Intelligent T4-Series

Power Factor Controllers

TAIK ELECTRIC
Metering Solutions

Intelligent T4-Series

Power Factor Controllers

	T406D	T412D	T407M	T414M
Outputs	6 steps	12 steps	7 steps	14 steps
Controlling mode	Auto/Manual			
Switching mode	Circular/Stack		Circular/Stack/Auto	
C/K setting	Auto/Manual			
Delay time setting	1-999 sec.			
PF target range	0.7 ~ -0.7			
PF target mode	Cap. load or only Ind. load			
Input voltage	AC 220V/380V	AC 220V/380V	AC 90~550V	AC 90~550V
Frequency range	45 ~ 65 Hz			
IP Code (IEC 60529)	IP 52			
Auto-reversal correction in wrong phase sequence	✓	✓	✓	✓
THD measurement	✓	✓	✓	✓
Switching on one step of the capacitor for fixed compensation under light load conditions	✓	✓	✓	✓
Pass code protected	X	X	✓	✓
Inner setup for 1P or 3P system wiring	X	X	✓	✓
Display of V.A.W.Var.VA.Hz	X	X	✓	✓
RS 485 interface	X	X	✓	✓
High components set in THD% for the alarm energized	X	X	✓	✓
Individual order harmonic distortion measurement	X	X	✓	✓
Capacitance decrease (%) set for the alarm energized	X	X	✓	✓
Temp. range set for the alarm energized	X	X	✓	✓
Volt/Amp bargraph indication in %	X	X	✓	✓

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Benefits

- Precise measurement in each capacity of the connected in-line capacitors
- No need of the site engineer for actual measurement in the life expectancy of the used capacitors
- Combined applications of the power quality meter and the power factor controller for the most optimized controlling
- Intelligent self-detecting mode to target a smooth compensation process

Features/Functions

- Auto/Manual operating mode
- Measured parameters in A, V, VA, Watt, Var, PF, Hz, ℃, THD-V, THD-I
- Direct reading in each parameter represented by a clear symbol illuminated on LCD screen
- Independent alarm to be energized the FAN for the temp. cooling around the inner cabinet
- Bargraphic indication for A, V and Temp.
- Versatile switching modes for configuring an optimized PF target
- Auto-reversal correction in a wrong phase sequence
- Initially memorized parameters for the switched-on capacitors
- Actual operating memorized parameters for the switched-on capacitors
- Running-hour time of the switched-on capacitor
- Recording for a number of times of the switched-on capacitor
- Indication of the abnormal status events
- Built-in input temperature sensor
- THD-I/THD-V components in % set-up for switching off the capacitor
- Alarm set-up for the measured under/over-current/voltage in %
- Adjustable delay time set-up for switching-on/off the capacitor

Communication

Interface……RS 485
Protocol ……MODBUS, RTU
Baud rate ……1200 ~ 38400 programmable
Address ……1 ~ 255 programmable
Data format ……N.8.1, N.8.2, O.8.1, E.8.1
Parallel connection ……Up to 32 meters

Standards

IEC 60529	IEC 61000-3-3	IEC 61000-4-5
IEC 55011	IEC 61000-4-2	IEC 61000-4-6
IEC 61326-1	IEC 61000-4-3	IEC 61000-4-8
IEC 61000-3-2	IEC 61000-4-4	IEC 61000-4-11

Characteristics

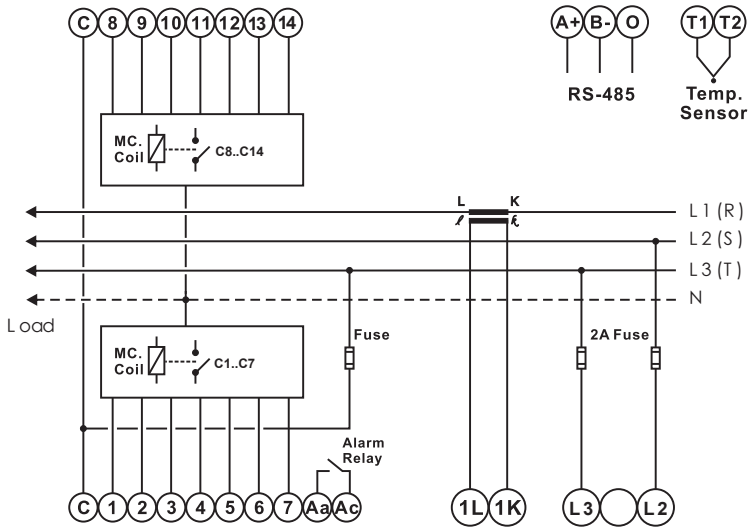
Input voltage: AC 90 ~ 550V (T407M,T414M)
AC 220V ±15% & AC 380V ±15%(T406D,T412D)
Power consumption:≦ 6VA (T407M),≦ 8VA (T414M)
≦ 4VA (T406D),≦ 6VA (T412D)
Input current: AC 0.05 ~ 5A
Current consumption: ≦0.5VA
Display screen: LCD white backlight, 12mm high
Display format:
PF.....3 digit
A, V, VA, Watt, Var, Hz, ℃.....4 digit
THD-I, THD-V, ...3 digit
Individual HD-I, HD-V.....3 digit
PF target set-up: Cap. 0.7 ~ Ind. 0.7; 0.97 as default value set from the factory
Accuracy:
V, A..... ±0.2% F.S.
VA, Watt, Var..... ±0.5% F.S.
PF..... ±0.02
Targeted PF mode: Set the desired value to 1.00 (PF) or set the targeted PF setting point mode
Relay energized delay time: 1 ~ 999 sec; 30 sec. as default value set from the factory
No. of the switching steps: 3 ~ 7 steps (T407M); 3 ~ 14 steps (T414M)
3 ~ 6 steps (T406D); 3 ~ 12 steps (T412D)
Over voltage range set-up: 110 ~ 130%; 120% as default value set from the factory
Operating temperature: 0 ~ 60℃
Storage temperature: -10 ~ 70℃
Relay contact capacity: Max. AC 380V 5A, typical at AC 220V 5A
Total harmonic distortion: Up to 31st
Harmonic analysis (THD& IHD): V, A
Dielectric strength: IEC 60688, AC 2KV, 60Hz, 1 min. between input/output/power
IP Enclosure: IP 52 (Front plate)
Terminal block: Plug-in terminal block
Weight: 0.55 kg (T406D), 0.6kg (T412D)
0.5 kg (T407M), 0.55kg (T414M)

Electromagnetic compatibility (EMC)

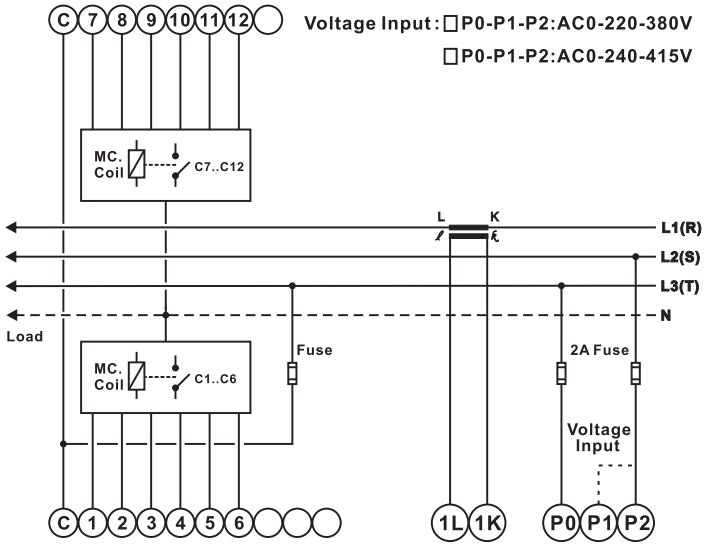
Electrostatic discharge ……IEC 61000-4-2
Electromagnetic field immunity ……IEC 61000-4-3
Electrical fast transient/burst immunity ……IEC 61000-4-4
Surge immunity ……IEC 61000-4-5
Immunity to conducted disturbances ……IEC 61000-4-6
Power frequency magnetic field immunity ……IEC 61000-4-8
Short interruptions and voltage variations immunity……IEC 61000-4-11
Harmonic current emissions……IEC 61000-3-2
Voltage changes, voltage fluctuations and flicker……IEC 61000-3-3

CONNECTIONS

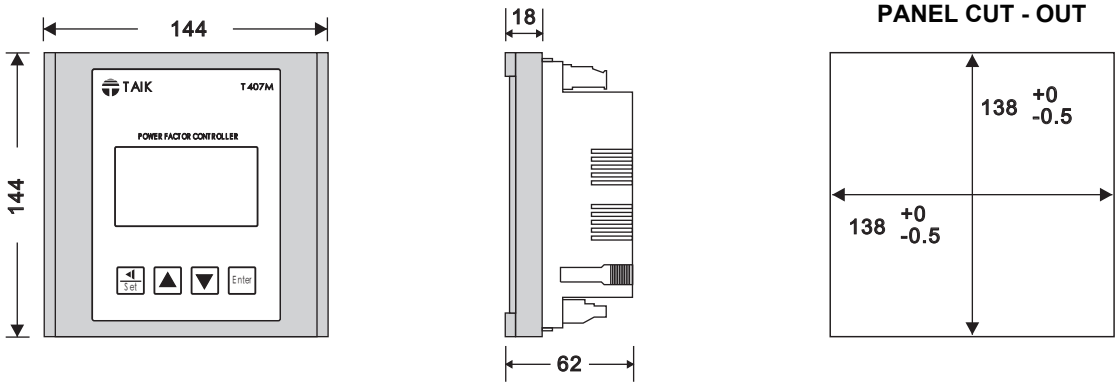
T407M/T414M



T406D/T412D



DIMENSIONS (Unit: mm)



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CE

ISO 9001: 2008 Certified
FM 40649