

# MK SENTRY



## Miniature Residual Current Breakers with Overcurrent Protection (RCBOs)



### Description

The MK Sentry range features neutral switched type double pole RCBOs in one module format. The one module MK Sentry RCBOs are a combination of a Type B/C MCB and a Residual Current Device. This enables both overcurrent protection and earth fault current protection to be provided by a single unit.

This combination allows earth fault protection to be restricted to a single circuit, thus ensuring that only the circuit with the fault is interrupted. (When groups of circuits are protected by an RCD, all circuits would be interrupted under fault conditions, which may cause unnecessary inconvenience).

The operating switch on all MK Sentry RCBOs may be locked in either the ON or OFF position without affecting the ability of the trip mechanism to operate.

MK Sentry RCBOs feature tunnel terminals of generous capacity, with 25mm<sup>2</sup> for live supply terminals and 10mm<sup>2</sup> for live and neutral load terminals. The neutral supply (blue) is provided via flying lead.

### Mode of operation

As the RCBO is a combination of an MCB and RCD, reference should be made to the relevant technical information regarding these devices.

### Features

- Single module
- Meet BS EN and IEE Wiring Regulation requirements
- Allows both overcurrent and earth fault protection and detection
- Available in a range of current ratings
- Tunnel type terminals
- Generous terminal capacity
- Positive contact status indication
- Double Pole

### Operating Characteristics

#### RCD Type A

These are used to respond to AC and pulsating DC Currents

#### MCB Curve B/C

| PART NUMBER | RATING | MCB CURVE | RCD TYPE | TRIPPING CURRENT | BREAKING CAPACITY |
|-------------|--------|-----------|----------|------------------|-------------------|
| H7732M      | 6A     | B         | A        | 30mA             | 6KA               |
| H7733M      | 10A    | B         | A        | 30mA             | 6KA               |
| H7734M      | 16A    | B         | A        | 30mA             | 6KA               |
| H7735M      | 20A    | B         | A        | 30mA             | 6KA               |
| H7725M      | 25A    | B         | A        | 30mA             | 6KA               |
| H7736M      | 32A    | B         | A        | 30mA             | 6KA               |
| H7737M      | 40A    | B         | A        | 30mA             | 6KA               |
| H6532M      | 6A     | C         | A        | 30mA             | 6KA               |
| H6533M      | 10A    | C         | A        | 30mA             | 6KA               |
| H6534M      | 16A    | C         | A        | 30mA             | 6KA               |
| H6535M      | 20A    | C         | A        | 30mA             | 6KA               |
| H6525M      | 25A    | C         | A        | 30mA             | 6KA               |
| H6536M      | 32A    | C         | A        | 30mA             | 6KA               |
| H6537M      | 40A    | C         | A        | 30mA             | 6KA               |

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### TECHNICAL SPECIFICATION

#### ELECTRICAL

##### CURRENT RATING

6~40A

##### OPERATING VOLTAGE

230V a.c.

##### OPERATING FREQUENCY

50Hz

##### RATED SHORT CIRCUIT CAPACITY $I_{cn}$

6,000A

##### SERVICE SHORT CIRCUIT CAPACITY $I_{cs}$

6,000A

When backed up by a BS 1361, 100A fuse, then the breaking capacity of the RCBO is increased to 16,000A.

##### RCD Type A

MCB Curve B or C

#### PHYSICAL

##### AMBIENT OPERATING TEMPERATURE

-5°C to + 55°C

##### IP RATING

Front face IP4X, screw IP2X

##### TERMINAL CAPACITY

Line in 25mm<sup>2</sup>

Line and neutral out 10mm<sup>2</sup>

##### TIGHTENING TORQUE

2.5Nm

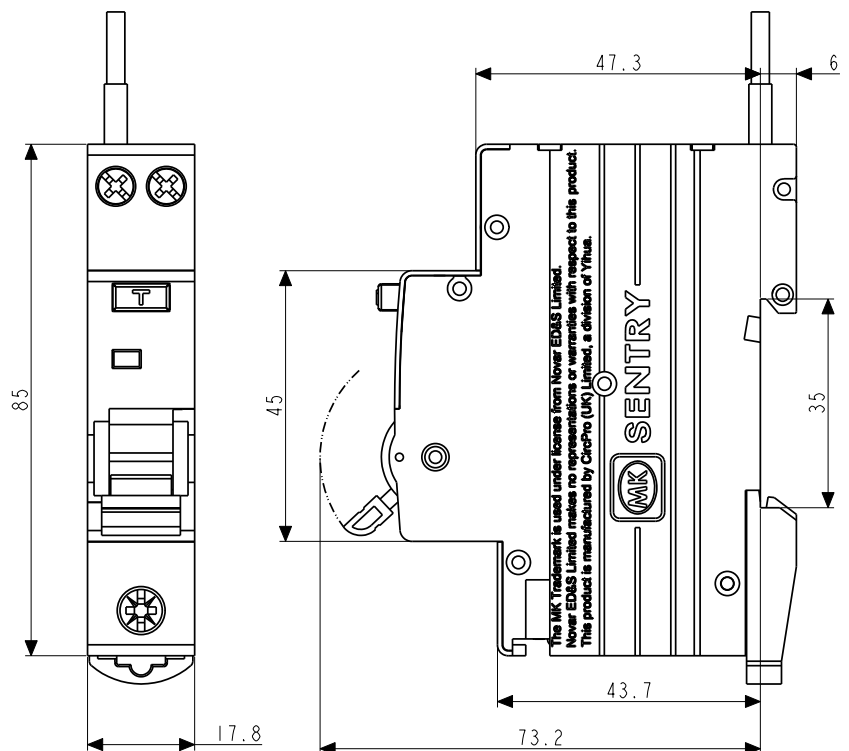
##### MAX. INSTALLATION ALTITUDE

2000 metres

### Dimensions (mm)

(height) 85mm x (width) 18mm x (depth)

73.2mm weight 0.15Kg (0.2Kg packed)



### Installation

MK Sentry RCBOs may be installed anywhere along the length of the busbar and will occupy one outgoing way.

Selection of the most suitable RCBO should take into account the following considerations:

1. Operating voltage and frequencies
2. Fault breaking capacity

For applications where the prospective fault current is in excess of this, a BS 1361, 100A (maximum) fuse should be used upstream of the RCBO to provide a system breaking capacity of 16,000A.

### 3. Cable protection

The current carrying capacity of the cable should always exceed the current rating of the RCBO, to prevent damage. However, should this not be the case, a further calculation may show that the RCBO can still interrupt the current in a sufficiently short time to prevent overheating of the cable insulation. Although this will prevent mechanical damage to the cables, further overload protection should be provided by a separate device, e.g. a motor overload relay.

### Standards and approvals

Product Standard: BS EN 61009-1, BS IEC 61009-2-2, BS 61543 (EMC)

Product Certification: CE, UKCA

Degree of Pollution: 2

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