TECHNICAL DATA COMMON TO ALL SERIES IN STANDARD CONFIGURATION

Enclosure	Made of steel sheet, protected against corrosion by phosphating and epoxy powder coating. Colour RAL 7035. Segregazione: form 1 External degree of protection: panel type G3E, G4E IP30; G4RM IP40; G6E, G8E, G9E IP31 Internal degree of protection: panels with interlocked switch-disconnector IP20 on live parts; IP 20 protection in additional modules In the G6, G8 and G9 cabinets, capacitor banks are assembled on drawers that can be pulled out from the front of the cabinet for quick maintenance G6, G8, G9 cabinets are equipped with eyebolts for lifting
Installation	Indoor installation, in a well ventilated position free from solar radiation. Pollution degree 1 Working temperature: -5 / +40 °C; Relative humidity RH50% @40°C Altitude: <1000 asl
Main Disconnector	Three-phase off-load disconnector with mechanical door interlock.
Wiring	Power connections are made with FS17-450/750V insulated, flame-retardant low smoke emission cables. On non-preinsulated cable lugs, the connection point is covered with a durable heat-shrink sleeve. Auxiliary circuits are appropriately identified in accordance with current standards.
Bank insertion	The banks are driven by three-phase contactors (Class AC6-b). Series without tuning reactor have contactors with a pre-insertion resistor to limit peak inrush current Static insertion series are fitted with thyristor insertion modules controlled by microprocessor such that switching on/off occurs when the potential difference between the mains and the capacitors is zero. (zero crossing). The switching time for the insertion of the capacitor banks is approximately 200 ms.
Fuses	The capacitive banks are protected by high breaking capacity fuses (100kA). The protection system for the power circuits uses NH-00 curve gG fuses; for the auxiliary circuits sectionable fuse holders and 10.3x38 fuses.
Auxiliary circuits	400 Vac for G3E, G4E, G4RM 230 Vac for G6E, G8E, G9E Internal transformer
Impulse withstand	6 kV for type G3E, G4E; 8 kV for G4RM, G6E, G8E, G9E
Capacitors	Single-phase capacitors made of self-healing (SH) metallised polypropylene (MKP) Over pressure safety device — Discharge resistor (75V within 3') PCB-free vegetable oil impregnation — Delta connection. Continuous service — Overvoltage: 1.1 x Un (8h / 24h) Current overload: 1.3 x In — Capacitance tollerance: -5% / +10% Dissipation losses: ≤0.4 W/kvar — Temperature category: -25 / D In the higher-performance series, **'Heavy Duty'** capacitors made of high thickness film and multiple elements in series are installed to reduce the effect of high currents on the element heads
Tuning reactor (where present)	Iron core with oriented crystals; aluminium windings Resin impregnation Dissipation loss (average): 6W/kvar Over-temperature control probe
Controller	Electronic, measurement type: varmetric on 4 quadrants. Current signal: via current transformer (user-supplied) with 5A secondary, class 1 Current signal sensitivity: 2.5% for BMR series, 0.3% for HPR series
Ventilation	Natural for series without de-tuning chokes and power below 200 kvar. Forced by high-efficiency fans with top expulsion for all other equipment
CCS	remote monitoring system for real time data display, emailing of alarms, historical data storage. Included on DMP-FTV, AAR/6, AAR/D20 series; on request on other series The symbol indicates that the equipment is equipped with CCS The symbol indicates that the CCS system is installable on the equipment
Safety	Automatic equipment shut-down in case of high THD(I), over-temperature >50°C, under and overvoltage. Bank shut down for reactor overtemperature (where fitted) Dry contact NC for extreme internal temperature (>70°C) In addition on HPR controller: auto shut-down for high THD(U), loss of capacitance of the bank
Testing	100% of the equipment undergoes visual inspection, phase-to-phase and phase-to-ground insulation tests, bank efficiency and ventilation circuit checks. Capacitors are tested for capacitance, dissipation factor [tan(δ)], verification of insulation to earth and overvoltage resistance at three consecutive points of the production process: after winding, during ageing process and at final assembly
Regulation	Capacitors: IEC/EN 60831-1 / 2 certified by IMQ (V1927) Equipment: IEC/EN 61439-1 / 2, IEC/EN 61921; 2014/35/EC Electromagnetic compatibility: 2014/30/EC.

Automatic Power Factor Correction with Static Insertion



The **B35-ST** series is free of switching transients thanks to zero-crossing technology, and is designed to improve the performance of conventional equipment, such as: increasing capacitor bank life, decreasing equipment response time to follow rapid changes in loads with **low to medium harmonic content**.

PERFORMANCE DATA

- **Rated voltage** 415 Vac (others on request)
- **Rated frequency** 50 Hz (60 Hz on request)
- **Insulation voltage** 800 Vac
- **Voltage overload** 1.1 Un (rated voltage)
- **Capacitors** Un=450; Umax 500

HARMONIC CONTENT
RESONANCE NOT ADMITTED

THD(I)max. = 25 % in the grid

THD(Ic)max. = 70 % on capacitors

STANDARD CONFIGURATIONS

Code	Type	Qn (kvar)	Cable entry	In (A)	bank power (kvar)	Steps (n)	Disconnector (A)	Controller (type)	CCS	Weight (kg)
8531413175200	G8E	175	↑	243	25+3x50	7	400	HPR6	🛠	165
8531413200200	G8E	200	↑	278	25+50+50+75	8	400	HPR6	🛠	180
8531413225200	G8E	225	↑	313	25+50+75+75	9	500	HPR6	🛠	200
8531413250200	G8E	250	↑	348	25+3x75	10	630	HPR6	🛠	220
8531413300200	G8E	300	↑	417	25+50+3x75	12	630	HPR6	🛠	270
8531413350200	G8E	350	↑	487	50+4x75	7	800	HPR6	🛠	280
8531413400200	G9E	400	↑	556	2x50+4x75	8	800	HPR6	🛠	290
8531413450200	G9E	450	↑	626	3x50+2x75+150	9	1000	HPR6	🛠	300
8531413500200	G9E	500	↑	696	50+4x75+150	10	1000	HPR6	🛠	310
8531413600200	G9E	600	↑	836	8X75	8	1250	HPR12	🛠	480
8531413700200	G9E	750	↑	1045	6X75+2X150	10	1600	HPR12	🛠	510
8531413800200	G9E (II)	825	↑	1149	5X75+3X150	11	800+1000	HPR12	🛠	550
8531413900200	G9E (II)	900	↑	1254	4X75+4X150	12	1000+1000	HPR12	🛠	580
8531414105200	G9E (II)	1050	↑	1462	2X75+6X150	14	1000+1000	HPR12	🛠	610

Note

For dimensions, please refer to the mechanical drawings section, referring to the 'Type' column.

- The cable entry (power supply) legend is as follows: ↑ from below, ↙ side up, ↓ from above,
- Rated power is expressed at rated voltage (Un)
- 🖧 indicates that the equipment is equipped with CCS
- 🛠 indicates that the CCS system is installable on the equipment