




Tech Note - TN101D - Using the Schedule Function

OffPeak Technologies LLC

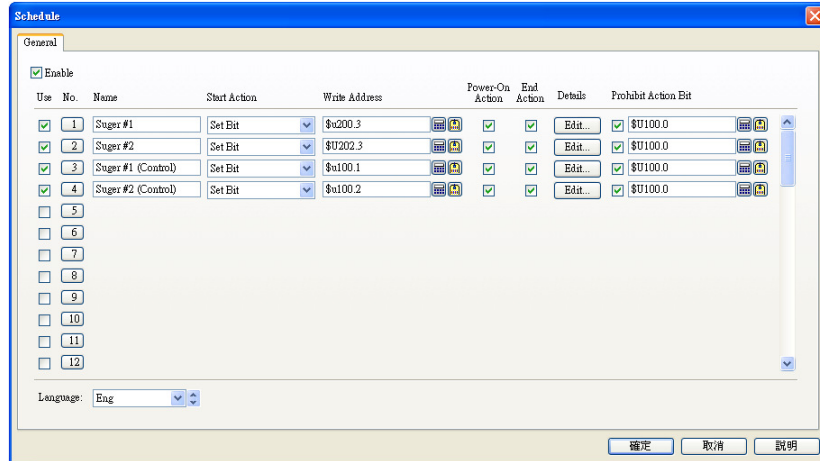
Note: This Tech Note is supplemental to the download version of the PT Scheduler Demo.zip file found on the web site.

Topic: The Application of a Schedule Function in a Manufacturing Process

Topic:	Example of the Schedule Function applied in Manufacturing.																					
	Goal: Arrange different manufacturing operations by using the Schedule Function to run specified operations automatically.																					
Software:	PM v1.2.91 (4-26-2011) or newer																					
Hardware:	All PT series HMI models																					
Operation:																						
AP	Screen:																					
Software Version V1.2.91	 <p>The screenshot shows a 3D industrial environment with three large tanks and connecting pipes. The central tank has an orange starburst icon. The interface includes a top status bar with time (13:50:52) and day (Friday). On the right, there are four control buttons labeled #1, #2, #3, and #4, each with 'OFF' and 'ON' indicators. At the bottom, there is a table with the following data:</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Name</th> <th>Status</th> <th>Set</th> <th>Start</th> <th>End</th> <th>Applied Days</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Stage #1</td> <td>Red</td> <td></td> <td>07:00:00</td> <td>20:00:00</td> <td>MON/WED/FRI</td> </tr> <tr> <td>2</td> <td>Stage #2</td> <td>Green</td> <td></td> <td>07:00:00</td> <td>20:00:00</td> <td>TUE/THU/SAT</td> </tr> </tbody> </table> <p>Below the table are function keys F1 through F6 and a USB icon. The bottom of the screen also shows a power button and language selection options (English, Chinese).</p>	ID	Name	Status	Set	Start	End	Applied Days	1	Stage #1	Red		07:00:00	20:00:00	MON/WED/FRI	2	Stage #2	Green		07:00:00	20:00:00	TUE/THU/SAT
ID	Name	Status	Set	Start	End	Applied Days																
1	Stage #1	Red		07:00:00	20:00:00	MON/WED/FRI																
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	<p>The schedule function in the HMI programming software can be applied to a manufacturing process and individual production lines can run specific operations automatically.</p> <p>In addition, the developer can change the time range of the original schedule at runtime by checking the “Changeable with Schedule Setting Table” property in Schedule Detail dialog box.</p>																					

Schedule Introduction:

- (1) Up to 48 schedules (Number 1 to Number 48) can be registered in a panel application. Please see the illustration below.



- (2) Each schedule can be programmed to either change the value of a specified PLC location or execute a specified macro at the designated time.
- (3) In addition to regular time schedule, you can select to make a schedule valid only for specified day. Please see the illustration below.

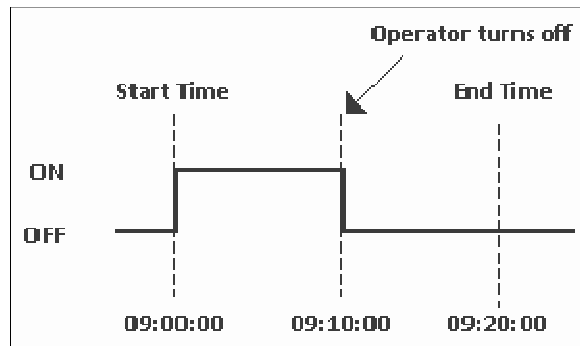


(4) Schedule Setting Table

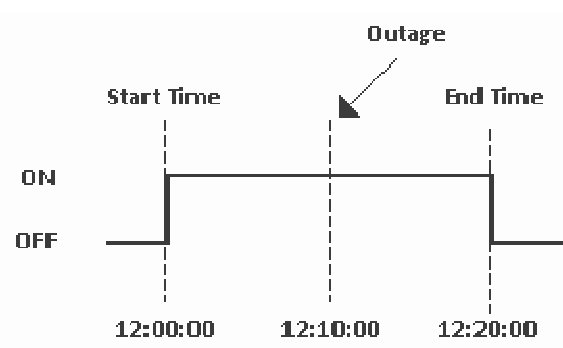
ID	Name	Status	Set	Start	End	Applied Days
1	Suger #1	■		07:00:00	20:00:00	MON/WED/FRI
2	Suger #2	□		07:00:00	20:00:00	TUE/THU/SAT
3	Suger #1 (Control)	□	□	07:00:00	20:00:00	MON/WED/FRI
4	Suger #2 (Control)	□	□	07:00:00	20:00:00	TUE/THU/SAT

Notification:

- 1) The Time schedule features are one time actions. When the Start Time is reached, the designated device address is written to just once. The write action is not repeated.



- 2) The Start Value and the Prohibit Action Bit are read only once at the beginning of the time range. Since regular readout is not possible, there may be a slight data communication delay that causes a slight delay in the Start Time. For the same reason, the delay may also occur in the End Time.
- 3) When the time range of a schedule is changed by whatever method and the current time is inside the time range, the start action is performed.
- 4) When the same Start Times and End Times appear in multiple schedules, they are handled in order, starting from the smallest schedule number.
- 5) If the Start Action is completed and then a power outage occurs, the End Action will be performed at the End Time after the power is resumed.



Contact Information

If you have any technical problems, please contact us.

OffPeak Technologies LLC
530 Stonewood Road
York, PA 17402 USA

ts@offpeak-solutions.com

717-891-0971