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.

AAR/100

Automatic Power Factor Correction with Tuning reactors



The AAR/100 series are suitable for three-phase networks with an operating voltage of **400 Vac** and **high harmonic content** in **current.** Suitable where there is a risk of resonance (L-C) between the power factor correction system and the equivalent network inductance. Not suitable for networks with high voltage distortions

PERFORMANCE DATA

- **Rated voltage** 400 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=500; Umax 550

HARMONIC CONTENT

THD(I)max. = 100 % in the grid

THD(U)max. = 3%. in the grid

p = 7% (189 Hz)

STANDARD CONFIGURATIONS

Code	Type	Qn (kvar)	Cable entry	In (A)	bank power (kvar)	Steps (n)	Disconnector (A)	Controller (type)	CCS	Weight (kg)
8561402250700	G4E	25	↙	36	2x6.25+12.5	4	200	BMR4		88
8561402310700	G4E	31	↙	44	6,25+2x12,5	5	200	BMR4		90
8561402435700	G4E	43,75	↙	63	6,25+12,5+25	7	200	BMR4		100
8561402500700	G4RM	50	↓	72	2x12,5+25	4	200	BMR4		105
8561402625700	G4RM	62,5	↓	90	12,5+2x25	5	200	BMR4		115
8561402750700	G4RM	75	↓	108	2x12.5+2x25	6	200	BMR4		125
8561403100700	G4RM	100	↓	144	4x25	4	250	BMR4		145
8561403125700	G6E	125	↓	180	25+2x50	5	315	HPR6	🛠	200
8561403150700	G6E	150	↓	216	25+50+75	6	400	HPR6	🛠	220
8561403175700	G6E	175	↓	252	25+3x50	7	400	HPR6	🛠	250
8561403200700	G6E	200	↓	288	25+2x50+75	8	500	HPR6	🛠	270
8561403225700	G6E	225	↓	324	25+50+2x75	9	500	HPR6	🛠	300
8561403250700	G6E	250	↓	360	2x25+50+2x75	10	630	HPR6	🛠	320
8561403275700	G6E	275	↓	397	25+2x50+2x75	11	630	HPR6	🛠	340
8561403300700	G6E	300	↓	432	25+50+3x75	12	800	HPR6	🛠	360
8561403350700	G8E	350	↑	504	50+4x75	9	800	HPR6	🛠	390
8561403375700	G8E	375	↑	541	25+50+4x75	15	800	HPR6	🛠	410
8561403400700	G8E (II)	400	↑	576	2x50+4x75	14	1000	HPR6	🛠	550
8561403450700	G8E (II)	450	↑	648	25+50+5x75	18	1000	HPR12	🛠	600
8561403500700	G8E (II)	500	↑	720	50+6x75	13	1250	HPR12	🛠	650
8561403550700	G8E (II)	550	↑	792	2x50+6x75	19	1250	HPR12	🛠	700
8561403600700	G8E (II)	600	↑	864	8x75	8	1600	HPR12	🛠	750
8561403650700	G8E (II)	650	↑	936	50+6x75+150	16	800+630	HPR12	🛠	800
8561403750700	G8E (II)	750	↑	1080	6x75+2x150	10	800+800	HPR12	🛠	850
8561403825700	G8E (III)	825	↑	1191	5x75+3x150	11	800+1000	HPR12	🛠	1000
8561403900700	G8E (III)	900	↑	1299	4x75+4x150	12	800+1250	HPR12	🛠	1050
8561403975700	G8E (III)	975	↑	1407	3X75+5X150	13	1000+1250	HPR12	🛠	1100
8561404105700	G8E (III)	1050	↑	1516	2x75+6x150	14	800+1600	HPR12	🛠	1150

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