

**Sensor and Detector Interface 36V 4-Wire Interface 24-Pin
CDIP Tube**



Images are for reference only

Inquiry

Manufacturer: [Analog Devices, Inc](#)

Package/Case: CDIP

Product Type: Drivers

Lifecycle: Active

General Description

The AD698 is a complete, monolithic Linear Variable Differential Transformer (LVDT) signal conditioning subsystem. It is used in conjunction with LVDTs to convert transducer mechanical position to a unipolar or bipolar dc voltage with a high degree of accuracy and repeatability. All circuit functions are included on the chip. With the addition of a few external passive components to set frequency and gain, the AD698 converts the raw LVDT output to a scaled dc signal. The device will operate with half-bridge LVDTs, LVDTs connected in the series opposed configuration (4-wire), and RVDTs.

The AD698 contains a low distortion sine wave oscillator to drive the LVDT primary. Two synchronous demodulation channels of the AD698 are used to detect primary and secondary amplitude. The part divides the output of the secondary by the amplitude of the primary and multiplies by a scale factor. This eliminates scale factor errors due to drift in the amplitude of the primary drive, improving temperature performance and stability.

The AD698 uses a unique ratiometric architecture to eliminate several of the disadvantages associated with traditional approaches to LVDT interfacing. The benefits of this new circuit are: no adjustments are necessary; temperature stability is improved; and transducer interchangeability is improved.

The AD698 is available in two performance grades:

GradeTemperature RangePackageAD698AP-40°C to +85°C28-Pin PLCCAD698SQ-55°C to +125°C24-Pin Cerdip

Key Features

Single Chip Solution, Contains Internal Oscillator and Voltage Reference

No Adjustments Required

Interfaces to Half-Bridge, 4-Wire LVDT

DC Output Proportional to Position

20 Hz to 20 kHz Frequency Range

Unipolar or Bipolar Output

Will Also Decode AC Bridge Signals

Outstanding PerformanceLinearity: 0.05%Output Voltage: ± 11 VGain Drift: 20 ppm/°C (typ)Offset Drift: 5 ppm/°C (typ)

Recommended For You

ADM3490EARZ

Analog Devices, Inc
SOP-8

ADuM3160BRWZ-RL

Analog Devices, Inc
SOP16

ADM3232EARUZ

Analog Devices, Inc
TSSOP-16

ADuM5211ARSZ

Analog Devices, Inc
SSOP20

ADuMI201BRZ-RL7

Analog Devices, Inc
SOP8

ADV7623BSTZ

Analog Devices, Inc
LQFP144

ADuMI410BRWZ

Analog Devices, Inc
SOP16

AD698APZ

Analog Devices, Inc
PLCC28

ADM3251EARWZ

Analog Devices, Inc
SOP20

ADM485ANZ

Analog Devices, Inc
DIP

ADuM6400ARWZ

Analog Devices, Inc
SOP16

ADuMI281BRZ

Analog Devices, Inc
SOP8

ADUMI42E0BRZ

Analog Devices, Inc
SOP-16

ADuMI412BRWZ

Analog Devices, Inc
SOP16

ADV7622BSTZ

Analog Devices, Inc
TQFP144