

Ref: T114 – Rev 9 – March 02

The Crompton Position Indicator system is available in the Unifix, New World, Sealed and the Quadratic series of instruments.

The main application of these instruments is in the indication of the transformer tap position and the transformer winding machine temperature. They can also be used to indicate hoist position and any similar functions where the position can be related to the movement of a potentiometer (min 2k ohm).

The system comprises an electronically regulated and stabilised power unit, a moving coil indicator and a remotely mounted potentiometer. A d.c or a.c supply of 50, 110 or 220 volts is required.

#### CONSTRUCTION

A standard moving coil indicator is used and the power unit is housed within the instrument case. Separate tap and potentiometer position transmitters and indicators are available.

#### PRINCIPLE OF OPERATION

An auxiliary supply rectified if a.c is fed into a zener diode circuit to provide a reference voltage. The stable voltage is used to control a transistor regulator providing an output voltage across the potentiometer of approximately 40v d.c. Supply variations of +/- 15% d.c or a.c have little effect on this output voltage and the accuracy of the indication is maintained within these supply limits.

The stabilised output is connected across the remote potentiometer and one side of the indicator. The other side of the indicator is connected to the potentiometer moving contact. When the position of this contact is changed, the current through the indicator alters in proportion, giving a change of indication.

In the event of supply failure or open circuit to the interconnecting leads, the indicator pointer goes off scale giving a failure indication.

The potentiometer moving contact is operated by the rotation of the mechanism to be monitored. For tap position indicators rotation is given by the tap change mechanism and for temperature indicators by movement of a Bourdon coil.

#### PERFORMANCE

The instruments comply with BSEN60051 as far as applicable. The system is CEEB approved to BEBS T2 (1966).

#### SCALING

Any linear scale can be provided with any caption. Non-linear scales are possible if the relationship is stated.

Tap position indicators are calibrated to declared stepped potentiometer resistance values. The standard is 400 ohms +/- 1% per step. The number of resistance steps in the potentiometer is one less than the number of positions to be indicated. Scaling for 11-18 taps can be arranged.

Winding temperature indicators are scaled 30/150°C with 2800 ohms potentiometers. The burden is 2VA.  
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The Information contained in these installation instructions is for use only by installers trained to make electrical power installations and is intended to describe the correct method of installation for this product. However, Tyco Electronics has no control over the field conditions, which influence product installation. It is the user's responsibility to determine the suitability of the installation method in the user's field conditions. Tyco Electronics' only obligations are those in Tyco Electronics' standard Conditions of Sale for this product and in no case will Tyco Electronics be liable for any other incidental, indirect or consequential damages arising from the use or misuse of the products. Crompton is a trade mark.

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