

PFC COMPONENTS



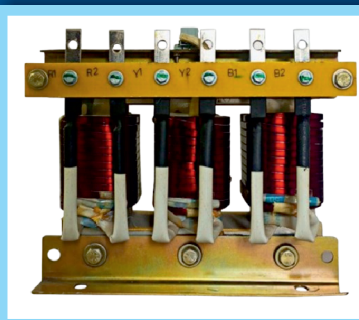
APP CAPACITORS

Type	APP.
Material	Film + Foil (AL).
Application	Power factor improvement & voltage profile improvement.
Voltage	230V to 17kV, 50 / 60Hz.
Range	5 to 800kVAR.
Protection	Above 70kVAR internal fuse & external fuse.
Temp. Category	-10° / C.
Operation Duty	Outdoor / indoor.
Cooling	NPCB oil cooled.
Losses	Less than 0.5%watts per kVAR.
Application	Steel, Textile, welding, Foundry, Sugar industries.
Reference standard	IS-13585, IS-13925 & IEC-60931,IEC-60871.



THYRISTOR SWITCH MODULE :- UCL-TSM

System voltage (RMS)	440-525V.
Vsystem frequency (Hz)	50 ± 5%Hz.
Operating temperature range	0 to 40°C (Non-condensing).
Semiconductor devices	SCR with 1800PIV for 440V & 2200PIV for 525V.
Range	12.5kVAR, 25kVAR, 50kVAR, 75kVAR, 100kVAR.
UCL-TSM configuration	3P3W.
Capacitor switching application	Yes
Thermal Losses	<2%
Colour Shed	Siemens Gray.
Protection	dv/dt protection, Over temperature protection.
Control Supply	12/24 Vdc.
Cooling	Above 25kVAR forced cooling.
Switching Topology	Differential zero voltage switching topology, less inrush current.
Response time	Upto 1 Sec.
Indications	Step on & Over temperature trip.
Potential Free Contacts	Potential free NO, NC Relay Contacts.



SERIES REACTORS

Type	Iron Core Tuned / Detuned Series reactor.
Material	Copper / Aluminium.
Application	Limit capacitor switching Inrush, Avoid Harmonic amplification & parallel resonance.
Voltage	440-750V.
Tunning Factor	0.2%, 7%, 14%, 5.67%.
Linearity	Default 180% (As on request 200 %).
Temp. Catagory	F/H class.
Protection	Inbuilt Thermistor.
Cooling	Natural cooled.
kVAR rating	5kVAR to 100kVAR.
Noise level	Less than 60dB.
Reference standard	IS-5553 & IEC-60076.



AUTOMATIC POWER FACTOR CONTROLLER:

Controller	Micro controller based.
Control method	Auto sensing.
Correction Time	1 sec to 1200 Sec settable.
Steps	8 Steps / 16 Steps.
Utilization counter	Available.
APFC Modes	Freeze/Stop/Auto.
Display	LCD Display.
Input Voltage	180V-300V Single Phase.
Input Sensing	Main 1CT / 3CT & PT (HT/ LT).
CT ratio	Programmable upto 9999.
PF programmable	0.60 lag/lead.
Protections	Over voltage / Over current / Over Harmonic.
Communication	RS-485 port (optional).
Switching Alogorithum	Best Fit. / Fast for Thyristor switching.
Display Parameters	Voltage, Current, kW, kVAR (lag), kVAR (lead), harmonics current upto 15 th only odd harmonics.



AUTOMATIC POWER FACTOR CONTROLLER: (Uni PF-HT - WSON-6001)

Controller	Micro-controller & DSP based, True RMS capacitor banks safely and efficiently.
Operating Modes	PPC Mode, Auto Mode, PPC + Auto Mode.
Bank Switching	10 to 999 Sec.(Programmable) Any Stage can be set as Permanently On / Permanently Off / Auto.
Number Of Steps	6 Steps.
Number Of Inputs	8 Digital Inputs for Breaker status.
Protection & Alarms	Under Voltage, Over Voltage, Reverse CT Connection.
Display	16x2 LCD Display.
Operating Voltage	170V-270Vac, 50Hz & 110/220VDC.
Input Sensing	3 Load CTs + 3 Capacitor CTs (1A/5A Factory Set) & PT Secondary 3-Phase 4-Wire (HT/ LT).
CT ratio	1 - 1000 (Programmable).
Communication	MODBUS with TCP/IP (Ethernet port – RJ 45).
Real Time Clock	In-built Real Time Clock with battery backup.
Display Parameters	Power Factor-3 ph, Phase / Line Voltages-3 Ph, Line Currents-3ph, KW, KVAs, KVArS (Lag/Lead), Frequency, Stages On/Off status, Breaker on/off input Status, Control Mode, PPC KVAR, IP address, Time & date, Output KVAR.
Operating Temperature Maximum Humidity	0 to 55° C & 95 % RH (Non-condensing).
Dimension	144mm x 144mm x 155 mm.
Weight	1300 grams.



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