LV Capacitor CLMD03
Unique reliability for Power Factor Correction

The CLMD03 is an extension of ABB's LV capacitor CLMD family. It is built on the well proven technology of ABB's capacitor elements in an innovative case offering high performance in a small volume.

Powerful and well ventilated

The CLMD03 capacitor is made of 9 capacitor elements housed in an aluminum case. The case material and design enhance ventilation and maximize heat dissipation allowing as much as 50 kvar in a single case.

Versatile and compact

The CLMD03 is available in two three-phase designs: a single capacitor or two capacitors within the same housing. In the latter, the power is distributed over 1/3 and 2/3 respectively.

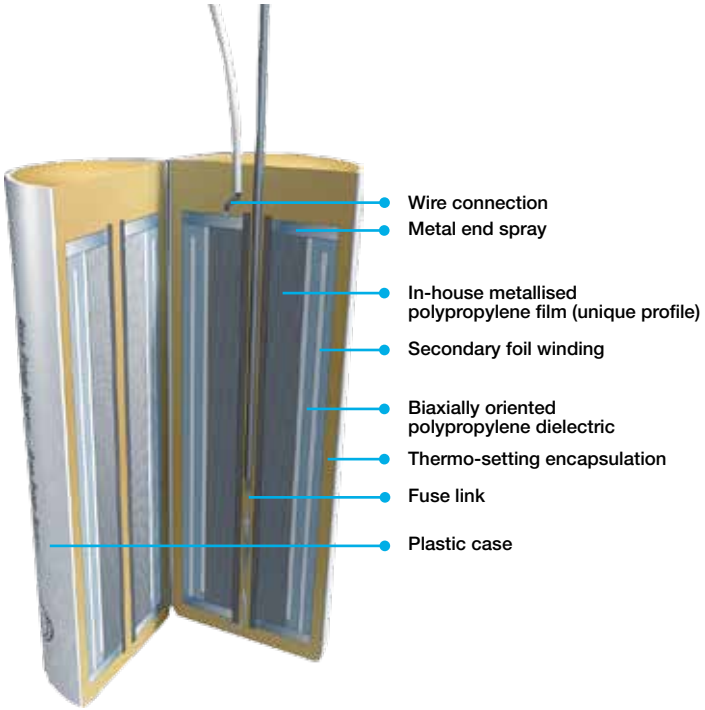
Environmentally-friendly

The CLMD03 is used for power factor correction, which provides the benefit of lower energy consumption – in the plant and upstream network. The capacitor uses proven dry-type technology which prevents risk of toxic oil leakage. The aluminum case is recyclable and the vermiculite used is made of natural material.

ABB provides high electrical power efficiency with lower environmental impact

Safe and reliable

The CLMD03 capacitor utilizes ABB *Internally Protected Elements* (IPE) technology. The IPE elements are made of polypropylene film which is metalized in-house under a strict quality controlled process. The elements have a unique sequential protection system insuring a safe disconnection of each individual element at the end of its life. The CLMD03 is filled with vermiculite, a natural and inert mineral providing high fireproof and energy absorption capabilities. The CLMD03 and IPE technologies are the results of more than 25 years of experience and know-how in R&D and production methodologies.



Capacitor element (IPE)

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Power and productivity for a better world™

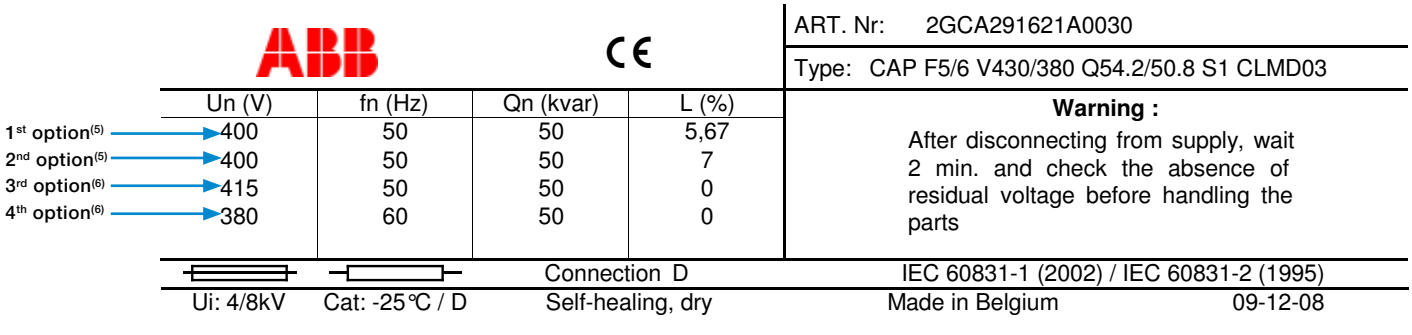
Range

U network [V]	Detuning reactor [%][2]	Net output power [1]: 50kvar Single-capacitor case			Net output power [1]: 37.5kvar (25+12.5kvar) Double-capacitor case			
		Reference number	Q [kvar][3]	Uc,n[V]	Reference number	Q1 [kvar][3]	Q2 [kvar][3]	Uc,n[V]
50 Hz network								
400	-	2GCA291615A0030	50.2	400	2GCA291630A0030	25.0	12.5	400
	5.67%	2GCA291621A0030	54.2	430	2GCA291634A0030	27.9	13.4	430
	7.00%	2GCA291621A0030	54.2	430	2GCA291634A0030	27.9	13.4	430
	12.50%	2GCA291617A0030	56.7	457	2GCA291636A0030	27.9	15.2	457
415	-	2GCA291621A0030	54.2	430	2GCA291631A0030	25.0	12.5	415
	5.67%	2GCA291617A0030	56.7	457	2GCA291636A0030	27.9	15.2	457
	7.00%	2GCA291617A0030	56.7	457	2GCA291636A0030	27.9	15.2	457
440	-	2GCA291616A0030	50.2	440	2GCA291635A0030	25.8	11.8	440
690	-	2GCA291623A0030	49.8	690	2GCA291637A0030	26.2	12.4	690
	5.67%	2GCA291618A0030	54.4	742	2GCA291632A0030	27.7	13.3	742
	7.00%	2GCA291618A0030	54.4	742	2GCA291632A0030	27.7	13.3	742
	12.50%	2GCA291619A0030	56.3	789	2GCA291633A0030	29.0	15.6	802
	14.00%	2GCA291620A0030[4]	50.4	802	2GCA291633A0030	29.0	15.6	802
60 Hz network								
380	-	2GCA291621A0030	50.8	380	2GCA291634A0030	26.1	12.6	380
	6.00%	2GCA291617A0030	54.4	409	2GCA291636A0030	26.7	14.5	409
	7.00%	2GCA291617A0030	54.4	409	2GCA291636A0030	26.7	14.5	409
	12.50%	2GCA291625A0030	57.9	442	2GCA291635A0030	30.2	13.8	434
	14.00%	2GCA291625A0030	57.9	442	2GCA291639A0030	28.9	14.7	442
440	-	2GCA291624A0030	50.6	440	2GCA291638A0030	26.2	12.1	440
	6.00%	2GCA291626A0030	53.7	473	2GCA291640A0030	26.8	14.7	473
	7.00%	2GCA291626A0030	53.7	473	2GCA291640A0030	26.8	14.7	473
480	-	2GCA291627A0030	50.4	480	2GCA291641A0030	25.0	12.5	480
	6.00%	2GCA291628A0030	52.4	516	2GCA291642A0030	27.8	13.3	516
	7.00%	2GCA291628A0030	52.4	516	2GCA291642A0030	27.8	13.3	516
600	7.00%	2GCA291623A0030	52.3	645	2GCA291637A0030	27.5	13.0	645
	12.50%	2GCA291629A0030	59.1	698	2GCA291643A0030	29.4	15.2	698
	14.00%	2GCA291629A0030	59.1	698	2GCA291643A0030	29.4	15.2	698

Notes:

(1) The net output power is the total power provided at the network voltage by the combination of the capacitor unit and its detuning reactor.
(2) Reactors are not provided.
(3) Q [kvar] is the exact rated power of the CLMD03 at its nominal voltage Uc,n.
(4) The net output power of this CLMD03 case and its 14% reactor is limited to 43kvar.

The CLMD03 nameplate includes data about the possible working conditions whether with[5] or without[6] the use of reactors.



Specification

Voltage range: From 380V to 690V.

Frequency: 50 and 60 Hz.

Connection: 3-phase.

Net output power:
- 50kvar for single-capacitor case.
- 37.5kvar (25+12.5) for double-capacitor case.

Reactors (not supplied):
Combinations with 5.67%, 6%, 7%, 12.5% and 14% reactors possible.

Discharge resistors:
Factory-installed discharge resistors sized to ensure safe discharge of the capacitor to less than 50V in 1 minute after a switch off (minimum off time: 40 seconds).

Terminals: M8 threaded terminals
- One set of 3-phase terminal for 50kvar units (single-capacitor case).
- Two sets of 3-phase terminals for 12.5kvar + 25kvar units (double-capacitor case).

Earth: Earth connection on the enclosure flange.

Case material: Recyclable aluminum enclosure.

Color: Raw aluminum.

Fixing:
Four slots for M6 screws (12x7mm) on the upper flange.

Execution: Indoor.

Protection degree (according to IEC 60529):
- IP00.
- IP20 with optional top cover.

Weight: Approx. 7.5 kg.

Maximum ambient temperature:
Class D according to IEC60831.
- Highest mean over any period of 1 year: 35°C.
- Highest mean over any period of 24h: 45°C.
- Maximum: 55°C.

Minimum ambient temperature: -25°C.

Minimum distance between units:
- Flange to flange.
- 25 mm between unit and wall.

Losses: for 380V rated voltage and above
- ≤ 0.2 W/kvar (capacitor without discharge resistors).
- ≤ 0.5 W/kvar (total including discharge resistors).

Tolerance on capacitance: 0 % + 10 %.

Voltage test (according to IEC 60831):
- Between terminals: 2.15xUn for 10 seconds.
- Between terminals and earth:
  - 3kV for 10 sec: Un ≤ 500V.
  - 4kV for 10 sec: Un > 500V.

Overload capability (according to IEC 60831):
- Overvoltage tolerance: 10% for maximum 8h in every 24h and 30% for maximum 1min.
- Maximum permissible current: 1.3x In for continuous operation.

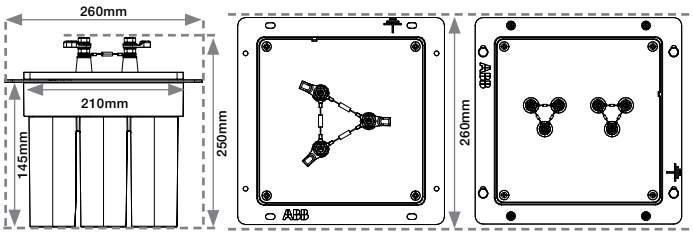
Altitude: Up to 1000m.

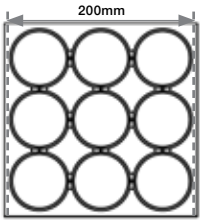
Compliance:
- IEC 60831 part 1 & 2.
- CE marked.

Accessory: Optional top cover.

Dimensions: Square flange with a side length of 260mm.

Height:
IP00 (including terminals): 250 mm.
IP20 (with optional top cover): 287 mm.





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