ViewPoint® VPx Pro 6 Sensor (900 MHz)

Continuous Monitoring Solutions

The ViewPoint® VPx Pro 6 Sensor is Mesa Laboratories' latest-generation wireless data transmitter and an integral part of a ViewPoint Continuous Monitoring System, capable of monitoring multiple environmental parameters with high accuracy. A 6th-generation design, the VPx Pro 6 Sensor is backwards-compatible with our 4th and 5th generation CheckPoint G4 and VPx systems, allowing legacy ViewPoint and CheckPoint Continuous Monitoring Systems to be expanded and upgraded as needed, extending the longevity and investment of original systems.

The VPx Pro 6 features an interactive LCD screen and user interface which displays current readings and cumulative min/max data, with local audible and visual alert capability (beep and flashing LED), ensuring that alerting of any parameter excursions is independent of network or server availability.

The flexible, modular design with four input ports coupled with exchangeable, external probes permits real-time monitoring of a wide range of parameters, including custom applications, using a single, highly versatile sensor unit (see Compatible Input Probes listed below).

The VPx Pro 6 Sensor utilizes a robust fault tolerant file system, similar to one used on many satellites, that enables corruption-resistant and high integrity storage of data. Measurement data is always buffered in case network or facility power fails.

With available on-board memory of up to 10,000 time-stamped data points, programmable sampling rates, local alarming for out-of-range temperatures, a low battery indicator and detachable buffered probes, the VPx Pro 6 Sensor meets and exceeds Vaccines for Children (VFC) requirements for vaccine temperature monitoring.

The VPx Pro 6 Sensor can operate continuously up to one year on lithium battery power alone at a 5 minute transmit interval and 1 minute sample rate or up to five years with a 15 minute transmit and sample rate in Battery Saver Mode. Optionally, the Sensor can be line-powered via the external power adapter with alkaline or lithium batteries as a back-up and redundancy in the event of a power failure.

VPx Pro 6 Sensors, inputs and alerting are supported in web-based ViewPoint Pro On-Premise and ViewPoint Cloud software applications, Release 1.4 or later. All measurement data is logged locally and transmitted autonomously to ViewPoint software at configurable intervals and during any parameter excursions.

The ViewPoint VPx Pro 6 Sensor with LCD screen and input ports shown.

Part Number: DS-VP-PRO-900-S

Features & Benefits

+ Easy to read LCD screen shows the current channel readings, alarm state, min/max values, battery life indicator, signal strength, and wireless diagnostic troubleshooting

+ Mute button for acknowledgement of local audible and visual alarms

+ Runs on lithium or alkaline batteries or optional external power with battery-backup

+ User-configurable measurement inputs, alarm delay, transmission & logging intervals

+ Detachable probe design enables convenient Probe Exchange option to meet yearly calibration requirements

+ Easy mounting and tool free installation with refined mount concept for streamlined cabling options

+ Easy battery replacement with no screws required

+ Four input ports: two analog inputs, one digital input and one discrete/binary input

+ Features ViewPoint over-the-air (OTA) two-way communication technology

+ Lithium battery power lifetime of up to 5 years in Battery Saver Mode

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ViewPoint VPx Pro 6 Sensor (900 MHz) General Specifications	
Radio	900 MHz (902-928 MHz)
Operating Range	+15 to +70°C and 0 to 90% relative humidity (RH) non-condensing
Application Range	-200 °C to +300 °C
On-board Memory	Up to 10,000 logged packets
Inputs	Two analog inputs (RTD temperature probe or 0-1V, 0-5V, 0-30V or 4-20 mA) One digital input (I²C temperature / humidity or differential pressure probe) One discrete / binary input (door status, motion sensing or dry contact) (see Technical Note: VPx Sensor Channel Configuration Guide for permissible input combinations)
Power	Three (3) AA size 3.6V 2.4Ah lithium batteries or Three (3) A size 3.6V 3.6Ah lithium batteries or Three (3) AA size 1.5V alkaline batteries or External 5V/1A AC Power Adapter
Screen	2.75" B&W Liquid Crystal Display (LCD)
Dimensions	5" W x 3.25" H x 1.125" D
Dimensions with cradle	5.625" W x 4.125" H x 1.625" D
Weight	7 ounces (with Li-ion batteries)
Weight with cradle	9 ounces (with Li-ion batteries)
Required Infrastructure	ViewPoint VPx 900MHz Access Point (part number CM-000250)
Software Compatibility	ViewPoint Professional (VP Pro) On-Premises Edition, Release 1.4 or later ViewPoint Cloud Edition, Release 1.4 or later

VPx Pro 6 Sensor Accuracy Specifications

Standard Laboratory Calibration Points: -197°C, -90°C, 0°C, +37°C, +90°C, +0.1VDC, +2.5VDC, +4.9VDC, 4.1mA, 12mA, 19.9mA

Range	Resolution	Accuracy	Uncertainty	As-Found Acceptance Criteria
-200 ≤ T < +100 (°C)	0.001 (°C)	0.15 (°C)	0.088 (°C)	0.238 (°C)
+100 ≤ T ≤ +300 (°C)	0.001 (°C)	0.25 (°C)	0.088 (°C)	0.338 (°C)
0 to 1 (VDC)	0.000001 (VDC)	0.001 (VDC)	0.00041 (VDC)	0.00141 (VDC)
0 to 5 (VDC)	0.000005 (VDC)	0.001 (VDC)	0.00041 (VDC)	0.00141 (VDC)
0 to 30 (VDC)	0.000030 (VDC)	0.090 (VDC)	0.00041 (VDC)	0.09041 (VDC)
4 to 20 (mA)	0.0001 (mA)	0.01 (mA)	0.0017 (mA)	0.0517 (mA)

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Compatible Input Probes	Probe Part Number
Standard Temperature RTD Range: -25 °C to +100 °C	CM-000188
Cryogenic Temperature RTD Range: -200 °C to -20 °C	CM-000079
Pyrogenic Temperature RTD Range: +90 °C to +300 °C	CM-000110
Temperature/Humidity (Snap I^2C) Range: +10°C to +40°C & 10% RH to 90% RH	72112 (requires Adapter, I2C, RJ11 to Hirose Snap Connector: CM-000164)
Door Status, Motion, Alarm Contact	CM-000183
*Carbon Dioxide (CO_2) Range: 0 to 20% CO_2	CM-000373
*Oxygen (O_2) Range: 0 to 25% O_2	166088
*Differential Pressure Range: -0.50 to +0.50 inches H_2O	CM-000385 (requires Adapter, I2C, VPx RJ11 to Differential Pressure Probe Snap C: CM-000383)
Leak Detection	CM-000338
*Third Party Probes/Sensors 0 To 1 VDC 0 to 5 VDC 0 to 30 VDC 4 to 20 mA	Various third-party inputs with powered 0-1V, 0-5V, 0-30V and 4-20 mA interfaces. Please inquire with Technical Support to confirm compatibility.

* Input type requires 120V (US) AC power

ViewPoint VPx Pro 6 Sensor Kits for Specific Input Types	Part Number
VPx Pro 6 900MHz Sensor RTD Standard Temperature Kit	DS-VP-PRO-900-S-TEMP-KIT
VPx Pro 6 900MHz Sensor Dual RTD Standard Temperature Kit	DS-VP-PRO-900-S-TEMP-TEMP-KIT
VPx Pro 6 900MHz Sensor RTD Cryo Temperature Kit	DS-VP-PRO-900-S-CRYO-KIT
VPx Pro 6 900MHz Sensor Dual RTD Cryo Temperature Kit	DS-VP-PRO-900-S-CRYO-CRYO-KIT
VPx Pro 6 900MHz Sensor RTD Pyro Temperature Kit	DS-VP-PRO-900-S-PYRO-KIT
VPx Pro 6 900MHz Sensor Digital Snap Temperature / Humidity Kit	DS-VP-PRO-900-S-DI-TEMP-HUMI-KIT
VPx Pro 6 900MHz Sensor Digital Snap Differential Pressure Kit	DS-VP-PRO-900-S-DI-DP-KIT
VPx Pro 6 900MHz Sensor Analog Carbon Dioxide (CO_2) Kit	DS-VP-PRO-900-S-MA-CO2-KIT
VPx Pro 6 900MHz Sensor Analog Carbon Dioxide (CO_2) & RTD Temperature Kit	DS-VP-PRO-900-S-MA-CO2-TEMP-KIT
VPx Pro 6 900MHz Sensor Analog Differential Pressure Kit	DS-VP-PRO-900-S-MA-DP-KIT
VPx Pro 6 900MHz Sensor Analog Oxygen (O_2) Kit	DS-VP-PRO-900-S-MA-O2-KIT
VPx Pro 6 900MHz Sensor Analog 4-20 mA Kit	DS-VP-PRO-900-S-MA-KIT
VPx Pro 6 900MHz Sensor Analog 0-5 V Kit	DS-VP-PRO-900-S-VOLT-KIT

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ViewPoint VPx Pro 6 Sensor Accessories	Part Number
ViewPoint (G3-G4-VPx Pro) 3-Pin Programming Cable	166563
VPx USB Serial Programming Cable	CM-000175
VPx Configuration Utility Software	SW-00056
3.6V Lithium Batteries	210427-001
5V/1A AC Power Adapter	TWA26
VPx Sensor Mounting Bracket	CM-000019
VPx Microwire RTD Probe Extension, 48", KIT	CM-000386
VPx Probe Extension, 25' - KIT	CM-000071
VPx Probe Extension, 50' - KIT	CM-000073
Cable, Power, Splitter, 1-to-4, 2.1x5.5mm	CM-000042
Cable, Power, Extension, 14.0', 2.1x5.5mm	CM-000065
Buffer Bottle with PGX Heat Transfer Fluid (Non-Toxic Glycol Substitute)	TWA200A
Vermiculite Solid Medium Thermal Buffer Bottle	166150
VPx Analog Cable for 0-20 mA or 0-30 VDC Applications	CM-000284