B35-ST

Automatic P.F.C. equipment with Static Insertion

PERFORMANCE DATA

Rated voltage	**415 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

The entire **B35-ST** series is equipped with "zero-crossing" static relays (thyristors), and it has been designed to improve the performance of traditional equipment, such as: increasing the life of the capacitors banks, decreasing the time response of the equipment to follow rapid changes in loads with a **medium-low harmonic distortion**.

HARMONIC CONTENT (in the absence of resonance)

THD(I)max. = 25%	on the network
THD(Ic)max. = 70%	on the capacitors

TECHNICAL DATA

Enclosures	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 (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 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.
Insertion	Static, based on the use of thyristors, controlled by a microprocessor such that the switching on of the electronic components occurs when the potential difference between the network and the capacitors is zero. In this way dangerous transients are avoided, with negative effects on the network, even when the capacitors are partially charged. The disconnection takes place at zero current (that is, shutdown occurs at the natural zero current passage of the static power factor correction) The microprocessor control ensures for the static system a maximum delay for the insertion of the capacitor banks of 200 ms.
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: 440 Vac (maximum voltage 500 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
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 • switching on / off times of the single capacitor bank: 1 "

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.
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

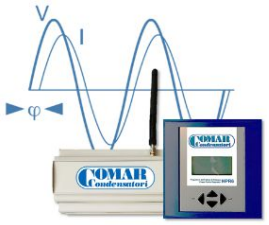
General notes

- 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 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)

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. = 25% THD(Ic)max. = 70%

Code	Type	Qn	Cable entry	In	Banks size								Steps	Switch isolator	Controller	CCS	Weight
		(kvar)		(A)	(kvar)								(n)	(A)	(type)		(kg)
8531413175200	G8E	175	↑	243	25	50	50	50					7	400	HPR6		195
8531413200200	G8E	200	↑	278	25	25	50	100					8	400	HPR6		200
8531413225200	G8E	225	↑	313	25	50	50	100					9	500	HPR6		210
8531413250200	G8E	250	↑	348	25	50	75	100					10	500	HPR6		220
8531413300200	G8E	300	↑	417	25	50	75	75	75				12	630	HPR6		240
8531413350200	G8E	350	↑	487	50	75	75	75	75				9	800	HPR6		260
8531413400200	G9E	400	↑	556	50	50	75	75	75	75			14	800	HPR6		300
8531413450200	G9E	450	↑	626	50	50	50	75	75	150			16	1000	HPR6		320
8531413500200	G9E	500	↑	696	50	75	75	75	75	150			13	1000	HPR6		340
8531413600200	G9E	600	↑	836	75	75	75	75	75	75	75	75	8	1250	HPR12		360
8531413700200	G9E	750	↑	1045	75	75	75	75	75	75	150	150	10	1600	HPR12		380
8531413800200	G9E (II)	825	↑	1149	75	75	75	75	75	150	150	150	11	800+1000	HPR12		550
8531413900200	G9E (II)	900	↑	1254	75	75	75	75	150	150	150	150	12	1000+1000	HPR12		580
8531414100200	G9E (II)	1050	↑	1462	75	75	150	150	150	150	150	150	14	1000+1000	HPR12		610

All automatic P.F.C.series, with ot without blocking reactors, can be realized with static insertion.
Other solutions are available on request