The Vector® series
Power factor correction shelf

Power factor correction (PFC) solutions for panel builders

State-of-the-art capacitor technology
The Vector® series provides ABB’s state-of-the-art CLMD03 capacitor technology in a modular system that is easy to install, operate and service while ensuring exceptional reliability and efficiency. The series includes individual capacitor shelves that enable panel builders to incorporate ABB’s PFC technology within their own low voltage panels.

Vector power factor correction shelf

<table>
<thead>
<tr>
<th>Shelf combination</th>
<th>Weight (kg)</th>
<th>Available ratings (kvar)</th>
<th>Approximate total losses (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front and rear</td>
<td>83</td>
<td>Up to 100*</td>
<td>600</td>
</tr>
<tr>
<td>Front only</td>
<td>43</td>
<td>Up to 50*</td>
<td>300</td>
</tr>
<tr>
<td>Front only</td>
<td>22</td>
<td>Up to 100**</td>
<td>300</td>
</tr>
</tbody>
</table>

* With detuning reactor
** Without reactor

Please note
1. The reactor can be replaced with a capacitor in the front shelf to form a unit rated up to 100 kvar of standard capacitance. In this case the rear shelf will not be attached.

2. Capacitors and reactors are not rated for infinite harmonic currents. Components are dimensioned on the assumption that the non-linear load on the system does not exceed 40% of the supply transformer capacity and the lowest major harmonic order is 250 Hz (5th harmonic).

Important notice
Our offer is valid only for normal operating conditions, as defined in BS EN 60831-1.
**Specification**

**Voltage** 415 V standard (alternative voltages on request)

**Frequency** 50 Hz (60 Hz on request)

**Connection** Three-phase as standard (no neutral)

**Discharge resistors** Permanently connected discharge resistors are incorporated to ensure safe discharge of the capacitors to less than 50 V in one minute after switch-off

**Termination** Terminations are designed to accommodate single core cables with M8 terminations

**Fuses** DIN NH–fuses

**Contactors** 400 or 415 V as standard (other voltages on request)

**Capacitor case** Aluminium (recyclable)

**Application** Panel mounting

**Ambient air temperature** -25°C to +40°C (Symbol ‘A’ as defined in BS EN 60831-1:1998)

**Voltage test** Between terminals, 2.15 kV for 10 seconds

**Acceptable overloads** According to BS EN 60831-1. Overvoltage 10% maximum (8 hours in every 24 hours). Overcurrent 30% (continuous)

**Recommended clearances**
- Minimum clearance from panel door to capacitor switching contactor = 20 mm
- Minimum clearance between capacitor and adjacent wall or between capacitor shelves = 50 mm (this also depends on the panel ventilation scheme – it is essential that the panel design must allow adequate clearances and air flow around the capacitor shelves)

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