal.

An active filter circuit provides the CD101 with a flat frequency response from steady state to 1000 Hz.

Both input and output are protected against a short circuit.

UPDATED 4/16/2025

SPECIAL REQUIREMENTS?

With over 3000 custom specifications already, we are confident we can customize a solution to fit your needs. Form factor, housing, pressure ports, electrical connectors, outputs and calibrations are all customizable. Contact our factory via email or phone today!

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GENERAL SPECIFICATIONS

INPUT SENSITIVITY: Min. 15mV/V for 10V DC output
Continuously adjustable by span control

MAXIMUM INPUT : 2.5Vrms

ZERO CONTROL: 0.1% full-scale for 30 days, ±10° C

OUTPUT RIPPLE: 10 mV peak to peak maximum

FREQUENCY RESPONSE: Flat ±5%, 0 to 1000 Hz

STABILITY: ±0.1% long term

THERMAL EFFECTS: Zero – 0.005%/ F Typical
Span – 0.01%/ F Typical

POWER REQUIREMENTS: 105 – 125 VAC; or 205 – 250 VAC, 50 – 400 Hz; 2VA; or, ± 15 VDC, @ + 17mA, -25mA.
Determined by user-selected wiring connections.

BRIDGE EXCITATION: 5V rms, 5kHz

BRIDGE CONFIGURATION: 10 ohms nominal

OUTPUT: ±10 mV/V

OUTPUT IMPEDENCE: 10 ohms nominal

LINEARITY: ±0.05%

TEMP RANGE: 0-185 F

ELECTRICAL CONNECTION: Printed circuit board connection; other options available

SIZE: 5 in. x 6 in. max. height above mounting surface 1.6”

***See Ordering Information for available options**

CD101 - A - 6 - A – 1 - A

INPUT POWER

Option Letter	Description
A	115 Vac/230 Vac. 50-400 Hz and ± 15Vdc - user selected
B	± 15 Vdc only

OUTPUT OPTIONS

Option Letter	Description
A	± 10 Vdc FS (STD)
B	± 1 Vdc FS
C	4 – 20 mA dc
D	$E_0 = 10\sqrt{\frac{P_{IN}}{P_{FS}}}$ mA dc
E	$I_0 = 4 + 16\sqrt{\frac{P_{IN}}{P_{FS}}}$ mA dc

OUTPUT FILTER (Low Pass)

Option No	Description
1.	100 Hz (STD.)
2.	0.1 Hz
3.	0.5 Hz
4.	1 Hz
5.	25 Hz
6.	50 Hz
7.	100 Hz

ZERO & SPAN CONTROL OPTIONS

Codes: 10 TDR = 10 Turn potentiometer & Dial furnished – remote mount
10 TDB = 10 Turn potentiometer & dial bracket mounted on board
TP = Trimming potentiometer board mounted

Option No.	-------Control Type---------- Zero	Span
1.	10 TDR	10 TDR
2.	10 TDR	TP
3.	10 TDB	10 TDB
4.	TP	TP
5.	TP	10 TDB
6.	None	None
7.	TP	10 TDR

ELECTRICAL CONNECTIONS

Codes: PC = Mating edge card connector with solder terminals furnished
TS = Cage Clamps terminators added in parallel to etched Terminal pads
PT = Transducer Input Connector, PT02A-10-6P or equal
WK = Transducer Input Connector, WK-4-32S or equal

Option Letter	PC	TS	Transducer Input Conn./Type	Option Letter	PC	TC	Transducer Input Conn./Type
A	Yes	No	None	G	No	Yes	None
B	Yes	Yes	None	H	No	Yes	PT
C	Yes	Yes	PT	J	No	Yes	WK
D	Yes	Yes	WK	K	No	No	PT
E	Yes	No	PT	L	No	No	WK
F	Yes	No	WK	M	No	No	None

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