



## Crystal Ball Plus

You may notice your Crystal Ball Plus arriving in a new yellow-black color scheme, designed to align with the upcoming launch of our WINGs™ product line. While the look is new, the real story is what's happening inside. The Crystal Ball has been completely redesigned with a new circuit board that delivers OTA update capability, more memory, and faster processing speeds. These upgrades improve performance, reliability, and ease of use—both now and well into the future.

## Order Information

**Part Number:** U-CBPLUS

## Applications

The OmniSite Crystal Ball Plus is applicable to pump stations, lift stations, plus other applications in need of trend analysis and pump control. The Crystal Ball Plus is a flexible, easy to install and configure, powerful controller/monitor. Its single integrated controller eliminates the need for multiple PLCs, radios, software, computers, modems, relays and other accessories. The complete packaged unit can be installed in under four hours, requiring only basic wiring knowledge. The Crystal Ball Plus includes OmniSite's "plug and play" GuardDog web interface, which eliminates the need for custom programming.

## Features

- **24 VDC external sensor courtesy voltage** (upgraded from 12 VDC) to better support today's 4–20 mA sensors. 20mA max current capacity per channel.
- **Increased LED brightness** for easy visibility in outdoor and high-sunlight environments
- **Simplified internal design** with fewer circuit boards to maintain durability while controlling costs
- **Numerous circuit improvements** that make the unit tougher, more reliable, and easier to service

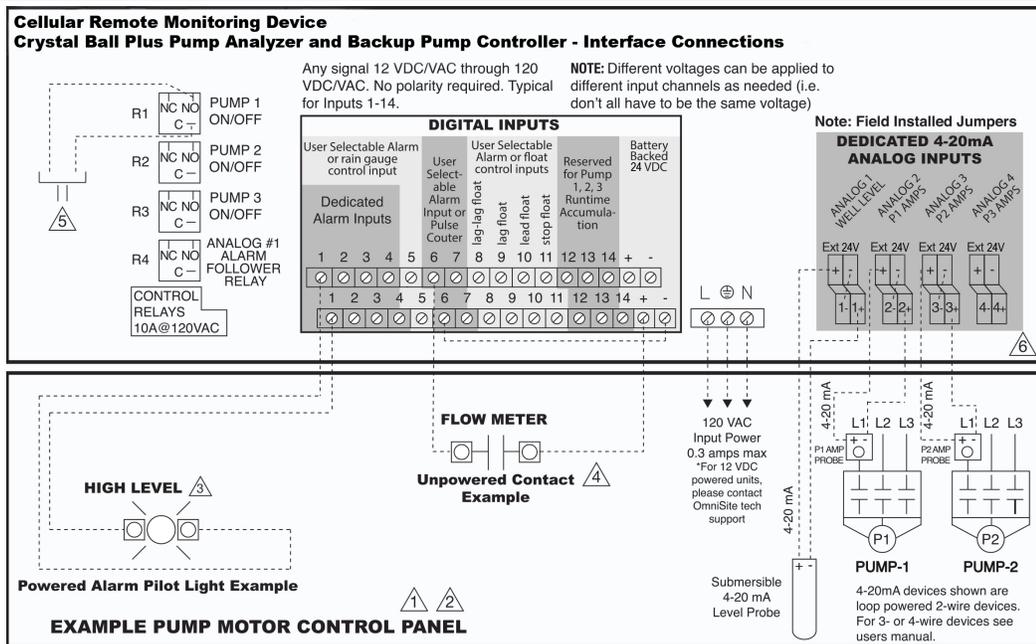
## Specifications

<b>I/O:</b>	Accepts (14) Universal Digital Inputs- any voltage in the range of +12VDC or VAC to +120VDC or VAC. Opto-isolated 4000 VAC isolation   (4) 20A form C relay outputs   (4) 4-20mA analog inputs. Analog input-1 includes 4000V opto-isolation   (3) Pulse Inputs: 0-30hz from dry contact or open collector device (1 pulse input reserved for 0.008" pulsing rain gauge)
<b>Input Power:</b>	80-260 VAC @ 0.5A max or optional 15 VDC @ 2A max
<b>Terminal Blocks:</b>	Gray color, removable style, spring-clamp accepts #14-22 AWG solid or stranded wire
<b>External Power Source:</b>	24 VDC @ 20mA battery backed internal power source available for powering external un-powered alarm contacts, and non-battery-backed for powering 4-20mA loop powered devices.
<b>SD Memory Card Slot:</b>	On-board SD memory card slot for data logging and software updates
<b>Battery Backup:</b>	Internal 12 VDC, rechargeable 800mA/hr sealed lead acid battery rated for 4 hours backup during AC power loss
<b>Operating Temperature:</b>	-20 - 150 °F Battery heater required at 15 °F and below
<b>Operating Humidity:</b>	0-90% RH, non-condensing



- Cellular Radio:** 4G/LTE CAT-1
- Antenna:** Multiband LTE Antenna, optional remote mount high gain antennas and cables available
- Display:** 4 line X 20 Character white background LCD w/ backlight. Includes "easy-use" navigation buttons
- Personal ID Key Reader:** Smart key reader to identify maintenance personnel. (1) smart key included
- Enclosure:** Standard unit is hinged painted steel design w/ remote mount keypad suitable for direct panel mount. Optional NEMA 4X polycarbonate enclosure w/ stainless locking hasps and solid or clear cover available.
- Dimensions:** Panel mount - 8.5"W x 8.2"H x 3.5"D - with optional NEMA 4X enclosure - 12"H x 10"W x 4" D
- Weight:** Weight: Standard panel mount - 7.0 lbs. With NEMA 4X enclosure - 7.5 lbs.
- Protection:** Protection: US Patent #7,228,129

## Wiring



### NOTES

- 1 This drawing is to be used for general information only. The control system supplier must determine proper connections to the OmniSite panel for each application.
- 2 Dashed lines indicate external field wiring by contractor.
- 3 This example shows connection to the high level alarm pilot light. The recommended procedure is to connect OmniSite field input terminals in parallel with alarm pilot lights as shown for fast, easy connections. This can be repeated for other alarm pilot lights to be monitored.
- 4 This example shows connections to a flow meter pulse contact. If you are monitoring unpowered, dry contacts, you must use a voltage source to power the contacts so the OmniSite unit can see them change state. This example shows using the onboard 24 VDC OmniSite power supply to power any number of dry contacts available.  
**CAUTION:** If you accidentally connect the onboard OmniSite 24 VDC power supply to contacts that have 120 VAC, you will cause non-warranty product damage.
- 5 Connect normally open relay contact to respective motor starter hand-off-auto control switch. Connect into auto circuit of switch.
- 6 Use shielded cable for 4–20mA inputs. Ground shield at Crystal Ball Plus and tape-off at field device.