



**ChemScan Control Point 2.0 Monitor**

Interfaces with all ChemScan family sensors. Systems can be created by the use of expansion boxes.



# ChemScan MPX4 Multiparameter Sonde

The ChemScan MPX4 is a cost effective multiprobe that integrates with plant control systems for long term installation using a local controller, direct connection or wireless telemetry. The probe can also be used for spot checking utilizing Bluetooth data collection. With interchangeable sensors, the probe replaces multiple instruments, reducing overall monitoring costs. Highly stable sensors require minimal maintenance and calibration.

**BENEFITS**

**Reduces monitoring costs:** With ultra-stable sensors that minimize calibration and maintenance needs, the multiprobe reduces total cost of ownership.

**Saves hours on fieldwork:** The VuSitu mobile app records data directly from the probe for spot checks. The ChemScan Control Point can interface with the probe providing local display and connection to plant control system. Telemetry integration with HydroVu platform provides real-time access to remote monitoring data.

**Delivers higher quality data:** Drift-resistant sensors with simplified calibration provide accurate, reliable data - no messy field notebooks required. When using the instrument as a handheld, our mobile app walks you through SOPs to minimize errors. Rugged design with optional antifouling wiper ensures performance in harsh environments for longer deployments.

**Ease of use:** Streamlined data collection and automatic environmental compensation mean zero-processing, while our mobile app lets you tag sites and track GPS coordinates.

**FEATURES**

- Interchangeable sensor, wet-mateable
- Optional 2" antifouling wiper for higher quality data in long-term deployment
- Wireless mobile Bluetooth® connection for iOS/Android (VuSitu app), and Win-Situ 5 for laptop
- Site tagging and GPS coordinates functions available via app
- LCD display gives snapshot of instruments health and connectivity
- Wide sensor range for performance in a variety of applications
- Automatic environmental compensation - no data post processing
- Easy integration with PLC/SCADA control systems, data loggers, and telemetry - no adaptors or confusing communication protocols
- Redesigned pH and ISE reference for 3X sensor stability
- Corrosion-resistant housing and abrasion-resistant RDO sensor
- Compatible with Low-Flow system (sold separately)

**PARAMETERS**

- Temperature/Conductivity
- Pressure
- Level
- Salinity
- pH/ORP
- Nitrate (NO3-)
- Rhodamine WT Fluorescence Intensity
- Ammonium (NH4+)
- Chloride (Cl-)
- Turbidity
- Total Suspended Solids
- Dissolved Oxygen (RDO)
- Blue Green Algae-Phycocerythrin

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**Applications:**

- LONG-TERM DRINKING WATER AND WASTEWATER PROCESS MONITORING
- REMOTE MONITORING VIA TELEMETRY
- SPOT SAMPLING AND PROFILING

GENERAL	CHEMSCAN MPX4 MULTIPARAMETER SONDE		
OPERATING TEMP. (NON-FREEZING)	23 to 122°F (-5 to 50°C) ISE: Ammonium and Nitrate 32-104°F (0 - 40°C), Chloride 32-122°F (0 - 50°C)	EXTERNAL POWER VOLTAGE EXTERNAL POWER CURRENT <sup>1</sup>	8-36 VDC; Required for normal operation Sleep: < 0.2 mA typical; Measurement: 40 mA typical, 75 mA Max
STORAGE TEMP.	Components Without Fluid -40°F (-40°C) to + 149°F (65°C) (Non Freezing Water) pH/ORP Sensors 23°F (-5°C) to +149°F (65°C) Ammonium/Nitrate: 32°F - 104°F (0 - 40°C), Chloride: 32°F - 122°F (0 - 50°C)	INTERNAL MEMORY AND DATA LOGGING	Control Point 2.0 or telemetry
DIMENSIONS	Length: 18.11" (46 cm) (includes connector). With bail: 23.23" (59 cm), Diameter: 1.85" (4.7 cm)	READING RATES	1 reading every 2 seconds
WEIGHT	2.16 lbs. (0.978 kg) (includes instrument, sensors, restrictor and bumpers)	COMMUNICATION DEVICE	Wireless TROLL Com, Control Point 2.0
WETTED MATERIALS (SONDE AND SENSORS)	PC, PC alloy, Delrin, Santoprene, Inconel, Viton, Titanium, Platinum, Ceramic, Nylon, PVC, Graphite	CABLE OPTIONS	3.28' (1m), 16.40' (5m), 32.80' (10m), 65.62' (20m), 98.43' (30m)
SENSOR HEX SCREW DRIVER	0.05 in.	LCD DISPLAY	Integrated display shows status of sonde, sensor ports, power voltage and connectivity, enable/disable BT.
ENVIRONMENTAL RATING	IP68 with all sensors and cable attached IP67 without the sensors or cable attached	SOFTWARE	Android: VuSitu through Google Play Windows: Win-Situ 5 Data Services: HydroVu
MAX PRESSURE RATING	Up to 150 PSI (1034 kPa) Ammonium/Nitrate up to 30PSI	INTERFACE	Android 4.4, requires Bluetooth 2.0

STANDARD SENSORS	ACCURACY	RANGE	RESOLUTION /PRECISION	RESPONSE TIME	UNITS OF MEASURE	METHODOLOGY
TEMPERATURE <sup>2</sup>	+/- 1.8°F (0.1°C)	23 to 122°F (-5 to 50°C)	0.18°F (0.01°C)	T63<2s, T90<15s, T95<30s	Celsius or Fahrenheit	EPA 170.1
pH <sup>3</sup>	±0.1 pH unit or better	0-14 pH	0.01 pH	T63<3s, T90<15s, T95<30s	pH, mV	Std. Methods 4500-H+, EPA 150.2
ORP <sup>4</sup>	+/- 5 mV	±1400 mV	0.1 mV	T63<3s, T90<15s, T95<30s	mV	Std. Methods 2580
CONDUCTIVITY <sup>5</sup> -TDS (TOTAL DISSOLVED SOLIDS) -SALINITY	±0.5% of reading plus 1 µS/cm from 0 to 100,000 µS/cm; ±1.0% of reading from 100,000 to 200,000 µS/cm; ±2.0% of reading from 200,000 to 350,000 µS/cm	0 to 350,000 µS/cm 0-350 ppt 0-350 PSU	0.1 µS/cm 0.1 ppt 0.1 PSU	T63<1s, T90<3s, T95<5s	Actual conductivity (µS/cm, mS/cm); Specific conductivity (µS/cm, mS/cm); Salinity (PSU, ppt); Total dissolved solids (ppt, ppm); Resistivity (Ohms-cm); Density (g/cm3)	Std. Methods 2510, EPA 120.1 Std. Methods 2520A
RUGGED DISSOLVED OXYGEN (RDO) WITH RDO-X OR FAST CAP <sup>6</sup>	±0.1 mg/L +/-2% of reading	0 to 20 mg/L 20 to 60 mg/L	0.01 mg/L	RDO-X: T63<15s, T90<45s, T95<60s Fast Cap: T63<1s, T90<15s, T95<30s	mg/L, %saturation, ppm	EPA-approved In-Situ Methods: 1002-8-2009, 1003-8-2009, 1004-8-2009
TURBIDITY - TSS (TOTAL SUSPENDED SOLIDS) <sup>7</sup>	+/-2% of reading or +/-2 NTU, FNU, w.i.g. <sup>12</sup>	0 - 4,000 NTU 0-1,500 mg/L	0.01 NTU (0-1,000); 0.1 NTU (1,000-4,000) 0.1 mg/L	T63<1s, T90<1s, T95<1s	NTU, FNU ppt, mg/L	ISO 7027
AMMONIUM (NH4+ - N) <sup>8,9</sup> RATED TO 25 M DEPTH -Unionized Ammonia, Total Ammonia (requires salinity, temperature and pH)	±10% or ± 2 mg/L, w.i.g. <sup>12</sup>	0-10,000 mg/L as N	0.01 mg/L	T63<1s, T90<10s, T95<30s	mg/L, ppm, mV	N/A
NITRATE (NO <sub>3</sub> - - N) <sup>8</sup> RATED TO 25 m DEPTH	±10% or ± 2 mg/L, w.i.g. <sup>12</sup>	0-40,000 mg/L as N	0.01 mg/L	T63<1s, T90<1s, T95<1s	mg/L, ppm, mV	Std. Methods 4500-NO3 D
CHLORIDE (CL - ) <sup>8</sup>	±10% or ± 2 mg/L, w.i.g. <sup>12</sup>	0-150,000 mg/L	0.01 mg/L	T63<1s, T90<10s, T95<30s	mg/L, ppm, mV	Std. Methods 4500-Cl - D
PRESSURE <sup>10</sup>	±0.1% FS from 23 to 122°F (-5 to 50°C)	Non-Vented 100' (30 m) - Burst: 130' (40 m)	0.01% full scale	T63<1s, T90<1s, T95<1s	Pressure: psi, kPa, bar, mbar, inHg, mmHg; Level: in, ft., mm, cm, m; Level: in, ft., mm, cm, m	Piezoresistive; Ceramic

**WARRANTY<sup>11</sup>**

2 year - Sonde, RDO and sensor cap, temperature/conductivity, temperature only, turbidity (excluding pH/ORP); 1 year - pH/ORP, chloride ISE, accessories 90 Days - Nitrate and Ammonium ISE sensors; See warranty policy ([www.in-situ.com/warranty](http://www.in-situ.com/warranty))

**NOTES**

<sup>1</sup>External power current dependent on display and wiping. <sup>2</sup>Typical system response with instrument, sensors and restrictor when changing approximately 27°F (15°C) in moderate flow. <sup>3</sup>pH sensor Response time at thermal equilibrium. <sup>4</sup>ORP sensor Accuracy from calibration standard @ 77°F (25C), response-at thermal equilibrium immediately following calibration in ZoBell's measuring from air to +400 mV. <sup>5</sup>Conductivity Accuracy at calibration points. <sup>6</sup>RDO sensor full range 0-50mg/L, 0-500% sat. EPA-approved under the Alternate Test Procedure process. <sup>7</sup>TSS User defined reference. <sup>8</sup>ISE Between 2 calibration points immediately following proper conditioning and calibration. Varies on site conditions and environmental interferences. See sensor summary sheet for potential interferences. <sup>9</sup>Ammonia Average response, can be longer with increasing concentrations of ammonium. <sup>10</sup>Pressure Typical performance across full temperature and pressure calibrated range. <sup>11</sup>Warranty Extended warranty option for sonde only (1-3 year extension for up to 5 years total). <sup>12</sup>Whichever is greater.

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