

PFC power factor controllers

Automatic power factor correction controller series PFC 6 DA, 8 DB, 12 DB

Application - Power factor control relays measure $\cos \varphi$ of a supply system and control the automatic connection and disconnection of compensation capacitors according to desired $\cos \varphi$. Microprocessor controlled power factor controller with measurement system.

Type	Rated voltage Un	Code No.	Adjustment limits	In (A)	Number of steps	Dimensions (mm)
PFC - 6 DA	400 V (+15%; -10%)	004656570	0,85 ind.-0,95 cap.	5 A	≤ 6	96x96x74
PFC - 8 DB	400 V (+15%; -10%)	004656572	0,85 ind.-0,95 cap.	5 A	≤ 8	149x149x60
PFC - 12 DB	400 V (+15%; -10%)	004656571	0,85 ind.-0,95 cap.	5 A	≤ 12	149x149x60

Technical data:

Supply voltage	230 - 415 VAC -15% +10% 50 or 60 Hz
Power consumption	model 96x96 - 4,5 VA model 144x144 - 4 VA
Rated current In	5 (A)
Current reading limits	0,125 ... 5,5A
Voltage reading limits	195 ... 460 VAC
Power factor adjusting	0.85 inductive ... 0.95 capacitive
Relay output limits	8A – 250VAC (AC1)
Maximum capacity the common contacts	10A
Maximum switching voltage	400VAC
Electrical contact life	20 x 10 ⁶ operations
Mechanical contact life	100 x 10 ³ operations
Standards	IEC 60255-5, IEC 60255-6, IEC 60068-2-61, IEC 60068-2-6, EN50081-1, EN50082-2
Operating temperature	-10 / +50 °C
Degree of protection	Front- IP41, Terminals - IP20



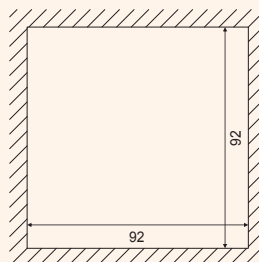
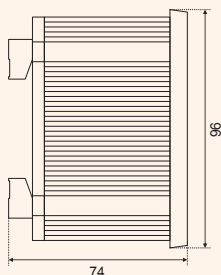
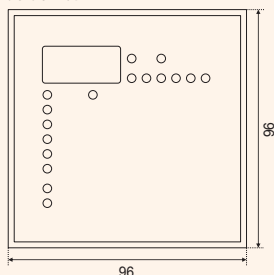
Description

- Auto recognized capacitor bank
- Anti-hunting function
- Fixed step programmable
- Function & alarm relay programmable
- Fan relay programmable
- RJ11 - TTL standard - serial interface
- Owner / modbus communication protocol
- Modular adapter TTL<>USB<>RS485 can be ordered separately, see ETIMETER chapter

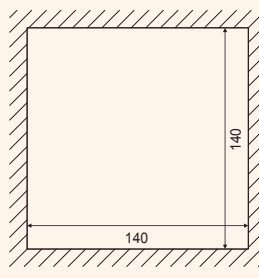
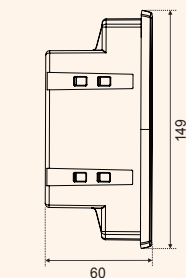
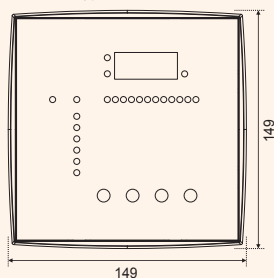
Measurements

- $\cos \varphi$ INDUCTIVE & CAPACITIVE
- phase to phase voltage & current
- $\cos \varphi$ desired
- total harmonic distortion
- ambient temperature
- dkVar - kVar needed to achieve the $\cos \varphi$ adjustment.

96x96 MODEL

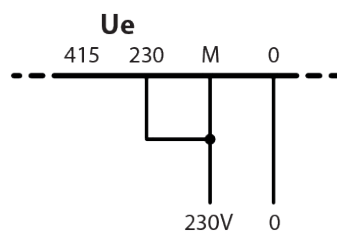


144x144 MODEL



Wiring diagrams of automatic PFC system

Connection -230V

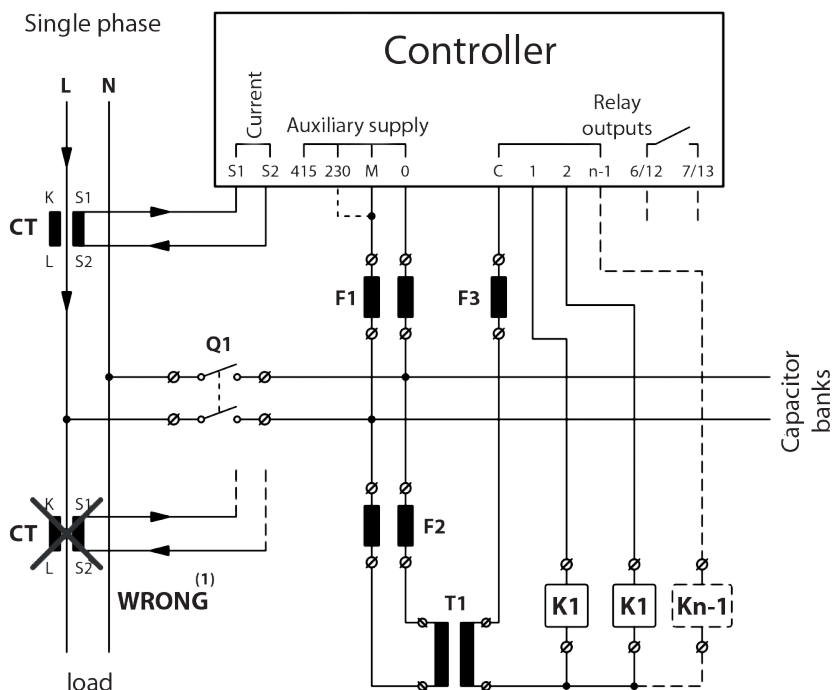
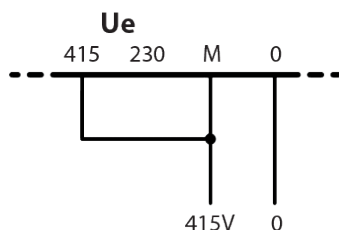


Isolation transformer T1 is used for:

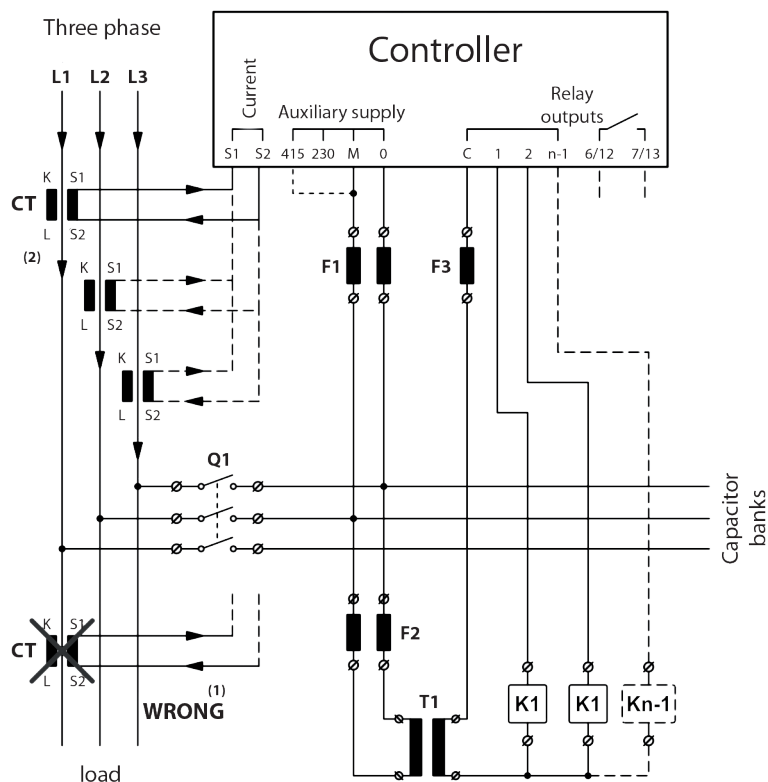
- Isolating the auxiliary circuit of the controller from the mains circuit.
- Coil voltage of the contactors are different from the mains voltage network

*Isolation transformer T1 and measuring transformer CT are not included

Connection 415V



Three phase



Note:

(1) It is important to connect current measuring transformer before load and capacitor banks, otherwise the controller will get wrong information, also polarity of transformer is very important (current direction).

(2) Correct installation of current measuring transformer