

# QCM MOTOR CONTROL CENTER

## Low Voltage Motor Control Center with Withdrawable Units

### The QCM series Motor Control Center:

The QCM Motor Control Center is a low voltage switchgear for controlling and protecting motors; it is shaped for:

- modular structure divided into cubicles - fixed or withdrawable;
- service continuity;
- guarantee of maximum safety;
- easy inspection and maintenance;
- to be designed to suits customer's requirements.

### Reference standards

|                         |  |
|-------------------------|--|
| International standards | IEC EN 61439-1/2; IEC/TR 61641                               |
| Italian standards       | CEI EN 61439-1/2, CEI EN 60529,<br>CEI EN 60865-1; CEI 17-86 |

### Type tests

CESI Certification under standards CEI EN 61439-1/2, IEC/TR 61641 for low voltage switchgears.

Tested for:

- Temperature-rise limits
- Dielectric properties
- Clearance and creepage distance
- Test under condition of arcing due to internal fault
- Verification of the short circuit withstanding strength of the main circuits
- Verification of the effectiveness of the protective circuit



### Main Electrical features

|   |              |
|---|--------------|
| Rated voltage up to                     | 690 Vca      |
| Rated insulation voltage up to          | 1000 V       |
| Rated current                           | up to 3200 A |
| Rated peak withstand current            | 154 kA       |
| Rated short-term withstand current (1s) | 70 kA        |
| Current under arcing conditions         | 70 kA        |
| Permissible arc duration                | 300 ms       |
| Rated impulse voltage                   | 12 kV        |
| Rated frequency                         | 50-60 Hz     |

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### Features of Construction

|                                |                   |
|--------------------------------|-------------------|
| Protection degree              | from IP30 to IP54 |
| Opened doors protection degree | IP 20             |

IP54 protection class is with a transparent tempered glass door as per standards.

### Service and environmental conditions

|                             |         |
|-----------------------------|---------|
| Type of installation        | Outdoor |
| Maximum ambient temperature | + 50° C |
| Minimum ambient temperature | - 5° C  |
| Relative humidity           | 90%     |

### Standard dimensions

|                    |   |
|--------------------|---|
| Maximum length     | 625/800+200/400 (cable lift)<br>+ 50 mm (lateral side)          |
| Compartment height | 2000/2200/2400 mm   |
| Compartment depth  | 500/625/800/1000/1200/1400/1550 mm<br>(possible for both sites) |

### Switchgear composition

#### 1- Main busbar unit

Main busbar unit located in the upper side of the cabinet, with metallic segregation; accessible from the front, the rear and the top.  
Nominal capacity:  
630A-800A-1000A-1250A-1600A-1800A-2000A-2500A-2900A-3200A.

On request it may be designed with a busbar system:

- Completely insulated with thermoplastic material;
- Silver-plated;
- With silver-plated terminals.

#### 2 - Distribution busbar unit

The distribution busbar unit is located on the left side, insulated and accessible from the back.

#### 3 - Cubicle unit

The cubicle unit is located on the front of the cabin and contains both removable and fixed cubicles for each motor starter/electrical device.

#### 4 - Wiring unit

The wiring unit is located on the right side of the front, with front and rear access for easy installation, operation and maintenance.

