

OPTIFLEX™ OF141-E2

OPTIFLEX ADVANCED VAV CONTROLLER



CONTROLLER FOR THE WEBCTRL® BUILDING AUTOMATION SYSTEM

The OptiFlex advanced VAV controller, model OF141-E2, is a central component of the WebCTRL system. These controllers are ideal for zone-level temperature and air quality control applications. Designed to operate in a wide range of environmental conditions, these controllers are well suited to satisfy the market demands of Variable Air Volume (VAV) and Variable Volume and Temperature (VVT) applications. Factory, pre-engineered ASHRAE Guideline 36 compliant control algorithms reduce energy consumption and increase occupant comfort.



KEY FEATURES AND BENEFITS

Application Features

- Versatile controller suitable for a variety of applications, including zone level temperature, air quality, and energy management
- Standard library of control programs available for most unitary equipment and zone applications
- Supports EIKON® graphical programming software, an object oriented tool that provides complete flexibility for any custom control sequence that you need
- Supports Automated Logic communicating ZS sensors, which are available in a variety of zone and equipment sensing combinations
- Supports OptiPoint™ touchscreen interfaces for managing and troubleshooting the connected equipment easily and for occupant engagement
- Supports OptiPoint smart valves and accessories
- Supports live, visual displays of control logic, helping operators troubleshoot and optimize system operation

Hardware Features

- Employs a bright LED locator light to help determine the unit's location and a damper rotation direction, minimizing the need to be in front of the electrical panel, in the ceiling, or at the air stream to assess the controller location or operation of the damper
- Includes dual high-speed ethernet ports supporting native BACnet over IP; daisy chain, Spanning Tree Protocol (STP) enabled
- Supports hard-wired and wireless service connections
- Uses non-volatile memory to store control programs and historical data, eliminating the need for batteries
- Features a capacitor-backed real-time clock that keeps time in the event of power failure for up to three days
- Includes USB port for local device updates, hard-wired and wireless service connections
- Features large termination strips for easy installation
- Supports remote firmware upgrades



The WebCTRL building automation system gives you the ability to understand your building operations and analyze the results. Integrate environmental, energy, security and safety systems into one powerful management tool that helps you reduce energy consumption, increase occupant comfort, and achieve sustainable building operations.

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SPECIFICATIONS

Part #	OF141-E2 OptiFlex Advanced VAV Controller		
BACnet Conformance	BTL Tested and conforms to the BACnet Advanced Application Controller (B-AAC) and BACnet Broadcast Management Device (B-BBMD) standard device profiles, as defined in BACnet 135-2012 Annex L, Protocol Revision 14. Please see BTL listing page for details.		
Power	24 Vac +/- 15% , 50 - 60 Hz 24 Vdc +/- 10%, 18 W		
Overcurrent Protection	3A, fast-acting fuse (5 mm x 20 mm)		
Device	Power Consumption	Device	Power Consumption
Controller nominal power	20.3 VA		
ZS Temp + RH	20.6 VA		
ZASF + ZS Temp + RH	23.6 VA		
A01 / A02	1		
ActNet Power	-		

*All external loads and peripherals excluded.

Communication	
BAS Primary Port	10/100 Base T, full duplex, Ethernet ports for BACnet/IP and/or BACnet/Ethernet communication
Rnet Port	12VDC @ 260mA supporting: Up to 5 ZS sensors and OptiPoint HMI devices
Act Net Port	Supports ZASF-A and up to 2 Act Net communicating devices such as the OptiPoint smart valves
USB Ports	Two (2) USB ports that support OptiPoint HMI devices controller configuration wireless service access expander firmware updates and controller recovery via USB drive
Inputs	
Universal	4 Universal Inputs electronically configurable to the following types: Dry Pulse Counting Thermistor 0-10 Vdc
Outputs	
Analog Output	1 Analog Output, 0-10 Vdc, configurable as 12 Vdc PWM control signal
Digital Output	1 bank of one N.O. binary output. Each relay contact rated at 3.75 A max. @ 30 Vac/Vdc
Integral Airflow Sensor	Precision differential pressure sensor 0-2 in. H2O, sensitive down to ±0.001 in. H2O. Barbed tapered airflow connections accept 3/16 in. (4.75 mm) I.D. tubing. Allows for readings across the 0-2in. H2O range, accurate to accurate to ±3% of sensor reading
Environmental Range	32 to 122°F (0 to 50°C), 10-95% relative humidity, non-condensing
Microprocessor	32-bit ARM Cortex-A8, 600MHz processor with multi-level cache memory
Memory	4 GBs eMMC Flash memory and 256 MB DDR3 DRAM
Real Time Clock	Real-time clock keeps track of time in the event of a power failure for up to 3 days
Compliance	United States: FCC compliant to Title CFR47, Part 15, Subpart B, Class B. UL Listed, File E143900; CCN PAZX, UL916, Energy Management Equipment; AS/NZS: RCM Mark 61000-6-3; Canada: UL Listed File E143900, CCN PAZX7, CAN/CSA C22.2 No. 205 Signal Equip., Industry Canada Compliant, ICES-003, Class B; CE Mark Compliant with 2014/30/EU, and RoHS Compliant: 2015/863/EU; UKCA Mark compliant with Electromagnetic Compatibility Regulations 2016 - Gov.UK and RoHS for Electrical and Electronic Equipment 2012, REACH compliant
Plastic Rating	Fire-retardant plastic ABS, UL94-5VA

● **Figure 1: Physical Dimensions**

