CQB2LE-40 Residual Current Operated Circuit Breaker with Over-current Protection (Electronic)

- **Overview and applications**
  - Suitable for industrial, commercial, high-rise and civil residences circuit protection.
  - Overloads & short circuit protection
  - Protect people against indirect contacts and additional protection against direct contacts.
  - Protect installations against fire hazard due to insulation faults.
  - Control electric circuits

- **Type designation**
  - CQB 2 LE - 40

- **Technical data**
  - **Specifications**
    - **Rated voltage (V):** 230V~
    - **Rated current (A):** 6, 10, 16, 20, 25, 32, 40
    - **Frequency:** 50Hz / 60Hz
    - **Pole:** 1P + N
    - **Rated residual operating current I, n:** 30 mA
    - **Rated non-tripping current:** 15 mA
    - **Rated breaking capacity Icu (A):** 4500A
    - **Rated residual making & breaking capacity (A):** 400A
    - **Tripping time:** ≤ 0.1s
    - **Mechanical & Electrical life:** 10000
    - **Tripping characteristics:** B, C, D
    - **Pollution degree:** 2
    - **Protection degree:** IP20
    - **Standards:** IEC61009-1, GB/T16917.1
    - **Compliant certification:** CCC

- **Table 1: Tripping characteristics (Reference temperature 30℃)**
  - **Item** | **Rated current (A)** | **Initial Status** | **Test current In (A)** | **Time limit for tripping or non-tripping** | **Expected result** | **Remark** |
  - Delay ≤ 40 Cold 1.13In ≤ 1h Non-tripping | Current smoothly rises to specified value in 5s |
  - Delay ≤ 40 Following previous test 1.45In < 1h Tripping |
  - Delay ≤ 32 Cold 2.55In 1 < t < 60s Tripping |
  - Delay 40 Cold 2.55In 1 < t < 120s Tripping |
  - Instantaneous Any value Cold 3, 5, 10In ≤ 0.1s Non-tripping | B, C, D |
  - Instantaneous Any value Cold 5, 10, 20In < 0.1s Tripping | B, C, D |

  **Note:** The term "cold" means that the test is carried out at a reference calibration temperature without load before the test.

- **Tripping curves**
  - **Conductor requirements and cross sections**
    - **Copper cross-section (mm²):**
      - **Rated current In (A):**
        - 6 ≤ In < 13
        - 13 ≤ In < 20
        - 20 ≤ In < 25
        - 25 ≤ In < 32
        - 32 ≤ In ≤ 40
  - **Dimensions (unit: mm)**
    - **Wiring Diagram**

- **Order Specifications**
  - When ordering circuit breakers, the following points should be specified:
    - A) Product models, such as CQB2LE-40;
    - B) Poles of circuit breakers, such as 1P + N;
    - C) Types of instantaneous tripping, such as type B / C / D;
    - D) Rated current of circuit breakers, such as 16A, 20A, 25A;
    - E) Residual current, e.g. 30 mA;
    - F) Order quantity, such as 100 pcs
  - **Purchase order template**
    - CQB2LE-40 1P+N 30mA C/16A 100pcs

- **Initial Status**
  - Cold
  - Following previous test
  - 2
  - IP20
  - B, C, D
  - ≤ 1h
  - < 1h
  - 1 < t < 60s
  - 1 < t < 120s
  - ≤ 0.1s
  - ≤ 0.1s

- **Following previous test**
  - Cold
  - 1.13In
  - 1.45In
  - 2.55In
  - 3, 5, 10In
  - 5, 10, 20In

- **Expected result**
  - Non-tripping
  - Tripping
  - Non-tripping
  - B, C, D

- **Remark**
  - Current smoothly rises to specified value in 5s
  - ≤ 0.1s
  - ≤ 0.1s

- **Note:**
  - The term "cold" means that the test is carried out at a reference calibration temperature without load before the test.