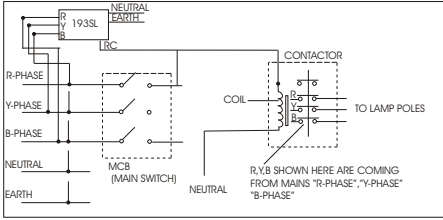


**CONNECTION DIAGRAM FOR
RELAY & CONTACTOR**



Trouble Shooting :

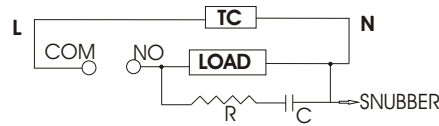
- 1) Sensor open indication : Display shows "Err".
- 2) Sensor reverse : If the RTD is not connected according to connection diagram. Then it will show erratic temperature
- 3) Not showing proper temp. : Loose connection on terminal or calibration problem.
- 4) Problem in relay operation -
Check connections as per wiring diagram given

**T193SL
STREET LIGHT CONTROLLER**

Features

- 1) Size: 193mm.x 193 mm
- 2) 24 Hours Real Time Clock
- 3) Twilight Adjustment up to 4 Hours
- 4) Delay to Twilight up to 8 hours
- 5) Date selection
- 6) Blackout Selection Actual time
- 7) Phase selection
- 8) Phase Activation Time
- 9) Battery Backup for a period of 2 years
- 10) Phase Manual 'ON' Switch
- 11) Three Phase indications LED

CONNECTION FOR LOAD



R=56 OHMS / 2 WATT.
C=0.1 MFD / 250 V AC
TC=TEMPERATURE CONTROLLER

**If load is inductive,
connect snubber across load**

Specifications

- 1) Operating voltage: 180 to 230 V AC
+/- 15% 50 Hz
- 2) Accuracy: Quartz Crystal
- 3) Display Time Real time
- 4) Relay Output: 5 Amp resistive



OPERATING MANUAL OF STREET LIGHT TIMER (T193SL).

DETAILS OF CONNECTIONS.

ON THE TOP THERE ARE TWO CONNECTORS, ONE IS FOR THREE PHASE CONNECTION & SECOND FOR COMMON OF ALL THREE PHASE RELAYS.

CONNECT "R-PHASE" TO "R", CONNECT "Y-PHASE" TO "Y" & CONNECT "B-PHASE" TO "B".CONNECT "NEUTRAL" TO "N" POINT & "EARTH" TO "E" POINT.

CONNECT "R-PHASE" LOAD TO "RR", "Y-PHASE" LOAD TO "RY" & "B-PHASE" LOAD TO "RB" POINT.

CHECK ALL THE CONNECTIONS & SWITCH ON THE MAINS SUPPLY.

NOW DISPLAY IS SHOWING REAL TIME IN (HH:MM).THREE LEDS ON LEFT OF DISPLAY ARE SHOWING THAT ALL THREE PHASES ARE ACTIVE.THREE MORE LEDS ON TOP ARE GIVEN TO INDICATE RELAY ON STATUS.THREE SWITCHES ARE GIVEN FOR RELAY ON.

OPERATING PROCEDURE.

NOTE : FLASHING DIGITS ARE SETTABLE FROM 0 TO 9 ONLY.

CLOCK SETTING :- PUSH "SET" KEY,CLOCK LED WILL GLOW & DISPLAY WILL DISSAPPEAR.PUSH "ENT" KEY NOW.NOW DISPLAY WILL SHOW PREVIOUSLY SET CLOCK & THOUSANDS DIGIT WILL START FLASHING.ONE CAN SET ONLY FLASHING DIGIT FROM (0 TO 9) BY "UP ARROW" KEY.PUSH "LEFT ARROW" KEY , NOW HUNDREDS DIGIT WILL FLASH.SET THIS DIGIT BY "UP" KEY FROM (0 TO 9).AGAIN PUSH "LEFT ARROW"KEY TO GO TO NEXT DIGIT.SIMILARLY ONE CAN SET REAL TIME HERE BY FOLLOWING ABOVE PROCEDURE.PUSH "ENT" KEY TO STORE NEW TIME & TO GO TO NORMAL MODE WHERE DISPLAY SHOWS REAL TIME.WRONG TIME SETTING WILL NOT BE CONSIDERED & DISPLAY WILL NOT GO TO NORMAL MODE.

DATE SETTING :- PUSH "SET" KEY IN NORMAL MODE.CLOCK LED WILL GLOW & DISPLAY WILL DISSAPPEAR.PUSH "LEFT ARROW" KEY.NOW DATE LED WILL GLOW.PUSH "ENT" KEY TO SET DATE.HERE YEAR WILL BE DISPLAYED FIRST & THOUSANDS DIGIT WILL START FLASHING.AGAIN SET THIS DISPLAY WITH "UP" KEY FROM (0 TO 9),TO GO TO NEXT DIGIT PUSH "LEFT ARROW" KEY & SET IT BY "UP" KEY FROM (0 TO 9).DO THE SAME PROCEDURE TO SET NEXT TWO DIGITS.PUSH "ENT" KEY.NOW DISPLAY WILL SHOW DATE & MONTH.FIRST SET DATE AS PER ABOVE PROCEDURE & THEN MONTH ON LAST TWO DIGITS.NOW PUSH "ENT" KEY TO SAVE THESE VALUES.DISPLAY WILL GO TO NORMAL MODE.

TWILIGHT SETTING :- PUSH "SET" KEY IN NORMAL MODE.CLOCK LED WILL GLOW & DISPLAY WILL DISSAPPEAR.PUSH "LEFT ARROW" KEY TWICE.NOW TWILIGHT LED WILL GLOW.PUSH "ENT" KEY NOW.HERE THOUSANDS DISPLAY WILL PAGE: 2 FO 2

FLASH .DO NOT SET THIS JUST SKIP THIS BY PUSHING "LEFT ARROW KEY".NOW HUNDREDS DISPLAY WILL FLASH. SO SET IT BY "UP" KEY FROM (0 TO 9).THIS TIME IS SETTABLE UPTO (4 HOURS & 00 MINS).SET NEXT DIGITS BY FOLLOWING ABOVE PROCEDURE.IF ONE HAS SET TWILIGHT OF (00:30) THEN LIGHTS WILL BE ON 30 MINS AFTER SUNSET & WILL BE OFF 30 MINS

DELAY SETTING:- PUSH "SET" KEY IN NORMAL MODE.CLOCK LED WILL GLOW & DISPLAY WILL DISSAPPEAR.PUSH "LEFT ARROW" KEY THREE TIMES..NOW DELAY LED WILL GLOW.PUSH "ENT" KEY NOW.HERE THOUSANDS DISPLAY WILL FLASH .DO NOT SET THIS JUST SKIP THIS BY PUSHING "LEFT ARROW KEY".NOW HUNDREDS DISPLAY WILL FLASH. SO SET IT BY "UP" KEY FROM (0 TO 9).THIS TIME IS SETTABLE UPTO (8 HOURS & 00 MINS).SET NEXT DIGITS BY FOLLOWING ABOVE PROCEDURE.IF ONE HAS SET DELAY OF (01:00) THEN LIGHTS WILL BE ON 1.00 HOUR AFTER TWILIGHT TIME AFTER SUNSET & WILL BE AS PER SUNRISE TIME OR BEFOR SET TWILIGHT TIME BEFORE SUNRISE.

BLACKOUT SETTING :- THIS TIME IS TO SWITCH OFF ALL RELAYS CONNECTED TO EACH PHASE AFTER A PARTICULAR SET TIME.THIS IS A REAL TIME BASED SETTING. :- PUSH "SET" KEY IN NORMAL MODE.CLOCK LED WILL GLOW & DISPLAY WILL DISSAPPEAR.PUSH "LEFT ARROW" KEY FOUR TIME..NOW BLACKOUT LED WILL GLOW.PUSH "ENT" KEY NOW.HERE THOUSANDS DISPLAY WILL FLASH .SET THIS DISPLAY WITH "UP" KEY FROM (0 TO 9).PUSH "LEFT ARROW KEY".NOW HUNDREDS DISPLAY WILL FLASH. SO SET IT BY "UP" KEY FROM (0 TO 9).THIS TIME IS SETTABLE IN REAL TIME FORMAT.SET NEXT DIGITS BY FOLLOWING ABOVE PROCEDURE.IF ONE HAS SET BLACKOUT TIME AS (11:30) THEN LIGHTS WILL BE OFF AFTER 11:00.

PHASE SEL :-HERE ONE CAN DEACTIVATE PHASE FROM "r", "y", "b" AFTER THE SET TIME PUSH "SET" KEY IN NORMAL MODE.CLOCK LED WILL GLOW & DISPLAY WILL DISSAPPEAR.PUSH "LEFT ARROW" KEY FIVE TIMES..NOW PHASE SEL LED WILL GLOW.PUSH "ENT" KEY NOW.PREVIOUSLY SET PHASE WILL FLASH ON DISPLAY.ONE CAN CHANG PHASE SETTING BY "UP" KEY.IF ONE HAS SETTED "r" PHASE THEN 1ST OF JAN THIS PHASE WILL BE OFF AFTER THE PHASE DEACTIVATION TIME."y" PHASE WILL BE OFF ON 2ND JAN & "b" PHASE WILL BE OFF ON 3RD JAN AFTER THE SET TIME.AGAIN ON 4TH JAN "r" PHASE WILL BE OFF. THIS CYCLE WILL CONTINUE FOR THE YEAR.

PHASE DACT: -THIS SETTING IS IN REAL TIME MODE.TO SWITCH OFF THE PHASE AFTER PARTICULAR TIME ,THIS SETTING IS APPLICABLE. PUSH "SET" KEY IN NORMAL MODE.CLOCK LED WILL GLOW & DISPLAY WILL DISSAPPEAR.PUSH "LEFT ARROW" KEY SIX TIME.NOW PHASE DACT LED WILL GLOW.PUSH "ENT" KEY NOW.HERE THOUSANDS DISPLAY WILL FLASH . SET IT BY "UP" KEY FROM (0 TO 9).PUSH "LEFT ARROW KEY".NOW HUNDREDS DISPLAY WILL FLASH. SO SET IT BY "UP" KEY FROM (0 TO 9).SET NEXT DIGITS BY FOLLOWING ABOVE PROCEDURE.IF ONE HAS SET PHASE DACT TIME AS (00:30) THEN ONE PHASE WILL BE OFF 30 MINS AFTER 00:00.

TO DISABLE ANY OF THE ABOVE SETTING THEN SET THOSE SET POINTS TO 00:00.

DISPLAY WILL GO TO NORMAL MODE FROM SET MODE AFTER 20 SECONDS IF NO KEY IS PRESSED IN SET MODE.