Technical Manual

DISPLACEMENT TRANSDUCERS
ACT SERIES

Doc. Ref CD1062E

Affirmed by Declaration
of Conformity

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OPERATION MANUAL FOR THE ACT SERIES OF DISPLACEMENT TRANSDUCERS

1. INTRODUCTION

Our standard range of AC energised LVDTs are for use in many applications including those where ambient temperature or vibration are too high to allow the option of integrated electronics. These A-C-LVDTs are a compact long stroke series and can be used whenever physical space is limited. The 'ACT' requires separate signal conditioning and will deliver its optimum performance when energised with between 0.5V and 7V rms at 5kHz using a high quality carrier amplifier, such as those available from RDP.

These transducers are available in three different armature configurations:

			Outline Drawing
(a)	Free armature	(no suffix)	D9307
(b)	Spring return	(suffix A)	D9309
(c)	Captive guided	(suffix C)	D9310

2. HANDLING PRECAUTIONS

2.1 DO NOT pull the cable.

2.2 Ensure the cable is correctly protected and supported.

2.3 Ensure the transducer temperature rating limits are not exceeded.

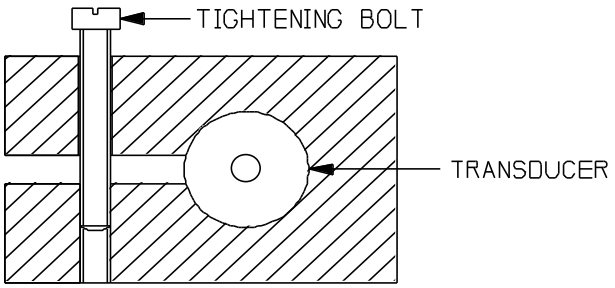
2.4 Ensure the transducer pressure rating is not exceeded.

2.5 Ensure the armature is not bent. Transport the transducer with the armature fully retracted for extra protection.

2.6 Ensure that when the transducer is fitted with end bearing that ranges of ±100 mm and higher are supported at the centre when used horizontally.

3. INSTALLATION

3.1 Mount the transducer by clamping the body. A suitable method of doing this is with a split block type of clamp as shown below.



3.2 On the free armature version (standard), the armature (probe) should be mounted on the moving part to be measured so that the armature moves centrally in the bore of the transducer body.

3.3 On the spring return version (suffix A), the probe tip is positioned against the part to be measured.

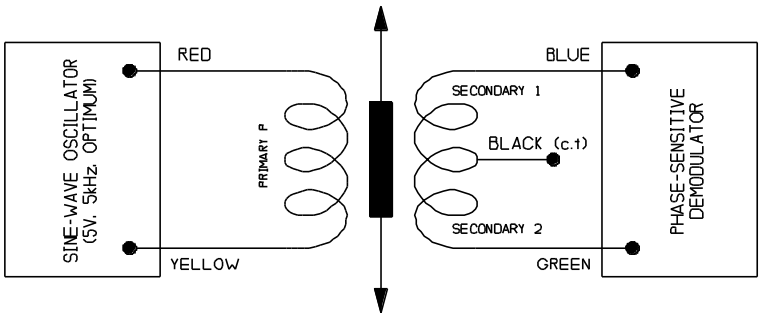
3.4 On the guided versions (suffix C), the threaded armature can be attached to the part to be measure directly or a rod end can be used to allow greater mechanical flexibility.

3.5 On the standard version, the cable supplied is 2 m long and 2.9/3.25 mm diameter. The material is Hytrel/Polyurethane.

3.6 Mounting blocks are available from RDP, Part No MB01.

4. ELECTRICAL CONNECTIONS

The ACT transducer requires an oscillator – demodulator type instrument such as one of the following RDP instruments: S7AC, S7M, DR7AC, E309, E725-AC.



The cable screen (shield) is not connected to the body of the transducer. It should be grounded at the instrument.

5. CALIBRATION

5.1 The calibration of the ACT transducer with its instrument is fully covered in the Technical Manual for the instrument.

6. MAINTENANCE AND INSPECTION

6.1 Check the cable is undamaged.

6.2 The insulation resistance between primary and secondary coils and between coils and case, should be minimum 100 M ohms.

6.3 Check that the black core when not used is correctly insulated.

WARRANTY AND SERVICE

WARRANTY.

R.D.P. Electronics products are warranted against defects in materials or workmanship. This warranty applies for one year from the date of delivery. We will repair or replace products that prove to be defective during the warranty period provided they are returned to R.D.P. Electronics.

This warranty is in lieu of all other warranties, expressed or implied, including the implied warranty of fitness for a particular purpose to the original purchaser or to any other person. R.D.P. Electronics shall not be liable for consequential damages of any kind.

If the instrument is to be returned to R.D.P. Electronics for repair under warranty, it is essential that the type and serial number be quoted, together with full details of any fault.

SERVICE.

We maintain comprehensive after-sales facilities and the instrument can, if necessary be returned to our factory for servicing.

Equipment returned to us for servicing, other than under warranty, must be accompanied by an official order as all repairs and investigations are subject to at least the minimum charge prevailing at the date of return.

The type and serial number of the instrument should always be quoted, together with full details of any fault and services required.

IMPORTANT NOTES.

1. No service work should be undertaken by the customer while the unit is under warranty except with the authorisation of RDP Electronics.

2. If the instrument is to be returned to R.D.P. Electronics for repair, (including repair under warranty) it is essential that it is suitably packed and that carriage is insured and prepaid. R.D.P. Electronics can accept no liability whatsoever for damage sustained during transit.

3. It is regretted that the above warranty only covers repairs carried out at our factory. Should the instrument have been incorporated into other equipment that requires our engineers to perform the repair on site, a charge will be made for the engineer's time to and from the site, plus any expenses incurred.

The aforementioned provisions do not extend the original warranty period of any product that has been either repaired or replaced by R.D.P. Electronics.

THIS WARRANTY MAY BE NULL AND VOID SHOULD THE CUSTOMER FAIL TO MEET OUR TERMS OF PAYMENT.