

RECORD Control

MOVING COIL INDICATORS WITH CONTROL OPTIONS 311



- 2 standard sizes with long 240° presentation
- Switching indicator with 90° scale & visible set points.
- Combines indication with control.
- Simple adjustment of high & low set points.
- Robust pivot & jewel movements

The control moving coil indicators (35SA, 45SA) and the Control Switching Indicator (45SI) have traditionally been associated with the larger control panel installations. Utilising a distinctively styled black moulded bezel and housed within a strong case, the meter comes complete with a die cast clamping band for simple panel mounting.

35SA & 45SA CONTROL MOVING COIL INDICATORS

Available in two standard sizes these meters offer long scale presentation using the 240° 'Premier' movement.

45SI CONTROL SWITCHING INDICATOR

This meter combines both analogue indication and control facilities. The moving coil indicator gives an accurate indication of the measured signal and shows any directional trend. Two visible markers indicate high and low control set points. The associated control relays are mounted directly onto the rear of the instrument, with all terminations insulated by a moulded terminal cover. The switching indicator utilises a special movement design incorporating a vane which switches the relays as it passes through the opto-sensors.

Both movement systems have been manufactured using the very best precision components and automated production facility. These factors give the movement system it's inherent reliability, linearity and accuracy.

Dials are marked to customer's requirements and can include coloured indices/lines/bands, dual/multi scales and customer's name/logo etc.



Instruments are available for A.C. or D.C. applications. For large A.C. or D.C. current and voltage applications we could supply complete with external current/voltage transformers, shunts, or suitable transducers.

Manufactured to BS 89 under the control of ISO 9001 Quality System.

SWITCHING SPECIFICATION

Set Points

Available as high and/or low setting adjustable over the whole scale by screw adjusters set in the instrument window. High and low settings can be adjusted to within 0mm of one another. Stops are fitted to limit the amount of travel of the instrument pointer beyond the set point which would otherwise cancel the trip conditions.

Relays

These are mounted on the rear of the indicator and are protected by an insulating cover.

Rating

Each relay is provided with two sets of voltage free, changeover contacts rated at 250V 8A AC; 30V 5A DC resistive.

Aux Supply

Selected from 12, 24, 48, 110, 220V DC; 24, 48, 110, 230V AC, Allowable variation: -20% to +10%.

OPTIONS

Reverse Action

With the pointer clear of the set points, the relays are energised.

When a trip condition arises and a set point is reached, the slave relay becomes de-energised and the contacts then operate.

Any failure in the auxiliary supply whilst the pointer is clear of the set points would be apparent since the slave relays would be de-energised and the contacts then operate, as in trip conditions.

Hold On

Once trip conditions are reached, the slave relay contacts are continuously maintained until the system is reset, which is achieved by the interruption of the auxiliary supply, by means of customer's external switch. A refinement on two set point indicators is for one level to hold-on until released by the other.

Electrical Specifications

Type	D.C. Current		Full Scale Range For self-contained Instruments				A.C. Volts	
	min	max	D.C. Volts		A.C. Current		min	max
35SA	0.2mA	20A	50mV	400V	1mA	50mA	5V	400V
45SA	0.2mA	20A	50mV	600V	1mA	20A	5V	600V
45SI	0.5mA	1A	50mV	600V	1mA	5A	5V	600V

Accuracy to BS 89 D.C. Ranges $\pm 1.0\%$ (Class 1) mV & A.C. Ranges $\pm 1.5\%$ (Class 1.5)

For D.C. current ranges above those stated an external shunt should be supplied.

For A.C. current ranges above those stated a current transformer could be supplied.

Mechanical Specs & Dimensions

Type	Dimensions (units)						Scale Length	Weight (Approx) (Kgs)
	A max (mm)	B max (mm)	C max (mm)	D max (mm)	E min (mm)			
35SA	92	13	39	19	69	150	0.3	
45SA	127	17	90	15	108	216	0.8	
45SI	127	17	87	35	108	105	0.9	

