15000 7th Street Suite 208-B
Victorville, CA 92395
(760) 881-4865
www.forshock.com

SCADAspire PLC Software

The SCADAspire system was created using industry leading components to create a highly integrated and cost effective Supervisory Control and Data Acquisition system for water and wastewater systems. SCADAspire PLC controllers provide the remote connection that makes this system function. The SCADAspire PLC remote field controller is comprised of many features that make your system work how you want it too.

Pump Control
Control and monitor wells, boosters, pressure pumps and more with our integrated system. This is a basic function of every system, but we have some differences:

- **Failure Takeover**: When the PLC detects a loss of communications for an extended duration, the unit enters into a local control mode, which provides the minimum pumping schedule your system needs to prevent the system level or pressure from reaching critical values.
- **Failure Shutdown**: The opposite of the *Failure Takeover* system; Failure Shutdown mode causes all pump controls to stop to prevent scenarios of over capacity or pressure.
- **Lockout**: Using Time-of-Use or On-peak/Off-peak pumping can lower your operating costs dramatically, but when a pump or motor runs within this window the fees are steep. Using the internal real time clock, you can create schedules for week days and/or weekends to prevent pumps from operating during preset times. Lowering the risk of accidental startups and incurring additional costs.
- **VFD Control (Variable Frequency Drive)**: Control pump speed using a measured field value such as pressure, flow rate, depth, or other variable signal. Lower energy usage, means lower operating costs.

Level & Measured Values Monitoring
Our system can monitor all types of inputs including Voltage (0 to 5VDC, 0 to 10VDC or -10 to 10VDC) and Current (0 to 20mA, 4 to 20mA). With up to 16-bit resolution (1 in 65,536), you can get the most accurate representation of what is happening in your system.

- **Filtering**: Filter and prevent "spikes" in your data. Keeping trends and historical data smooth to prevent surging and bump start-stop conditions. Select the time frame to get the level represented how you want from 1 second to 15 minute intervals.
- **Expansion**: Our software has the ability to address up to (24) 16-bit analog values with all expansions fitted.
- **Totalizers**: Provides a system for measuring consumption and keeping logs on production. Up to four (4) separate registers.

Security
Installing a separate security system and then paying a monthly fee can increase site costs dramatically. Our software includes points dedicated to monitoring and responding to physical intrusions to your site.

- **Local and Remote Standby**: Allow operators to enable and disable the system at the site or from the master control software. Prevent false alarms and notifications.
- **Timers**: Separate arm and disarm delays prevent false alarms and allow operators time to activate or deactivate the system.
- **Flexible input devices**: Connect to motion sensors, door switches and many more field monitoring devices to detect intrusions. Can be used with Normally Open or Normally Closed devices. We recommend Normally Closed for wire-cut notification.
- **Response**: Outputs control lighting, sirens and digital video. (1) Delay-On (NO), (1) Delay-off (NC), (1) Triggered (Mirrors field devices, NO/NC) and (1) Tripped (NO/NC).

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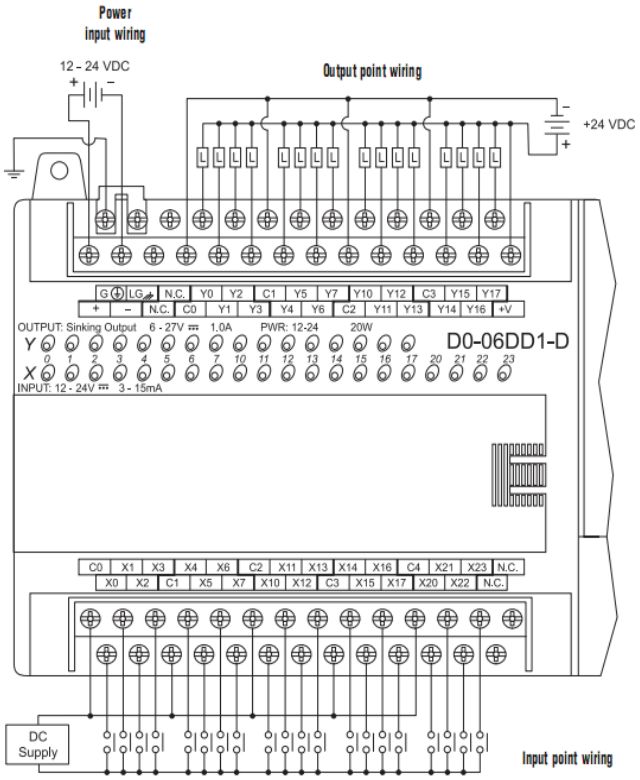
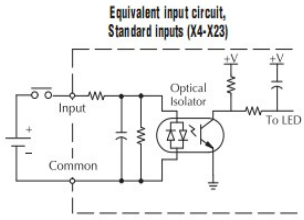
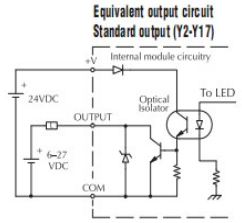
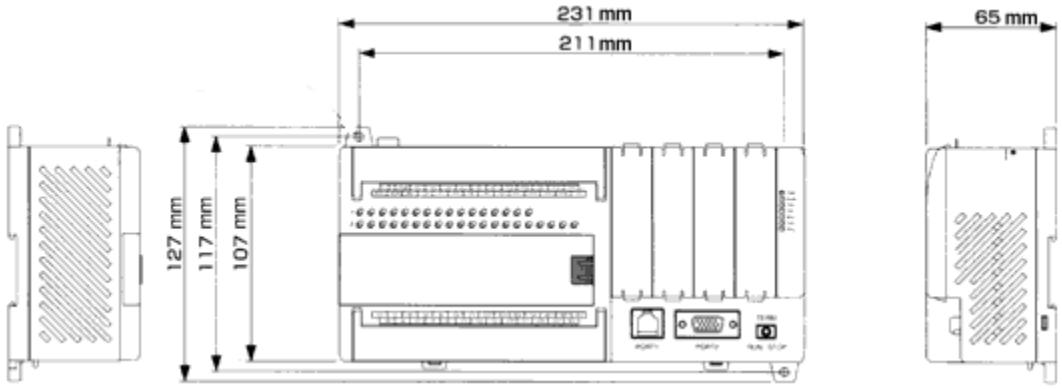
Base Unit (DD1-D)			
Power Supply	Voltage Range	12-24VDC (15W)	
DC Input Specifications	Inputs	20 (sink/source)	
	Commons	5 (isolated)	
	Voltage Range	12-24VDC	
	Impedance	(X0-X3) 1.8K @ 12-24VDC (X4-X23) 2.8K @ 12-24VDC	
	ON Voltage	>5mA/10VDC	
	OFF Voltage	<0.5mA/<2VDC	
	Response Time	X0-X3	X4-X23
	OFF to ON	<100µs	<8ms
	ON to OFF	<100µs	<8ms
	Fuses	None	
DC Output Specifications	Outputs	16 (sinking)	
	Commons	4 (isolated)	
	Voltage Range	6-27VDC	
	Max. Voltage	30VDC	
	Max. Current	0.5A / point (Y0-Y1)* 1.0A / point (Y2-Y17)**	
	Max. Leak Current	15µA @ 30VDC	
	Max. Inrush Current	2A for 100ms	
	OFF to ON	<10µs	
	ON to OFF	<20µs (Y0-Y1) <60µs (Y2-Y17)	
	Indicators	Logic Side	
	Fuses	None (external recommended)	









All specifications are subject to change without notice. Please contact us for the latest specifications and features. Please follow all electrical and building codes when installing and maintaining equipment. Not rated for explosive environments.