

# Устройства защитного отключения QF10

## Технические характеристики



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## QF10 - Series Earth Leakages

The QF10 is an Earth Leakage Device with an un-switched neutral fitted on to a single 18 mm wide unit. It has an additional 50 mm long neutral cable and fits on DIN, CBI Mini Rail and can be surface mounted.



**QF10**  
Dual (DIN & CBI Mini Rail) Mount

### Features

- Hydraulic-magnetic technology
- 100% rating capability, independent of ambient temperature
- AS/NZS 3111 and AS/NZS 3190 compliant
- Ratings 6 to 40 A
- Earth Leakage sensitivity 30 mA
- Single pole with unswitched neutral earth leakage protection
- Additional neutral wire
- Compact 18 mm width
- Precision tripping characteristics
- Trip indication with mid-trip position
- Reset immediately after overload
- Shell design permits easier installation onto busbar
- 45 mm front escutcheon

### Applications

- Residential and commercial applications requiring high sensitivity earth leakage protection from electrical shock and fire hazards
- Telecom / datacom equipment
- Lighting control
- UPS equipment
- Alternative energy equipment
- Mobile power generation equipment
- Railway signalling and infrastructure

## QF10 - Series Earth Leakages

### Technical Data

| Product Type            | QF10                        |
|-------------------------|-----------------------------|
| Approvals               | AS/NZS 3111, AS/NZS 3190    |
| Number of Poles         | (1+N) in 18 mm width        |
| Standard Ampere Ratings | 6, 10, 16, 20, 25, 32, 40 A |
| Sensitivity             | 30 mA                       |
| Rated Voltage           | 110 - 240 V                 |
| Rated Interrupting      | 6 kA                        |

| Product Type                | QF10   |
|-----------------------------|--|
| Operating Temperature Range | -40 °C to +85 °C   |
| Mounting Options            | Dual (DIN & CBI Mini rail), surface mount  |
| Time Delay Curves           | 1, 2, 3  |
| Endurance                   | 1500 electrical operations (AS/NZS 3111, AS/NZS 3190)  |
| Dielectric Strength         | 1480 V (single pole) / 1830 V (multi pole), 50 Hz for one minute after testing   |
| Weight                      | 240 g per pole (unpacked)  |
| Humidity                    | 35 to 85% relative   |
| Altitude                    | Certification tests done at altitude ≈ 2000 metres.<br>Will operate at higher altitudes.                                 |
| Shock                       | 16 G (IEC 600068-2-27)   |
| Vibration                   | 2 G (IEC 600068-2-27) (sinusoidal wave)  |
| Flammability                | I3 - Ignition does not persist at 850 °C after glow wire is withdrawn with an oxygen index of ≥ 28                       |
| Toxicity                    | F1 - Smoke index of ≤ 20 which determines the fume class   |
| Pollution Degree            | PD2 - Normally only non-conductive pollution occurs.<br>Temporary conductivity caused by condensation is to be expected. |

| Earth Leakage | Wire Size mm <sup>2</sup> (IEC) | Torque (IEC) | Comments                  |
|---------------|---------------------------------|--------------|---------------------------|
| 1+N           | 0.75 - 35 mm <sup>2</sup>       | 2.5 Nm       | Pozidriv #2<br>Combi head |

## QF10 - Series Earth Leakages

### Ordering Information

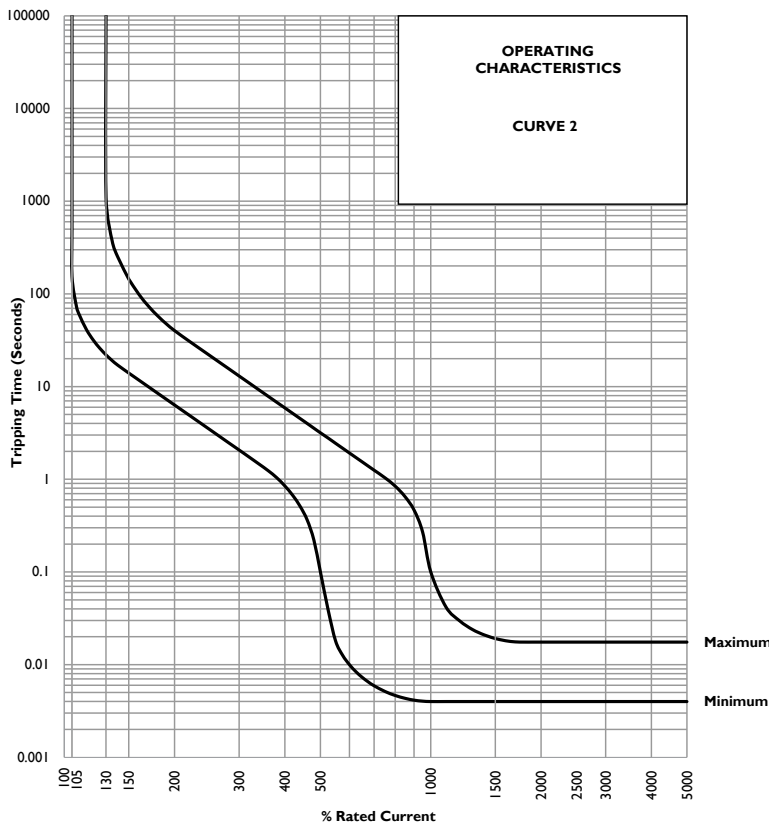
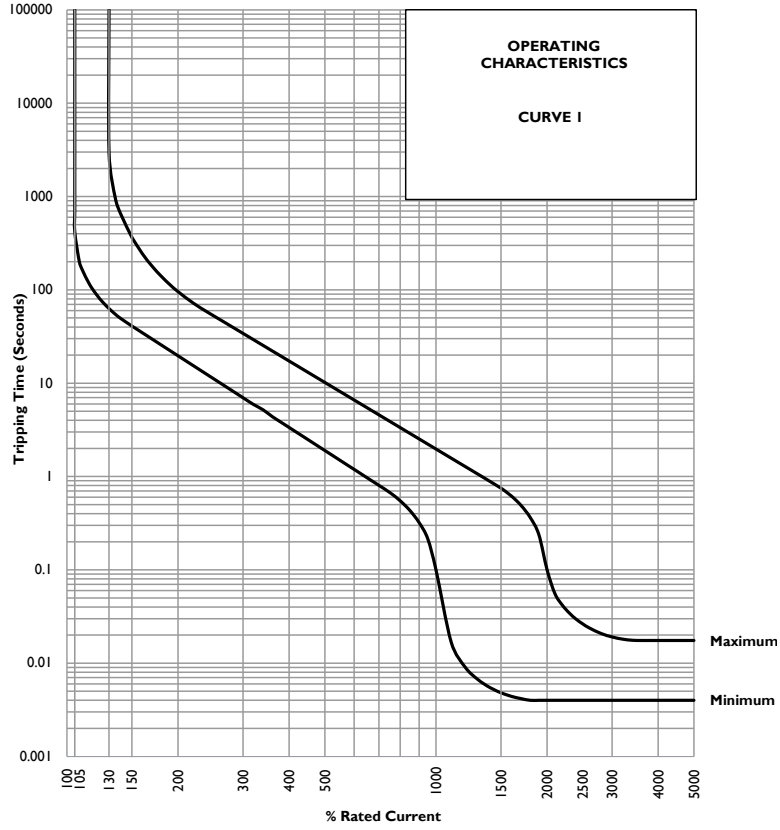
Example Code: **Q-F-10-A--DM-2-40A-30mA-240V**

| Group       | 1          | 2        | 3          | 4        | 5                   | 6          | 7                    | 8                   | 9                 | 10               |
|-------------|------------|----------|------------|----------|---------------------|------------|----------------------|---------------------|-------------------|------------------|
| Requirement | Q<br>Frame | Type F   | 1 pole + N | Overload | No auxiliary switch | Dual Mount | Medium delay curve 2 | Current rating 40 A | Sensitivity 30 mA | Voltage 240 V AC |
| Long Code   | <b>Q</b>   | <b>F</b> | <b>10</b>  | <b>A</b> | <b>-</b>            | <b>DM</b>  | <b>2</b>             | <b>40A</b>          | <b>30mA</b>       | <b>240V</b>      |

| Group                                       | Code                        | Description                                      | Comments  |
|---|-----------------------------|--|---|
| <b>Group 1: Frame Type</b>                  | Q                           | 18 Mm wide earth leakage                         |   |
| <b>Group 2: Product Type</b>                | F                           | 240 V AC, 6 kA                                   |   |
| <b>Group 3: No of Poles</b>                 | 10                          | Single pole plus switched neutral (1+N) in 18 mm | QF10  |
| <b>Group 4: E-L Type</b>                    | A                           | Overload (auto tripping)                         |   |
| <b>Group 5: Auxiliary / Additional Pole</b> | -                           | Not applicable                                   | Use this code if no auxiliary used  |
| <b>Group 6: Mounting</b>                    | D                           | Dual Mount                                       | Dual Mount supplied in grey body only - 45 mm Escutcheon  |
| <b>Group 7: Time Delays</b>                 | 1                           | Long time delay                                  |   |
|   | 2                           | Medium time delay                                |   |
|   | 3                           | Short time delay                                 |   |
| <b>Group 8: Current Ratings</b>             | Code / Description          |  | Comments  |
|   | 6, 10, 16, 20, 25, 32, 40 A |  | QF10<br>Ratings available vary depending on certification<br>* Other ratings are available as special orders. Check availability. |
| <b>Group 9: Sensitivity</b>                 | 30mA                        | 30 mA  | Standard  |
| <b>Group 10: Voltage</b>                    | Code / Description          |  | Comments  |
|   | 110V                        | 110 V AC   |   |
|   | 240V                        | 240 V AC   |   |

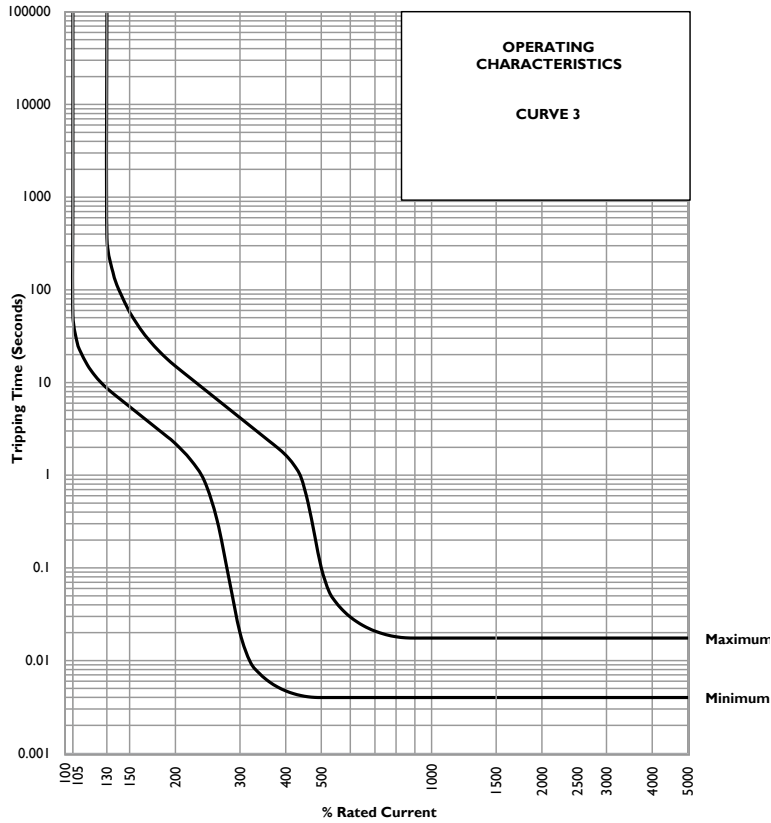
# QF10 - Series Earth Leakages

## Time Delay Curves



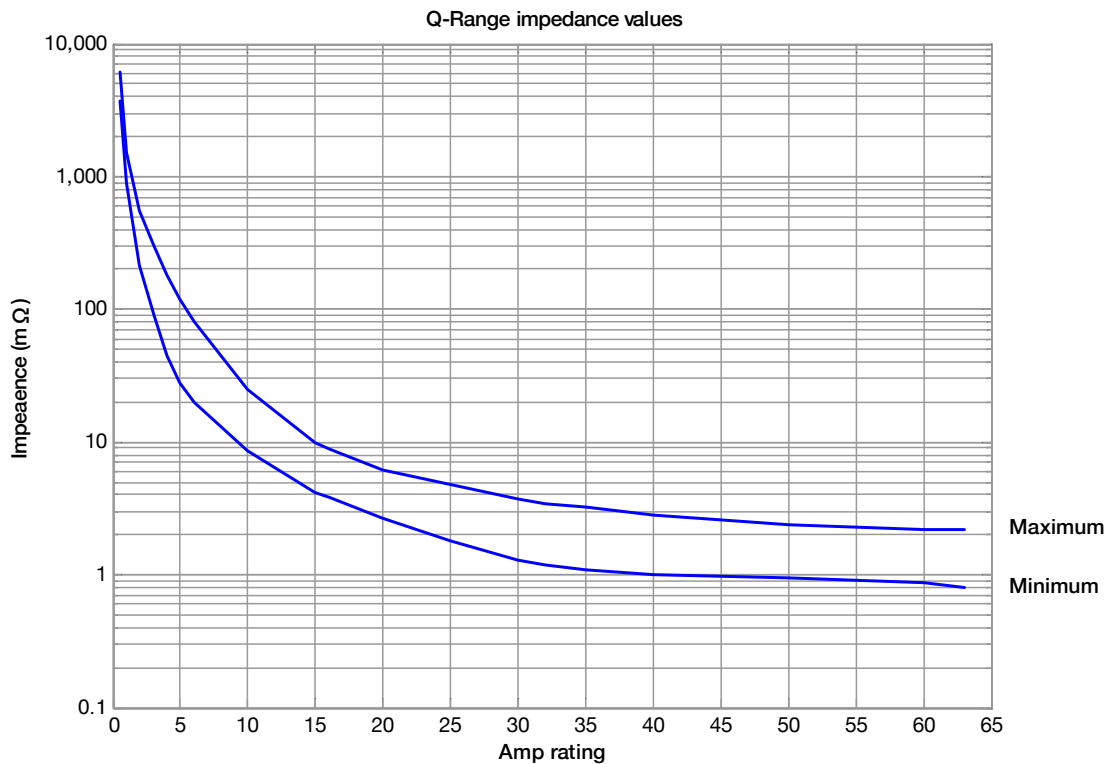
## QF10 - Series Earth Leakages

### Time Delay Curves



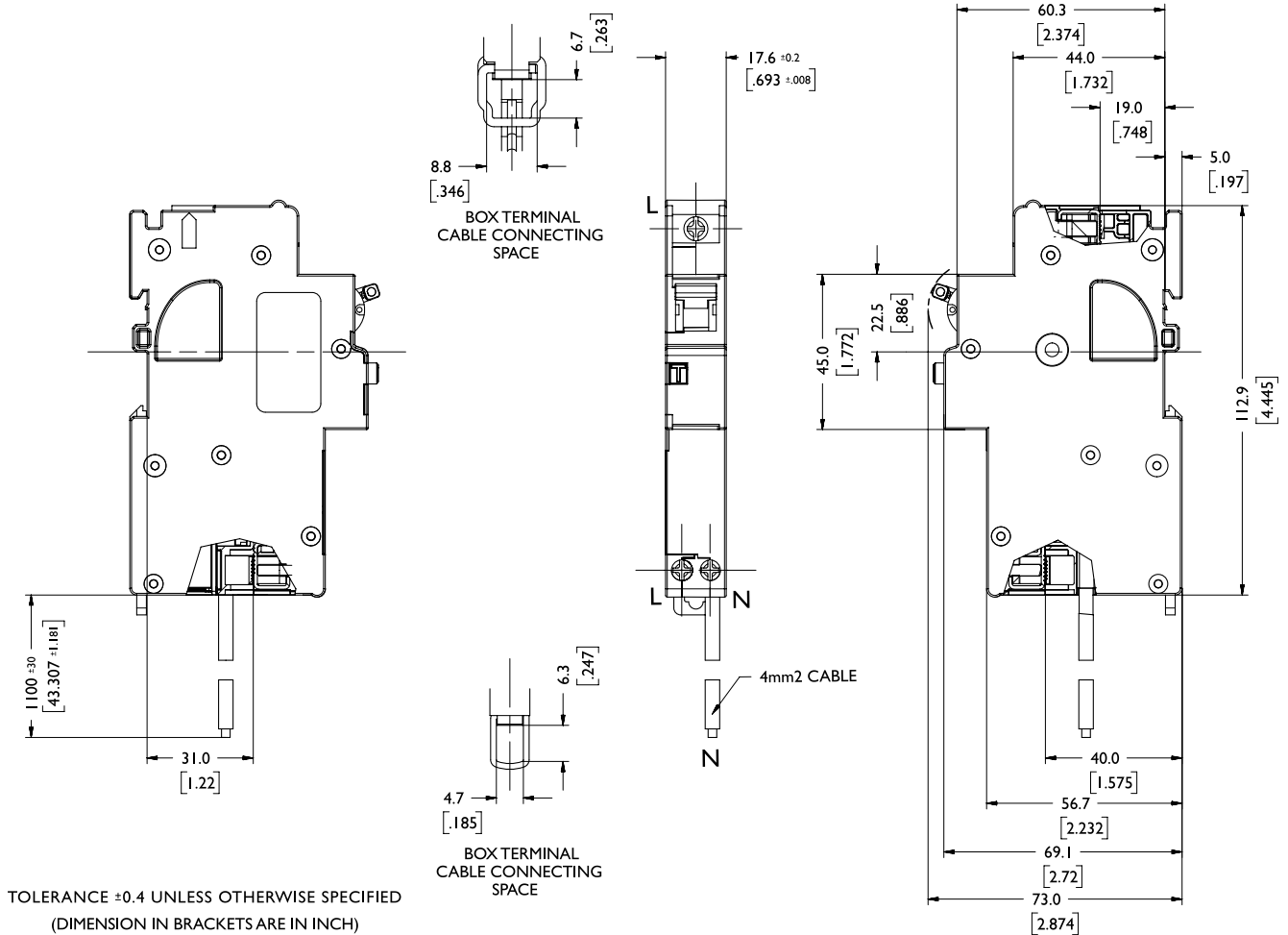
\* The published time delay curves are generated at 30°C ambient temperature with the Circuit Breaker mounted in the up-right position. The “must hold”, “must trip” and “instantaneous trip” current values are not affected by temperature, although delay time for the other operating current values may have to be adjusted using the temperature compensation curve which is available on request.

### Internal Impedance vs Current Rating



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### Outline Dimensions: Surface Mount



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