1.1.General Description

Tripconnect 1P type multi-function Protective Device is designed to measure single phase two wire AC active energy and used in overvoltage protection, under voltage protection and over-current protection . In case of over-voltage fault, under-voltage fault or over-current fault in line, this product can instantly power off the load to prevent electrical equipment from being burnt. The over-voltage, under-voltage and over-current values of this product can all be set up by yourself and can be adjusted on the basis of local practical condition .It is a long use-life product with the advantage of high stability , high over load capability , low power loss and wide working voltage range .

2.Product features

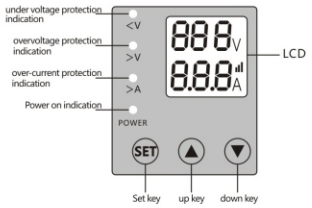
2.1 LCD display with backlight , can display total active energy (kWh) , real time current (A) , voltage(V) , active power (W) .
2.2 LCD display kWh (4 digital+1 decimal) , Bi-directional total active energy measurement ,reverse active energy measure in the total active energy
2.3 Product self-design has function of lighting protection
2.4 Overvoltage protection, under voltage protection and over-current protection can select auto-Reclosing mode or manual-Reclosing mode
2.5 In case of over-voltage fault, under-voltage fault or over current fault in single phase line, the product can power off the line and can automatically restore connecting the line over a time delay after voltage of the line is recovered to normal condition.
2.6 In case of transient over voltage in line, the product can protect the equipment from false operation.
2.7 In case that the line subjects to unstable voltage or sudden power-off and power-on due to loosened connection and other fault, the product will disconnect the line.
2.8 When fault voltage of the line reaches the peak, the product itself will not be damaged.
2.9 Under over-current protection mode , you also can select Malignant load protection (Pure Resistive Load limit) which is used for Apartments and Student Dormitories electric safety
2.10 You can select the circuit output cycle switch on/off mode
2.11 Led indication of overvoltage protection, under voltage protection and over-current protection
2.12 Diversified design for the protection , you can closed t any one of overvoltage protection, under voltage protection and over-current protection in any time

3.Specification and Technical Parameters

Input working voltage	85~300V
Overvoltage protection value	85-300V (default 270V)
Under voltage protection value	85-300V(default 170V)
Over current protection value	1-63A (default 40A)
	1-80A(default 60A special order)
Rated frequency	50/60Hz
Delay in switch on after power off	2-255V (default 2s)
Voltage circuit power consumption	≤0.5W
Current circuit power consumption	<1VA
Active energy display range	0~9999.9kWh
Voltage/current/active power accurate	+0.5%
Active energy accurate	+1% (IEC62053-21)
Operating temperature	-25℃~+70℃
Storage temperature	-40℃~+80℃
Relative humidity	≤85%
Altitude	≤2500m
Electromagnetic Environment	E2
Mechanical life	≥100000 cycles

4.LCD display and mode setting

4.1 Window sketch



4.2 Function mode and display code instruction

LCD Code	Parameters setting	default	Max.	Min.	Marking
dE	Function mode	1	7	1	
dE 1	Mode 1				overvoltage protection, under voltage protection and over-current protection automatic switch off/on
dE 2	Mode 2				overvoltage protection, under voltage protection and over-current protection automatic switch off/manual switch on
dE 3	Mode 3				Close function of overvoltage protection, under voltage protection and over-current protection ,always keep the output load switch off
dE 4	Mode 4				Close function of overvoltage protection, under voltage protection and over-current protection ,always keep the output load switch on
dE 5	Mode 5 , unit: second	5	999	1	Close function of overvoltage protection, under voltage protection and over-current protection , keep the output load switch on /off in cycle
dE 6	Mode 5 , unit: minute	5	999	1	
dE 7	Mode 5 , unit: hour	5	999	1	
b9	Backlight mode	2	2	1	Mode 1 means always lighting ，mode 2 means it will lighting last 30s after you push the buttorh . it will light out after 30s if no any operation with button
SS	Delay time in load switch on after input power on	2s	255s	2s	It means switch on the output load after how many times when product input power on again
Uo	Overvoltage protection value	270V	300V	85V	If the value exceed the range , the LCD will display off and closed this protection function
UoH	Overvoltage recovery value	265V	300V	85V	This value must be smaller than overvoltage protection value. or it will default set as overvoltage protection value -5V when you save
UL	Under voltage protection value	170V	300V	85V	If the value exceed the range , the LCD will display off and closed this protection function
ULH	Under voltage recovery value	175V	300V	85V	This value must be smaller than under voltage protection value. or it will default set as under voltage protection value +5V when you save
SU	overvoltage / under voltage fault judgment time	3s	60s	0.1s	It means the fault must be last how many times then it will make output load switch off when happen fault
Io	Over current protection value	40A	63A	1A	If the value exceed the range , the LCD will display off and closed this protection function
IC	Malignant load protection value(Pure Resistive Load limit)	0.5A	5A	0.5A	If the value exceed the range , the LCD will display off and closed this protection function
SI	Over current fault judgment time	3s	60s	0.1s	It means the fault must be last how many times then it will make output load switch off when happen fault
SH	Delay time setting for recovery load after output load switch off protection	60s	512s	1s	It means the product must wait for how many times then make the output switch on again after happen protection
oP	Delay time set for cycle switch(under function mode 5/6/7)	5	999	1	The time unit is different under mode5/6/7
CL	Delay time set for cycle switch on(under function mode 5/6/7)	5	999	1	The time unit is different under mode5/6/7
Er1 5	Last five records of protection reason				

Note 1: Under voltage protection value must be smaller than Overvoltage recovery value , or it will restore factory setting .
Note 2: Under the setting mode , mode 1 to 7 all can display the function mode , backlight mode , Delay time in load switch on after input power on , but the following display will difference according to the function mode .

4.3 Key operation instruction

4.3.1 Press and hold on the "set" key for 3s, entering into setting status and if go on hold the "set" key , it can select different function mode . then you can set different value by pressing the "up" key or "down" key to increase or decrease the detailed value. if you hold "up" key or "down" key at all , the value will increase or decrease at all .
4.3.2 Under the function mode , hold on the "set" key for 3s , it will save and exit to normal display status . if you have no any operation more than 30s , it will also exit to normal display status . if you press the he "up" key or "down" in the meantime ,all data will restore factory setting
4.3.4 Under the normal display status , you can display voltage/ current/active energy/active power step by step by pressing the "up" key or "down" . the LCD will display step by step automatically
4.3.5 Under the function mode 2 , you can press the he "up" key or "down" in the meantime to make the output load switch on after happen protection /switch off
4.3.6 Under the function mode 1 and 2 , it the press the "down" key to check the last five records of protection reason(Er1 ～ Er5) .under the display firstly layer is Er1 , the second layer number : 1 means the overvoltage protection, 2 means under voltage protection , 3 means over-current protection , 4 means

4.3.7 Under the function mode 3 and 4 , all protection function will be closed . the product is only as normal switch for keep the output load is switch on/off
4.3.8 Under the function mode 5/6/7 , all protection function will be closed . the product is only as normal switch for keep the output load is switch on/off in cycle .

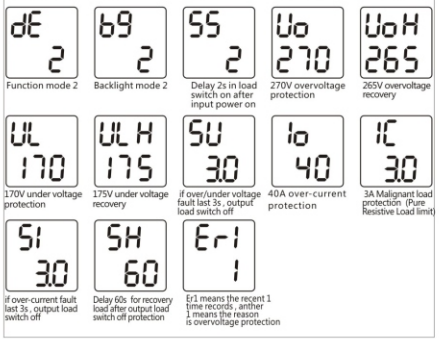
4.4 LCD display instruction

4.4.1 normal working status LCD display

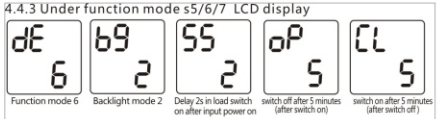


RMS voltage and current | Total active energy (kWh) | RMS active power (W)

4.4.2 Under function mode setting and value setting LCD display



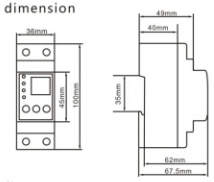
4.4.3 Under function mode s5/6/7 LCD display



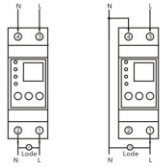
5.Usage

5.1The product can be installed on 35 mm din rail ,it should be install in the water proof box indoor or outdoor . The product should be install fully in accordance with connection diagram on the terminal cover, it is better to use copper as the leading wire for connection. All screws should be tightened.

5.2 installation dimension



5.3 Connection diagram



Wire connection must connect as sequence of the above 2 type diagram

6.Note

6.1 The input and output shall be corrected connected on the basis of the product marking. (Wherein, the load current shall be less than protective current of the product.)
6.2 Neutral line N cannot be improperly connected and shall be reliably wired; otherwise, the protector may not work normally.
6.3 Before powering on, please carefully check whether the wiring is correct, whether the load matches with protective current of the product and whether the binding screw is tightened; otherwise, the product may be damaged.
6.4 After powering on the product, don't touch any live part to avoid electric shock.
6.5 This product shall be combined with micro circuit breaker to play a role of short-circuit protection; otherwise, the product may not be able to realize load limit protection in case that input or load end of the product appears short circuit.
6.6 As the product has automatic reset function, after the product plays the role of protection and acts, it is necessary to remove the load (electric appliance) and check the circuit; otherwise the product will be frequently connected and disconnected to the load. Finally, the product or its circuit may be burnt due to frequent overload connection and disconnection for long time.

7.Warranty

Within 12 months from the day of selling and provided that users operate correctly according to the requirement of the user's manual , if the product doesn't reach its technical specification. It can be repaired or replaced in free f charge by the manufacturer .

Tripconnect 1P
12-01036
USER'S MANUAL