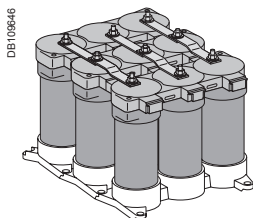


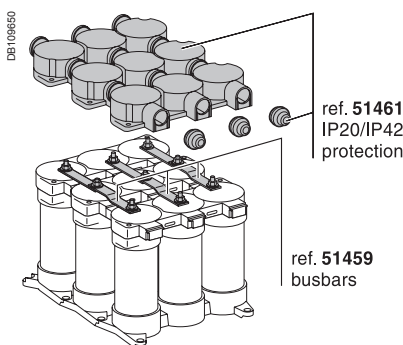
Varplus² modular capacitors allow by their different assembly combination to cover many power ratings (kvar) depending on the voltage (V), frequency (Hz) and harmonic pollution level of the network.



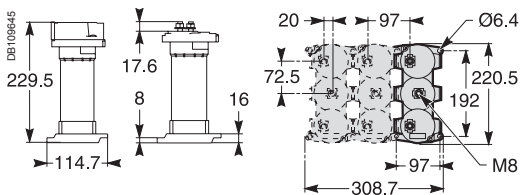
Varplus² IP00



Example of Varplus² IP00 assembly.



Varplus² accessories.



Weight of Varplus² 2.1 kg.

Slightly polluted network (Gh/Sn ≤ 15 %)

Varplus ²		
400 V (kvar)	415 V (kvar)	Reference
5	5.5	51311
6.25	6.5	51313
7.5	7.75	51315
10	10.75	51317
12.5	13.5	51319
15	15.5	51321
20	21.5	51323
Assembly advised		
25	27	2 x 51319
30	31	2 x 51321
40	43	2 x 51323
50	53.5	2 x 51321 + 51323
55	58.5	2 x 51323 + 51321
60	64.5	3 x 51323
65		3 x 51323 + 51311

Maximum mechanical assembly: 4 capacitors and 65 kvar.
 Assembly > 65 kvar: see conditions to respect in Varplus² user manual.

Technical data

- capacitor rated voltage: 415 V, 3-phase 50 Hz
- HQ protection system built into each single phase element
- high current fault protection by HRC cartridge fuse
- low current fault protection by combination of single phase internal overpressure device with the HRC fuse
- capacitance value tolerance: -5, +10 %
- insulation level:
 - withstand 50 Hz 1 minute: 4 kV
 - impulse wave withstand 1.2/50 μs: 15 kV
 - voltage test: 2.15 Un (rated voltage) for 10 s
- maximum permissible overloads at service voltage network as per IEC 60831 1/2:
 - current: 30 % permanently
 - voltage: 10 % (8 hours over 24 hours)
- with internally fitted discharge resistors: residual voltage less than 50 V in 1 minute
- total losses: less than 0.5 Watt/kvar (discharge resistors included)
- temperature class D (+55 °C):
 - maximum: 55 °C
 - average over 24 hours: 45 °C
 - average over 1 year: 35 °C
 - maximum: -25 °C
- colour:
 - elements RAL 9005
 - base and cover RAL 7030
- standards: IEC 60831 1/2, CSA 22-2 N°190, UL 810
- execution: indoor
- protection:
 - IP00 without cover (option)
 - IP20 or IP42 see accessories
- no earth connection is needed
- terminals: 3 M8 rods allowing 360° cable connection (without cover).

Accessories for Varplus ²	Reference
1 set of 3-phase copper bars for connection and assembly of 2 and 3 capacitors	51459
1 set of protective cover (IP20) and cable glands (IP42) for 1, 2 and 3 capacitors	51461

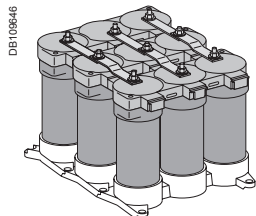
Installation

All positions are convenient except vertical one with connecting terminals upside down. Fixing holes for M6 screws. A kit to replace Varplus by Varplus² is available (ref. 51298).

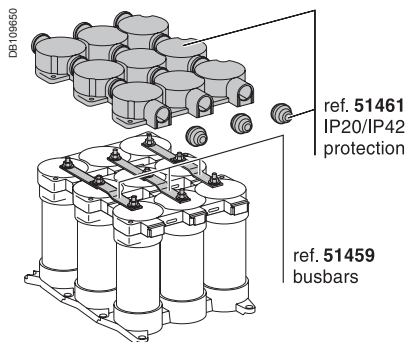
Varplus² modular capacitors allow by their different assembly combination to cover many power ratings (kvar) depending on the voltage (V), frequency (Hz) and harmonic pollution level of the network.



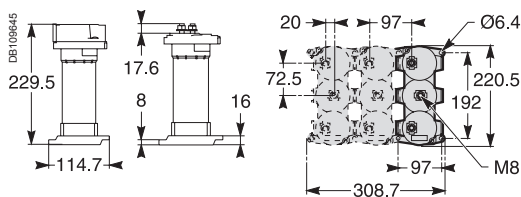
Varplus² IP00



Example of Varplus² IP00 assembly.



Varplus² accessories.



Weight of Varplus² 2.1 kg.

Polluted network (15 % < Gh/Sn ≤ 25 %)

Capacitors rated 480 V are necessary.

Varplus ²				
Useful powers		Rated values		
400 V (kvar)	415 V (kvar)	440 V (kvar)	480 V (kvar)	Reference
5	5.5	6.1	7.2	51325
6.25	6.5	7.6	9	51327
7.5	8	8.8	10.4	51329
10	11	13	15.5	51331
12.5	13.5	14.3	17	51333
15	16.5	19.1	22.7	51335
Assembly advised				
20	23			2 x 51331
25	25			2 x 51333
30	34			2 x 51335
45	51			3 x 51335
60	68			4 x 51335

Maximum mechanical assembly: 4 capacitors and 62/68 kvar 400/415 V.
 Assembly > 62 kvar: see conditions to respect in Varplus² user manual.

Technical data

- capacitor rated voltage: 480 V, 3-phase 50 Hz
- HQ protection system built into each single phase element
- high current fault protection by HRC cartridge fuse
- low current fault protection by combination of single phase internal overpressure device with the HRC fuse
- capacitance value tolerance: -5, +10 %
- insulation level:
 - withstand 50 Hz 1 minute: 4 kV
 - impulse wave withstand 1.2/50 μs: 15 kV
- voltage test: 2.15 Un (rated voltage) for 10 s
- maximum permissible overloads at service voltage network as per IEC 60831 1/2:
 - current: 30 % permanently
 - voltage: 10 % (8 hours over 24 hours)
- with internally fitted discharge resistors: residual voltage less than 50 V in 1 minute
- total losses: less than 0.5 Watt/kvar (discharge resistors included)
- temperature class D (+55 °C):
 - maximum: 55 °C
 - average over 24 hours: 45 °C
 - average over 1 year: 35 °C
 - minimum: -25 °C
- colour:
 - elements RAL 9005
 - base and cover RAL 7030
- standards: IEC 60831 1/2, CSA 22-2 No190, UL 810
- execution: indoor
- protection:
 - IP00 without cover
 - IP20 or IP42 see accessories
 - no earth connection is needed
 - terminals: 3 M8 rods allowing 360° cable connection (without cover).

Accessories for Varplus ²	Reference
1 set of 3-phase copper bars for connection and assembly of 2 and 3 capacitors	51459
1 set of protective cover (IP20) and cable glands (IP42) for 1, 2 and 3 capacitors	51461

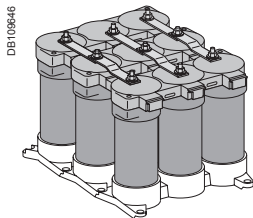
Installation

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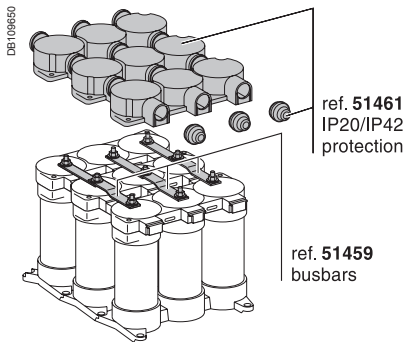
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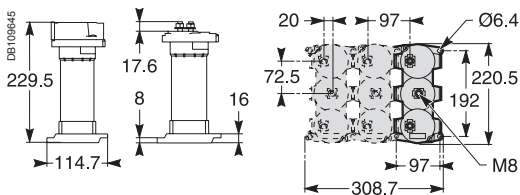
Varplus² IP00



Example of Varplus² IP00 assembly.



Varplus² accessories.



Weight of Varplus² 2.1 kg.

Highly polluted network (25 % < Gh/Sn ≤ 50 %)

Capacitors rated 480 V will be used with detuned reactor.

Varplus ²					
Usefull powers tuning order	400 V (kvar)		415 V (kvar)		Reference
	440 V (kvar)	480 V (kvar)	440 V (kvar)	480 V (kvar)	
2,7 (135 Hz - 13,7 %)	6.5	7	6,7	8	51337
	12.5	13.5	13	15.5	51331
Assembly advised					
	25	27			2 x 51331
	50	54			2 x 51335 + 51333

Maximum mechanical assembly: 4 capacitors and 50/54 kvar 400/415 V.
Assembly > 50 kvar: see conditions to respect in Varplus² user manual.

Varplus ²					
Usefull powers tuning order	400 V (kvar)		415 V (kvar)		Reference
	440 V (kvar)	480 V (kvar)	440 V (kvar)	480 V (kvar)	
3,8 (190 Hz - 6,92 %)	6.5	7	7.6	9	51327
or	7.75	8.25	8.8	10.4	51329
4,3 (215 Hz - 5,4 %)	10	11	11.8	14	51345
	12.5	13.5	14.3	17	51333
	16.5	17.75	19.1	22.7	51335
Assembly advised					
	25	27			2 x 51333
	30	31.25			51333 + 51335
	50	53.25			3 x 51335

Maximum mechanical assembly: 4 capacitors and 65 kvar 400/415 V.
Assembly > 65 kvar: see conditions to respect in Varplus² user manual.

Technical data

- capacitor rated voltage: 480 V, 3-phase 50 Hz
- HQ protection system built into each single phase element
- high current fault protection by HRC cartridge fuse
- low current fault protection by combination of single phase internal overpressure device with the HRC fuse
- capacitance value tolerance: -5, +10 %
- insulation level:
 - withstand 50 Hz 1 minute: 4 kV
 - or
 - impulse wave withstand 1.2/50 μs: 15 kV
- voltage test: 2.15 Un (rated voltage) for 10 s
- maximum permissible overloads at service voltage network as per IEC 60831 1/2:
 - current: 30 % permanently
 - voltage: 10 % (8 hours over 24 hours)
- with internally fitted discharge resistors: residual voltage less than 50 V in 1 minute
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 - minimum: -25 °C
- colour:
 - elements RAL 9005
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- standards: IEC 60831 1/2, CSA 22-2 No190, UL 810
- execution: indoor
- protection:
 - IP00 without cover
 - IP20 or IP42 see accessories
- no earth connection is needed
- terminals: 3 M8 rods allowing 360° cable connection (without cover).

Accessories for Varplus ²	Reference
1 set of 3-phase copper bars for connection and assembly of 2 and 3 capacitors	51459
1 set of protective cover (IP20) and cable glands (IP42) for 1, 2 and 3 capacitors	51461

Installation

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