



Technical Manual
**APPLICATION DETAILS FOR
DCV TRANSDUCERS**

Doc. Ref CD1069E



Affirmed by Declaration
of Conformity

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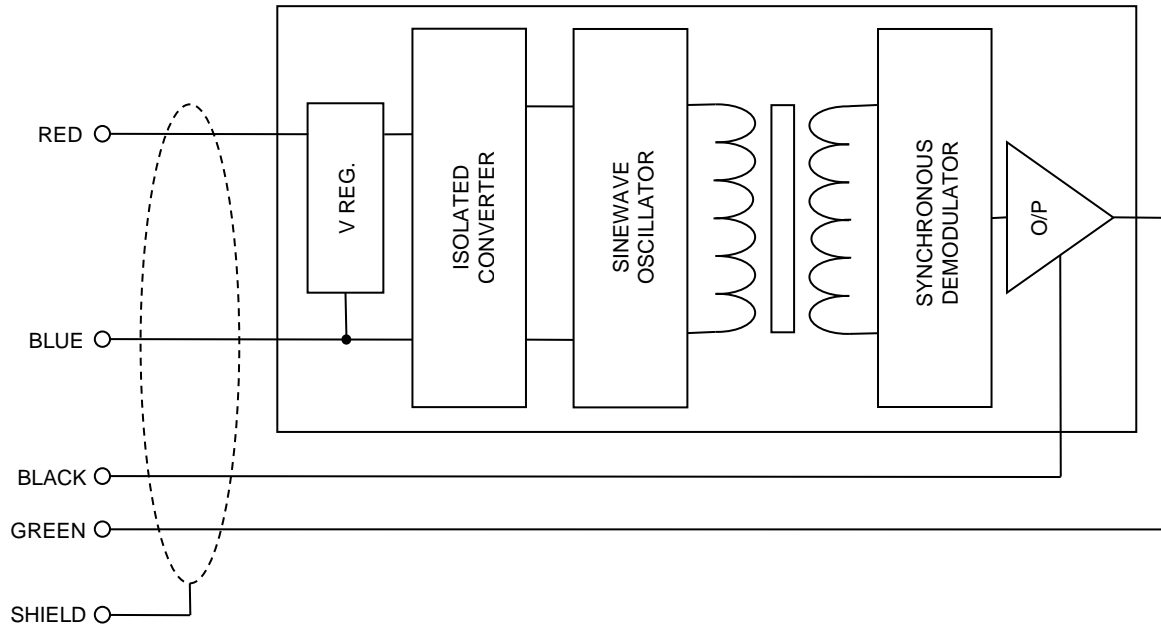
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APPLICATION DETAILS FOR DCV TRANSDUCERS

The DCV range of transducers are DC in - DC out LVDT based, displacement measuring instruments. They require only a +14 to +26V dc supply to give an output signal of 0 to 10V dc that is electronically isolated from the input voltage. DCV transducers cover total measuring ranges from 25 mm to 940 mm (1" to 37"). These ranges are sometimes expressed as ± 12.5 mm to ± 470 mm (± 0.5 " to ± 37 "). Shorter measuring ranges are available in RDP's DCTH/1430 series.



Connection Details

| Cable Core Colour | Connection |
|-------------------|-------------------|
| Red | +14 to +26V dc |
| Blue | Supply Com (0V) |
| Black | Output Low |
| Green | Output High |
| Shield | Instrument Ground |

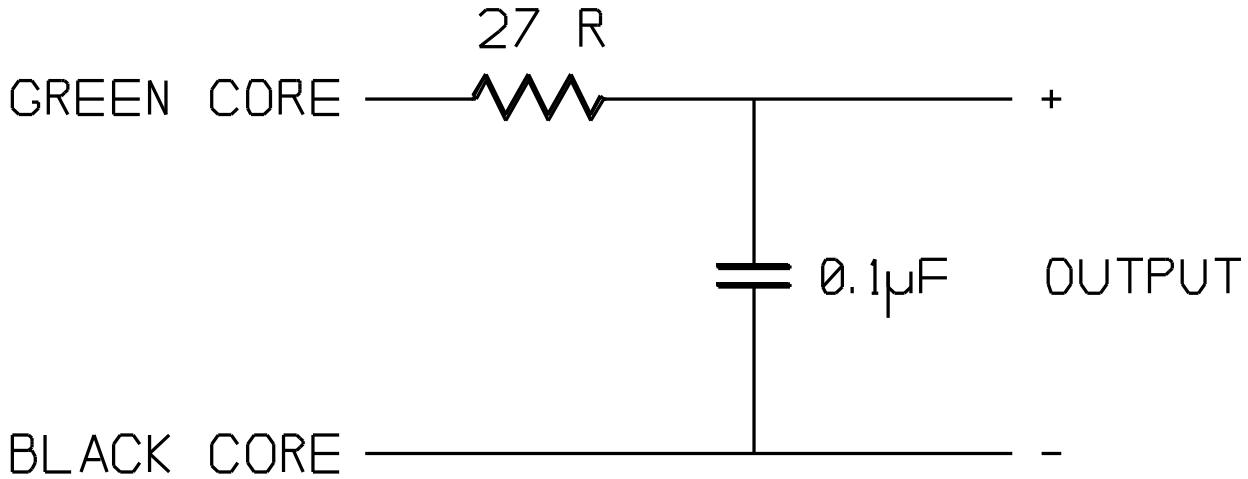
Note:

1. Incorrect connection may cause irreparable damage. Contact our Sales Department if you require assistance.
2. The transducer is factory-calibrated with an energising voltage of +24V, fitted with 2 metres of shielded cable.
3. To help prevent output noise and to comply with EMC requirements, it is preferable to connect cable shield to earth.

Output Noise (Ripple)

The output noise on DCV transducers is 30mV peak to peak. This consists of 10kHz ripple with H.F. (>200kHz) superimposed on it.

This can be reduced to a 10mV peak to peak 10kHz ripple by the addition of an RC network across the output:



Specification

| | |
|------------------------|---|
| Input requirements | +14V to 26V dc at 30 mA typical |
| Linearity | ±0.5% of full range max. standard or ±0.25% and ±0.1% is available at extra cost in some models |
| Output Voltage | 0 to 10V dc nominal for working stroke (s/c protected) and isolated |
| Output Load (Minimum) | 2k ohms |
| Output Ripple | 30mV peak to peak |
| Output Bandwidth | 200Hz (flat) |
| Output Impedance | 2 ohms |
| Zero Temp. Coefficient | ±0.01% FS/°C (0.005%FS/°F) |
| Span Temp. Coefficient | ±0.03% FS/°C (0.015%/FS/°F) |
| Operating Temp. Range | -40°C (-40°F) to +70°C (160°F) |