



**B15 series equipment** are particularly suitable for three-phase networks with operating voltage equal to **400 Vac (+/- 10%)** with **low harmonic distortion** in current. These equipment guarantee an accurate P.F.C., thanks to a multi-step design that effectively divides the power. In addition, on the G6E and G8E cabinet, all the capacitors banks are assembled on racks, easily removable from the front of the panel, for simple management and maintenance.

### PERFORMANCE DATA

■ <b>Rated voltage</b>	<b>415 Vac</b> (others on request)
■ <b>Rated frequency</b>	<b>50 Hz</b> (60 Hz on request)
■ <b>Insulation voltage</b>	690 Vac
■ <b>Auxiliary voltage</b>	400 Vac for G3E, G4E, G4RM <sup>1</sup> 230 Vac for G4RM <sup>2</sup> , G6E, G8E
■ <b>Overvoltage</b>	1,1 Un (rated voltage)
■ <b>Temperature range</b>	-5 / +40 °C
■ <b>Impulse withstand</b>	6 kV (G3E, G4E); 8 kV (G4RM, G6E, G8E)

<sup>1</sup>up to 200 kvar. <sup>2</sup>over 200 kvar. Auxiliary voltage is supplied by a proper transformer.

### HARMONIC CONTENT (in the absence of resonance)

<b>THD(I)max. = 15%</b>	on the network
<b>THD(Ic)max. = 50%</b>	on the capacitors

### TECHNICAL DATA

<b>Enclosures</b>	Made of sheet steel, protected against corrosion by phosphating and epoxy powder coating. RAL 7035 colour (others on request). Degree of protection: external panel IP 31, with the exception of type G3E and G4E with IP30 (others on request); internal panel IP 20 at the input of power cables (IP 20 with open doors on request).
<b>Installation</b>	Indoor installation, in a well ventilated position away from heat sources.
<b>Ventilation</b>	Natural for powers up to 200 kvar; Forced for powers over 200 kvar.
<b>Switch isolator</b>	Tri-polar off-load disconnecter.
<b>Wiring</b>	The internal connections are made with flame retardant cables with very low smoke emission (other types of cables on request). On the non-pre-insulated terminals the connection point is covered with a long-life heat-shrinking sheath. The auxiliary voltage are appropriately identified in compliance with current regulations.
<b>3-pole contactors</b>	Each battery is switched on / off by a three-pole contactor (Class AC6-b) to offer high reliability. The limitation of current peaks caused by the insertion of the capacitive batteries is guaranteed by pre-charging resistors.
<b>Fuses</b>	Each capacitors bank is protected by fuses. The protection system of both the power circuits (NH-00 curve gG fuses) and the auxiliary ones (isolable fuse holders and 10.3x38 fuses) foresees the use of high breaking power fuses (100kA).
<b>Capacitors</b>	Single-phase capacitors in self-healing metallized polypropylene (MKP), equipped with an anti-burst device and discharge resistance. They are impregnated in vegetable oil, PCB free. Delta connection. Type of continuous service. <ul style="list-style-type: none"> <li>• <b>rated voltage: 415 Vac (maximum voltage 450 Vac)</b></li> <li>• overvoltage: 1.1 x A (8h / 24h)</li> <li>• current overload: 1.3 x In</li> <li>• capacity tolerance: -5% / + 10%</li> <li>• losses due to dissipation: ≤0.4 W / kvar</li> <li>• temperature category: -25 / D</li> </ul>
<b>Controller</b>	<ul style="list-style-type: none"> <li>• type of measurement: varmetric.</li> <li>• amperometric signal: by means of an amperometric transformer with secondary 5A, class 1 - 5VA (by the user)</li> <li>• amperometric signal sensitivity: 2.5% for BMR series, 0.3% for HPR series</li> <li>• standard capacitors on / off times: 25 "± 30" (others on request)</li> </ul>

### QUALITY AND TESTING

<b>Regulations</b>	Capacitors: IEC/EN 60831-1 / 2 certified by IMQ (V1927); Equipment: IEC/EN 61439-1 / 2, IEC/EN 61921.
<b>European directives</b>	Low voltage: 2014/35/CE; Electromagnetic compatibility: 2014/30/CE.
<b>Testing</b>	100% of the automatic equipment is subject to visual inspection, insulation test: phase-phase and phase-earth, battery efficiency and ventilation circuit control: the report is included in the documentation. The capacitors are tested in three consecutive stages of the production process: after winding, regeneration and before labeling.

### CONFIGURATION

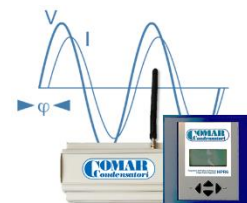
#### General notes

- For dimensions, please consult the cabinet drawings, referring to the "Type" column.
- The indication for cable entry (power supply) is as follows: ↑ from the bottom, ↙ side up, ↓ from the top
- The rated power is expressed at 415 V - 50 Hz.

The choice of supply cables depends on the installation conditions, the length of the same and the ambient temperature. For a correct sizing, refer to the IEC 60364-5, CEI 64-8 and the UNEL 35024/01 standards.

#### Cloud Control System (CCS)

On request, the CCS remote monitoring system can be integrated to display the data in real time. For any specific information, and to discover the advantages of the Cloud Control System service, we refer to the specific brochure available on the website [www.comarcond.com](http://www.comarcond.com) or directly upon request.



#### Table

THD(I)max. = 15%

THD(Ic)max. = 50%

Code	Type	Qn (kvar)	Cable entry	In (A)	Banks size (kvar)				Steps (n)	Switch isolator (A)	Controller (type)	Weight (kg)				
8631412102320	G3E	10,2	↙	14	3,4	3,4	3,4		3	40	BMR4	14				
8631412159320	G3E	15,9	↙	22	3,4	6,25	6,25		5	40	BMR4	15				
8631412221320	G3E	22,15	↙	31	3,4	6,25	12,5		7	80	BMR4	16				
8631412310320	G3E	31,25	↙	43	6,25	12,5	12,5		5	80	BMR4	18				
8631412435320	G3E	43,75	↙	61	6,25	12,5	25		7	125	BMR4	22				
8631412500320	G3E	50	↙	70	12,5	12,5	25		4	125	BMR4	23				
8631412625320	G3E	62,5	↙	87	12,5	25	25		5	125	BMR4	26				
8631412750320	G4E	75	↙	104	12,5	12,5	25	25	6	160	BMR4	38				
8631413100400	G4E	100	↙	139	12,5	12,5	25	50	8	200	BMR4	43				
8631413136400	G4E	136	↙	190	17	17	34	68	8	315	BMR4	55				
8661413150325	G4RM	150	↙	209	25	25	50	50	6	315	BMR4	85				
8661413175325	G4RM	175	↙	243	25	50	50	50	7	400	BMR4	87				
8661413200325	G4RM	200	↙	278	25	25	50	100	8	400	BMR4	89				
8661413225325	G4RM	225	↙	313	25	50	50	100	9	500	BMR4	95				
8661413250325	G4RM	250	↙	348	25	50	75	100	10	500	BMR4	102				
8661413289400	G4RM	289	↙	402	17	17	34	34	68	68	68	102				
8661413300325	G6E	300	↓	417	25	50	75	75	75		12	630	HPR6	175		
8661413350325	G6E	350	↓	487	50	75	75	75	75		9	800	HPR6	192		
8661413400325	G6E	400	↓	556	50	50	75	75	75	75	14	800	HPR6	207		
8661413450325	G6E	450	↓	626	50	50	50	75	75	150	16	1000	HPR6	240		
8661413500325	G6E	500	↓	696	50	75	75	75	75	150	13	1000	HPR6	255		
8631413525420	G8E	525	↑	731	75	75	75	75	75	75	7	1250	HPR12	315		
8631413600420	G8E	600	↑	836	75	75	75	75	75	75	75	8	1250	HPR12	330	
8631413675420	G8E	675	↑	940	75	75	75	75	75	75	150	9	1600	HPR12	350	
8631413750420	G8E	750	↑	1045	75	75	75	75	75	75	150	150	10	1600	HPR12	380
8631413825420	G8E (II)	825	↑	1149	75	75	75	75	150	150	150	11	800+1000	HPR12	510	
8631413900420	G8E (II)	900	↑	1254	75	75	75	75	150	150	150	12	1000+1000	HPR12	530	
8631413975420	G8E (II)	975	↑	1358	75	75	75	150	150	150	150	13	1000+1250	HPR12	550	
8631414105420	G8E (II)	1050	↑	1462	75	75	150	150	150	150	150	14	1000+1250	HPR12	650	
8631414120420	G8E (II)	1200	↑	1671	75	75	150	150	150	150	300	16	1250+1250	HPR12	690	
8631414135420	G8E (II)	1350	↑	1880	75	75	150	150	150	300	300	18	1600+1250	HPR12	730	

Other solutions are available on request.