

Description

The CD 19A is a high gain, dual output Carrier Demodulator Plug-In Module for use in Validyne Engineering Corporation's MC1 System. The unit is used to provide transducer excitation, and to amplify and demodulate the output of carrier-excited strain-gage bridges and transducers, variable reluctance transducers, potentiometric transducers and linear and rotary variable differential transformers (LVDT/RVDT).

The CD19A will operate with full-bridge or half-bridge transducers delivering 10Vdc output for inputs ranging from 1 mV/V to 166 mV/V. A six-position gain switch and a ten-turn vernier gain potentiometer permit the use of inputs up to 166 mV/V.

Screwdriver adjusted "R" and "C" balance controls are provided, with a HI and LOW balance range switch for a 10 to 1 balance range expansion.

A calibration circuit provides availability of plus and minus calibration to be injected into the input.

Output frequency response is controlled by a low-pass active filter, and is switch selectable to 1 Hz, 10 Hz, 50 Hz, 200 Hz and 1 kHz.

Features

- Six selectable gain settings
- Selectable calibration points
- Five selectable frequency response ranges
- 3 kHz carrier operation
- Adjustable R & C balance controls
- Dual output

Specifications

Input Sensitivity: 1 mV/V, 2.5mV/V, 5mV/V, 10mV/V, 25 mV/V and 50 mV/V (switch selected)

Gain Vernier: 0 to 100%, calibrated dial

Bridge Excitation: 5Vrms ac, 3 kHz from precision center tapped transformer

Bridge Configuration: 2 & 4 arm variable reluctance & strain gage transducers, LVDT transformers and potentiometer transducers

Input Impedance: Single ended, 100K ohms. Differential, 200K ohms

Bridge Balance: Resistive (R), normal 2 mV/V, high 20 mV/V; Capacitive (C) normal 1 mV/V, high 10 mV/V

Output: A: ± 10 Vdc at 10 mA;

Output Impedance: A: 10 ohms

Output Noise: 80 mV p-p with 1 kHz filter; 2 mV p-p with 10 Hz filter

Frequency Response: Selectable 0 to 1, 10, 50, 200 or 1000 Hz, flat $\pm 10\%$

Linearity: $\pm 0.05\%$ FS

Temperature Range: 0°F to + 160°F

Thermal Zero Shift: 0.005%/°F

Thermal Sensitivity Shift: 0.01%/°F

Power Requirements: 5Vrms, 3kHz & ± 15 Vdc supplied by MCI module case

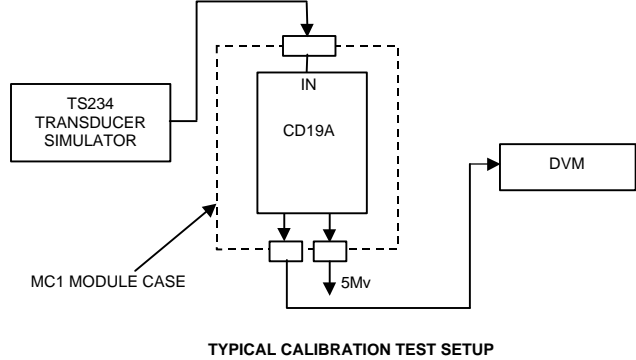
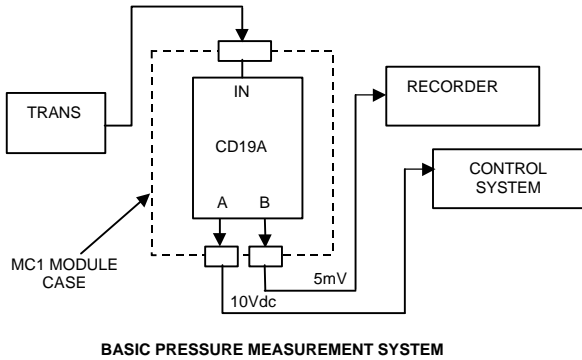
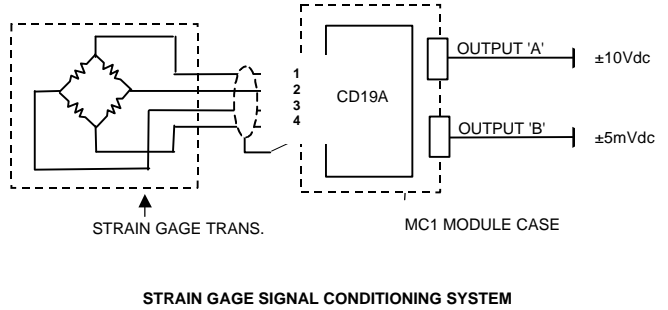
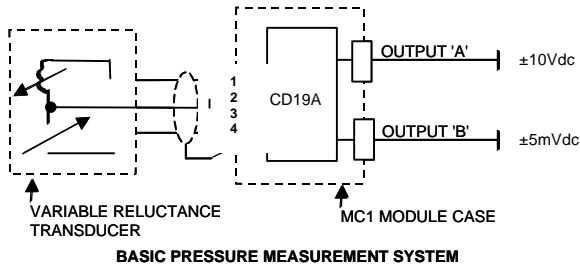
Options

- Phase Adjustment
- Trim Pot Gain
- B Output
- Low Pass Filter (0.1 Hz)
- Remote Calibration

CD19A

MC1 SYSTEM

Typical Applications



Ordering Information *specify part number as follows:*

CD19A - 1 - A - 1 - A - 1

REMOTE CALIBRATION	
Option Number	Description
1	None
2	Remote Calibration

PHASE ADJUSTMENT	
Option Letter	Description
A	None
B	Phase Adjustment

FRONT PANEL GAIN POT	
Option Number	Description
1	10 Turn Dial Pot
2	Trim Pot

LOW PASS FILTER	
Option Number	Description
1	1Hz (STD)
2	0.1Hz

OUTPUT	
Option Letter	Description
A	STD "A"
B	Attenuated "B" Output With "A"

For additional information call or write:

Specifications subject to change without notice.

VESC CD19A - 4-99 REVISED



8626 Wilbur Avenue
(818) 886-2057
<http://www.validyne.com>

Northridge, CA 91324-4498
FAX (818) 886-6512
e-mail to sales@validyne.com