



## Smart Universal Valve Controller®

The CSM Inc. Smart Universal Valve Controller® can operate from either a pressure or flow rate based remote signal to control piloted diaphragm operated control valves or motorized butterfly valves.

The SUVC® offers the following advantages not found on conventional remote valve controllers:

- Can be programmed to process via the HMI (touch screen) all stored customer supplied CV (coefficient values) and select required valve sizes, port configurations and method of calculation.
- Can calculate and set required flow rates based on a remote set-point from the HMI, Internet or iPhone using CV values, pressure differential & valve position *OR* based on an in-line flow meter (selectable).
- Communicates with remote control devices either via Internet or hard-wired Ethernet monitoring / control stations on a public IP address, private or industrial Ethernet network.
- Communicates to Smart phones and/or Internet email systems with messages providing alert status of various selectable control points (up to 8 messages).
- Can operate independent and autonomous or can be connected to a dedicated IP address using Windows based VPN configurations or a private VPN.
- Requires no SCADA based system.
- Can be controlled via Internet and/or iPhone.

### **Features:**

- NEMA 4X Stainless Steel enclosure with optional inner door available.
- HMI with 10 selectable operator screens:
  - General information screen, NON password protected
  - Valve set-up screen, password protected
  - PID control and set screens, password protected
  - Time clock schedule, NON password protected
  - Sensor raw data calibration screens, password protected
- MODBUS based Internet monitor:
  - 1 monitoring and control data screen for up to 16 monitoring points and 8 control points in any combination of analog or digital values
  - 1 emergency notification screen with selectable email address notifications of any combination of 8 analog and/or digital values as required
- Troubleshooting via remote PLC programming is a standard feature when the SUVC® is connected to the internet via VPN or public IP address system.
- VPN using wireless routers.
- The SUVC® is adaptable to any new or existing mechanical or electrical controlled installation in almost any location having Internet access.

- CSM SUVC® version **1.10** is currently available for Cla-Valve® Hytrol 100 Series and 130 Series, OCV Control Valves Series 120, and any Butterfly Valve Series. (customer specify)
- CSM SUVC® version **1.11** also features controls for up to 3 storage tanks using analog level sensors and digital alarm level sensors.
- CSM SUVC® version **1.12** includes all features listed in V1.11 and in addition provides start/stop controls of 1 well pump and/or 1 booster pump command via HOA switches.
- All SUVC® systems can be customized per customer requirements.

***Basic Specifications:***

- 24" x 24" x 12" Stainless Steel NEMA 4X enclosure (Inner Door optional)
- HMI is 5" Soft-touch style, 240 x 128 Display resolution with IP65 Front protection
- ABB 554-ETH/AX/DO PLC System with SD Card program backup
- 100/10 Mb high-speed Ethernet port
- RS45 communication ports (2)
- VPN router for up to 8 user VPN access, complete with firewall
- MODBUS configured internet based monitoring and control system with 8 selectable email generators to 8 different or same email addresses
- SSR 5 amp relays, 0-120V AC, 24V AC or 24V DC selectable outputs terminated (2)
- SPDT 5 amp relay isolated and terminated (4)
- 24V DC inputs (8)
- 24V DC outputs (14)
- 4-20mA analog inputs (8) *or*
- 0-10V DC analog inputs (8)
- 4-20mA analog outputs (4) *or*
- 0-10V DC analog outputs (4)
- Valve "Open-Auto-Close" selector switch for manual control
- Green pilot light for Valve opening indication and Red pilot light for Valve closing indication
- Main Power Switch
- Power supply: 24V DC @ 10 amps, 120V AC 60Hz @ 10 amps (customer specified)

***Options available:***

- The SUVC® is expandable to control up to 3 valves simultaneously.
- 3G/4G based internet communications using owner's 3G/4G contract account.
- SUVC® is adaptable to operate on a 24V DC power supply that can be generated by photovoltaic, wind generator or a combination of the two and/or a 120V AC trickle charger on a 24V DC battery system.

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