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# Displacement Transducers

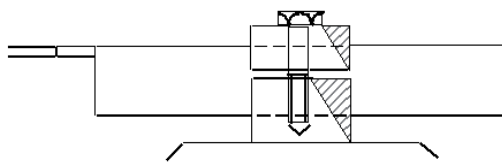
## Clamping Methods

Application Note  
502352  
Issue 3

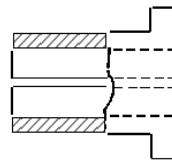
L.V.D.T. transducers are generally a reliable and proven technology that is well established in all areas of manufacturing and control industries. The majority of the associated problems experienced with their application and use are totally avoidable, particularly if sufficient thought is given during the initial design stages of equipment through to the positioning and clamping methods employed for these feedback elements.

L.V.D.T.'s, being of inductive nature, are to some degree susceptible to the influence of magnetic fields and therefore should be positioned well away from electric motors, relays and permanent magnets. Where this is not possible then magnetic shielding should be considered as an alternative.

Each requirement for clamping of the coil assembly should be considered carefully, as is it dependent on its application. The clamping methods shown below are to be used only as a guide.



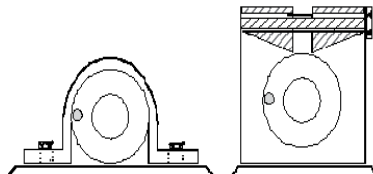
If possible centralise L.V.D.T.



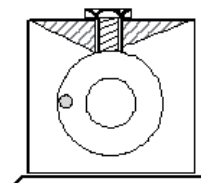
Non-metallic split (Tufnol) or Nylon bush for use with metallic clamp

Ideally the body of the transducer should be clamped centrally in a pinch or yoke type clamp. The clamp should be manufactured from a low conductivity, non-magnetic material. If this is not possible then the introduction of a non-metallic bush between body and clamp is a preferred alternative.

### Recommended methods of clamping



Irrespective of clamping method, care must be taken not to overtighten retaining screws as distortion of the body may prove damaging to the integrity of the transducer and adversely effect the geometry of the installation.



The end of a screw (i.e. single point load) is NOT a recommended clamping method.

If the L.V.D.T. is to be mounted on equipment subject to high "g-force" then, dependent on the direction of these forces, it may be advantageous to consider end to end clamping in preference to over body clamping.