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/6

Automatic Power Factor Correction with Tuning reactors



The **AAR/6** series are suitable for three-phase networks with an operating voltage of **400 Vac** and **very high harmonic current content** with values that do not comply with EN50160 (wire drawing, chemical-pharmaceutical or oil industries. Heavy Duty capacitors with double elements and increased thickness allow use even in extremely harsh working conditions

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
* Up to 150% for non-continuous use

THD(U)max. = 10%. in the grid

p = 7% (189Hz)

STANDARD CONFIGURATIONS

Code	Type	Qn (kvar)	Cable entry	In (A)	bank power (kvar)	Steps (n)	Disconnector (A)	Controller (type)	CCS	Weight (kg)
855140310005R	G6E	100	↓	144	2x25+50	4	250	HPR6	🖧	170
855140312505R	G6E	125	↓	180	25+2x50	5	315	HPR6	🖧	190
855140315005R	G6E	150	↓	216	2x25+2x50	6	400	HPR6	🖧	210
855140317505R	G6E	175	↓	252	25+3x50	7	400	HPR6	🖧	230
855140320005R	G6E	200	↓	288	4x50	4	500	HPR6	🖧	260
855140322505R	G8E	225	↑	324	25+4x50	9	500	HPR6	🖧	340
855140325005R	G8E	250	↑	360	5x50	5	630	HPR6	🖧	370
855140330005R	G8E(II)	300	↑	432	6X50	6	800	HPR6	🖧	480
855140335005R	G8E(II)	350	↑	504	5x50+100	7	800	HPR6	🖧	540
855140340005R	G8E(II)	400	↑	576	4x50+2x100	8	1000	HPR6	🖧	600
855140345005R	G8E(II)	450	↑	648	3x50+3x100	9	1000	HPR6	🖧	660
855140350005R	G8E(II)	500	↑	720	2x50+4x100	10	1250	HPR6	🖧	720
855140355005R	G8E(III)	550	↑	792	50+5x100	11	1250	HPR6	🖧	860
855140360005R	G8E(III)	600	↑	864	4x50+4x100	12	1600	HPR12	🖧	890
855140365005R	G8E(III)	650	↑	936	3x50+5x100	13	1600	HPR12	🖧	920
855140370005R	G8E(III)	700	↑	1010	2x50+6x100	14	1600	HPR12	🖧	970
855140375005R	G8E(IV)	750	↑	1080	3x50+4x100+200	15	1000+1000	HPR12	🖧	1080
855140380005R	G8E(IV)	800	↑	1190	2x50+5x100+200	16	1000+1000	HPR12	🖧	1130
855140385005R	G8E(IV)	850	↑	1227	3x50+3x100+2x200	17	1000+1000	HPR12	🖧	1180
855140390005R	G8E(IV)	900	↑	1299	2x50+4x100+2x200	18	1000+1000	HPR12	🖧	1230
855140410005R	G8E(IV)	1000	↑	1445	2x50+3x100+3x200	20	1250+1250	HPR12	🖧	1320

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