

TELSEC[®] MP1

User Guide



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CAUTION - Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

FCC Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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Revision History

Date	Rev #	Modifications	By:
9/15/22	3.0	Updates for features in Build #22 9/12/22: <ul style="list-style-type: none">• Password rules for http, SSH/Telnet and SNMPv3• TL1 type addition for alarms• Support for 8 Time Schedules	K. Nickel
05/11/22	2.2	Additional clarification on defining input 7 for power monitoring	K. Nickel
04/20/22	2.1	Minor update to the specification section	K. Nickel
10/29/21	2.0	Updated to support new features and web page organization in Build # 20	K. Nickel
03/24/21	1.0	Initial release	K. Nickel

Table of Contents

1	Overview	1
1.1	Getting Started.....	1
2	Product Specifications.....	2
3	Installation	3
3.1	Mounting the MP1.....	3
3.2	Powering and Grounding	4
3.3	Connecting the Ethernet.....	4
3.4	Wiring inputs.....	4
3.5	Wiring Outputs.....	9
4	Local Operation.....	10
4.1	Power LED	10
4.2	Alarm LED.....	10
4.3	Relay Outputs.....	10
4.4	Restoring to Factory Defaults	10
5	Communicating with the MP1	11
5.1	Connecting to the System	11
5.2	Web Page Navigation.....	11
6	System Status.....	12
6.1	Input Status.....	12
6.2	Output Status.....	14
6.3	Alarm Status.....	14
6.4	Active Alarm Log	15
6.5	Historical Alarm Log	15
6.6	Log Data	17
7	Bypassing	18
7.1	Bypass Inputs	18
7.2	Bypassing Outputs	19
8	Configuring the MP1	20
8.1	System Setup.....	20
8.2	Alarm Dispatch Settings	26
8.3	HTTP User Administration.....	28
8.4	Advanced Settings.....	29
9	Programming the System.....	32
9.1	Input Programming.....	32

9.2	Output Programming	34
9.3	Alarm Programming.....	36
9.4	Time Schedules	41
10	Shell Commands.....	43
10.1	Set IP Command.....	43
10.2	Set MTU Command.....	44
10.3	Set httpswd Command	44
10.4	Set snmpmgr Command	44
10.5	Upgrade URL	45
10.6	Checking for Upgrades.....	45
10.7	Ping Command	45
10.8	Exit & Logout Command	46
11	File Upload Format.....	46
11.1	Section Formats	46
11.2	Uploading config files.....	49
12	SNMP Sets & Gets	50
12.1	Public SNMPv2	50
12.2	Input table.....	50
12.3	Alarm point table	50
12.4	Output table.....	51
12.5	Active alarm point table.....	51
12.6	Scalar values.....	52
13	Troubleshooting.....	53
13.1	Power Up.....	53
13.2	Communication.....	53
13.3	Sensor Reading.....	53
13.4	Control Point Failure	53
13.5	Alarm Notification Failure.....	54
13.6	Battery.....	54
	Appendix A - SNMP Trap Format	55
	Appendix B - RADIUS Server Configuration	56
	Appendix C – Email Alarm Format	57
	Appendix D – TL1 Alarms and Commands	58
	Contact Information.....	61

1 Overview

The TELSEC® MP1 is designed to provide advanced monitoring and alarming for remote facilities and cabinets using industry standard communications protocols such as SNMP and SMTP (Email) over Ethernet. The system has a built-in web server for status review and programming and can be polled using SNMP GET requests. The MP1 has six universal inputs for monitoring temperature, humidity, contact closures and any 0-6 VDC or 0-20 mA sensors. The MP1 also monitors the incoming voltage to the unit and displays the value as the seventh input. Each individual input may be scaled and displayed in the proper engineering units. The MP1 has two digital outputs which can be actuated based upon user programmable events or actuated remotely through the web server or SNMP. This user guide is intended to provide basic operational information for programming and status review of the MP1 System. Please contact Quest Controls for additional information and or questions about the operation of the system.

1.1 Getting Started

The TELSEC® MP1 is simple to setup and program which allows you to start monitoring your facility quickly. The basic steps are listed below along with a chapter reference for this manual:

1. Mount the MP1 in the desired location (section 3.1)
2. Power the system. (section 3.2.1)
3. Connect the inputs to be monitored to the system. (section 3.4)
4. Wire the digital outputs. (section 3.5)
5. Connect the MP1 to an Ethernet switch and configure the IP settings. (section 5.1)
6. Configure the system (Section 8.1)
7. Configure the alarm distribution. (section 8.2)
8. Define the inputs. (section 9.1)
9. Define the alarm points. (section 9.3.1)

2 Product Specifications

Part number: 151095

- Inputs: six universal inputs supporting 0-5 VDC, 4-20 mA, thermistor & contact closure. One Input (UIN 7) to monitor monitoring 18-60 VDC
- Outputs: two Form C digital outputs. Contact rating: 0.5 A @ 60 VDC
- Network interface: Ethernet 10/100 Base-T
- Protocols supported: IPv6, IPv4, HTTP, HTTPS, RADIUS Password Authentication, NTP, SMTP (email), SNMP v1, v2c and v3 for Gets, Sets and traps/informs
- Logging: Logs data for inputs, outputs and alarms
- Alarm notification methods: TL1, Email and SNMP traps or informs
- Alarm destinations: four programmable trap destinations, nine email addresses or distribution lists
- I/O terminal: spring loaded terminals supports 16 -24 AWG wire
- Power: 24-48 VDC, 3.7 W max.
- Battery: long life lithium (PN 250034) 3 VDC*
- Ambient operating temperature: -4° to 140°F (-20° to 60°C), 0-95% RH Non-condensing
- Certification: UL, cUL, FCC 47 CFR Part 15B, ISED ICES-003 Class A
- Dimensions: 8.2" L x 4.7"W x 1.7" D (208 x 119 x 43 mm)
- Weight: 0.9 lb. (408 g)
- Warranty: 1 Year



Specifications subject to change without notice

3 Installation

All local and national electrical safety codes (NESEC®) must be followed when installing the MP1. If there is any contradiction in this manual and those standards, then the installer must follow the local and national codes. Use copper conductors only.

3.1 Mounting the MP1

Install the MP1 in the desired location using appropriate hardware to connect the two mounting tabs to the wall.



Figure 1 - TELSEC® MP1 Dimensions

3.2 Powering and Grounding

3.2.1 Powering the MP1

Follow all national and local electrical codes when powering the MP1. Quest recommends a minimum of 18 AWG conductor for powering. The TELSEC® MP1 will operate from 18-60 VDC power (50 mA max at 48 VDC). The power input is isolated from the rest of the system and will work on either a positive or negative DC system. Connect the power source to the MP1 observing the polarity markings on the enclosure. Quest recommends fusing the power source at 1 A. Reverse polarity will not damage the unit, but it will not operate until corrected. It is recommended that all input wiring be completed with no power to the system. The terminals are spring loaded. Press on the orange button to release the spring and then insert the wire. Turn on power once all wiring is verified.

3.2.2 Removing the Battery Insulator

The MP1 is shipped with an insulator to keep the battery disengaged from the system. Remove the insulator once the unit is permanently powered, by pulling the tab in front of the unit. The system uses the battery to save the system time and input timer status.

3.2.3 Grounding the MP1

There is a ground terminal on the power connector. Place a ground wire using a minimum 12 AWG conductor from the Electrical panel ground bus (or other approved grounding point) to the ground terminal on the MP1. Follow national and local codes and practices for properly grounding the system.

3.3 Connecting the Ethernet

Use a standard Cat5 Ethernet cable to connect the MP1 to the local switch or hub. Configure the switch port to auto speed detect and auto negotiation. A green LED link light on the ethernet jack will be illuminated when a physical link has been established. The amber LED on the ethernet jack will be illuminated when the connection is 100Mb and off if the connection is 10Mb.

3.4 Wiring inputs

Wire each input to be used between the input terminal (1-6) and a common terminal (C). Refer to the silkscreen on the enclosure for location of each input and common terminal. The terminals support 16-24 AWG wire and are spring loaded. Press on white button to release the spring and then insert the wire. The inputs will support any sensor that is a 10k Type III thermistor: 0-6 VDC or 0-20 mA analog sensors. In addition, the system accepts dry contact closures or wet contact closures up to 65 VDC.

3.4.1 Thermistors

Thermistors are resistive devices and do not have polarity. Connect one lead to the input terminal of the desired input and the second lead to a common terminal. Quest recommends using shielded and stranded cable for all analog sensors. Connect the shield of the cable to chassis ground on the MP1. Cut the drain wire and isolate the shield at the sensor end of the cable.

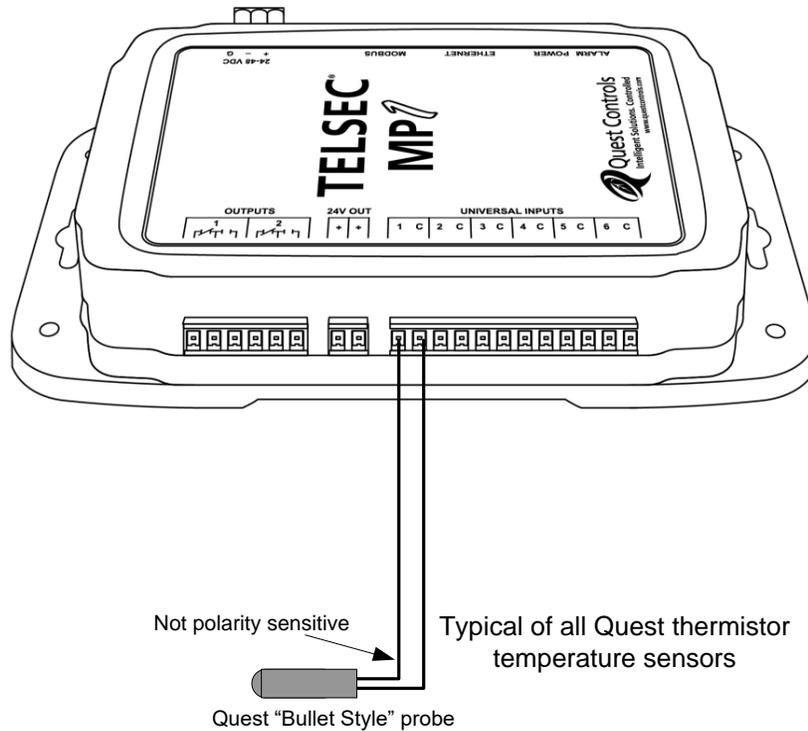


Figure 2 - Thermistor Temperature Sensor Wiring

3.4.2 Voltage Sensors

The TELSEC® MP1 can read and scale any linear voltage input from 0 to 6 VDC. The MP1 has two 24 VDC Output (maximum of 50 mA total) terminals for powering sensors. Use an external power supply for sensors that have a higher current draw. Contact Quest for the Input Scaling spread sheet to determine the correct number for the Low and High Custom scale factors.

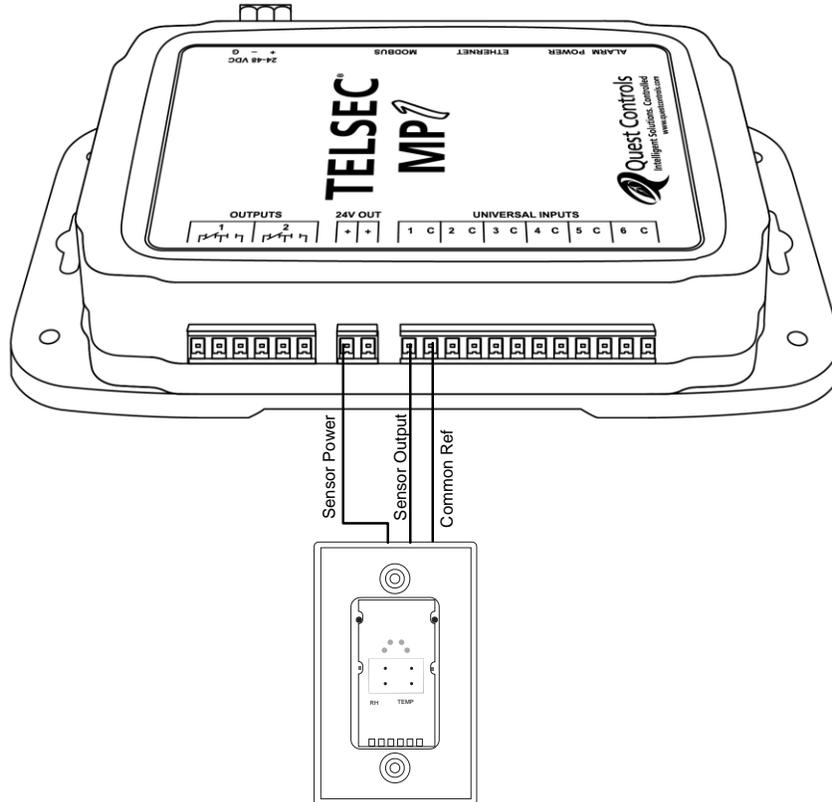


Figure 3 - Wiring Voltage Sensors

3.4.3 Current Sensors

The TELSEC® MP1 can read and scale any linear current input from 0 to 20 mA. An external 249 ohm resistor (recommend 1% tolerance) is required to convert the signal to voltage. Twist the incoming sensor wire and resistor together prior to insertion into the spring-loaded connector to ensure a proper connection. Alternatively use a butt splice or similar device to connect the resistor and input wire together and then feed a single wire into the input terminal. Contact Quest for the Input Scaling spread sheet to determine the correct number for the Low and High Custom scale factors.

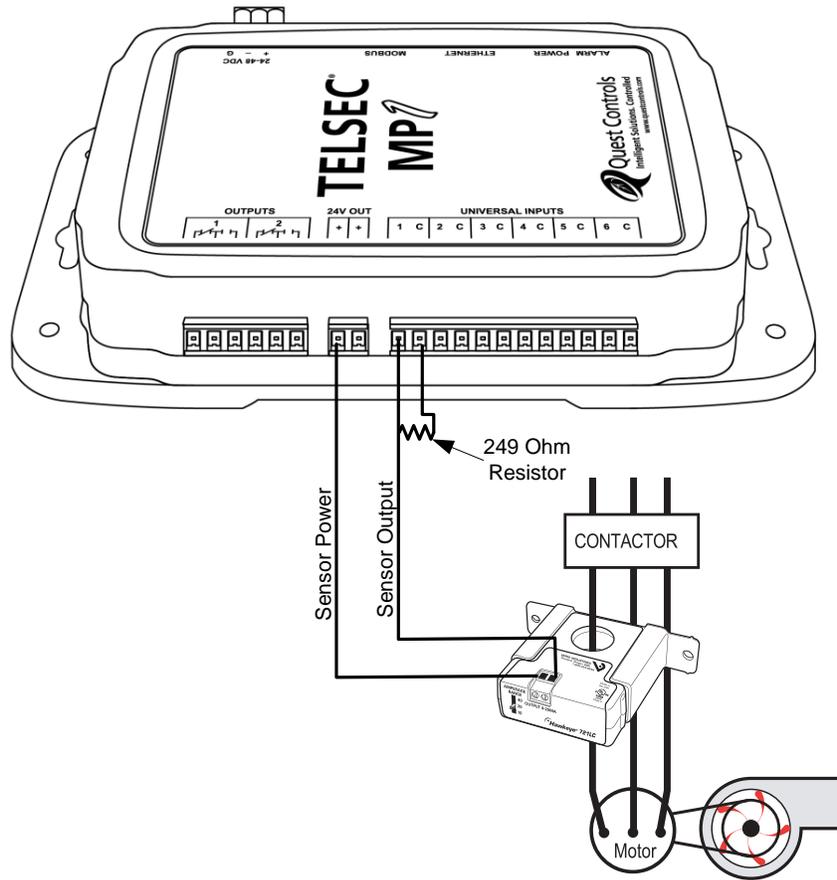


Figure 4 - Wiring a 4-20mA Sensor

3.4.4 Contact Closures

The TELSEC® MP1 supports dry contact closures or wet contacts up to 65 VDC. A *wet* contact is an input where there is an external voltage present. A *dry* contact has no voltage present and the MP1 provides the sensing voltage. The detection point for determining ON/OFF status is greater than 2.8 VDC and less than 0.8 VDC. There is no transition when the voltage is between these two values. Both wet and dry input types are connected between the input terminal and a common terminal. For Wet inputs the voltage must be between 0 VDC and up to +65 VDC. Negative voltages are not supported. Make sure to define the input properly for “Wet” or “Dry” contact closures (see section 9.1) for proper operation.

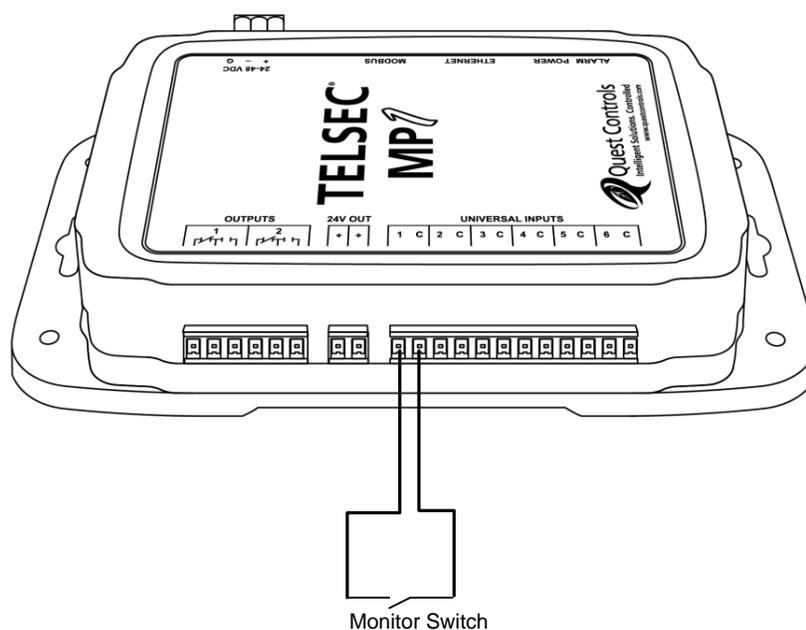


Figure 5 - Wiring Contact Closures

3.5 Wiring Outputs

There are two Form C relays available for control of external devices based upon alarm conditions or time schedules. Place wires between the common and normally open or normally closed terminals for each output on the MP1. The terminals support 16-24 AWG wire and are spring loaded. Press the white button to release the spring-loaded tension and insert the wire. The relays are designed for Class 2 wiring and are rated for a maximum of 1 amp at 24 VAC or 30 VDC, 0.3 A @ 60 VDC.

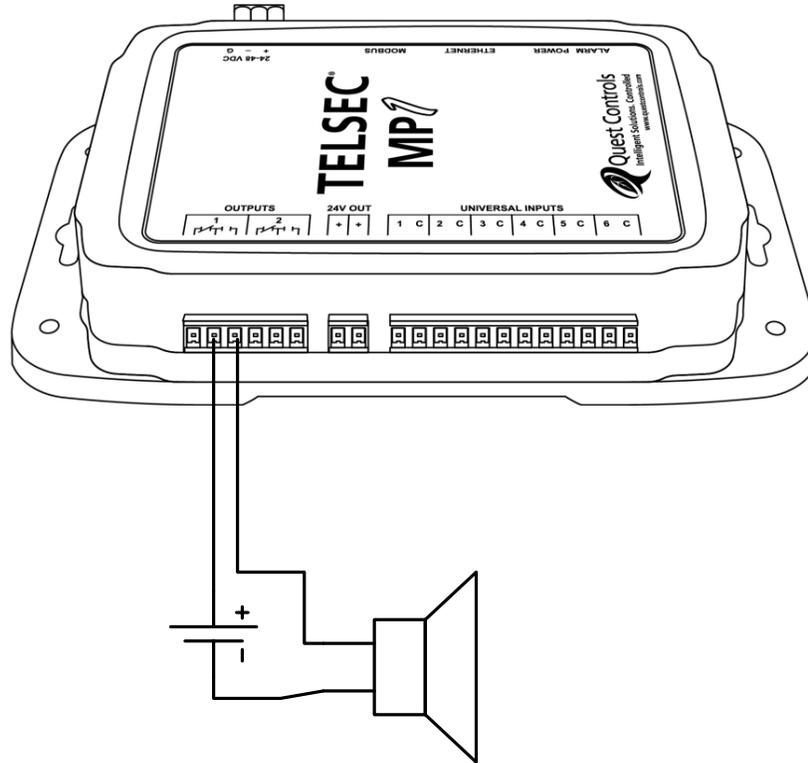


Figure 6 - Wiring Outputs

4 Local Operation

4.1 Power LED

Once the TELSEC® MP1 is installed, powered, and connected with an Ethernet connection, the system will start operation based on the program controlling the unit. Under normal operation the green Power LED will flash at one second intervals to indicate the system is operating properly. Occasionally there may be a pause in this operation if the system is saving data to flash memory. If the LED is off for longer than one minute, then check the power connection and cycle power to the unit. If the LED is constantly on longer than a minute, then cycle power to the system to see if it goes back to normal operation of flashing the LED.

4.2 Alarm LED

The red alarm LED will be illuminated when any of the alarm points are in alarm. This LED does not provide notification of the state of the control relays since an alarm point may be in alarm, but not associated with an output. If this LED is illuminated, then log into the web server on the MP1 and review the active alarm log on the home page.

4.3 Relay Outputs

Relay outputs are programmable for normally energized or de-energized condition. The normally open/normally closed terminations on the board refer to when the output is de-energized. There are two outputs that may be associated with an alarm severity or a time schedule. Outputs that are associated to an alarm severity will be “active” when the alarms are present and will deactivate when either all alarms with the associated severity have cleared or if the acknowledge function is used. Outputs associated with a time schedule will be “active” when the schedule is on and deactivated when the schedule is off. Outputs can be bypassed indefinitely or for a period of time remotely via the built-in web server or by SNMP SET commands.

4.4 Restoring to Factory Defaults

The TELSEC® MP1 has a small access hole next to the green power LED. Holding this switch in for approximately 15 seconds during a power up (cycle power off then back on) will cause the system to erase all programmed settings and go back to the factory defaults. During the Cold Start process, you will see both the power LED and Alarm LED flash simultaneously every second. After a few seconds, the alarm (red)LED will be illuminated solidly. Release the cold start switch once the alarm LED is on solid.

5 Communicating with the MP1

Connect a standard Ethernet cable between the TELSEC® MP1 and your local Ethernet switch or router. You can also direct connect to the system with your PC using a crossover Ethernet cable and setting a static IP address on your PC. The MP1 has a default IP address of 192.168.1.31. Use this address to log into the unit and then change the IP address to a new permanent setting.

5.1 Connecting to the System

The built-in web server uses a *username* and *password* combination to authenticate a user and allow access. No information will be shown without proper authorization. The default setting uses HTTP protocol with a username of **Admin** and password of **admin**. The username and password are case sensitive so make sure your caps lock key is turned off. The default password along with the five available user level passwords can be change once you log in and go to the Settings/User Administration web page. Keep track of your password because there is no way to access the system without a valid password. The system will have to be cold started to return to default settings if the password is unknown.

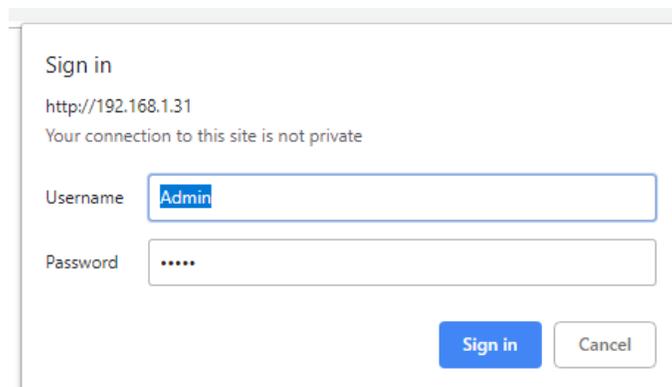


Figure 7 - Login Screen

5.2 Web Page Navigation

All MP1 web pages will have a top header section that shows the Site Name, the systems date and time, Alarm bell icon and a menu ribbon with the available choices for navigation. The choices presented on the menu ribbon will be dependent on the access level of the password used. Clicking on the alarm icon will navigate directly to the active alarms page.

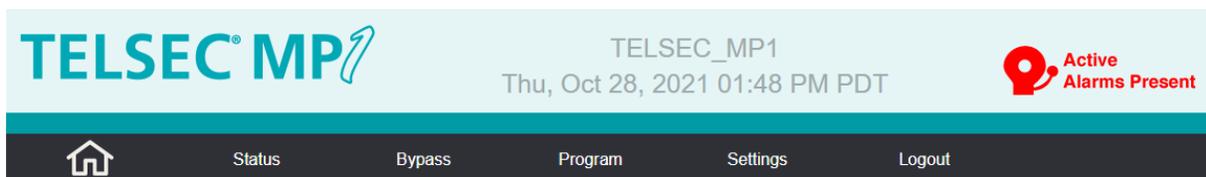


Figure 8 - Web Page Header Section

5.2.1 The Home Page

After you log in with your username and password, the MP1 will display the Home page. This page can also be displayed if you click on the home icon on the menu ribbon. The home page will show the Site Information text box, status of the outputs and any Active Alarm condition. Outputs have an acknowledge button to allow the user the ability to return the output to the inactive state. See Figure 9.

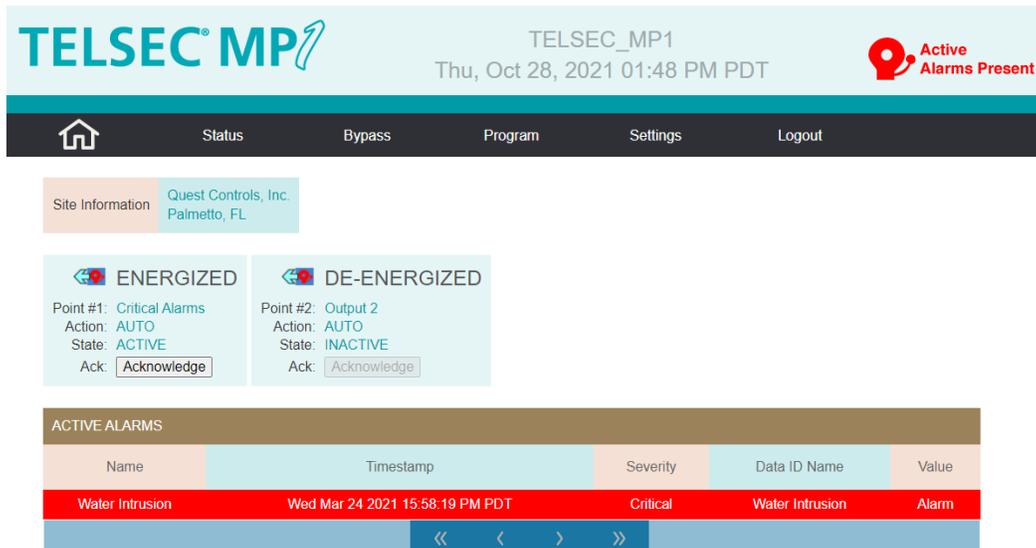


Figure 9 - The TELSEC® MP1 Home Page

6 System Status

Hovering your mouse pointer on the Status option will provide the choices of Input Status, Output Status and Log Data. This section of the manual will review each one of these options and the available functions.

6.1 Input Status

The input status page will show the current value of the universal inputs currently programmed in the system. The status page groups the inputs based on their definition into either digital inputs or analog inputs. The display will show the digital inputs first followed by the analog points. Click on the expand window icon to display the points.

6.1.1 Digital Inputs

Digital inputs will show the input number followed by the defined name of the point and the current value. The page will show the ACCUMULATED ON which represents the entire time the input has been active (ON), this timer can be cleared. The INTERVAL ON timer shows how long this input has been active this time, when the input clears (OFF) this value will be held. When the input re-activates, this timer will clear to zero and start counting. The INTERVAL OFF timer reacts similarly to the ON timer but only counts when the input is off or inactive. The EVENT counter counts one for each change in state of the input, on is one, off is two, next on is three and so on. The EVENT TIMER begins counting from the time the input is programmed or from the time the input was last cleared.

The system will keep track of the number of alarms that are active for the input and display that as a hyper link. Clicking on the link will bring up a window with a table of active alarms for the point.

The last column on the digital input page will show the defined “normal state” of the input. The purpose of this column is to indicate how the point is defined to make trouble shooting easier without having to navigate to the input definition page. The following will be displayed:

DRYNO = A normally open input wired between input and ground.

DRYNC = A normally closed point wired between input and ground

WETNO = A normally open input wired between the 24V terminal (or external voltage max 60 VDC) and the input terminal.

WETNC = A normally closed input wired between the 24V terminal (or external voltage max 60 VDC) and the input terminal.

UNIVERSAL INPUTS

ALL INPUTS									
DIGITAL INPUTS									
Point #	Name	Value	Related Alarms	Accumulated On	Interval On	Interval Off	Event Count	Event Timer	Normal State
1	Tower - Light Status	ON	1	211:00:19:45	005:21:03:37	000:00:15:03	1	211:00:34:48	DRYNO
2	Tower - Photocell Failure	OFF	0	000:00:04:47	000:00:04:47	206:03:11:16	1	211:00:34:48	DRYNO
3	Tower - Marker Light Fail Alarm	OFF	0	000:00:00:00	000:00:00:00	211:00:34:48	0	211:00:34:48	DRYNO
4	Tower - Night Beacon Light Fail	OFF	0	166:19:50:13	159:15:35:12	044:04:43:34	2	211:00:34:48	DRYNO
5	Tower - Day Beacon Light Failure	OFF	0	000:00:17:02	000:00:01:00	203:04:06:23	3	211:00:34:48	DRYNO
ANALOG INPUTS									

Figure 10 - Digital Input Status

6.1.2 Analog Inputs

Analog input status will show the input number, the programmed name for the point and the current value of the input in the defined engineering units. The related alarms column will indicate the number of active alarms currently present that reference the input. A number greater than 0 will be a hyperlink that will bring up a window showing a table of active alarms for the point. Input seven is a special input that is used to monitor the voltage of the incoming power to the MP1.

UNIVERSAL INPUTS

ALL INPUTS			
DIGITAL INPUTS			
ANALOG INPUTS			
Point #	Name	Value	Related Alarms
2	Zone 1 Temperature	77.3	0
5	Zone 2 Temperature	76.2	0
7	DC Power	47.5	0

Figure 11 - Analog Input Status

6.2 Output Status

The output status page shows the current status of the digital outputs. Each output will be shown with the defined name, Action which is either automatic (AUTO) or BYPASSED if a user has bypassed the output (Settings/Bypass). The state field shows whether the point is Active or Inactive based upon the user defined program. The last function is the ability to Acknowledge the current active state which will cause the output to go to an inactive state until the next condition causing an Active state occurs.

OUTPUT STATUS

The screenshot displays two digital output status cards. The first card, titled 'ENERGIZED', shows 'Point #1: Critical Alarms', 'Action: AUTO', 'State: ACTIVE', and an 'Acknowledge' button. The second card, titled 'DE-ENERGIZED', shows 'Point #2: Output 2', 'Action: AUTO', 'State: INACTIVE', and an 'Acknowledge' button. Both cards include a red location pin icon with a left-pointing arrow.

Figure 12 - Digital Output Status

6.3 Alarm Status

The Alarm Status page will provide the current status of all the defined alarm points. Each alarm point will be listed with the defined name, the name of the point being referenced in the alarm, a timestamp when the alarm point last transitioned to its current value and the current value of the point.

ALARMS STATUS

The screenshot shows the Alarm Status page. At the top is a 'FILTER' section with a dropdown menu set to 'All', and input fields for 'Name' and 'Data ID Name'. Below this is a table titled 'ALARMS' with the following data:

Name	Data ID Name	Timestamp	Value
Alarm Test	N/A	N/A	OFF
Intrusion - Door Open	Main Door Monitor	N/A	OFF
High Temperature Alarm	Zone 1 Temperature	N/A	0
Water Detected in Structure	Water Detection	Wed Mar 24, 2021 15:58:19 PM PDT	ON (alarm)
Commercial Power Alarm	Commercial Power Alarm	N/A	OFF
Generator Run Alarm	Generator Running	Wed Mar 24, 2021 13:14:54 PM PDT	OFF
Low DC Power	DC Power	N/A	0

At the bottom of the table are navigation arrows: a double left arrow, a single left arrow, a single right arrow, and a double right arrow.

Figure 13 - Alarm Status Page

Use the forward, back, beginning and end icons to navigate through the alarms. The page supports filtering alarms based on category from the dropdown box or by word matching of point names. Use the Name field for the alarm name and the Data ID Name field to search by an input name. For example, you can type Tower in the name field to get a list of all alarms that have the word “Tower” in the name.

6.4 Active Alarm Log

The Active Alarms page will display any alarm that is currently active in the system. The page allows for searching based on severity level and by date. The alarms displayed can also be downloaded to a CSV file by clicking on the Download To CSV button.

ACTIVE ALARMS

TYPE/DATE FILTER

Critical	Minor	Notice	Start Date <input style="width: 80%;" type="text"/>
Major	Warning	Clear	End Date <input style="width: 80%;" type="text"/>

Regenerate Alarm Table

Download To CSV

ACTIVE ALARMS				
Name	Timestamp	Severity	Data ID Name	Value
GEN NOT IN AUTO	Fri Mar 01 2019 4:47:42 PM	Critical	Generator in Auto	Alarm
Tower - Beacon Fail - Night mode	Fri Mar 01 2019 10:45:37 AM	Critical	Tower - Night Beacon Light Fail	Alarm

<< < > >>

Figure 14 - Active Alarms Page

6.5 Historical Alarm Log

The Historical Alarm page will show the alarm history of the stored alarms. Use the back, next, beginning and ending button on the bottom of the table to navigate through the list of alarms. The Download To CSV button will create a CSV file and download it to your computer.

HISTORICAL ALARMS				
Name	Timestamp	Severity	Data ID Name	Value
Water Detected in Structure	Wed Mar 24 2021 15:58:19 PM PDT	Critical	Water Detection	Alarm
Water Detected in Structure	Wed Mar 24 2021 13:15:37 PM PDT	Critical	Water Detection	Clear
Water Detected in Structure	Wed Mar 24 2021 13:15:32 PM PDT	Critical	Water Detection	Alarm
Generator Run Alarm	Wed Mar 24 2021 13:14:54 PM PDT	Major	Generator Running	Clear
Generator Run Alarm	Wed Mar 24 2021 13:14:31 PM PDT	Major	Generator Running	Alarm
Generator Run Alarm	Tue Mar 23 2021 17:35:09 PM PDT	Major	Generator Running	Clear
Generator Run Alarm	Tue Mar 23 2021 15:08:14 PM PDT	Major	Generator Running	Alarm

Figure 15 - Historical Alarm Page

6.5.1 Filtering Alarm Data

Use the TYPE/DATE FILTER functions to filter the alarm severity and the Start/Stop Date fields to select the specific desired ranges. The page has additional filters for the alarm category and the ability to word match the name of the alarm and/or the data point being referenced in the alarm. Press the Regenerate Alarm Table button once you create your search criteria. For example, a search of all Major Generator alarms:

HISTORICAL ALARMS

TYPE/DATE FILTER

Critical	Minor	Notice	Start Date	<input type="text"/>
Major	Warning	Clear	End Date	<input type="text"/>

CATEGORY/NAME FILTER

Category: Name: Data ID Name:

Regenerate Alarm Table

HISTORICAL ALARMS				
Name	Timestamp	Severity	Data ID Name	Value
Generator Run Alarm	Wed Mar 24 2021 13:14:31 PM PDT	Major	Generator Running	Alarm
Generator Run Alarm	Tue Mar 23 2021 15:08:14 PM PDT	Major	Generator Running	Alarm

Figure 16 - Alarm History Search Results

Press the “Download to CSV” button if you want to save a copy of this search to your computer in a comma separated values (CSV) file format.

6.6 Log Data

The MP1 will plot a graph of up to four points at a time. The page controls will allow the user to select from Analog Inputs, Digital Inputs and Digital Outputs. Any combination of point types can be charted at one time. Select the point to be graphed and then select the date range for the data. If no date range is specified, then the system will display the most recent data for the points when clicking on the Regenerate Graph button. The “Point name match string” field can be used to only show points that contains those characters. For example you could type Zone in the point name match field and the system will only display analog inputs with value of Zone in the name.

LOG DATA

Choose Points

Point 1	Point 2	Point 3	Point 4
<input type="text" value="Point name match string..."/>			
Analog Inputs			
ZONE TEMP			

Start Date End Date [Regenerate Graph](#)

Figure 17 - Select Data Point to be Graphed

The system will display the graph with a default view of the last 24 hours. Use the page buttons and zoom in and out icons to view the data in your web browser. The MP1 will display a Download to CSV button which will download the data in a CSV file for viewing in another program. Note the download will be the most current 4095 entries per point when no time range was selected. If a large time range was selected, then the system will return the last 4095 entries per point for the range.



Figure 18 - Graph of Selected Data Points

7 Bypassing

The Bypass page is used to bypass the two outputs on the MP1 and to override the current status of directly wired input points.

7.1 Bypass Inputs

Directly wired inputs can have their current value overridden by clicking on the “Add new input bypass” button. This will bring up the following dialogue:

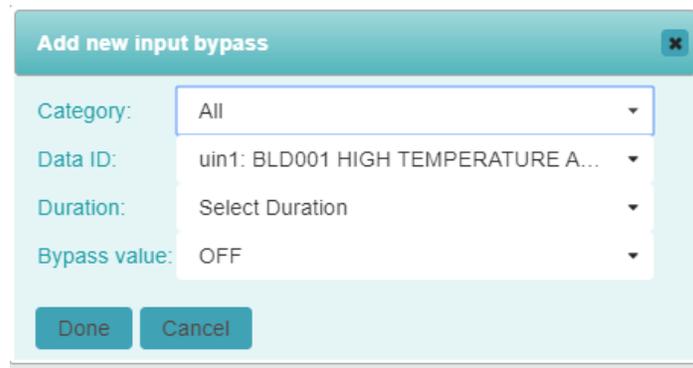


Figure 19 - Bypass Inputs

Select the point to be bypassed in the Data ID field and then select the duration. The bypass value field will have the option of ON or OFF for binary points or will allow the user to enter a value for analog sensors. Press the Done button to complete the bypass. The point in bypass will then appear on the bypass page. Clicking on the Auto button for the input will return the point to automatic readings.

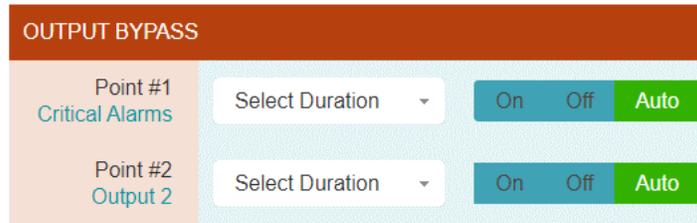
INPUT BYPASS			
Universal Input #1 BLD001 HIGH TEMPERATURE ALARM	0:14:18 remaining	ON	Auto
Universal Input #18 Temperature Sensor	0:14:07 remaining	120	Auto

Add new input bypass

Figure 20 - Input Bypass Status

7.2 Bypassing Outputs

The bypass output function is used to turn on (activate) or off (deactivate) the outputs. Select a time duration from the dropdown or the word FOREVER and then select the desired action of ON or OFF. Outputs bypassed for a time period will return to automatic mode once the time elapses. Outputs bypassed FOREVER must be manually returned to automatic by selecting Auto.



OUTPUT BYPASS		
Point #1 Critical Alarms	Select Duration ▾	On Off Auto
Point #2 Output 2	Select Duration ▾	On Off Auto

Figure 21 - Bypassing MP1 Outputs

8 Configuring the MP1

Configuring the MP1 consists of setting up the basic functions and features that will be used with your application. Items such as the network settings, system clock, network protocols and alarm dispatch need to be configured so the system knows what and how to operate when you program the system for monitoring and alarming.

8.1 System Setup

Select Settings from the main menu and choose General. The MP1 will display a list of options for configuration with the first one being Site Parameters. Click on each accordion header to modify the settings for each section and press Save Settings to write the changes to non-volatile flash memory. Save Settings will cause the system to save the changes and reboot to come up with the new values. You can navigate through each section on this page, make changes and then press the Save button to save all changes at once. **Changes will not be saved if you navigate from this page without pressing the “Save Settings” button.**

The screenshot displays the 'GENERAL SETTINGS' interface. At the top, there is a section for 'SITE PARAMETERS' which is expanded to show two fields: 'Site Name' with the value 'TELSEC_MP1' and 'Site Information' with the text 'Quest Controls, Inc. Palmetto, FL'. Below this are several other configuration sections, each with a small arrow icon to its left: 'IPV4 CONFIGURATION', 'IPV6 CONFIGURATION', 'IP GENERAL', 'TIME SETTINGS', 'SNMP/SMTP GENERAL CONFIGURATION', 'SNMPV3 USER CONFIGURATION', 'RADIUS CONFIGURATION', and 'TELNET/SSH USER CONFIGURATION'. At the bottom left of the page is a blue button labeled 'Save Settings'. A white callout box with a black border and an arrow pointing to the 'Save Settings' button contains the text: 'Press to save settings after making changes in all sections.'

Figure 22 - Web Server Setup

8.1.1 Site Parameters

The Site name is displayed in the header of web pages and is used when sending Emails and/or SNMP traps. Enter the desired name to reference the site where the MP1 is located. **Note spaces are not allowed and will be converted to underscores.** The Site Information section is to store unique information about the site such as the address to the facility or contact information.

SITE PARAMETERS	
Site Name	TELSEC_MP1
Site Information	Quest Controls, Inc. Palmetto, FL

Figure 23 - Site Name and Information

8.1.2 IPV4 Configuration

The MP1 supports dual stack for IPv4 and IPv6 or you can disable either IPv4 or IPv6. The default setting is for IPv4 to be enabled and IPv6 disabled. The system will not allow a user to disable both. Use this section to enable/disable IPV4 protocol and to configure an IP address for the unit. The system supports DHCP or Static. If Static is chosen, then enter the desired IP address, Subnet mask and Gateway address.

IPV4 CONFIGURATION	
IPv4 Protocol	Enabled Disabled
Address Type	DHCP Static
IP Address	192.168.1.31
Netmask	255.255.255.0
Gateway	192.168.1.1

Figure 24 - IP Address and Settings

8.1.3 IPV6 Configuration

The MP1 supports either dual stack for IPv4 and IPv6 or you can enable IPv6 and disable IPv4. Use this section to enable IPv6 and configure the network address using either Auto configuration or manual configuration. If Auto is chosen, then the system will display the address in the IP address field after pressing the Save Settings button and the system goes through its restart. For manual configuration, enter the IP address with the prefix and the gateway address without a prefix.

IPv6 CONFIGURATION	
IPv6 Protocol	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
Auto Config	<input type="radio"/> Auto <input checked="" type="radio"/> Manual
IP Address (with /prefix)	<input type="text" value="fd75:983f:60e7:a16e::4/64"/>
Gateway (without /prefix)	<input type="text" value="fd75:983f:60e7:a16e::1"/>

Figure 25 - IPv6 Settings

8.1.4 IP General

This section is used to enter the DNS server IP addresses, change the default IP ports, enable/disable SSL and configure the location of where the update server is located. The Telnet and SSH ports are used for Transaction Language 1 (TL1) alarming and access to the management shell. See section 8.1.9 for configuring usernames and passwords. The TL1 port is a read only access that uses Telnet and does not require a login sequence. Changing the port number to 0 for Telnet, TL1 Port or SSH will disable access to that function.

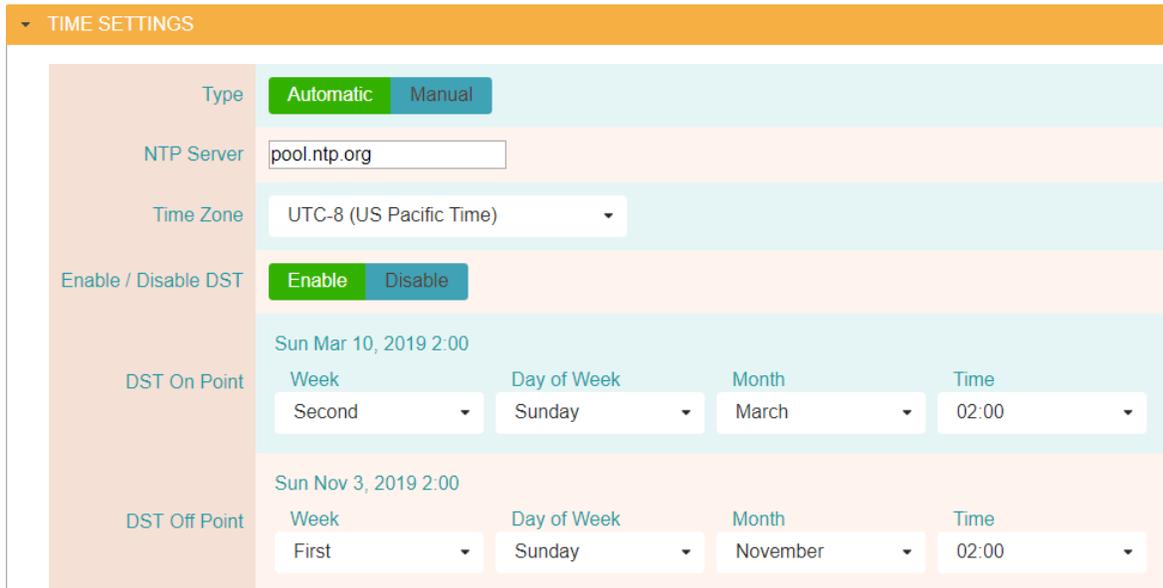
When selecting SSL, the system will allow you to copy/paste the contents of your own PEM data file if you have one. The system will create a self-certification if PEM data is not entered. Self-certification will allow HTTPS connection, but your browser will generate an error notice and ask you if you want to continue. The update server section is used to identify where to look for updates when a user presses the Check and Install Updates button found on the Settings/Advanced page. It is recommended that this field is not changed unless you know the IP address and path for update files.

IP GENERAL	
DNS1	<input type="text" value="8.8.8.8"/>
DNS2	<input type="text" value="8.8.4.4"/>
Telnet Port	<input type="text"/>
TL1 Port	<input type="text" value="3024"/>
SSH Port	<input type="text" value="22"/>
HTTP Port	<input type="text" value="80"/>
SSL	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Update Server	<input type="text" value="192.168.1.104/mp1"/>
Ethernet MAC Address	3C:FB:96:77:88:AC

Figure 26 - Additional Network Settings

8.1.5 Time Settings

Use this section to either set the system clock manually or to turn on automatic time updates using an NTP Server. This page will also allow you to enter a time zone for the system and configure daylight savings time. In manual mode, the web page will allow you to set the time of the system manually by clicking on the time field. This will bring up a dialog box for setting the time which will include a button to set the time using time on your computer.



TIME SETTINGS				
Type	<input checked="" type="button" value="Automatic"/> <input type="button" value="Manual"/>			
NTP Server	<input type="text" value="pool.ntp.org"/>			
Time Zone	UTC-8 (US Pacific Time) ▾			
Enable / Disable DST	<input checked="" type="button" value="Enable"/> <input type="button" value="Disable"/>			
DST On Point	Sun Mar 10, 2019 2:00			
	Week	Day of Week	Month	Time
	Second ▾	Sunday ▾	March ▾	02:00 ▾
DST Off Point	Sun Nov 3, 2019 2:00			
	Week	Day of Week	Month	Time
	First ▾	Sunday ▾	November ▾	02:00 ▾

Figure 27 - System Clock Settings

8.1.6 SNMP/SMTP General Configuration

Use this section to set up the common settings when using SNMP or SMTP (Email). When using SNMPv3, you can have SNMPv1 & v2c active by putting in a Read and Write community string. Leave these fields blank to disable v1 & v2c SET and GET operations. Contact Quest to obtain the MIB files for the MP1. There is a specific MP1 MIB for doing SET and GET commands along with Quest's standard Alarm MIB file for trap reception.

The SMTP setup is to allow the MP1 to send text-based emails when an alarm occurs. Enter the SMTP server information, username and password if necessary, to allow the MP1 to connect to the sever for sending email notifications. The email dispatch addresses and alarm severity are configured in the Settings Alarm Dispatch page (section 8.2.2). The format of the email can be found in Appendix C – Email Alarm Format

SNMP/SMTP GENERAL CONFIGURATION

Incoming SNMP Port	161
SNMP Read Community	public
SNMP Write Community	private
SNMP sysContact	TechSupport@yourdomain.
SNMP sysName	TELSEC_MP1
SNMP sysLocation	Palmetto_FL
SMTP Server	smtp.youemailserver.com
SMTP Server Port Number	25
SMTP Auth Username	user@youemailserver.com
SMTP Auth Password
SMTP From Address	MP1@yourdomain.com

Figure 28 - SNMP and Email Configuration

8.1.7 SNMPv3 User Configuration

Use this section to create up to four different users for SNMP Set/Get access to the system and sending traps if v3 traps are configured under the Settings/Dispatch page. The MP1 supports authentication using MD5 or SHA and Privacy using DES or AES. Usernames and passwords are 8-32 characters in length and accept the characters a-z,A-Z and 0-9.

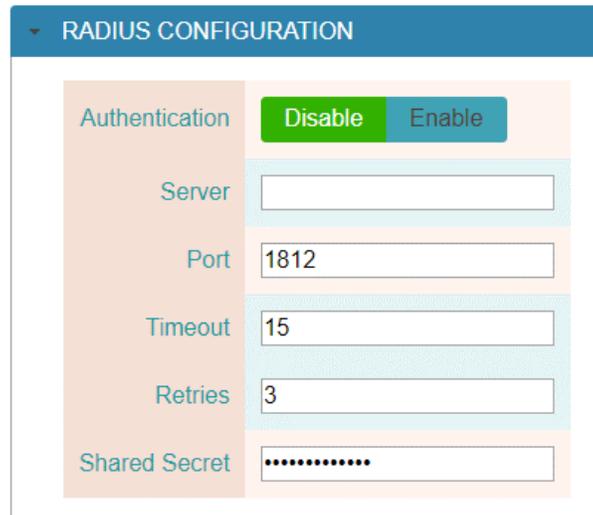
SNMPV3 USER CONFIGURATION

Username	Access Type	Auth Type	Auth Protocol	Auth Pswd (twice)	Priv Protocol	Priv Pswd (twice)
UserNumber1	R/O R/W	authPriv	MD5 SHA	DES AES
UserNumber2	R/O R/W	noAuthNoPriv	MD5 SHA	 	DES AES	
UserNumber3	R/O R/W	authNoPriv	MD5 SHA	DES AES	
	R/O R/W	noAuthNoPriv	MD5 SHA	 	DES AES	

Figure 29 - SNMPv3 Username Configuration

8.1.8 RADIUS Configuration

If RADIUS is enabled, the MP1 will contact the defined server when a user attempts to log into the system to determine if the username/password is valid. The MP1 will grant access if the username/password is valid and will show the menu options based upon the user's access level defined in the RADIUS server. See Appendix B - RADIUS Server Configuration for the required setting when configuring the RADIUS server.



The screenshot displays the RADIUS CONFIGURATION interface. At the top, there is a blue header with a dropdown arrow and the text "RADIUS CONFIGURATION". Below this, the interface is organized into a table-like structure with a light orange background. The first row is for "Authentication", featuring a green "Disable" button and a blue "Enable" button. The subsequent rows are for "Server", "Port", "Timeout", "Retries", and "Shared Secret", each with a corresponding text input field. The "Port" field contains the value "1812", the "Timeout" field contains "15", and the "Retries" field contains "3". The "Shared Secret" field is filled with a series of dots, indicating a masked password.

Figure 30 - RADIUS server interface setup

8.1.9 Telnet/SSH User Configuration

The MP1 supports SSH and Telnet for access to the system to receive alarms via TL1 (Appendix D – TL1 Alarms and Commands) or to access the Shell console for managing the network settings of the MP1 (section 10). The Telnet/SSH User Configuration section is used to set usernames, passwords, inactivity timeout delay and the access type for up to nine different users. The default username/password for the “shell” level is Shelllevel/shelllevel and for TL1 access it is TL1level/tl1level. Change the default settings and or add additional users by entering the appropriate information and then select the access type. Press the save changes button to write the settings to flash. Usernames are 8-32 characters in length and can contain A-Z,a-z, 0-9 and special character _. Passwords are 8-32 characters in length and can contain A-Z,a-z, 0-9 and special characters _@#%*-

TELNET/SSH USER CONFIGURATION			
Username	Password (twice)	Inactivity Timeout (minutes)	Access Type
Shelllevel	***** *****	15	shell
TL1level	***** *****	60	tl1
			none

Figure 31 - Telnet/SSH User Configuration

8.2 Alarm Dispatch Settings

The Alarms Dispatch option under the Settings menu will display the current settings for both the SNMP dispatch and Email dispatching of alarms.

8.2.1 SNMP Dispatch

The MP1 supports sending SNMP traps or Informs (v2c or v3 only) to four trap servers. Enter the IP address of the trap server and select the SNMP version and either Trap or Inform. Some trap servers require a specific Community String to be used, but if not, use the value of Trap which is the default. For SNMPv3, you will need to use one of the defined Usernames that was created during the configuration of SNMPv3 (section 8.1.7). Press the “Save Settings” button to save your changes. **Note: if you are also using Email dispatching, then make those entries first prior to pressing the “Save Settings” button (section 8.2.2).**

ALARM DISPATCH

▶ SNMP DISPATCH

Number	Receiver IP	Version	Type	Community String/V3 Username
1.	<input type="text" value="192.168.1.100"/>	v1 v2 v3	Trap Inform	<input type="text" value="WhyWontYou"/>
2.	<input type="text" value="192.168.1.104"/>	v1 v2 v3	Trap Inform	<input type="text" value="Trap"/>
3.	<input type="text"/>	v1 v2 v3	Trap Inform	<input type="text" value="Trap"/>
4.	<input type="text"/>	v1 v2 v3	Trap Inform	<input type="text" value="Trap"/>

▶ EMAIL DISPATCH

Figure 32 - SNMP Trap/Inform Configuration

8.2.2 Email Dispatch

Click on the Email Dispatch expand icon to display the settings for creating email distribution. The Email server settings must be configured for email alarming to occur (See section 8.1.6). The MP1 supports nine email addresses for sending alarms. Enter the users email address or distribution list address to be used. The subject field allows for a custom message to be included with the email. The system will create a subject line with the severity of the alarm followed by the text entered in the subject field. The last column allows for filtering of what type of alarms to be sent. The system will automatically send a clear email when the alarm condition clears. For example, if only Critical alarms are sent via email then the Clear for those critical alarms will be sent.

ALARM DISPATCH

▶ SNMP DISPATCH

▶ EMAIL DISPATCH

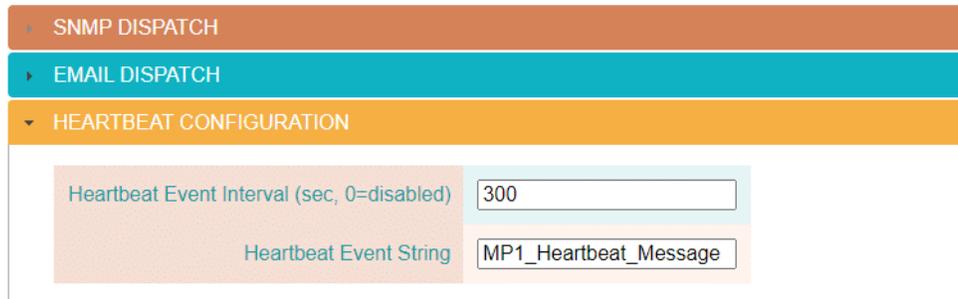
Number	Recipient	Subject	Severity Filter
1.	<input type="text"/>	<input type="text"/>	Disabled
2.	<input type="text"/>	<input type="text"/>	<div style="border: 1px solid #ccc; padding: 2px;"> Critical, Major, and Minor Critical and Major Critical Only All Severities Disabled </div>
3.	<input type="text"/>	<input type="text"/>	Disabled
4.	<input type="text"/>	<input type="text"/>	Disabled
5.	<input type="text"/>	<input type="text"/>	Disabled
6.	<input type="text"/>	<input type="text"/>	Disabled
7.	<input type="text"/>	<input type="text"/>	Disabled
8.	<input type="text"/>	<input type="text"/>	Disabled
9.	<input type="text"/>	<input type="text"/>	Disabled

Figure 33 - Email Alarm Dispatch

Press the Save Settings button at the bottom of the page when completed. This will save any changes made to the email dispatch and changes made to the SNMP dispatch.

8.2.3 Heartbeat Function

The MP1 can be enabled to send a heartbeat message based on a user defined interval. This is typically used to coordinate with a monitoring system platform to ensure the system is operational. Heartbeat messages are only sent via SNMP or TL1 over a Telnet/SSH connection. The heartbeat message is a user definable 32-character message. Enter the desired message and select the interval by entering in the number of seconds to wait between sending messages. A value of 0 will disable this function.



The screenshot displays a configuration interface with three main sections: 'SNMP DISPATCH' (orange), 'EMAIL DISPATCH' (teal), and 'HEARTBEAT CONFIGURATION' (yellow). The 'HEARTBEAT CONFIGURATION' section is expanded, revealing two input fields. The first field is labeled 'Heartbeat Event Interval (sec, 0=disabled)' and contains the value '300'. The second field is labeled 'Heartbeat Event String' and contains the value 'MP1_Heartbeat_Message'.

Figure 34 - Heartbeat Configuration

8.2.4 Test Alarms

The  button at the bottom of the page will cause a test trap to be sent to all the defined destinations along with a test email to the defined recipients. The Test alarm will have a critical severity with all the data fields showing TEST ALARM. The critical alarm will be followed by a clear alarm again with all the data fields showing TEST ALARM.

8.3 HTTP User Administration

This page sets up the six available usernames for the password and what areas the user can access. If the RADIUS server function is enabled, then this option does not affect user access. The default passwords are the same as the username, but in all lower case. No characters are displayed in the password field for security purposes. Passwords can be 5-32 characters in length and contain A-Z,a-z, 0-9 and special characters _@#%*-

USER ADMINISTRATION				
User	Password	Confirm Password	Privileges	
User1	<input type="text"/>	<input type="text"/>	Home	Status Bypass Program Settings
User2	<input type="text"/>	<input type="text"/>	Home	Status Bypass Program Settings
User3	<input type="text"/>	<input type="text"/>	Home	Status Bypass Program Settings
User4	<input type="text"/>	<input type="text"/>	Home	Status Bypass Program Settings
User5	<input type="text"/>	<input type="text"/>	Home	Status Bypass Program Settings
Admin	<input type="text"/>	<input type="text"/>	Home	Status Bypass Program Settings

Figure 35 - Webserver Password Setup

8.4 Advanced Settings

8.4.1 System Version & Update

Choosing the Advanced settings will display the current version of the system’s firmware. Selecting the Update button will cause the system to try and connect to an update server to look for upgrades. The IP address used for upgrades must be accessible from the network the MP1 is on in order to perform the upgrade. The IP address for the upgrade server is configured in the IP General window. See section 8.1.4.

ADVANCED OPTIONS

SYSTEM VERSION & UPDATE

Kernel version	#1 Thu Oct 25 11:30:54 PDT 2018
Filesystem version	#1

↻ Check and Install Updates

CONFIGURATION UPLOAD & DOWNLOAD

POINT LOG REMOVAL

CLEAR INPUT TIMERS

EVENT & DEBUG LOG

Figure 36 - Firmware Version and Update

8.4.2 Configuration Upload & Download

Select the expand arrow to display the option for downloading or uploading a configuration file to the system. The download option will download a text file to your web browser. The file will have all of the current settings configured in the system. This file can then be saved in case the site needs to be uploaded in the future. The Upload option will allow you to load a configuration file to the system. While the system will download all settings into a single file, it will accept uploading files with individual sections. This way you can upload only the sections requiring changes. Each section has a label in brackets [] to denote the section. The entire section must be loaded together to be successful.

First select the Choose File button to navigate and select a file from your computer. Then select the Upload button. The system will receive the file and then verify the information to ensure it conforms to the proper syntax. The system will then present a dialogue box displaying any errors with their line number or a notice of no errors. If there are no errors, then there will be a Save and Reboot button below the dialogue box. Pressing this button will cause the system to save the contents of the configuration file to flash and then reboot and come back up with the new settings.

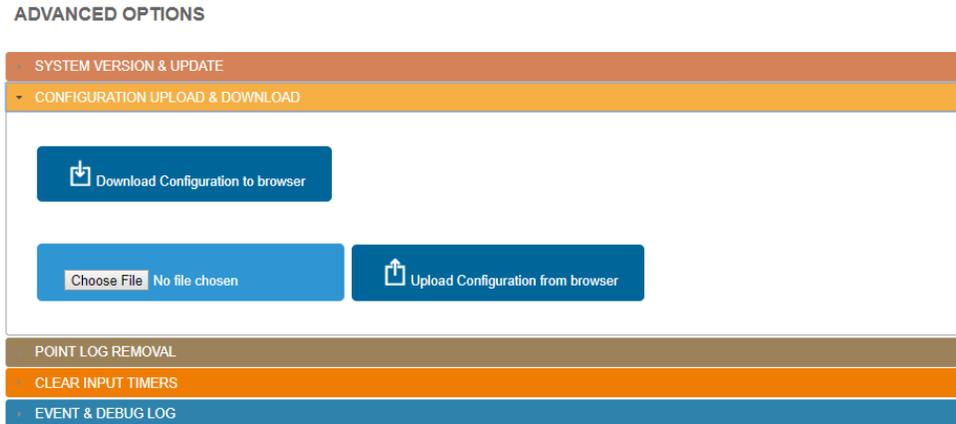


Figure 37 - Configuration File Upload & Download

8.4.3 Point Log Removal

This section will allow clearing of log data for a single point or erasing history log data for all the points. It is not necessary to periodically remove log data since the system will overwrite old data when the log is full. Typically, the manual clearing of logs might be done after the system is properly wired and configured to eliminate erroneous data that could have occurred during installation.



Figure 38 - Remove Log Data

8.4.4 Clear Input Timers

This option will clear all digital input timers at one time. The system will provide a confirmation popup and then proceed to reset the timers to zero if the user confirms the operation.



Figure 39 - Clear Input Timers

8.4.5 Event & Debug Log

The Event and Debug log will provide diagnostic information regarding the operation of the MP1. Typical use of this log would be to resolve issues with sending traps or email alarms. Contact Quest for assistance if you are experiencing issues with your MP1 system. The filter options allow you to select the category and then the detail level of events to be displayed. Select the choices you want and use the optional date range and press the Regenerate Debug Log button. The information will be displayed in a window with controls for forward, back, beginning and end of log navigation. A download button will also be displayed which when pressed will download a text file of the log to your browser.

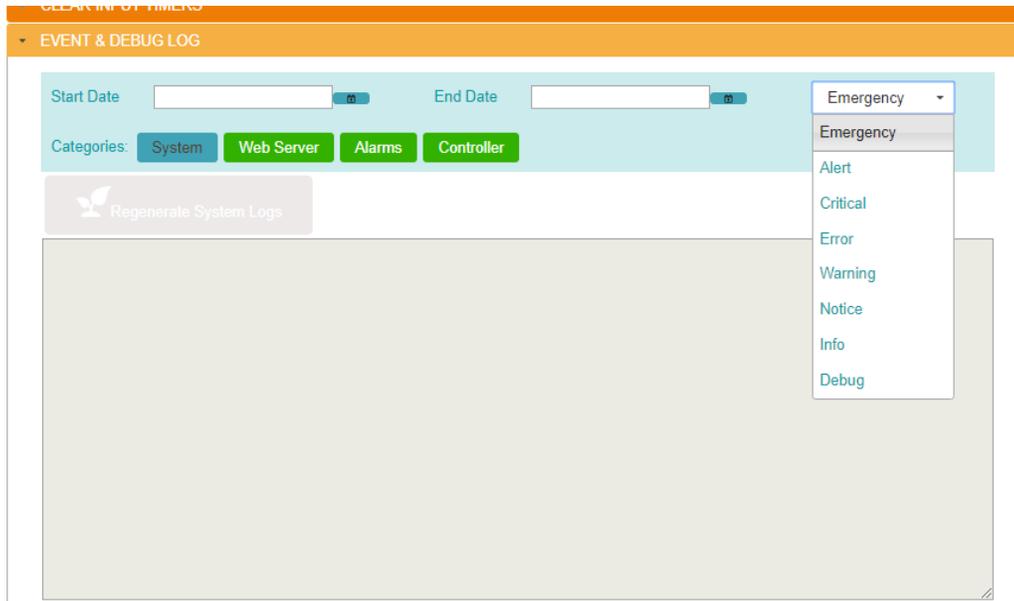


Figure 40 - Event and Debug Log

9 Programming the System

Hovering on the Program menu will display the available program options. For all program pages the system must save changes/additions to flash and do a reboot. When entering data, you will notice that after pressing the Done button there will be a 60 second count down timer in the header. You will have 60 seconds to enter the next point information, which will reset the timer to 60 seconds again. You can continue to add additional points in this manor or if you are completed, you can click on the Save and Reboot button to save immediately instead of waiting for the time out.

9.1 Input Programming

The program input page will show all inputs that have been defined with their current settings. There are a total of seven inputs. Inputs 1-6 correspond to the field terminals on the MP1 and input 7 is used to monitor the incoming power to the MP1. The point names are hyperlinks to bring up a window for changing the setting. The same window will appear when selecting the “Add new point” button.

PROGRAM UNIVERSAL INPUTS

Point #	Name	Input Type	Offset	Custom Low	Custom High	Log Type	Log Interval (min)
1	Main Door Monitor	DRYNC	0	0	0	COS	0
2	Zone 1 Temperature	TEMPF	0	0	0	Time	15
3	Water Detection	DRYNC	0	0	0	COS	0
4	Generator Running	DRYNC	0	0	0	COS	0
5	Zone 2 Temperature	Custom	77	0	100	None	0
6	Commercial Power Alarm	DRYNO	0	0	0	COS	0
7	DC Power	Custom	0	0	61	Time	15

Figure 41 - Defining Universal Inputs

The screenshot shows the 'PROGRAM UNIVERSAL INPUTS' table from Figure 41. An 'Edit point #2' dialog box is overlaid on the table. The dialog contains the following fields and values:

- Point: 2
- Name: Zone 1 Temperature
- Input Type: TEMPF
- Offset: 0
- Custom Low: 0
- Custom High: 0
- Log Type: INTERVAL
- Log Interval (min): 15

At the bottom of the dialog are three buttons: 'Delete point', 'Done', and 'Cancel'. A 'Save Settings' button is also visible at the bottom left of the main interface.

Figure 42 - Add/Change Input Settings

9.1.1 Point

Inputs 1-6 are associated with the physical wiring terminals on the unit. Input seven is used to monitor the incoming power to the MP1. Use the dropdown to select input 1-7 that you want to define. To define and use input 7 set the input type to CUSTOM with an offset of 0, low value of 0 and high value of 61 to read Volts DC. Then set the log type to interval and enter the interval in minutes for logging.

9.1.2 Point Name

The point name will allow up to thirty-two characters to describe the point being monitored. The name is case sensitive and will be displayed exactly as you typed it.

9.1.3 Sensor Type

The sensor type dropdown will list the available choices for the input. They are as follows:

DRYNO	A dry contact closure that is normally open. This input will show an OFF value when open and an ON value when closed.
DRYNC	A dry contact closure that is normally closed. This input will show an ON value when open and an OFF value when closed.
WETNO	A wet contact closure that is normally open. A wet contact is an input that provides its own voltage. A value greater than 2.8 VDC is determined to be in the ON state and a voltage less than 0.8VDC is deemed to be in the OFF state. The maximum voltage allowed on the input is 65 VDC.
WETNC	A wet contact closure that is normally closed. A wet contact is an input that provides its own voltage. A value greater than 2.8 VDC is determined to be in the OFF state and a voltage less than 0.8 VDC is deemed to be in the ON state. The maximum voltage allowed on the input is 65 VDC.
TEMPF	The MP1 supports 10k Type III thermistors. Choosing TEMPF will display readings in Fahrenheit.
TEMPC	The MP1 supports 10k Type III thermistors. Choosing TEMPC will display readings in Celsius.
CUSTOM	The custom scale allows you to enter a scale using the Custom Low and Custom High fields. This allows you to create a scale for any sensor that provides a signal between 0-5 VDC or 0-20 mA. Note the scale is a linear interpolation between the low and high values. Quest has a spreadsheet file to assist in determining scale factors. Please contact your representative to obtain a copy of the file.

9.1.4 Offset

The offset field is used for any analog sensor to correct the reading of the input. The MP1 will read the input and add the offset value automatically so all alarms, logging and display screens show the corrected value.

9.1.5 Custom Low

This field is used when selecting the CUSTOM input type and will be the value displayed when the input is reading the minimum value or 0 VDC in. The MP1 will use this value along with the Custom High value to create a scale and display the sensor in the correct engineering units.

9.1.6 Custom High

Used in conjunction with the Custom Low field to create a scale for the sensor attached to the input. The High value is the reading the sensor will have when the input is at the maximum input value. Quest

has created a special Excel spreadsheet for calculating the minimum and maximum values based on your sensor output. Contact Quest to obtain a copy of this file for your use.

9.1.7 Log Type

Choose between TIME for a timed interval, COS for change of state or NONE to disable the logging for the input. The TIME option is best for analog sensors to log on a user specified interval. Using COS for digital inputs will optimize your logging to only put entries in the historical log when the point changes its ON/OFF state. If you select COS for an analog input, the system will log whenever the input value changes. Needless to say, this will fill up your log rather quickly if you decide to use COS on an analog point.

9.1.8 Log Interval

This is the logging interval in minutes when you select a log type of TIME. The field will allow values between 1 and 120 minutes for the interval.

9.2 Output Programming

The program outputs page will show the current settings for the two outputs. The output name is a hyperlink that when clicked on will bring up the change settings window for that output.

PROGRAM OUTPUTS

Point #	Name	Default State	Follows	Acknowledge Input
1	Critical Alarms	DE-ENERGIZED	CR Alarms	unused
2	Output 2	DE-ENERGIZED	None	unused

[Save Settings](#)

Figure 43 - Output Settings Page

9.2.1 Output Name

Enter up to thirty-two alphanumeric characters to name the output. The name is case sensitive and will be displayed exactly as you typed it.

9.2.2 Default State

The default state is the condition of the relay when it is not being commanded to the active state. This option allows for the relay coil to be either de-energized or energized as the default state of the relay. Select whether the output should be De-energized when not activated (normal relay logic) or Energized when not in the activated state (reverse relay logic).

9.2.3 Output Follows Option

Use the dropdown to select what function you want the relay to follow. This dropdown will show the options of NONE meaning it will only be activated with a user bypass, Alarm severity options or defined time schedules. Time schedules must be defined first for them to appear in the dropdown. By following an alarm severity, the output will be in the activated (ON) condition when there is an active alarm with

the chosen severity. The output will stay activated until there are no longer any active alarms with the chosen severity or if the Acknowledge button on the web page is pressed. Additionally, an input can be used as the acknowledge function as well. When either Acknowledge function is activated, the system will de-activate the output. The output will remain deactivated until another active alarm with the corresponding severity occurs. See Figure 44 below.

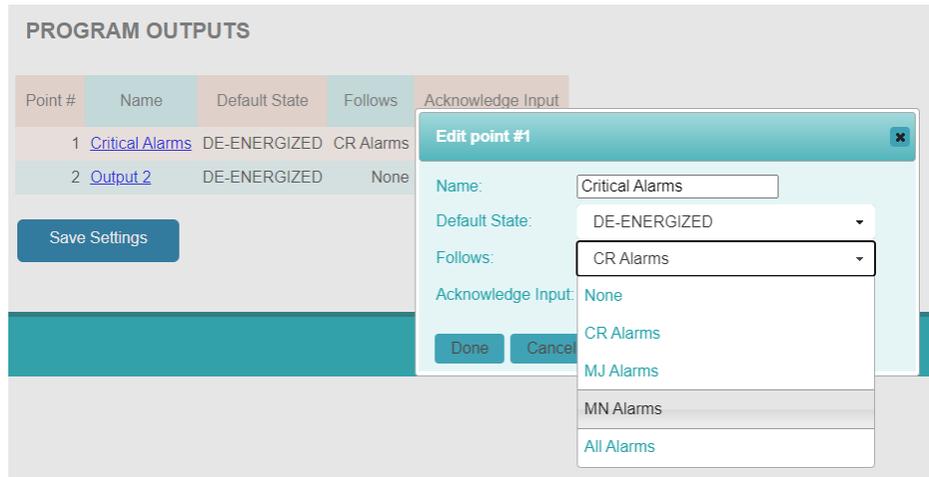


Figure 44 - Program Output Window

9.2.4 Output Acknowledge Function

The program output window has the option to select a digital input as an acknowledge function. If the output is activated due to an Active Alarm, then the output will de-activate when the acknowledge input is in the ON condition. This is useful when using a local enunciator panel that has a momentary input to acknowledge the alarm condition and turn off the output. For example, you may program an output to control a warning light when there is a critical alarm active and program another relay controlling the horn. Pressing the acknowledge button could silence the horn until the next alarm occurs.

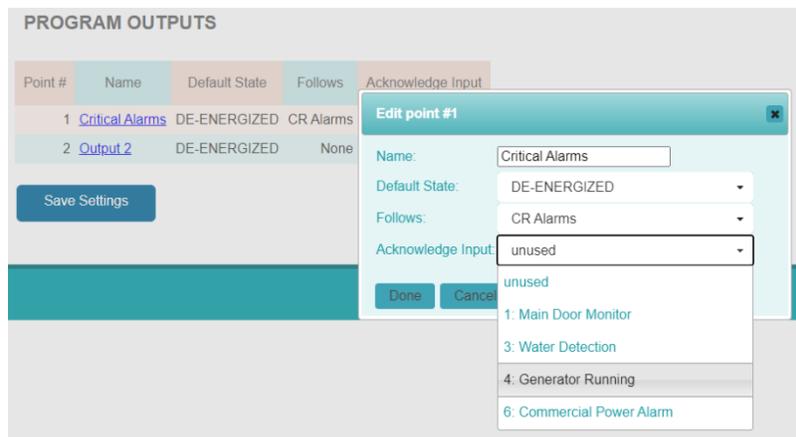


Figure 45 - Adding an Acknowledge Input

Press the Done button to go back to the program outputs page and then select another output to program or press the Save Settings button.

9.3 Alarm Programming

Select Alarms from the Program menu to see the alarm program screen. This screen will display all programmed alarms in a table with the ability to navigate the table using the next, back, beginning and end buttons. The filter section allows you to search based on the alarm name or the name of the point used in the alarm. For example, to see all Tower alarms, you can type Tower in the name field and press enter. Now only alarms with the word Tower in the name will be displayed.

The alarm names are hyperlinks that when selected will bring up the program alarm window. The same window is used for new alarms when selecting the Add new alarm button.

PROGRAM ALARMS

FILTER

Category: All Name: Data ID Name:

ALARMS

ID	Name	Data ID Name	Severity	Comparison	Value	Qualifier	Alarm Delay	Clear Delay	Nag Interval	TL1 Type
a109	Tower Light Status	Tower - Light Status	Notice	>	0		10 second(s)	5 second(s)	0 minute(s)	ENV
ai09	Power Alarm	DC Voltage	Critical	>	30		1 second(s)	1 second(s)	0 minute(s)	ENV
ai01	Tower - Photocell Failure	Tower - Photocell Failure	Critical	>	0		5 second(s)	30 second(s)	0 minute(s)	ENV
ai02	Tower - Marker Light Alarm	Tower - Marker Light Fail Alarm	Critical	>	0		5 second(s)	30 second(s)	0 minute(s)	ENV
ai03	Tower - Beacon Fail - Night mode	Tower - Night Beacon Light Fail	Critical	>	0		5 second(s)	30 second(s)	0 minute(s)	ENV
ai04	Tower - Beacon Fail Day Mode	Tower - Day Beacon Light Failure	Critical	>	0		5 second(s)	30 second(s)	0 minute(s)	ENV
ai05	Tower Light for alrm qualifier	Tower - Light Status	None	=	0		0 hour(s)	0 hour(s)	0 minute(s)	ENV
ai06	Tower Lights are not on	Light Level Sensor	Critical	<	10	ai05	30 second(s)	5 second(s)	0 minute(s)	ENV

« < > »

Add new alarm

Save Settings

Figure 46 - Program Alarm Page

9.3.1 Defining Alarm Strategies

Selecting an existing alarm name or clicking on the Add new alarm button will bring up the dialog for modifying or adding a new alarm.

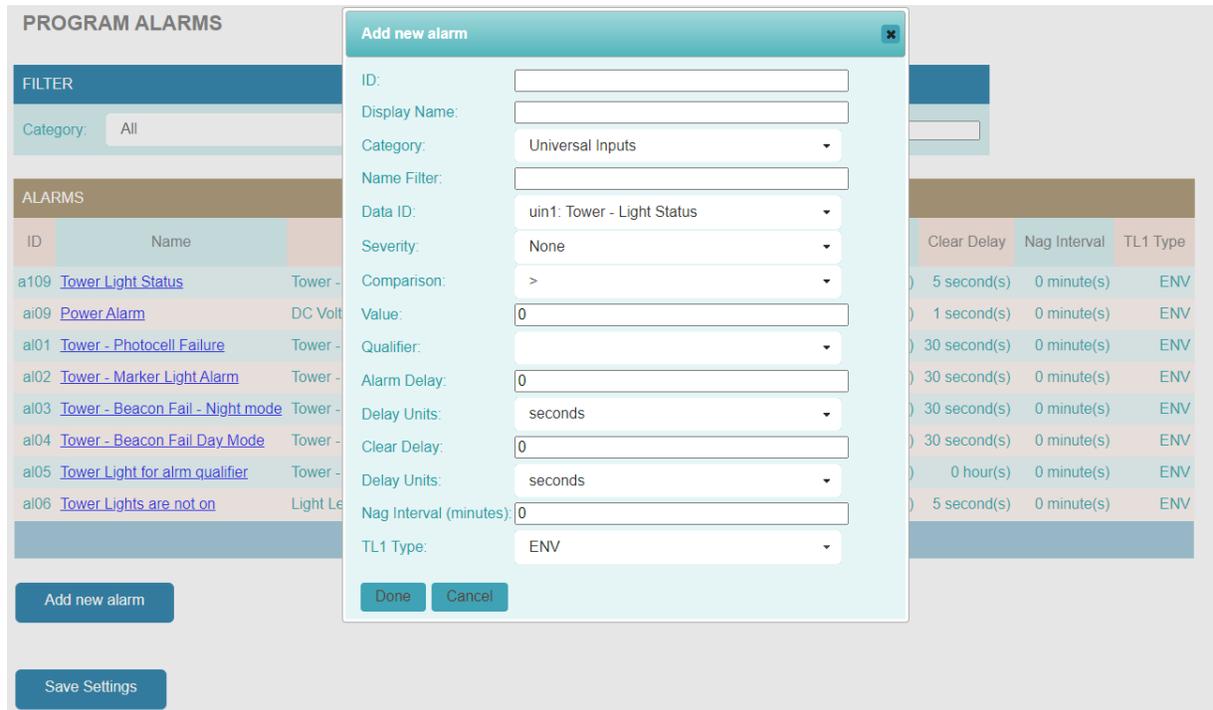


Figure 47 - Defining an Alarm Strategy

9.3.1.1 Alarm ID

The ID field is a unique alphanumeric four-character code used to identify the point in the system. This is used for alarm programming, and SNMP to create a reference ID for the point. The four-character ID can be whatever the user would like to use to organize the points. For example, you may want to have IDs per alarm type so later you can sort data based on the ID, Such as GEN1 for generator point 1 alarm, etc. You may want to use the same numbering scheme when setting up multiple sites because the ID will also be the SNMP index number for doing sets and gets.

9.3.1.2 Point Name

The point name will allow up to thirty-two characters to describe the point being monitored. The name is case sensitive and will be displayed exactly as you typed it.

9.3.1.3 Category and Data ID

The category field is used in conjunction with the Data ID dropdown to filter the display list. This way you can limit the size of the dropdown list for specific points. The category list choices are ALL for every defined point in the system, universal inputs for a list of the defined inputs and Modbus/Device name for a list of defined Modbus points sorted by device. Select the desired category and then select the Device ID to be used for the alarm strategy.

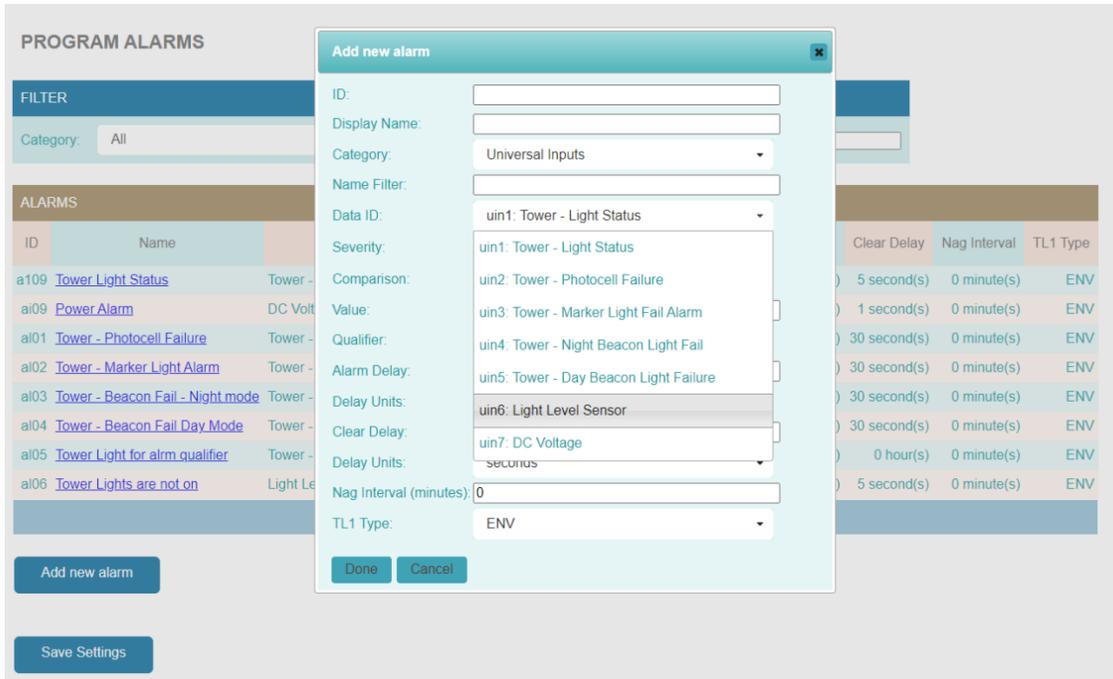


Figure 48 - Selecting a point to alarm

9.3.1.4 Alarm Severity

Select the desired alarm severity from the Severity dropdown. A severity of NONE will disable the alarm until the severity is changed to another level. Notice is special case severity level where the alarm when active and cleared will appear in the alarm historical log, but alarms with Notice level are not sent as traps or emails.

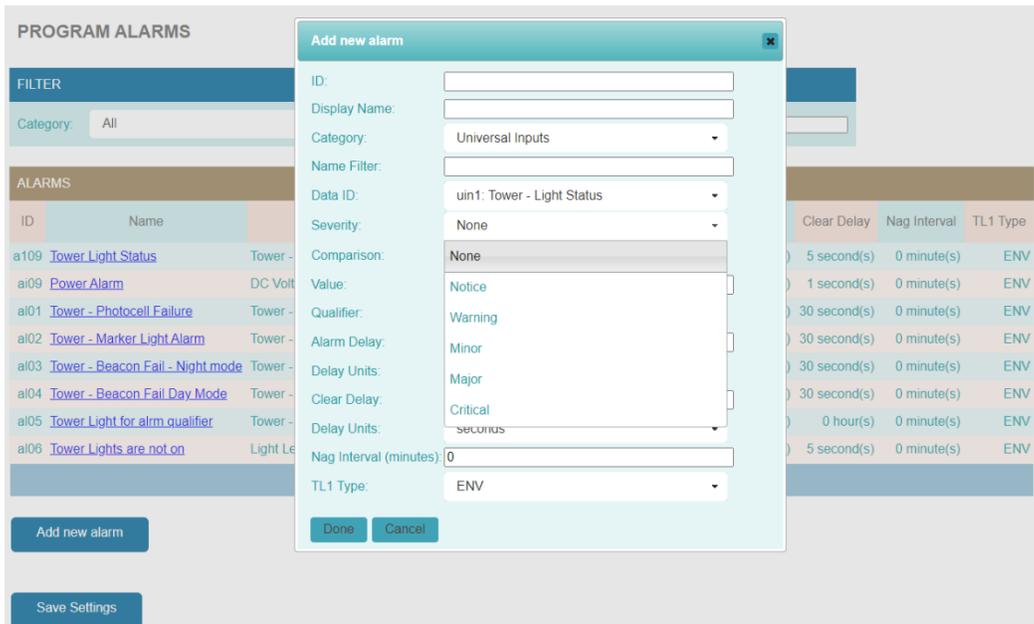


Figure 49 - Selecting the Alarm Severity

9.3.1.5 Comparison Operator and Value

The Comparison field is used to select the operator for creating the alarm strategy. The alarms are looking for “true” statements and will alarm when the condition described is in the true state. The value field is used with the operator to determine if the point being monitored is in the alarm condition. Digital inputs are compared to 0 for OFF and 1 for ON. Thus, to create an alarm when the digital input has an ON status, you would compare the input > (greater than) 0 or you could compare the input = (equal to) 1, or input ≠ (not equal to) 0. Analog sensors such as temperature and humidity, use the greater than (>) value or the less than (<) value for alarm condition determination. An example would be if the zone temperature sensor is greater than 80 degrees. Alarm values are entered as integer numbers.

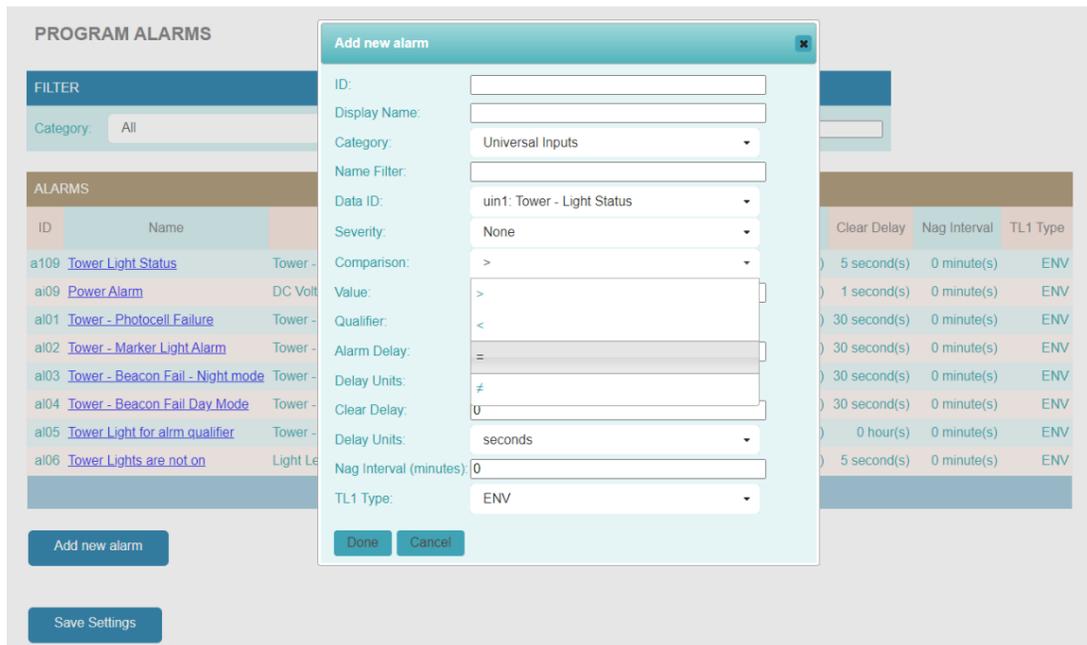


Figure 50 - Select Comparison Operator

9.3.1.6 Additional Qualifier

Alarm strategies allow for a qualifier to create additional conditions that must be true (on) before this alarm statement is true or active. The qualifier field is optional and will contain a list of previously defined alarm strategies and time schedules. Time schedules can be used to only create the alarm during certain times of the day or days of the week. By using other alarm strategies as qualifiers, you can create combinatorial logic to alarm based on multiple conditions. The MP1 will allow you to string together multiple alarm strategies in this way to then generate the alarm condition. Keep in mind that ALL conditions must be true or active for the alarm strategy to be in alarm (active/on). If any conditions become false (off) then the alarm strategy is no longer active and has a status of off, which generates a clear alarm in the alarm log.

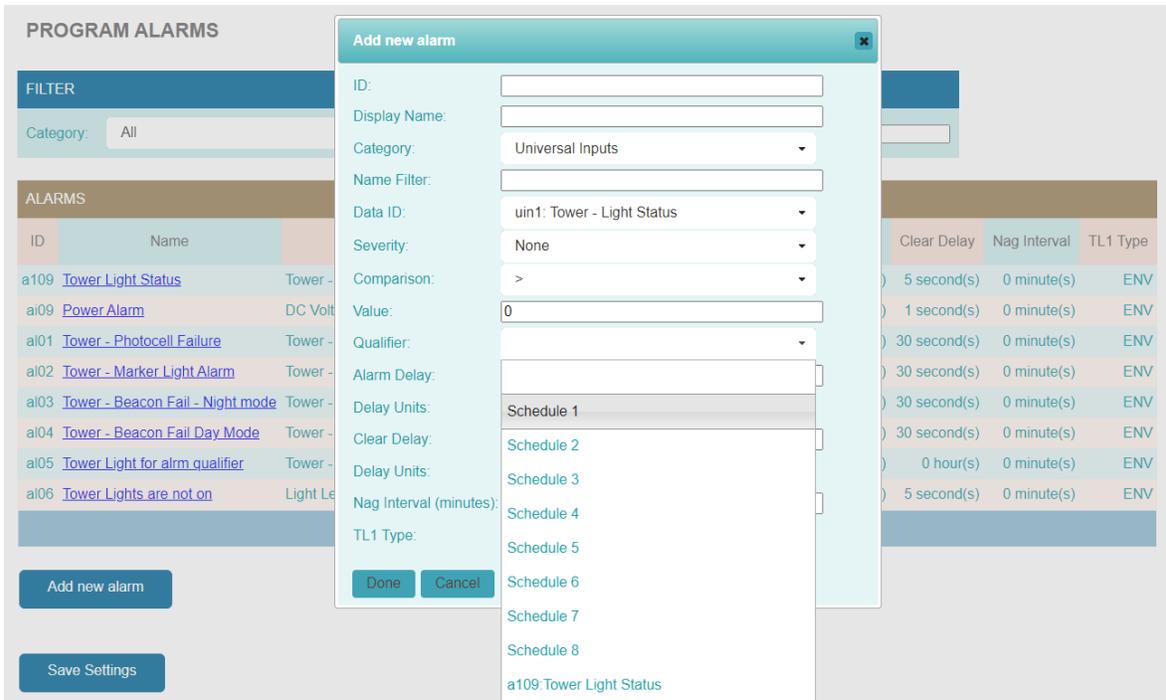


Figure 51 - Using Additional Qualifiers

9.3.1.7 Alarm Delay and Delay Units

Use the Alarm Delay field and the Delay Units drop down to create a delay time for the alarm condition. The alarm condition must be true for this time period for the alarm to be generated. An alarm will not be generated if the conditions become false before the delay time elapses. The maximum delay time is 25 hours.

9.3.1.8 Clear Delay and Delay Units

Use the Clear Delay field and the Delay Units drop down to create a delay time for the clear condition. A clear alarm will be generated once the alarm condition is no longer true for the defined delay time. The maximum delay time is 24 hours.

9.3.1.9 Nag Interval

The nag interval is used to resend the alarm if the alarm is still active. A value of 0 means the alarm will be sent once per occurrence. A value in minutes greater than 0 will create an interval timer where the alarm will be resent every time the time has been elapsed. The maximum nag interval is 1440 minutes.

9.3.1.10 TL1 Type

This field allows the user to select the TL1 Alarm type. The default es ENV for environmental alarm but can be changed to Equipment Service Affecting (EQPTSA) or Equipment Non-service affecting. This function is used with the TL1 alarming protocol supported by the MP2.

9.4 Time Schedules

Select Schedule from the Program menu to see the Program Schedule page. This page will show the defined schedules (up to 8 schedules) and their current status or state. The name of the schedule is a hyperlink that when selected will bring up a window showing the current settings and allow the user to modify the schedule. The “Add new schedule” button will bring up the same change schedule dialogue window. Press the “Save Settings” button once you have made changes to an existing schedule or created a new schedule.

PROGRAM SCHEDULE

Sched #	Name	State
1	Check to see if Light Level Fail	OFF
2	Turn On Tower Lights	OFF

[Add new schedule](#)

[Save Settings](#)

Figure 52 - Change/view Time Schedules

9.4.1 Change Time Schedule

The change schedule window has a place for the user to enter a thirty-two-character name to describe the schedule and up to sixteen priorities for turning the schedule on and off. Select the action for a priority line and then select the hours, minutes and AM/PM setting. Finally select which days of the week the priority line will be active. Press the “Done” button once you are completed with filling out the desired priorities. Schedules typically have at least one ON and OFF priority to allow the schedule to change status based on time of day and the day of the week. Once the schedule is created, it will be available for use in programming outputs and/or alarm strategies.

TELSEC MP1

Active Alarms Present

PROGRAM SCHEDULE

Sched # Name

1 [Check to see if Light Lev](#)

2 [Turn On Tower Lights](#)

Add new schedule

Save Settings

Add new schedule

Name:

PRI#	ACTION	TIME			DAY OF WEEK							
					SU	MO	TU	WE	TH	FR	SA	
1	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
2	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
3	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
4	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
5	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
6	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
7	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
8	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
9	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
10	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
11	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
12	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
13	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
14	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
15	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							
16	NONE ▾	12 ▾	00 ▾	AM ▾	<input type="checkbox"/>							

Done Cancel

Figure 53 - Define Schedule Priorities

10 Shell Commands

The MP1 supports a management shell that is accessible through SSH or Telnet. From this shell, the user can issue various commands to administer the communications of the system. Use your favorite SSH or Telnet client to connect to the MP1. The default username/password is Shelllevel/shelllevel. The username/password can be changed or additional username/password combinations can be created through the Telnet/SSH User Configuration on the web server. See section 8.1.9 of this manual. A command prompt will be shown after a successful login. Type the word “show” to see the available commands:

Available commands:

```
set ip
set mtu
set httpswd
set snmpmgr
set upgradeurl
set upgradecheck
ping
show
exit
logout
```

All commands when entered will execute without further confirmation to the user. When using the “set” commands the system will output a message of “parameters set...unit will restart after you exit”. You can do multiple “set” commands and then type “exit” or “logout” to exit and reboot the system. The system will then restart and come up with the new settings.

10.1 Set IP Command

Typing “set ip” only will show the current settings for the network configuration. To change the settings, use the following format:

Format: set ip <ipaddress> <subnetmask> <gateway> <DNS1 | none> <DNS2 | none> <http_port>

Where:

<ipaddress> = the IP address for the device in decimal dot format

<subnetmask> = The subnet mask entered in decimal dot format

<gateway> = the gateway IP address entered in decimal dot format.

<DNS1 | none> = DNS 1 server IP address in decimal dot format or the word none when DNS is not used

<DNS2 | none> = DNS 2 server IP address in decimal dot format or the word none when DNS is not used

<http_port> = The port number to use for HTTP access.

Example:

```
set ip 192.168.1.58 255.255.255.0 192.168.1.1 8.8.8.8 8.8.4.4 80
```

Where 192.168.1.58 is the IP address, 255.255.255.0 is the subnet, 192.168.1.1 is the gateway, 8.8.8.8 is DNS 1 server, 8.8.4.4 is DNS 2 server and the HTTP port is 80.

When there is no DNS then use the following example:

```
>set ip 192.168.1.58 255.255.255.0 192.168.1.1 none 80
```

10.2 Set MTU Command

Type “set mtu” to see the current settings. The set mtu command will change the size of the Maximum Transmission Unit value. The default value is 1500.

Format: set mtu <value>

Example: set mtu 1200

Sets the max mtu size to 1200.

10.3 Set httpswd Command

The set httpswd command will change the passwords for the built in web server. There are a total of six usernames (User1 – User5 & Admin) that can be change. Note this changes the password only and does not change the access levels assigned to each username. To change the access level go to the web server go to Settings/HTTP User Administration. See section 8.3.

Format: set httpswd <username> <pswd> <pswd copy>

Where:

<username> = User1, User2, User3, User4, User5, Admin

<pswd> = the password value used when logging into the webserver using the username

<pswd copy> = reenter the password again for confirmation.

10.4 Set snmpmgr Command

This command will allow you to set the four SNMP trap receiver addresses. Typing “set snmpmgr” without any parameters will show the existing settings for the four trap server addresses.

Format: set snmpmgr <#> <ipaddress|none> <v1|v2|v3> <Trap|Inform> <community string/v3 username>

Where:

<#> = The trap server number to be changed 1-4

<ipaddress|none> = IP address of the trap server or the word none to remove and existing definition

<v1|v2|v3> = the trap format to be used

<Trap|Inform> = Whether to send traps or informs to the server.

<community string/v3 username> = the SNMP community string to be used or one of the defined SNMP user names to be used if sending v3 traps/informs (see section 8.1.7).

Example: set snmpmgr 1 192.168.1.104 v2 Inform Trap

Sets the first trap manager to IP address 192.168.1.104 and will send SNMP v2c informs with a community string of Trap.

10.5 Upgrade URL

The set upgradeurl will allow the user to change the IP address and path of where the Ethernet module can locate upgrades. Typing “set upgradeurl” and pressing enter will show the current location of where upgrades can be found when the system is told (through the web server link or the upgrade command) to check for upgrades. The format for changing the location is as follows:

Format: set upgradeurl <ipaddress/filelocation>

Example: set upgradeurl 192.168.1.105/MP1

10.6 Checking for Upgrades

The set upgradecheck command can be used to have the system go check to see if there is an available upgrade and if so, the system will upgrade to the version stored on the upgraded server assuming the build number of the code is greater than what is currently running in the MP1. Entering “set upgradecheck” will show the current firmware build number. Entering “set upgradecheck on” will cause the system to check for and perform the upgrade.

Example:

Command: set upgradecheck

Response: kernel version is #2 Fri Oct 4 10:28:18 PDT 2019
filesystem version is 2

Command: set upgradecheck on

Response: upgrade check turned on...unit will restart and check after you exit

10.7 Ping Command

The ping command will allow you to verify communications on the network. This command can be helpful when reusing an IP address for the MP1. By doing the ping, the Ethernet switch the MP1 is connected to will update its ARP table for the new MAC address of the unit.

Format: ping <ipaddress>

Example:

Command: ping 192.168.1.1

Response: PING 192.168.1.1 (192.168.1.1): 56 data bytes
64 bytes from 192.168.1.1: seq=0 ttl=64 time=10.726 ms
64 bytes from 192.168.1.1: seq=1 ttl=64 time=0.758 ms
64 bytes from 192.168.1.1: seq=2 ttl=64 time=0.775 ms
64 bytes from 192.168.1.1: seq=3 ttl=64 time=0.802 ms

```
--- 192.168.1.1 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max = 0.758/3.265/10.726 ms
```

10.8 Exit & Logout Command

The exit and logout command have the same function. Typing exit or logout will terminate your session and if changes were made, will cause the system to reboot and come back up with the new settings.

11 File Upload Format

The MP1 supports complete programming by uploading a file through the web server. The file is broken down into multiple segments and each starts with a heading in brackets. It is permissible to upload only certain sections at a time, but when uploading a section, all the options for that section must be sent. For example, if you send the [network] section, you must send all items in that section. For application programs sections such as [alarms], you must send all alarm programs since the new uploaded alarm section would replace all alarms that were in the unit. The alarms section [alarms] require that the reference points (inputs, Modbus etc.) must be defined first. Therefore, they either have to be in the same file during the upload or have previously been defined.

The configuration settings in each section are comma separated values. You can use a text editor or a CSV application program to edit and or create the entire file or individual sections.

To become familiar with the file format, it is recommended that you download the file from the MP1 by going to Settings/Advanced/Configuration Upload & Download and select "Download Configuration to browser". A text file will be downloaded from the system to your web browser.

11.1 Section Formats

Listed below are the various sections in the configuration file along with explanation of what the section is used for and how it correlates to programming through the web server.

11.1.1 [network]

Contains the network settings that are configured through the Settings/General section of the web server for IPv4, IPv6 and IP General sections.

11.1.2 [site]

Site specific information from the Settings/General/Site Parameters section. In addition, there are fields for latitude, longitude, and URL text information that are for future use and should not be changed.

11.1.3 [timeserver]

Information for setting the system clock which is configured through Settings/General/Time Settings.

11.1.4 [timezone]

The time zone used for the system which is configured through Settings/General/Time Settings.

11.1.5 [snmp]

The SNMP general settings that are configured through Settings/General/ “SNMP/SMTP General” Settings. This section also contains the heartbeat trap configuration which can be set through the web server Settings/Alarm Dispatch/Heartbeat Configuration section.

11.1.6 [smtp]

The general email settings that are configured through Settings/General/ “SNMP/SMTP General”.

11.1.7 [email]

This section will contain the email dispatch configuration that is created through the Settings/Alarm Dispatch/Email Dispatch tab. The severity mask is as follows:

62 = All severities

56 = Critical, Major & Minor

48 = Critical and Major

32 = Critical only

0 = Disabled

11.1.8 [log]

This section is for internal use and should not be changed unless directed to do so by Quest Controls, Inc. personnel. Changes to this section can impact the performance of your system and or render it inoperable.

11.1.9 [snmpv3]

This section contains the SNMPv3 settings that are entered through the web server Settings/General/SNMPv3 User Configuration tab.

11.1.10 [radius]

Settings for the RADIUS server connectivity that are entered through the web servers Settings/General/Radius Configuration tab.

11.1.11 [telnetssh]

Settings used for Telnet and SSH access that are entered through the web servers Settings/General/Telnet/SSH User Configuration.

11.1.12 [inputs]

This section is for defining inputs that are tied to the MP1 main board or Quest expansion boards. See Section 9.1 for additional information on defining inputs.

Options:

#pt = The point number where the point is connected to the system. from 1-7

Name = The 32-character display name defined for the point

Type = tempf, tempc, dryno, drync, wetno, wetnc, custom

Offset = offset value to correct the sensor reading.

custom low = When input is defined as custom this value is the low end of the scale.

custom high = When input is defined as custom this value is the high end of the scale.

log type = "COS" for change of state or "time" for interval time logging
log interval (min) = number of minutes for interval time logging or 0 when using COS.

Example:

[inputs]

```
#pt,name,type,offset,custom low,custom high,log type,log interval (min)
1,Outside Air,tempf,0,0,0,time,5
2,Zone 1,tempf,0,0,0,time,5
3,Humidity,custom,0,0,139,time,10
```

11.1.13 [outputs]

This section is for defining the two outputs on the MP1. See Section 9.3 for additional information on defining outputs.

Options:

#pt = The point number of the output. All four points must be defined.

Name = The 32-character display name defined for the point

default state = 0 for De-energized, 1 for Energized

follows = equations for equation control, CR-alarms for critical alarms, MJ-alarms for major alarms, MN for minor alarms, alarms for all alarms or TOD# where # is the schedule number.

ack input = for outputs following alarms add the input ID number i.e., UIN16

Example:

[outputs]

```
#pt,name,default state,follows,ack input
1,Turn on Tower Lights,0,TOD2,
2,Critical Alarms 2,0,CR-alarms,
```

11.1.14 [schedules]

The schedules section is for the time schedule programming. There are eight time schedules and each schedule can have up to sixteen priorities. See section 9.4 for additional information on defining schedules.

Options:

#sched = The schedule number 1-8

Name = a 32-character name display name for each schedule.

Action-day mask 1 (action=bit7/su=bit0..sa=bit6) = The list of days or an alternate date for the priority line along with the action bit where 1 = on and 0 = off. ie ON 7 days a week would be the first eight bits equal to 1 (11111111) which is 255 in decimal. Date Schedules use an additional byte where date schedule 1 = bit 7.

time (0-1435) = Time in minutes the action is to take place with 0 = midnight.

12 SNMP Sets & Gets

The MP1 can be managed using SNMP Sets to review data and Gets to make changes. Contact Quest Controls, Inc. to obtain a copy of the product MIB. The System uses Quest's standard Alarms MIB for sending traps (see 8.2.1). This section will focus on using the product MIB for gathering data.

12.1 Public SNMPv2

The MP1 supports the standard v2-MIB OIDs for system branch. sysDescr, sysObjedID and sysUpTime are read only while sysContact, sysName and sysLocation support read and write.

12.2 Input table

The input table will contain all the defined inputs that are physically wired to the base MP1. The table index will be the integer input number for each point. The table has the following objects available:

Object	Description
Input name	The defined 32-character name for the input.
Input integer value	The input reading as an integer. Digital inputs will show 1 for On and 0 for Off.
input integer value times 100	The input reading as an integer in 100ths. Divide the analog input value by 100 to convert the value. Digital inputs will show 1 for On and 0 for Off.
Input string value	The Input value as a string value. Analog inputs will display values to the 10 th . Digital inputs will display ON and OFF.
Input causing alarm	Shows if the point is causing an alarm point to be active.
Input type	Shows the input definition type, i.e. Dry contact, thermistor, custom, etc.
Input offset	For analog sensors this will display the offset value defined for the point.
Input custom low	The defined low value for an input defined as CUSTOM. Used with the Custom High value to scale the sensor reading.
Input custom high	The defined high value for an input defined as CUSTOM. Used with the Custom low value to scale the sensor reading.
Input log type	The type of logging defined for the input. Either interval logging based on time or change of state (COS).
Input log interval	For inputs defined as interval logging this will be the number of minutes between log entries.
Input accumulated on time	Total accumulated on time for inputs defined as digital.
Input interval on time	The interval on time for inputs defined as digital.
Input interval off time	The interval off time for inputs defined as digital.
Input event counter	The number of cycles (on/off events) for inputs defined as digital.
Input event timer	The amount of time that has elapsed since all the timers were cleared.

12.3 Alarm point table

The alarm point table will contain all the defined alarm points in the system. The table index is a four-character ASCII index based upon the user defined point ID number. If your SNMP client doesn't support ASCII index, then use the decimal equivalent to the ASCII characters. The Index number format will be the number 4 plus the decimal value for each ASCII character. For example, an alarm ID of a001

will have an ASCII table index of a001 or the decimal value of 4.97.48.48.49. The table has the following objects available:

Object	Description
Alarm point name	The defined 32-character name for the alarm.
Alarm point state	Either active meaning in alarm or the word clear meaning not in alarm.
Alarm point timestamp	The time of the last event for the point. I.e. if in alarm then that is the time the alarm occurred or if clear, that is the time the clear occurred.
Alarm point severity	The defined alarm severity for the alarm.
Alarm point input name	The name of the input or point that is used to determine an alarm condition.
Alarm point string value	A string value showing the status of the point being monitored.
Alarm point comparison	The comparison type used for creating the alarm condition.
Alarm point comparison value	The value that the input point is being compared to when determining an alarm condition.
Alarm point alarm delay	The delay in seconds that the comparison must be true before the alarm is active.
Alarm point clear delay	The delay in seconds that the comparison must no longer be true before the alarm is cleared.
Alarm point nag interval	The value in minutes that will cause an alarm dispatch if the alarm point is still active. A value of 0 means no nag function.
Alarm point tl1 type	The TL1 alarm type. env, eqptsa or eqptnsa

12.4 Output table

The output table will contain the digital outputs that are on the base MP1. The table index will be the integer output number for each point. The table has the following OIDs available:

Object	Description
Output name	The defined 32-character name for the output.
Output logical state	The current logical state of the output. Note that an Active will be the inverse of the default state.
Output control mode	The current control mode of the output. Values here will either be: Auto, bypOff (time left), bypOn (time left) Note that the units of time are seconds and a time of FOREVER may be displayed This object is writable to create a bypass by using bypOn <seconds forever>, bypOFF <seconds forever> or auto.
Output default state	The state the relay will be in when not commanded to be ON or Active.
Output follows	The defined use of the output. This can be an alarm severity, TOD schedule or equations.
Output acknowledge input	For outputs following an alarm severity there can be an input used to acknowledge the alarm condition and turn off the output. You can also write the word "ack" to remotely acknowledge an alarm condition.

12.5 Active alarm point table

The active alarm point table will display any alarm that is currently in the active state. The table index is a four-character ASCII index based upon the user defined point ID number. If your client doesn't support ASCII index, then use the decimal equivalent to the ASCII characters. The Index number format

will be the number 4 plus the decimal value for each character. For example, an alarm ID of a001 will have an ACII table index of a001 or the decimal value of 4.97.48.48.49. The table has the following objects available:

Object	Description
Active alarm point name	The defined 32-character name for the alarm.
Active alarm point timestamp	The time when the point went into the active condition.
Active alarm point severity	The defined alarm severity for the alarm.
Active alarm point input name	The name of the input or point that is used to determine the alarm condition.
Active alarm point string value	A string value showing the status of the point in alarm.

12.6 Scalar values

This section of the MIB contains the firmware version for the system. This is a string value that will contain the current firmware version of the system.

13 Troubleshooting

The following section is designed to help you isolate the most likely system malfunctions that may occur. For additional help, contact Quest's Technical Support and Service Center.

13.1 Power Up

PROBLEM

- Green Power Light is not blinking every second.

SOLUTION

- 1) Use a voltmeter and verify that the incoming power to the MP1 is between 18 and 65 VDC.
- 2) Verify input power polarity. If using an A&B feed, make sure both feeds have correct polarity.
- 3) Replace the MP1

13.2 Communication

PROBLEM

- I experienced a communication failure with the TELSEC® MP1 through my Ethernet connection.

SOLUTION

- 1) Verify you have a physical link by looking at the Green LED on the Ethernet jack. Reconnect or replace any defective IP/Ethernet cables.
- 2) Verify the router the TELSEC® MP1 is connected to is operable and properly configured.
- 3) Verify the IP address has not been changed. Connect to the TELSEC® MP1 with a crossover cable using the programmed address or try the default address of 192.168.1.31
- 4) Replace the Ethernet cable.
- 5) Power cycle the MP1

13.3 Sensor Reading

PROBLEM

- I am not receiving data from one of my sensors.

SOLUTION

- 1) Verify wiring is correct from the sensor to the TELSEC® MP1.
- 2) Use a known good sensor and replace the suspected bad sensor.
- 3) If the known good sensor doesn't work, then disconnect the field wiring from the TELSEC® MP1 and connect it directly. If it works now, then correct or replace field wiring.
- 4) If the known good sensor doesn't read when connected directly to the TELSEC® MP1 then try the sensor on another input. Be sure to define the input accordingly.
- 5) If the input is bad, then either move the sensor to a spare input or replace the unit.

13.4 Control Point Failure

PROBLEM

- One of my control points is not turning off.

SOLUTION

- 1) Verify that the program is correct and has the proper program assigned to the output.
- 2) Verify the relay on the TELSEC® MP1 opens and closes when using the bypass command from the web server or via SNMP set to the output.
- 3) Verify the wiring to the control point is correct.
- 4) Verify the control source voltage (typically an external 24 VAC transformer) is operable and supplying proper voltage.

13.5 Alarm Notification Failure

PROBLEM

- I am not receiving email alarms.

SOLUTION

- 1) Verify network connection.
- 2) Check the setting in the Email Alarm notification page.
- 3) Verify the EMAIL SMTP server is operational and that the proper username and password (if required) have been entered.
- 4) Check for any firewalls and or network rule sets preventing emails being sent from the location to the SMTP server.
- 5) Do a test email by clicking on the Send Test Alarm button.

PROBLEM

- I am not receiving traps.

SOLUTION

- 1) Verify network connection.
- 2) Check the settings for the trap server on the TELSEC® MP1 and make sure they match the requirements of the trap server including SNMP version and community string or username (v3).
- 3) Check for any firewalls and or rule sets preventing traps being sent from the location to the SMTP server.
- 4) Send a test trap by clicking on the Send Test Alarm button.

13.6 Battery

PROBLEM

- The system keeps losing history memory and clock settings.

SOLUTION

- 1) Verify the battery insulating tab was removed at install to enable the battery circuit.
- 2) Power down the system, remove the cover and change the system battery.

Appendix A - SNMP Trap Format

The TELSEC® MP1 can send traps or informs to four different trap servers. The user can program the system to send v1 traps, v2 traps/informs or v3 traps/informs to the server. When the MP1 sends a trap, it will be sent with an OID based on the severity of the alarm. There will also be multiple variable bindings (varabinds) sent to provide detailed information of the event that occurred. For proper trap reception, you will need the alarm MIB. Please contact Quest for the current revision of the alarm MIB.

TRAP OIDs

The following table shows the available trap OID names and numbers for each trap type:

Alarm Severity	OID Number	OID Name
Critical	11476.100.0.5	alarmCritical
Major	11476.100.0.4	alarmMajor
Minor	11476.100.0.3	alarmMinor
Info	11476.100.0.2	alarmInfo
Clear	11476.100.0.1	alarmClear

When a point goes into alarm, it will generate a trap using the critical, major, minor or info OID. Once the alarm point goes out of alarm or clears, the MP1 will send a trap with the clear OID.

Trap Variable Bindings

The MP1 will send the following bindings with every trap that is sent:

Varabind Name	OID Number	Value Type	Value
sysUpTime	1.3.6.1.2.1.1.3	Timeticks	This binding is <u>only available with v2 and v3 traps</u> and will contain the system up time since the MP1 started up.
snmpTrapOID	1.3.6.1.6.3.1.1.4.1	Object Identifier	This binding is <u>only available with v2 and v3 traps</u> and will contain the OID value for the alarm severity.
notifyProduct	11476.100.1.2	Text String	The product type that is alarming. The value is TELSEC® MP1
notifyCriticality	11476.100.1.3	Text String	The alarm severity in Text. Available values are: CRITICAL, MAJOR, MINOR, INFO and CLEAR
notifyType	11476.100.1.4	Text String	Alarm type. For TELSEC® MP1's the type value is SYS for inputs
notifyTime	11476.100.1.5	Timeticks	The time the alarm was generated.
notifyName	11476.100.1.6	Text String	The thirty-two-character name of the alarm point
notifyValue	11476.100.1.7	Text String	The text value of the sensor that caused the alarm.
notifyInputName	11476.100.1.8	Text String	The thirty-two-character name of the input referenced in the alarm point
notifySiteId	11476.100.1.9	Text String	The programmed site identification value for the system.

notifyPointOID	11476.100.1.10	Object Identifier	The OID of the value of the point in alarm
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Appendix B - RADIUS Server Configuration

For the RADIUS server configuration, you must use the “Filter-ID” attribute for each user to have access. Inside the “Filter-ID” you must have QuestMP1:<number>

<number> is an encoded value for access to the different sections of the web server. The sections and values are:

Home page – 1

Status – 2

Bypass – 4

Program – 8

Settings – 16

Add up the access level for the user and use that number. Example if you want a user to have full access then the value to enter would be “QuestMP1:31”.

Appendix C – Email Alarm Format

The TELSEC® MP1 will generate text-based emails for alarm conditions. The email notification will follow a specific format which is outlined below.

Format:

Subject line:

MP1 <email type> (<severity>) - <user defined subject line>

Email body:

MP1 named <site name> generated <email type>

Description of <alarm name>

Timestamped at <day month year hh:mm:ss -UTC>

Severity of <severity>

Value of <current value>

Data point name of <data point name>

Where:

<email type> = ALARM or CLEAR

<severity> CRITICAL, MAJOR, MINOR OR WARNING

<user defined subject line> = Subject field entered when defining the Email dispatch.

<site name> = The site name entered under Site Parameters

<alarm name> = The name of the alarm strategy that generated the alarm

<data point current value> = The current value of the data point causing the alarm condition

<data point name> = The name of the data point causing the alarm condition.

Example:

Subject: MP1 ALARM (Critical) - TELSEC® MP1 Email notification

MP1 named MP1_Site_101 generated ALARM

Description of Tower Lights are not on

Timestamped at 01 Mar 2019 13:30:04 -0700

Severity of Critical

Value of 0.07

Data point name of Light Level Sensor

Appendix D – TL1 Alarms and Commands

TL1 Commands and Alarm:

TL1 stands for “Transaction Language 1.” The MP1 supports TL1 alarm messaging for all alarms being sent out. When an Alarm Point becomes active, the system will generate an alarm. The alarm will be sent using SNMP, SMTP (Email) and/or TL1 depending on how the MP1 is configured. TL1 alarms assumes the receiving system has established a Telnet session to either the standard IP telnet port or the port number defined in the TL1 Port setup (see section 8.1.4). In addition to sending TL1 autonomous alarm messages, the MP1 will respond to the following read only commands:

RTRV-HDR:

The RTRV-HDR command is used to retrieve the system identification which is configured in the System Site Configuration (see section 8.1.1). The command format is as follows:

```
RTRV-HDR:<TID>::<CTAG>;
```

TID Target identifier (the first ID line). This can be omitted on direct connect.

CTAG Correlation tag. Used to match the response to the command with who sent the command

Examples:

Command: RTRV-HDR:::K;

Response: MONITOR 19-10-23 09:57:37
M K COMPLD
;

Command: RTRV-HDR:MP1_MONITOR:::K;

Response: MONITOR 19-10-23 09:57:37
M K COMPLD
;

RTRV-ALM:

The RTRV-ALM command is used to review active alarms. By issuing the command, the MP1 will show all currently active alarms. The format for RTRV-ALM command is as follows:

```
RTRV-ALM-<TYPE>:<TID>::<CTAG>;
```

Where:

TYPE

ALL Will show all active alarms.
EQPT Will show active equipment alarms.
ENV Shows active environmental alarms.

TID Target identifier (first line of the ID). This can be left out for direct connect.

CTAG Correlation tag to match the request with response.

Examples:

Command: RTRV-ALM-ENV:::X123;

Response: MP1_MONITOR 19-10-23 09:59:48
M X123 COMPLD
* 1 REPT ALM ENV
"ALM_A002:MN,BTL_LTMP,10-04,15-46-10:\ "BLD002 LOW TEMPERATURE ALARM,ON\ ""
* 2 REPT ALM ENV
"ALM_A004:MN,BHL_LHUM,10-04,15-46-10:\ "BLD011 LOW HUMIDITY ALARM,ON\ ""
;

Automatic TL1 Alarms

Once a point is determined to be in alarm, the controller will automatically send the alarm and log the event in the alarm log. When the alarm goes away, the controller will automatically send out a clear message in TL1 format. The clear will also be logged in the alarm log.

TL1 ALARM MESSAGE

FORMAT:

<cr><lf><lf>
<sp><sp><sp>TID<sp>YY-MM-DD<sp>HH:MM:SS<cr><lf>
ALMCDE<sp><ALARM SEQUENCE NUMBER><sp>REPT<sp>ALM<sp>ENV <cr><lf>
<sp><sp><sp>"ALM_<REF#>:<NOTIFICATION CODE>, <ALARM NAME>,MM-
DD,HH:MM:SS,<ALARMMESSAGE>"<cr><lf>

;

<ALMCDE>

*C = CRITICAL ALARM

** = MAJOR ALARM

*<sp> = MINOR ALARM

A<sp> = AUTOMATIC used for clear alarm and heartbeat messages

<ALARM SEQUENCE NUMBER> = sequential sequence number assigned to every TL1 autonomous message.

<REF#>= The four-digit alarm reference number that was assigned when defining the alarm.

<NOTIFICATION CODE>

CR = Critical alarm

MJ = Major alarm

MN = Minor alarm

CL = Cleared alarm

NA = Non Alarm used for notifications.

<ALARM NAME> = The 32-character name that was defined for the alarm.

< ALARMMESSAGE> = The 32-character name of the point causing the alarm followed by a comma and the current status of the alarm.

Sample alarm:

SITE401 19-10-26 11:43:39

** 1 REPT ALM ENV

"ALM_A005:MJ,POWER_Failure,10-26,11:43:39,COMMERCIAL POWER FAILURE"

;

Sample Clear Alarm:

SITE401 19-10-26 11:43:59

A 2 REPT ALM ENV

" ALM_A005:CL,POWER_Failure,10-26,11:43:59,COMMERCIAL POWER FAILURE"

;

Sample Heartbeat message:

RDNGPAREH72_MP1 19-10-23 09:48:05

A 13808 REPT EVT ENV

"HEARTBEAT:NA,HEARTBEAT,10-23,09-48-05:\\"User defined Heartbeat message\\""

;

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