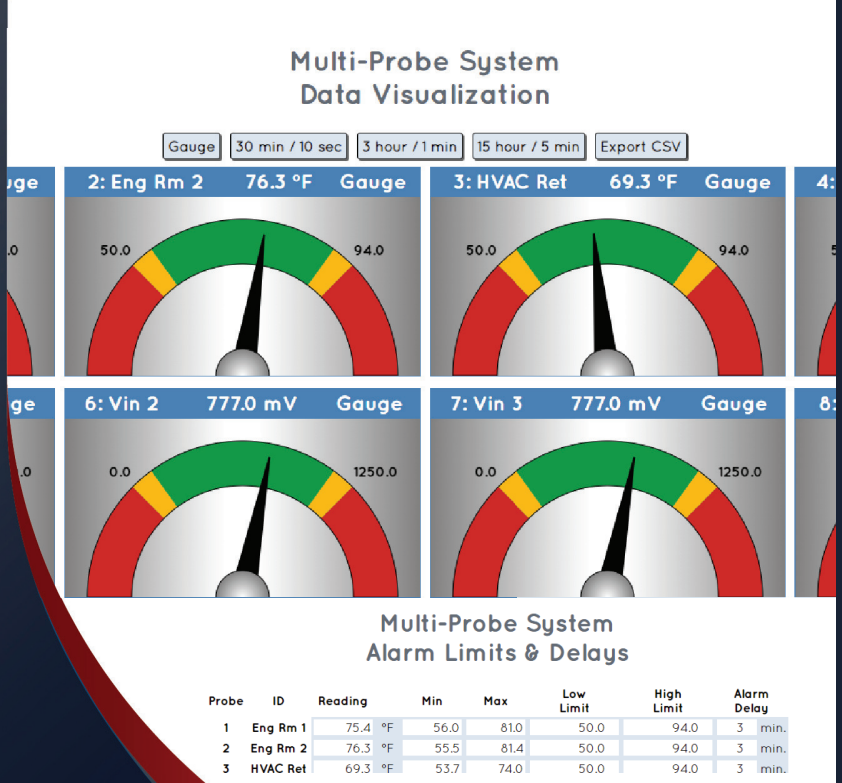
HAMPSHIRE CONTROLS

"Safeguarding Your Precious Biological Materials"



Multi-Probe System
Alarm Limits & Delays

Probe	ID	Reading		Min	Max	Low Limit	High Limit	Alarm Delay	
1	Eng Rm 1	75.4	°F	56.0	81.0	50.0	94.0	3	min.
2	Eng Rm 2	76.3	°F	55.5	81.4	50.0	94.0	3	min.
3	HVAC Ret	69.3	°F	53.7	74.0	50.0	94.0	3	min.

MPS Web Accessible Operating Program

FEATURES:

- Real-time data visualization
- Sensor channel configuration and calibration
- Cross-channel mathematical and logic functions and alerts
- Alarm limits and alarm delay settings
- Email and SMS text settings and options
- Data directly accessible in JSON and XML
- Password protection for Admin, Users, and Guests
- All features accessible through any modern web browser

SPECIAL FEATURES:

- Set IP network address and network protocols
- Set unique channel IDs
- Set temperature probe display to °C or °F
- Apply exponential signal averaging to dampen high frequency noise
- Activate/deactivate battery backup
- Quickly reset minimum/ maximum readings and mute active alarms
- Enable, disable, or timed shutoff (1 – 60 seconds) of backlit LCD display
- Disable audio alarm

PRODUCT DESCRIPTION:

The MPS Multi-Probe Monitor/Alarm Operating Program is a feature rich program accessible through any modern web browser. Simply type http:// followed by the IP address of the MPS to access the Multi-Probe System main page. MPS data is directly accessible in JSON and XML formats, providing an efficient way of polling current configuration and sensor readings in easily interpretable formats, and allowing you to implement custom data-logging solutions.

MPS Operating Program features include interfaces for network configuration; setting secure username and password credentials for Administrators, Users, and Guests; and for setting channel ID names. MPS Operating Program options also include the ability to set a relay latch for maintaining the relay in alarm state until the alarm is acknowledged; the ability to select specific channels to control the relay, and to use the relay as a control signal rather than an alarm signal; and the ability to disable the MPS edit menus, so that only an Administrator can edit limits, delays, and channel calibration parameters. Internet Protocol (IP) communication options include standard protocols for the Hampshire Controls' *ALERT* Monitoring System as well as a flexible Simple Network Management Protocol (SNMP) option for integrating the MPS into an existing data monitoring solution.

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Custom programming can be provided to satisfy all data display and logging requirements.

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HAMPSHIRE CONTROLS

MPS Web Accessible Operating Program

When email alerts are enabled, the MPS Operating Program sends emails to a distribution list of up to 10 recipients for critical events including alarm condition, mute button pressed, mute period expired, recovery from alarm condition, loss of line power, and recovery from loss of line power. If the alarm condition remains for an extended period, then the system will continue to send emails at a programmable frequency until the alarm condition is cleared. The MPS Operating Program is compatible with widely available email services such as Gmail, Outlook, and Yahoo.

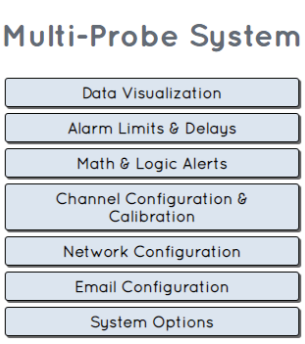
The MPS Operating Program provides intuitive, yet powerful, tools for MPS channel configuration and calibration including methods for calibrating standard temperature probes, adjusting ranges and calibrating current and voltage input sensors, setting display units of measure, setting display significant figures (decimal digits), scaling display values, setting minimum/maximum alarm limits and alarm delays, and applying exponential signal averaging to dampen high frequency noise.

Math ("plus", "minus") or logic ("and", "or/xor") operations can be applied between two channels to set up to four additional uniquely identified alarm conditions. These custom alarm conditions may be used in conjunction with, or as replacements to, the individual channel alarm conditions.

Data is presented for all sensors in real time using gauge-like graphics, providing rapid visual status for each channel. The graphic display includes channel ID, current reading, low and high warning intervals, and low and high alarm limits. Simple round-robin data logging with strip chart graphics is also available. The data logging option runs entirely within the web browser, and recorded data can be stored to CSV files. Note that for each channel, the data log contains the last 30 minutes of readings and up to 180 hours of time-averaged readings with mean, minimum, and maximum for each averaged period. Please see Hampshire Controls' *ALERT* Monitoring System for a permanent logging solution to any specified data depth, for reporting, and for statistical process control. Contact Hampshire Controls for available options and configurations.

Hardware Requirements	
MPS Multi-Probe Monitor/Alarm with 10/100 Base/T Ethernet	• **MPS 2 – 8 Probe Monitor/Alarms** • **MPS-2HT, MPS-4HT Temperature & Humidity Monitor/Alarms** • **MPS-LV LN2 Level & Vacuum Breach Monitor/Alarm**
Ethernet Jack	Accessible to the **MPS** and connected to the target LAN or WAN
PC with Ethernet Jack	Connected to the target LAN or WAN; **MPS** accessible with any modern web browser

Note: MPS Web Accessible Operating Program is not compatible with MPS Multi-Probe Monitor/Alarms that include independent per-channel output relays or 4 – 20 mA output or voltage output.



Multi-Probe System
Channel Configuration & Calibration

Channel	Raw Value	Cal Value	Unit	Type	Decimal Digits	Cal Point A	Cal Point B	Cal Offset	Cal Gain	User Offset	Range Min	Range Max	Alpha	Calibrate
1	75.161323	75.4	°F	TMPR	1	32.0	104.0	0	1.002901	0.00	-148.0	212.0	0.2500	A B
2	74.598823	74.6	°F	TMPR	1	32.0	104.0	0	1.000564	0.00	-148.0	212.0	0.2500	A B
3	70.6912	70.7	°F	TMPR	1	32.0	104.0	0	1.000042	0.00	-148.0	212.0	0.2500	A B
4	93.671089	94.8	°F	TMPR	1	32.0	104.0	0	1.015229	0.00	-148.0	212.0	0.2500	A B
5	0.776726	776.7	mV	ADCv	1	0.0	1.0	0	1	0.00	0.0	1000.0	0.1000	A B
6	0.776728	776.7	mV	ADCv	1	0.0	1.0	0	1	0.00	0.0	1000.0	0.1000	A B
7	0.776729	776.7	mV	ADCv	1	0.0	1.0	0	1	0.00	0.0	1000.0	0.1000	A B

One-year warranty on all Hampshire Controls products.

About Us: Established in 1975, Hampshire Controls provides standard and custom-designed electronics to the biomedical and industrial markets. In addition to the wide variety of **MPS Multi-Probe Monitor/Alarms**, our product portfolio includes:

- **T° Sentry Model 140** single probe temperature monitor/alarms
- **TT-150/200** temperature & humidity Wi-Fi transmitters
- **LD-215 Liquid Nitrogen Level Detector/Alarms**
- **Air Flow Monitors** (50 to 2500 FPM)
- **STEDIVOLT SV2005 Line Voltage Controls**
- Customized OEM electronics design and manufacturing
- **T° Sentry *ALERT* Monitoring System** data logging
- CO_2, LN2 **CA5000 Freezer Backup Systems**
- **TC-25 & TC-25+ TEMPCHECK Rapid Response Thermometers**
- **ADM-215 Remote Alarm Delay Modules**
- Customized monitoring, alarm notification, and logging

MADE IN USA