

Terms and condition of APFC controller for dispatch to any client.

1. Operating Voltage and Temperature Limits for APFC controller as well as warranty terms.

The APFC controller is designed to operate within the following maximum operating limits:

- **Maximum operating voltage: 280 VAC for L-N and 460V(L-L)**
- **Maximum operating temperature: 70°C**

The controller must be operated within these specified limits and in accordance with the manufacturer's installation and operating instructions.

2. 12 Months Warranty Exclusions

The warranty shall not cover any damage, malfunction, or failure or burning of the APFC controller resulting from:

1. Supply voltage exceeding 280 VAC.
2. Operating temperature exceeding 70°C.
3. Voltage surges, spikes, transients, lightning, or other electrical disturbances.
4. Improper installation, incorrect wiring, loose connections, or improper earthing.
5. External electrical faults, short circuits, or other abnormal operating conditions.
6. Unauthorized repair, modification, mishandling, or improper use of the controller.
7. **Warranty Validity Subject to Timely Payment**
 - The warranty shall be valid only if payment for the supplied APFC controllers is made in full within 30 days from the date of dispatch. If any payment remains outstanding beyond 30 days from the date of dispatch, the warranty shall become invalid for the affected supply..
 - Aaradhya Electronics Pvt. Ltd. shall not be liable for warranty claims during any period in which the payment terms remain unfulfilled.

APFC Controller – Damage Disclaimer and Limitation of Liability

An APFC controller may fail or get damaged due to the following reasons:

1. **Excessive Supply Voltage:** Supply voltage exceeding 280 VAC (Line-to-Neutral) or 460 VAC (Line-to-Line).
2. **Excessive Operating Temperature:** Operating temperature exceeding 70°C.
3. **Electrical Disturbances:** Voltage surges, spikes, transients, lightning, or other electrical disturbances.
4. **Improper Installation:** Incorrect wiring, loose connections, improper installation, or inadequate earthing.
5. **External Electrical Faults:** Short circuits, abnormal supply conditions, or other external electrical faults.
6. **Unauthorized Handling or Modification:** Unauthorized repairs, modifications, mishandling, negligence, or improper use of the controller.

Limitation of Liability: If the APFC controller fails, burns out, or sustains damage due to any of the above-mentioned conditions, or any other external electrical or environmental factors, the company Aaradhya Electronics Pvt.Ltd. shall not be held liable for such damage or any consequential losses arising therefrom. This includes, to the extent permitted by applicable law, damage to associated equipment, production losses, downtime, and other indirect or consequential damages.

Any repair or replacement of the such burned controller damaged under such circumstances shall be chargeable and shall not be covered under the standard warranty.

The customer shall ensure that the APFC controller is installed, operated, and maintained in accordance with the recommended operating conditions and installation guidelines.

Important: If the controller is damaged /burned due to voltage or temperature limits or any environmental factors, such damage shall be excluded from the warranty. Aaradhya Electronics Pvt. Ltd. shall not be responsible for consequential losses, damage to connected equipment, production losses, or other indirect damages arising from such conditions, subject to applicable law.

3. Inspection of Failed Controllers

In the event of a controller failure, the customer shall return the failed controller to Aaradhya Electronics Pvt. Ltd. for technical inspection.

Warranty of 12 months coverage shall be determined based on the inspection findings and the applicable warranty terms. Where as the failure/burning of APFC controller due to any reason/cause may be due to overvoltage, excessive temperature, improper installation, or any other excluded condition, the repair or replacement shall be chargeable to the customer. Aaradhya Electronics Pvt. Ltd. shall not be responsible for consequential losses, damage to connected equipment, production losses, or other indirect damages arising from such conditions The customer shall not assume that every controller failure automatically qualifies for free replacement under warranty.

4. Payment Terms

Payment Terms and Interest on Delayed Payment

Payment for the supplied APFC controllers shall be made within **30 days from the date of dispatch**. In the event of delayed payment beyond the stipulated 30-day period, **interest at the rate of 5% per month shall be**

applicable on the outstanding amount for each month of delay, subject to applicable law.

For clarity:

- **1 month of delay:** 5% interest on the outstanding amount.
- **2 months of delay:** 10% interest on the outstanding amount.
- **3 months of delay:** 15% interest on the outstanding amount.

The interest shall accrue for each successive month of delay until the outstanding payment is received in full.

6. Limitation of Liability

Aaradhya Electronics Pvt. Ltd. shall not be liable for damage indirect or consequential losses to end customer.

C. Define the warranty period and start date

The warranty period shall be **12 months from the date of dispatch of the material.**

Inspection, Complaint Reporting and Acceptance of Material

The customer shall inspect the supplied APFC controllers and report any defects, malfunctions, or discrepancies in writing to Aaradhya Electronics Pvt. Ltd. within **15 days from the date of dispatch.**

If no written complaint is received within the stipulated 15-day period, the material shall be deemed accepted and considered satisfactory with respect to its condition and performance upon receipt, subject to applicable law and the agreed warranty terms.

Any complaint regarding defects or malfunctions that were reasonably identifiable during the initial inspection and testing but were not reported within the stipulated 15-day period shall not be accepted as a claim for rejection or non-acceptance of the supplied material.

APFC panel commissioning instructions

Before panel is powered up for the first time:

1.Panel Wiring Check

It is recommended that all connections in the panel are tightened properly and there are no loose connections. Also ensure that the wiring is done as per the wiring diagram. It is recommended that use the end sealing lugs for all the connections.

2.Power Wiring Check

Ensure that the power cables are connected properly from the Panel I/C to the feeder I/C or the transformer bushings. The connection has to be after the Load Feed back CT looking from the Transformer side.

Ensure that the Bus Bars and/or Lugs are clean and free of Dust, Corrosion or Oxidation on the contact sides so that good electrical connection is maintained. The surface area should be flat so as to get maximum contact area.

3.Load Feed Back CT connection

Ensure that the load feed back CT connections are done & tightened properly. Confirm that correct phase CT is connected with the correct phase input terminals.

CT connections to be done carefully so as to ensure that the wire does not get open and there is no loose connection.

Loose connection or open CT secondary can result in very high voltages getting developed in the circuit which can damage the CT and also produce high levels of noise in the system.

After the panel is powered up:

1. Remove the fuses/switch-off MCBs/MCCBs which are in series with every capacitor bank. Connect supply to the PF Controller. Keep the load feedback in shorted condition.
2. Turn ON the supply to the panel and set date/time & various other parameters as per the panel configuration. It is important to understand the meaning of every parameter from the instructions given before and then put the appropriate values in them. Wrong values entered can give the wrong performance of the panel.

3. Once the parameterization is complete, put the PF Controller in Manual mode to check if every bank command is being transmitted to the Contactor switch. The corresponding output should be checked for physical turn ON / OFF of the Contactor.
4. Once all the Capacitor banks are seen to be getting the correct commands, switch off the supply to the panel and replace all the fuses (or turn on MCBs/MCCBs if they are provided instead of fuses). Turn on the panel.
5. Put PF Controller back in Manual mode and turn ON/OFF the individual steps. Use Tong tester (ac current measurement) to check that current in all three phase of the corresponding bank are OK. In case any bank is not giving the desired current, check for capacitor bank healthiness or power circuits.
6. Keep all the banks in off mode. Remove the short of Load feedback CT. In case KW value is seen as –ve for any phase, CT is with wrong polarity. change CT polarity(If Auto Synchronization is enable then no need to do this step).
7. Now turn ON the capacitor banks one by one and observe that capacitor current increases as per the rating of the steps on capacitor Current display. Turn ON all the Capacitor banks to see that almost full rated current flows through the capacitors

Observe panel performance for about 1hrs after commissioning.