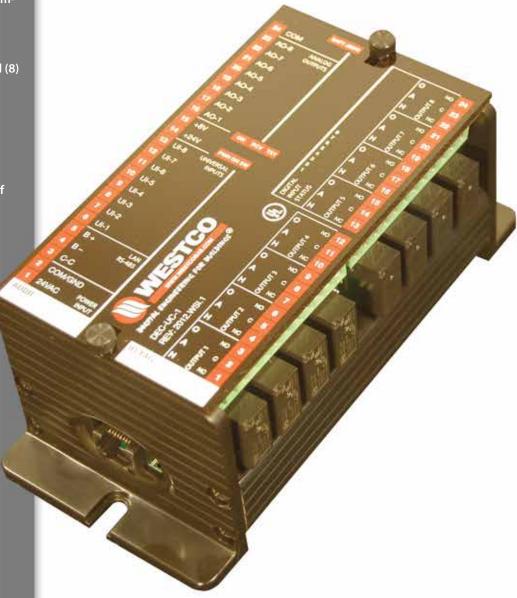# DEC-UC-1

Universal Stand Alone Controller

Westco's DEC-UC is the next generation in Universal Controllers. The DEC-UC is programmable with a real time clock and 365 day calendar. The DEC-UC insures a seamless upgrade path for existing projects. The DEC-UC has (8) built-in universal inputs and (8) built-in analog outputs.

The DEC-UC can also be field expanded to include (4) or (8) digital outputs (HOA with status lights) using plug-in modules. These modules allow for field construction and customization of the DEC-UC for any type of application.

- Solar Systems
- Built Up HVAC Units
- Split Systems
- Roof Top Units
- Fan Coil Units
- Chiller and Boiler Plants
- Heat Pumps (Water or Air Source)
- Variable Speed Drives
- Lighting
- Dampers, Valves, Actuators
- Gas Detection and Monitoring
- Multiple Alarms
- Snow Melt Systems

BACnet®

Made in the USA

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DEC-UC-1
Universal Stand Alone Controller

HARDWARE FEATURES/BENEFITS

- Networkable Distributed - fully peer-to- peer modular system architecture
  - scalable
- Fully isolated (optical and power supply) output circuitry
  - immune to electrical noise
- On board isolation transformer - for transient protection and noise immunity
- Stand alone capability - controller operates if network is down
- Battery backup of critical system data - ensures retention of operating data after extended power failure
- Lithium back-up of control program and logged data via lithium battery: 7 + years

- Flash based operating controller: Eliminates obsolescence and operating system can be uploaded remotely
- Extensive data logging and monitoring - past 35 days peak value recording for all points - past 48 hours of point value is recorded with 15 minute average values
  - point value totalization
  - override time totalization
  - 48 hour logging of 0-10VDC and digital output status
  - output status
  - programmable input averaging period
- All points are global
- Software pass code lock out
  - for system security

- Compact size
  - ideal for limited space applications
- Industrial ABS 787 packaging with color coded and pad printed removable terminal strips
  - for simple, accurate and fast installation and wiring
- Digital Outputs: Up to eight (8) Digital Outputs would require two (2) plug-in relay modules (DEC-R4)
- Pulsed Inputs: Pulsing dry contact at a rate of up to 40Hz @ 50% duty cycle. Equivalant to 2,400 pulses per minute.
  - Minimum pulse width = 25 Miliseconds
  - Maximum pulse width = Unlimited
- Local Service Port with DEC HH device.
- BACnet® device profile = B-ASC

PROGRAMMING FEATURES

- Sophisticated temperature control, building automation and energy management strategies in stand-alone or networked applications.
- Time of day scheduling
- Fixed and variable duty cycling with parallel or staggered outputs
- Fixed and variable output control
- Adaptive/non-adaptive optimum start/stop for heating/cooling
- PID control of outputs

- Demand management strategies = load shedding
- Global overrides
  - enabling programs based on any global point value
  - primary/secondary output switchover based on run time
- Event and holiday scheduling
- Security
  - user defined security access codes

- Alarm
  - multiple phone, pager, cell phone or email dial out with interface
  - run time limit alarm
- Global point value alarm
- ICMS 5.0
- Graphically Programmed in Native BACnet® with Tridium®
- Title 24 Demand Compliant with Tridium®

SPECIFICATIONS

- DEC UC Controllers
  - 8 universal digital output ports (option via 4 channel relay modules), optically isolated from the processor with HOA switches built in
- Option: 4 Channel NO Relay module, form C, 5 Amps@ 24 VAC with HOA switches and status LEDs
  - 4 Channel NC Relay module, form C, 3 Amps@ 24 VAC with HOA switches and status LEDs
- Option: 4 Channel solid state (Triac, with zero cross switching) N.O. output module
- 8 Analog Outputs: 0-10 VDC - 8 universal analog inputs: 4-20mA, 0-10V, various thermistors, pulse (event) or digital inputs (with status LEDs)

- Serial Sub-LAN port: wiring via CAT-5 cable for multiple zone sensors
- Future expansion Flash Memory ID Tag port
- Communications - Programmable from 1200 Bauds to 57K Bauds - RS485 -2 or 3 wire with network TXT and RCV status LEDs - Power supply and optical isolated - Flash based non-volatile configuration
- Electrical- input power: Transorb and self-reset-ting fuse protected
  - class II, 22-28VAC, 50/60Hz 8VA max.
  - Lithium battery back up, 7 year
  - Regulated 24 VDC built-in. Can supply from 25 up to 100 mA based on total hardware energized by the controller
  - Additional built in 8 VDC power supply

- Hand Held terminal interface port via CAT-5 cable
- Environmental - operating: 0°F to 140°F and 0%-95% RH, non condensing
- Mechanical: ABS 787 housing construction
- Shipping weight 2 lb.
- User interface- remote or direct through a personal computer utilizing ICMS Windows® based front-end software. Optional equipment allows for web browser based control
- Each DEC controller contains a powerful 16 bit flash microprocessor to automate and monitor any mechanical system while continually logging pertinent programmed system operating data.

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