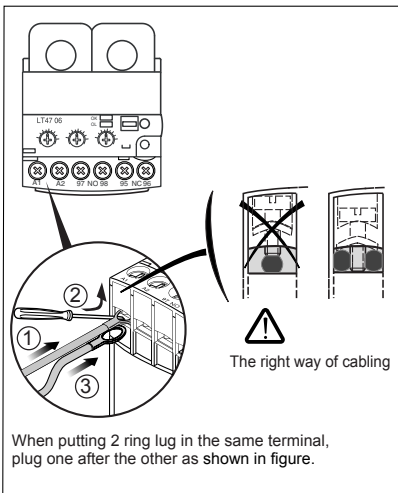


Current Transformer operated

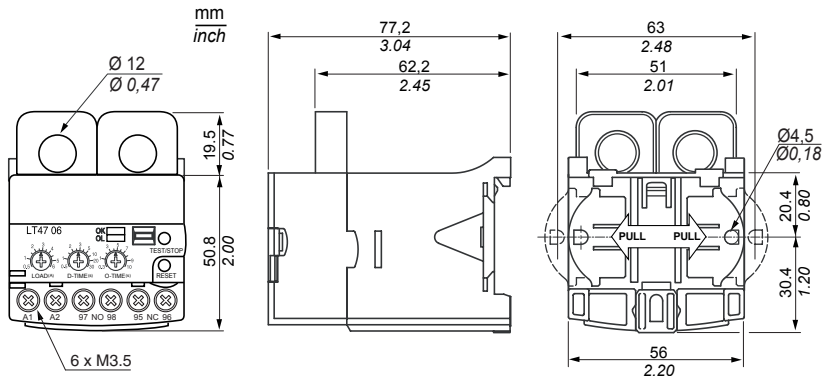
- Motor currents are monitored through two internal current transformers.
- CT hole size is 12 mm in diameter. Please don't allow excessive force on CTs.

Operating and Function

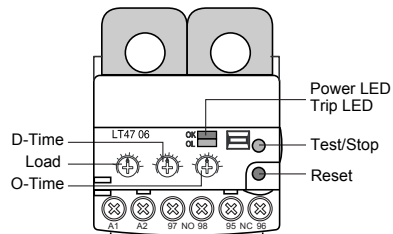
- LT47, solid state overload relay, compares motor current with preset load current threshold (LOAD).
- D-Time counts down and is only available for motor starting. During steady state, if motor current is greater than current setting (overloaded), LT47 switches its contacts after O-Time. (Refer to "Easy troubleshooting" and "Time based Function").
- For shear-pin (mechanical shock) protection, set O-Time knob to its minimum in order to trip in 0.2~0.3 sec.



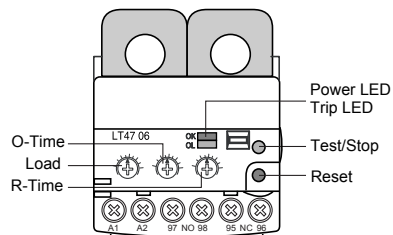
| Type | Relay setting range |
|---------|---------------------|
| LT 4706 | 0.5 - 6 A |
| LT 4730 | 3 - 30 A |
| LT 4760 | 5 - 60 A |



Standard type (Manual/Electrical Reset)



Auto Reset Type



Combined signals from red and green LEDs indicate motor status including trip cause.

| Condition | LED Signal | |
|--------------|---------------|-----------------------|
| | Green LED | Red LED |
| Power on | On [████████] | Off |
| Starting | [████████] | [████████] |
| Steady state | On [████████] | Off |
| Overloading | On [████████] | [████████] |
| Trip | Off | On [████████] |
| Off | On [████████] | Flickering [████████] |

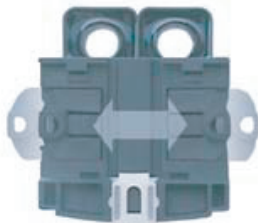
Notes / Caution for safety

- In case trip cause is unknown, please contact our company by e-mail or phone.
- Please read this manual and the following documents carefully, before setting, wiring, operating, repairing or checking. Use this product in a right way.
- This issue replaces all previous issues. Availability, errors and specifications subject to change without notice (warning).
- Please keep this manual till the product is disused.**
- The notes for safety are indicated in letters such as Warning and Caution as following.

WARNING !

These safety instructions are intended for all work on the LR97D. Neglecting these instructions can cause physical injury and death. All electrical installation and maintenance work on the LR97D should be carried out by qualified electricians. Comply with the following to avoid serious personal injury before installing, setting, wiring, operating, repairing, removing, servicing, or checking unit :

- Always lock the off power switch.
- Comply with safety and health standards.
- Use it with care to prevent injury.
- Tools must be in good condition and properly used.
- Wiring must be done according to typical wiring diagram.



Panel and 35mm DIN Rail

Setting Guide - Manual reset type

■ Machine which can be loaded to its full load during the setting

1. Adjust Load, D-Time and O-Time knobs to their maximum value. Then start motor.
2. Adjust D-Time knob to the known motor start-up time. If start-up time is unknown, use clamp current meter to find its value.
3. When motor reaches steady state, adjust Load knob counterclockwise until the red LED start to flicker. Then slowly adjust the Load knob clockwise until red LED stops flickering.
4. Adjust O-Time knob to the desired trip delay time.

■ Machine's load is unknown or load with high fluctuation.

1. Adjust load knob to motor's nominal current or just upper value.
2. Adjust D-Time to the calculated time which take into account the machine feature(Torque, Inertia)
3. Adjust O-Time to desired trip relay time.

Setting Guide - Auto reset type

■ Machine which can be loaded to its full load during the setting

1. Adjust Load and O-Time knobs to their maximum value. Then start motor. Adjust O-Time knob to a few seconds more than motor start-up time.
2. If start-up time is unknown, use clamp current meter to find its value.
3. When motor reaches steady state, adjust Load knob counterclockwise until the red LED start to flicker. Then slowly adjust the Load knob clockwise until red LED stops flickering.
4. Adjust R-Time knob to the desired auto-reset delay time(1~120sec).

■ Machine's load is unknown or load with high fluctuation.

1. Adjust load knob to motor's nominal current or just upper value.
2. Adjust O-Time to the calculated time which take into account the machine feature(Torque, Inertia)
3. Adjust R-Time to desired auto-reset delay time.

Reset

- Manual: Immediate reset by RESET button
- Electrical: Immediate reset by interrupting control power, (minimum 0,1s). Remote electrical reset.
- Auto: reset by preset R-Time, 1~120 s adjustable, Auto Reset type only.

Test / Stop Guide

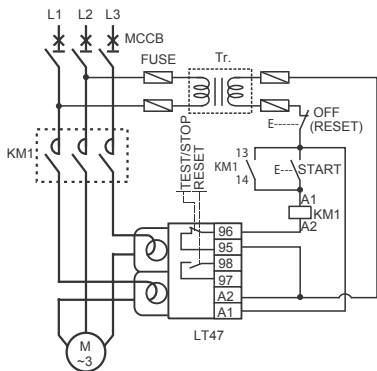
TEST Function available at no load.

- When LT47 is powered, keep Test button pushed for D-Time plus O-Time(Manual reset type) or O-Time(Auto reset type), till the internal relay switches its contact.
- Periodic test is recommended.

Stop Function while motor is running. Must be associated with 3-wire control circuit

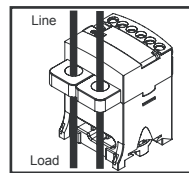
- The motor will be stopped immediately by pressing the TEST/STOP button. In this case, LT47 is automatically reset.

WIRING

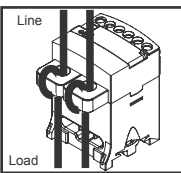


When motor current is less than minimum current setting (< 0.5A), looping conductors through CT holes can be used. The following table explains number of looping for low current setting.

| | No. of Loops | Time of Passing | Current Set. Range (A) |
|---------|--------------|-----------------|------------------------|
| LT4706 | 0 | 1 | 0.50 - 6.0 A |
| | 1 | 2 | 0.25 - 3.0 A |
| Looping | 2 | 3 | 0.17 - 2.0 A |
| | 3 | 4 | 0.12 - 1.5 A |
| Option | 4 | 5 | 0.10 - 1.2 A |



Straight-through-Wiring

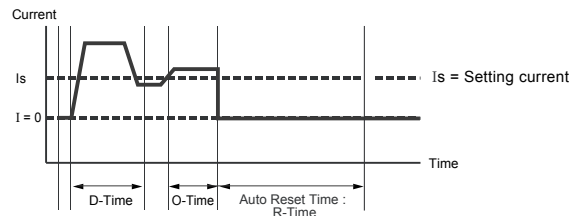


Looping Option (1-Loop)

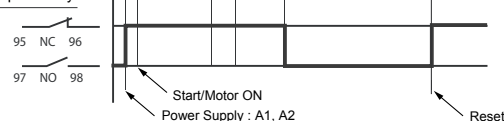
Caution

- LT47 may be influenced by the harmonics on the control power.
- The control power should be supplied via the isolated transformer.
- Output : Normally energized.

Adjustable Current Threshold (preset)



Output Relay



As shock relay utilisation, set O-Time at the minimum scale (tripping time: 0,2 ~ 0,3 s)