

3-Digit Thumbwheel Timer

User Manual

Notice before start-up

Please confirm the specification of instrument is to totally with your requirement before using it, also read this manual in detail.

Danger

Danger! Electric Shock!

DON'T touch AC power wiring terminals when instrument has been powered!

Keep the power off until all of the wirings are completed!

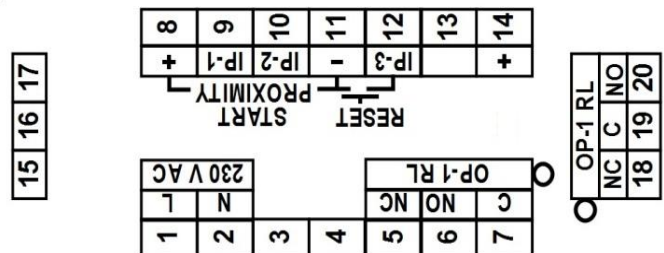
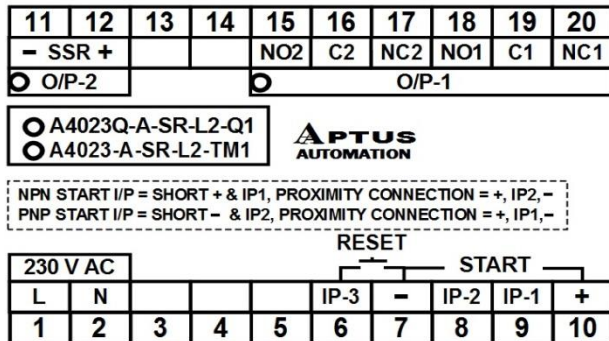
Warning

- 1) Please confirm the AC power wiring to instrument is correct, otherwise it would be caused aggravated damage on instrument.
- 2) Be sure to use the rated power supply, otherwise it would be caused aggravated damage on instrument.
- 3) Please confirm wires are connected with correct terminal (Power, Input and Output).
- 4) Avoid installing instrument in following spaces:
 - I. A place where the ambient temperature may reach beyond the range from 0 to 50°C
 - II. A place where the ambient humidity may reach beyond the range from 20 to 90% RH.
 - III. A place where the instrument likely to come into contact with water, oil, chemicals, steam and vapor.
 - IV. A place where the instrument is subject to interface with static electricity, magnetism and noise.
- 5) For proximity input, use shield compensating lead wire.

TECHNICAL SPECIFICATIONS

Product Name	: Thumbwheel Timer
Model No.	: A4023-A-PR-L-TW-TIMER
Input	: Start(Proxy selectable), Back reset
Output	: 1 Relay, 5Amp/ Relay (Contacts 2NO-2C-2NC)
Display	: 4 digits 0.56" RED seven segment display.
Reset	: Auto Reset, Back Reset, Manual Reset
Output Logic	: On delay/Off delay
Power Supply	: 230VAC $\pm$ 10%

TERMINAL DETAILS



INPUT TYPE	A4023-A-PR-L-TW-TIMER	A4023-D-PR-L-TW-TIMER
230 V AC Power supply	Terminal 1 & 2	Terminal 1 & 2
NPN Pulse Input	Short Terminal 9 & 10, Terminal 10(+Ve), 8 (NPN Signal) & 7(-Ve)	Short Terminal 8 & 9, Terminal 8(+Ve), 10 (NPN Signal) & 11(-Ve)
PNP Pulse Input	Short Terminal 7 & 8, Terminal 10(+Ve), 9 (PNP Signal) & 7(-Ve)	Short Terminal 10 & 11, Terminal 8(+Ve), 9 (PNP Signal) & 11(-Ve)
Reset Input	Terminal 6 & 7 (Potential Free Contact)	Terminal 11 & 12 (Potential Free Contact)
Output (Relay)	Terminal 20(NC1), 19(C1) & 18(NO1). Terminal 17(NC2), 16(C2) & 15(NO2).	Terminal 5(NC1), 7(C1) & 6(NO1). Terminal 18(NC2), 19(C2) & 20(NO2).

CONFIGURATION MENU

To enter in configuration menu, press RST Key and switch on the power supply. Parameter will be appeared on display as shown below table. Configure all parameter using Thumbwheel Count & RST key, as per your requirement.

Left First Thumbwheel Count	DISPLAY	FUNCTION	RANGE
100	Unt/Min	Unit of Time: Set Unit for time. It may be Hour/Minute/second. Press RST key to change.	Hr/Min/SEC
200	rng/999	Range 1: Select Range 1 for time 1. Press RST key to change. (The range 9.99 is available only if the time mode is in SEC mode.)	999/99.9/9.99
300	mod/Ond	Timer Mode: Select timer type either as On-delay timer, or as OFF-delay. ON delay – In this mode Relay will be ON after set time. OFF delay – In this mode Relay will be On with start, and will be Off after set time.	Ond/OFd
400	U-d/UP	Count Direction: Set direction for counting a running time. UP – Running time is increase from 0 (zero) to set value. Down – Running time decrease from set value to 0 (zero).	UP/dwn
500	MEM/YES	Memory selection: select the time saving at power off. YES – running time will save in memory at power off. NO – running time will not save in memory at power off.	YES/nO
600	Str/OFF	Start selection: Select the start input is required or not. Press RST key to change. OFF – Timer will start with power ON. PLE(Pulse to start) – This type start input, Timer will start with pulse. And pulse has no effect in running Timer. PLr (Pulse to restart) – This type start input, Timer will restart with pulse. And pulse will restart to running Timer. LtE (Latch to start) – Timer will run till input is applied, with remove input, Timer will pause, if input is applied again, the Timer will resume. Ltr (Latch to restart) – Timer will run till input is applied, with remove input, Timer will pause, if input is applied again, the Timer will restart.	OFF/PLE/PLr/LtE/Ltr
700	rst/00.0	Relay reset: Select Relay reset time. Press RST key to go into relay reset mode. Then display will show the current value of thumbwheel count. Now set the thumbwheel count for relay reset value & press RST key to exit from relay reset mode.	00.1~99.9 sec
800	OUT	Exit from Setting: Press RST key to Exit from Setting mode.	OUT
900	OUT	Exit from Setting: Press RST key to Exit from Setting mode.	OUT
000	OUT	Exit from Setting: Press RST key to Exit from Setting mode.	OUT

Thumbwheel Setting:

Set the required value of time to be executed, using the keys of Thumbwheel module.

Display Indication:

Running Time ----- = on Upper Display according to Unit (SEC/MIN/HOUR)

Keys & Terminal Function:

External Reset (Back RST) ----- = to reset the Timer

Front Reset Key ----- = to reset the Timer

Input Types:

- Power-On-Start:-
 - Cycle will start when the power is applied to the device.
 - After the completion of cycle, external reset/front reset/auto reset will restart the cycle.
- Pulse-To-Start:-
 - Cycle will start when the Pulse is applied to the device.
 - In running cycle, input pulse has no effect.
 - After the cycle complete, reset the Relay if it is set to manual reset mode.
 - Now if the pulse is applied again then the cycle will repeat.
- Pulse-To-Restart:-
 - Cycle will start when the Pulse is applied to the device.
 - In running cycle, input pulse will restart the cycle.
 - After the cycle complete, if the pulse is applied again then the cycle will restart.
- Latch-To-Start:-
 - Cycle will start & run only when the Latch is applied to the device.
 - In running cycle, if latch is removed the cycle will paused & it will start to resume if latch is given.
 - After the cycle complete, reset the Relay if it is set to manual reset mode.
 - Now if the latch is applied again then the cycle will repeat.
- Latch-To-Restart:-
 - Cycle will start & run only when the Latch is applied to the device.
 - In running cycle, if latch is removed the cycle will paused & it will restart the cycle if latch is given.
 - After the cycle complete, if the latch is applied again then the cycle will repeat.

WORKING:

ON-Delay Timer:

- Cycle will get started according to the selected input type & display shows the parameters as mentioned above.
- Relay is OFF initially & when the **[Running Time >= Set 1]**, the **[Relay]** will be ON.
- Relay will auto reset according reset time, if reset time is non-zero. As well as you can reset manually or by applied external reset input.

OFF-Delay Timer:

- Cycle will get started according to the selected input type & display shows the parameters as mentioned above.
- Relay is ON initially & when the **[Running Time >= Set 1]**, the **[Relay]** will be OFF.
- Relay will auto reset according reset time, if reset time is non-zero. As well as you can reset manually or by applied external reset input.