



ASTRONOMICAL TIME SWITCH

Imagination To Creation

Product code : REDPDT200-20/32

Features:

- Fast and accurate performance was performed by an 8-bit, 32-MHz Power-full Micro-controller.
- Calculate sun rise and sun set time according to programmed latitude and longitude.
- Sun set and sun rise time is change according to date, month and year. Ex. on winter it is different and in summer it is different.
- Provide sunset and sunrise offset for flexibility.
- 20 amp load on and off directly.
- Wide battery Backup more then 500 hr In condition of light failure..
- Excellent look, easy to use.

Application:

The Astro Digital Time Switch is used to regulate lighting in accordance with the sun's twilight and rising. It can be used as a digital clock as well.

It is employed for controlling street lights and glow sign boards. Unit is turned on at sunset and turned off at Sunrise.

Device controlling mode:

- On at sun set and off at sun rise Product code is REIPDT200.

Precautions:

- Keep device away from direct water fall or rain.
- keep safe from direct sun light.
- make screw tight properly.
- Don't connect load high then rated
- **warranty void** for water damage or relay burn out.

PRODUCT SPECIFICATION

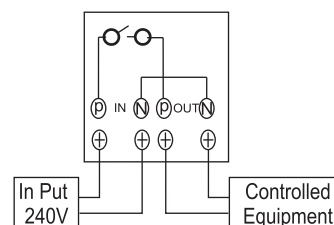
Product code	REDPDT 200
Supply Characteristics	
Supply Voltage	100 - 265VAC,
Supply Frequency	47-63 Hz.
Power consumption	2.7VA

DEVICE Characteristics

Display	.39 Inch 4 digits 7 segment LED.
Numbers of programs	Calculate Sunset and Sunrise according to the longitude and latitudes date year and day. And on off relay according to that.
Battery Backup	Approx 3 Years running reserve at 20° C ambient temperature.
Clock resolution	1 Minute
Clock Accuracy	±2 Second per day.
Clock Mode	00-00 to 23-59 (hh-mm)
Led Indication	Led 1 : red : For program mode
	Led 2 : Green : For relay status
Number of Key	3
Output mode	Relay On / Off
Contact Ratings	1N/O, 20 Amp @ 250VAC. (-20)
	1N/O, 32 Amp @ 250VAC. (-32)
Electrical life	10,00,000 Operation

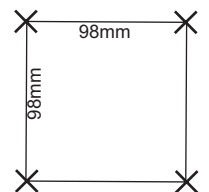
Mechanical life	10,00,000 Operation
Operating Temperature	-10°c to +60°c
Storage Temperature	-10°c to +70°c
Weight Approx.	400gm
Relative Humidity	5 to 15% RH (non condensing)
Mounting type	Base mount

CONNECTION DIAGRAM



WIRE CONNECTED : 0.5 TO 4 MM²

DRILL DIAGRAM



Specification are subject to change without notice due to continuous improvement



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PROGRAM FOR ASTRONOMICAL TIME SWITCH



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TO CHECK TIME			
Press key	Display Parameter	Display	
		Hr	Min
◀	Sun RiseTime (SRIS)	xx	xx
	Sun Set Time (SSET)	xx	xx

Reset and check default value			
Press key & Supply On	Reset Parameter	Display	
		Hr	Min
SET	Latitude	23	13
	longitudes	72	39
	Sunrise offset	00	
	Sun set offset	00	
	Year	23	
	Month	01	
	Date	01	
	Time	00	01

**Result for reset condition is
sun rise = 06-56, and Sun set = 18.29**

PROGRAMMING DETAIL

Press key	Set Parameter	Led Status	Display	Set parameter
Set	LATITUDE	● ○	LATI XX XX	Press ◀ [shift left] and ▶ [increment] key to set Latitude.
Set	LONGITUDE	● ○	LONG XX XX	Press ◀ and ▶ key to set Longitude.
Set	Sun Rise Offset time	● ○	SROF XX	Press ◀ and ▶ key to set Sun rise offset time.
Set	Sun Set Offset time	● ○	SSOF XX	Press ◀ and ▶ key to set Sun Set offset time.
Set	Current YEAR	● ○	YEAR XX	Press ◀ and ▶ key to set Year.
Set	Current Month	● ○	MNTH XX	Press ◀ and ▶ key to set month.
Set	Current Date	● ○	DATE XX	Press ◀ and ▶ key to set Date.
Set	Current TIME	● ○	CLK hr min	Press ◀ and ▶ key to set Time HR and MIN.

* Insert the latitude and longitude in degree format.

Chart of Relay work

