AAR/600

Automatic P.F.C. equipment with Detuning Reactors

PERFORMANCE DATA

Rated voltage	**400 Vac** (others on request)
Rated frequency	**50 Hz** (60 Hz on request)
Insulation voltage	690 Vac
auxiliary voltage	230 Vac (110 Vac on request)
Overvoltage	1,1 Un (rated voltage)
Temperature range	-5 / +40 °C
Impulse withstand	8 kV

AAR/600 series equipment are particularly suitable for three-phase networks with **high 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.

HARMONIC CONTENT

THD(I)max. = 100%	on the network
THD(U)max. = 6%	on the network
p = 7%	

TECHNICAL DATA

Enclosures	Made of sheet steel, protected against corrosion by phosphating and epoxy powder coating. RAL 7032 colour (others on request). Degree of protection: external panel IP 31 (others on request); internal panel IP 20 at the input of power cables (IP 20 with open doors on request).
Installation	Indoor installation, in a well ventilated position away from heat sources.
Ventilation	Forced.
Switch isolator	Tri-polar under-load type with door lock.
Wiring	The internal connection cables are FS17-450 / 750V type, flame retardant and with very low fumes 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.
3-pole contactors	Each battery is switched on / off by a three-pole contactor (Class AC6-b) to offer high reliability.
Fuses	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).
Capacitors	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. • rated voltage: 500 Vac (maximum voltage 550 Vac) • overvoltage: 1.1 x A (8h / 24h) • current overload: 1.3 x In • capacity tolerance: -5% / + 10% • losses due to dissipation: ≤0.4 W / kvar • temperature category: -25 / D
Detuning reactors	Tuning frequency: 189 Hz (p = 7%) Power losses: 6 W / kvar (AVG) Max. Harmonic distortion of the voltage allowed on the networks is: THDU = 6% (189 Hz).
Controller	• type of measurement: varmetric. • amperometric signal: by means of an amperometric transformer with secondary 5A, class 1 - 5VA (by the user) • amperometric signal sensitivity: 2.5% for BMR series, 0.3% for HPR series • standard capacitors on / off times: 25 "÷ 30" (others on request)

QUALITY AND TESTING

Regulations	Capacitors: IEC/EN 60831-1 / 2 certified by IMQ (V1927); Equipment: IEC/EN 61439-1 / 2, IEC/EN 61921.
European directives	Low voltage: 2014/35/CE; Electromagnetic compatibility: 2014/30/CE.

COMAR Condensatori

Testing 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

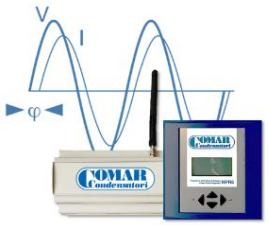
General notes

- 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 400 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)

The symbol indicates that CCS, the remote monitoring system, is pre-installed on the P.F.C. equipment. For any specific information, and to find out the advantages of the Cloud Control System service, refer to the appropriate brochure available on www.comarcond.com or directly on request.



Table

THD(I)max. = 100% THD(U)max. = 6% p = 7%

Code	Type	Qn	Cable entry	In	Banks size								Steps	Switch isolator	Controller	CCS	Weight
		(kvar)		(A)	(kvar)								(n)	(A)	(type)		(kg)
8551403100600	G6E	100	↓	144	25	25	50						4	200	HPR6		180
8551403125600	G6E	125	↓	180	25	50	50						5	315	HPR6		210
8551403150600	G6E	150	↓	216	25	50	75						6	400	HPR6		230
8551403175600	G6E	175	↓	252	25	50	50	50					7	400	HPR6		260
8551403200600	G6E	200	↓	288	25	50	50	75					8	500	HPR6		280
8551403225600	G6E	225	↓	324	25	50	75	75					9	500	HPR6		315
8551403250600	G6E	250	↓	360	25	25	50	75	75				10	630	HPR6		355
8551403275600	G8E	275	↑	397	25	50	50	75	75				11	630	HPR6		370
8551403300600	G8E	300	↑	432	25	50	75	75	75				12	800	HPR6		380
8551403350600	G8E	350	↑	504	50	75	75	75	75				9	800	HPR6		400
8551403375600	G8E (II)	375	↑	541	25	50	75	75	75	75			15	800	HPR6		520
8551403400600	G8E (II)	400	↑	576	50	50	75	75	75	75			14	1000	HPR6		570
8551403450600	G8E (II)	450	↑	648	25	50	75	75	75	75	75		18	1000	HPR12		620
8551403500600	G8E (II)	500	↑	720	50	75	75	75	75	75	75		13	1250	HPR12		670
8551403550600	G8E (II)	550	↑	792	50	50	75	75	75	75	75	75	19	1250	HPR12		720
8551403600600	G8E (II)	600	↑	864	75	75	75	75	75	75	75	75	8	1250	HPR12		770
8551403650600	G8E (II)	650	↑	936	50	75	75	75	75	75	75	150	16	800+630	HPR12		820
8551403750600	G8E (II)	750	↑	1080	75	75	75	75	75	75	150	150	10	800+800	HPR12		880
8551403825600	G8E (III)	825	↑	1191	75	75	75	75	75	150	150	150	11	800+1000	HPR12		1040
8551403900600	G8E (III)	900	↑	1299	75	75	75	75	150	150	150	150	12	800+1250	HPR12		1090
8551403975600	G8E (III)	975	↑	1407	75	75	75	150	150	150	150	150	13	800+1250	HPR12		1140
8551404100600	G8E (III)	1050	↑	1516	75	75	150	150	150	150	150	150	14	800+1600	HPR12		1190

Other solutions are available on request.