

Manual Instruction MT84SR

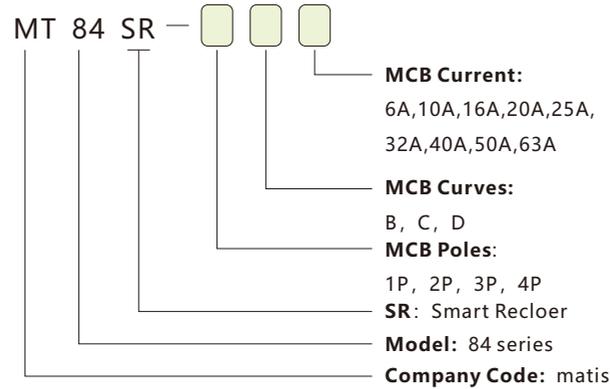


MT84SR Smart Reclosed MCB for voltage & current fault

Brief Introduction

MT84SR smart recloser for voltage and current fault, owns full protection and auto reclose for voltage and current fault, and automatically judge both of them that it will trip to protect for both over/under voltage, and will automatically auto reclose when voltage recovers to normal. It may also protect when overload or short circuit, and auto reclose when current fault disappeared.

Product Model



Front Panel Instruction

Voltage Indicator:

- Green: Normal
- Red: O/V fault
- Orange: U/V fault
- Red flash: O/V recover
- Orange flash: U/V recover

Power Supply & Voltage Detector

Mode Light Instruction

- Green: control+O/U V
- Red: control+O/U V + current fault reclose
- Red/green flash: maintenance

On/Off Status

Current Fault Status

- Red: Current fault
- White: Normal

Mode Change

Operation Handle

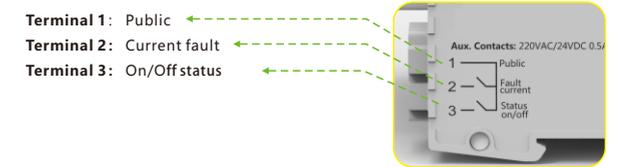
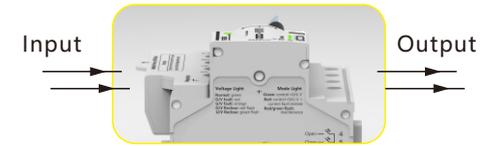
Safety Lock

Safety tips:

Safety lock must be pulled out and held with a lock (hole diameter:4mm) when maintenance or power off is required.

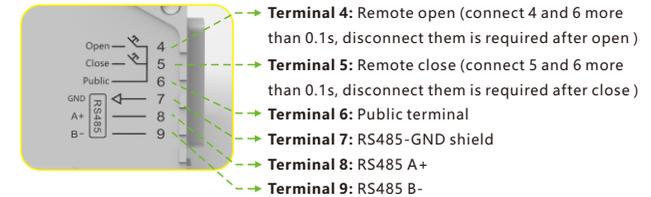


Input & Output Terminals



Instruction:

1. Device normal work when 2 and 3 disconnected with 1;
2. When current is fault, terminal 1 and 2 will connect and output;
3. When the handle is ON, terminal 1 and 3 will connect and output;



Instruction:

1. Terminal 4,5,6 are passive input terminals for remote control;
2. Terminal 7,8,9 are for RS485 control terminals communication;
3. Please refer attachment for our detailed RS485 communication protocol;

Operation Mode Review

- Mode 1:** ■ Green: Dry contacts control + Rs485 + O/U voltage protection (Note: mode 1 as factory default)
- Mode 2:** ■ Red/Green flash: Maintenance mode
- Mode 3:** ■ Red: Dry contacts control + Rs485 + O/U voltage protection + current fault auto reclose

Note: Press and hold the modes button 4 seconds to switch cycling 3 modes: press and hold the center of the mode button, the mode switch command is activated, the mode button indicator flashes continuously, press and hold for 4 seconds until the LED stops flashing, the indicator light changes color, that is, it has switched to the next mode. (Remarks: The mode can only be switched by the button) The mode has the memory capability, and the original mode is saved after power off and restart; the corresponding mode can be observed through the mode indicator light or read through Rs485 remotely.

Auto Reset Over/Under Voltage Protector

Item	Voltage	Time	Description
O/V1	$\geq 275\text{v}$	5s	O/V1 is activated when voltage $\geq 275\text{v}$, and device trip when O/V continues $\geq 5\text{s}$
O/V2	$\geq 300\text{v}$	1.5s	O/V2 is activated when voltage $\geq 300\text{v}$, and device trip when O/V continues $\geq 1.5\text{s}$
O/V3	$\geq 350\text{v}$	0.3s	O/V3 is activated when voltage $\geq 350\text{v}$, and device trip when O/V continues $\geq 0.3\text{s}$
O/V4	$\geq 400\text{v}$	0.1s	O/V4 is activated when voltage $\geq 400\text{v}$, and device trip when O/V continues $\geq 0.1\text{s}$
U/V1	$\leq 160\text{v}$	3s	U/V1 is activated when voltage $\leq 160\text{v}$, and device trip when U/V continues $\geq 3\text{s}$

Note: The normal voltage range for auto reset of overvoltage and undervoltage is based on the standard $\geq 0.85U_e$ and $\leq 1.1U_e$, the U_e value is 230v by default, which can be set through RS485. After the voltage returns to normal, the auto reset time delay of overvoltage and undervoltage is based on the standard $\geq 20\text{s}$ and $\leq 60\text{s}$, the device defaults to 30s, which can be set through Rs485 remotely.

$\geq 0.85U_e$ rated undervoltage auto reset at 195V
 $\leq 1.1U_e$ rated overvoltage auto reset at 255V

Auto Reset Current Fault

Note 1: This device can determine whether the device is manually opened or current fault tripped. If it is manually opened, the device will not auto reclose in any mode.

Tip 1: Current faults include short-circuit fault and overload fault
 Tip 2: Auto reset current fault is only activated when mode 3 red light on

Definition of Success reset	The device reclosed after current fault, the equipment keeps closed for more than 15 minutes, which is defined as a successful closing. After the closing is successful, the set reclose times of the equipment will automatically be cleared. When such current fault trip occurs again, the device will delay 5 seconds to auto reclose.
Process of current fault auto reset	Mode of current fault auto reclose: the device is connected to the power supply when the red light is on. 1) The device will first auto reclose, if device in open state, with a time delay of 5s; 2) The device will second auto reclose, if failed to reclose in first time, with a time delay of 20s; 3) The device will third auto reclose, if failed to reclose in second time as well, with a time delay of 60s; 4) The device will be in current fault lock state, with red/green flashing, if also failed to reclose the third time, and stops auto reclose again.
Remove current fault lock	After checking the fault manually, pull out and push in the lock back to the device, and manually close the handle once and such current fault lock will be removed

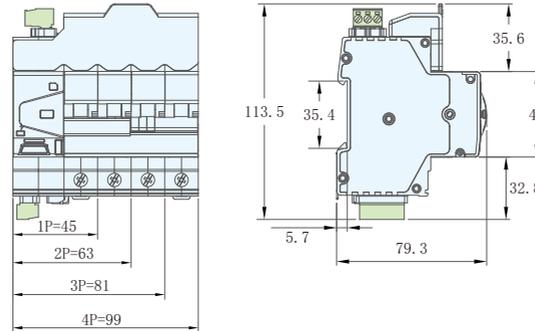
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Technical Data

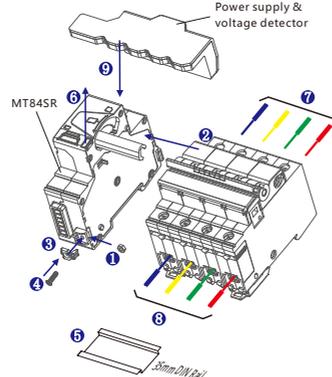
Poles	1P, 2P, 3P, 4P
Rated voltage	Single phase 230V~ /Three phase 400V~
Frequency	50/60Hz
Mechanical life	≥ 10000 trips
Action time	Open $\leq 0.2\text{s}$ Close $\leq 0.3\text{s}$ (Exclude time delay)
Time delay of reset current fault	1st: 5s; 2nd: 20s; 3rd: 60s; 4th: lock
Protection grade	IP20
Work temperature	$-25^{\circ}\text{C} \sim +55^{\circ}\text{C}$
Storage temperature	$-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$
Relative humidity	$\leq 95\%$
Installation	35mm DIN Rail Mounting
Direction of install	Vertical, horizontal, and surface mounting

Installation Parameter

Unit: mm



Instruction of Assembly and Installation



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- Assembly and installation process:**
 Step 1: Put the nut into the hole of MT845R
 Step 2: Align the circuit breaker with MT845R handle, and press flat
 Step 3: Insert yellow buckle into the position as shown in the figure
 Step 4: Screws the clips into device as shown in picture and tighten them
 Step 5: Snap the assembled equipment into the DIN rail
 Step 6: Pull out the safety lock handle and lock it
 Step 7: Screw the input cable on input terminal of MCB
Notice: N line should be on left terminal
 Step 8: Screw the output cable on output of the circuit breaker
 Step 9: Press the voltage detector module on input terminal of the device

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Test Process

- After all the wiring is installed, fully press the safety lock into the device, Check whether the output terminal of the circuit breaker is normal;
- Test the opening and closing functions of dry contact control respectively;
- After the test is completed, the device will enter the normal operating state.

Frequent Questions and Answers

1	Question	The device can not auto reclose
	Answer & Solution	Please make sure safety lock is fully pressed into the device, the device might be in lock state, it requires manually pulled out and push in the handle once;
2	Question	It is unable to send command of On/Off, no response
	Answer & Solution	Please make sure safety lock is fully pressed into the device, and make sure all lines are in good state
3	Question	The device failed to reclose
	Answer & Solution	Please check the circuit breaker or leakage output circuit for short circuit or overload fault

Quality Guarantee

Users who purchase this model of MT845R smart reclosed MCB with voltage and current fault are entitled to a 24-month warranty from the date of purchase. During the warranty period, if the quality of the product is a problem that affects normal use, you can enjoy free repair and replacement. In case of irreparable damage caused by improper use, falling, incorrect installation and wiring, it can be repaired or replaced with a fee during the warranty period. If you disassemble and modify it yourself, you will not be entitled to warranty service.

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