

## DIGI-GAGE PLUS™ DATASHEET

### Digital Constant Speed Controller

The Digi-Gage Plus™ is a single compact SCADA ready system controller designed to automatically start, stop, alternate and precisely monitor & control fluid levels.

- Supports from 1 to 6 pumps from a single controller.
- Combines all current Digi-Gage models functions into one easy-to-use intuitive interface and single part number.
- Fits and functions within the existing Digi-Gage Classic footprint.
- Networkable, scalable, upgradable and expandable platform for integration into most SCADA packages.



### Digi-Gage Plus Standard Features

#### Visual Indication

Pump mode (run/auto/fail), lead/lag sequencing, alternation, process level, high/low level alarms are displayed.

#### Level Simulation

Level simulation to test setup function and alarm set points.

#### Maximum Number of Pumps

Configure the maximum number of pumps to run at the same time.

#### Color Touch Screens

- Home Screen (Digi-Gage)
- Level & Pump Status Screen
- Configuration/Setup Screens
- Simulation Setup Screen
- Clean Out Feature Setup Screen
- Alarm History Screen
- Alarm Popup and Acknowledge Screen
- Reverse Pump function Setup Screen (Optional with addition of reversing contactors, pressure feedback and expanded input module)

**Communications & Data**

- TCP/IP Ethernet communications
- Local Level, Alarm Data Logging
- Remote Interface (Requires network connectivity)
- Phone App interface to monitor status (requires smart phone application)
- Web Server features
- Standard status and control address mapping for ease of SCADA integration

**Status**

- Pumps 1-6 Start Status, Auto & Fail
- Phase Loss, Float Backup, Intrusion Status
- Panel Alarm Status Output

**Wet Well Clean Out (Flush) Mode**

The system employs a user adjustable time/cycle set point to allow pumps to run beyond the normal level set points to flush wet well and help prevent buildup.

**Wet Well FOG Buildup Reduction Mode**

The system employs a changing level algorithm to help prevent grease buildup at a set level. This feature can be enabled/disabled by user.

**Clog Prevention Mode**

The system uses customer settable time or number of cycles to trigger a cycle that will oscillate the pump(s) reverse and forward to help prevent clogs or “rags” that may build up on the pump’s impeller.

**Volume (Flow) Calculation**

The system employs calculations based on pump characteristics and change of level to provide an estimated flow rate and display.

**Advanced Alternation**

The controller can alternate up to 6 pumps/blowers in the automatic operation mode and include the capability of selecting any pump/blower for the lead position(s) with or without alternation.

**Advance Grouping**

The system allows user to group any number of the 6 pumps/blowers into alternation groups. (Example: a 5 pump system can be operated as a duplex and triplex within the same controller).



## Digi-Gage Plus Technical Data

### Inputs/Outputs

Pump mode (run/auto/fail), lead/lag sequencing, alternation, process level, high/low level alarms are displayed.

### Level Simulation

Level simulation to test setup function and alarm set points.

### Maximum Number of Pumps

Configure the maximum number of pumps to run at the same time.

### Color Touch Status

Panel Alarm Status Output

### Hardware Ratings

- Operating Temperature: 0 to +60°C (32 to 140°F)
- Storage Temperature: -20 to +60°C (-4 to 140°F)
- Relative humidity: (RH) 10% to 95% (non-condensing)
- NEMA/IP Rating: NEMA4X/IP65/66
- Voltage range: 10.2 to 28.8VDC <10% ripple
  - Power consumption: npn inputs 280mA @ 24VDC
  - pnp inputs 190mA @ 24VDC
  - Backlight 20mA @ 24VDC
  - Ethernet card 35mA @ 24VDC
  - Relay Outputs (ea.) 8mA @ 24VDC

### System Ratings

- Input / Output Capacity is capable of supporting up to 256 I/O points (8 I/O modules maximum)
- Scan Rate of 15µs per 1kb ladder logic
- Adjustable white LED backlight TFT LCD display
- Up to 1024 displays
- Colors 65,536 (16-bit)
- 3.5" viewing area resistive, analog touchscreen
- 5 pre-programmed function keys, sealed membrane

### Other Features

- Remote access
- Micro SD Card backup/ upload/ logging
- Data logging
- OPC Server compliant
- DDE format read/ write

**System Processor**

- Memory: 1MB Application, 512k Fonts, 3MB Images.
- Removable memory: Standard SD or SDHC (32GB max)
- Real Time Clock
- Battery backup (7 years typical at 25°C), Replaceable, coin type, Lithium battery (CR2450)

**Base Features**

- Input voltage 24VDC
- 12 Digital inputs rated 24VDC (2 configurable as analog current/ voltage)
- 6 Relay outputs rated 5 amp at 250VAC/ 30VDC
- Comm Port 1: RS232/ RS485 (up to 32 nodes)
- Comm Port 2: Ethernet

**Communication Interfaces (optional)**

- Comm Port 1
  - RS232/485 baud rates between 300 to 115200 bps
  - RS485 up to 32 nodes/ 1200m (4000') maximum
  - USB 2.0 compliant; full speed
- Comm Port 2 (Optional)
  - Ethernet
  - RS232/485
  - CANbus

**Modbus**

- Use ethernet port connection.
- Communicates over TCP.
- Unit is a Modbus slave