# OPTIFLEX<sup>™</sup> OF683T-E2

ADVANCED EQUIPMENT CONTROLLER

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# CONTROLLER FOR THE WEBCTRL® BUILDING AUTOMATION SYSTEM

The OptiFlex advanced equipment controller, model OF683T-E2, is ideal for small equipment control applications such as fan coil units, heat pumps, and advanced zone control applications requiring direct connection or daisy chain topology over BACnet/IP and integration of devices such as VFDs, electric meters, lighting systems and Modbus occupancy sensors.



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# **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<sup>®</sup> 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<sup>™</sup> 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**

- Dual ethernet ports support daisy chain BACnet over IP; Spanning Tree Protocol (STP) enabled
- Supports 80 Modbus points for system integration
- Uses non-volatile memory to store control programs and historical data, eliminating the need for batteries
- Capacitor-backed real-time clock keeps time in the event of power failure for at least three days
- USB port for local device updates; hard-wired and wireless service connections
- Large termination strips for easy installation
- Firmware upgrades can be performed remotely
- DIN rail or screw mounting
- Can be installed in mechanical rooms, equipment boxes, or almost any other weather-tight location





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.

#### **SPECIFICATIONS**



Part #	OF683T-E2 OptiFlex Advanced Equipment 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	
Power	24Vac +/- 15% , 50 - 60Hz, 55VA   24Vdc +/- 10%, 20W	
Communication		
BAS Primary Port	10/100 Base T, full duplex, Ethernet ports supporting native BACnet/IP and/or BACnet/Ethernet or Modbus TCP/IP communication	
Serial Port 1 & 2	Communication with a Modbus serial network at 9,600 to 115,200 bps. Supports up to 80 Modbus points.	
Rnet Port	12VDC @ 260mA supporting: -Up to 10 wireless and/or ZS sensors -One Equipment Touch or OptiPoint interface	
Act Net Port	Supports up to 5 Act Net communicating devices such as actuators and OptiPoint smart valves	
USB Service Port	USB 2.0 host port for setting up the controller and troubleshooting through a local connection to a computer, connecting to the OptiPoint <sup>™</sup> interface, or the Automated Logic wireless service adapter	
Inputs		
Universal	8 Universal inputs configurable in the control program for 0-5Vdc, 0-10 Vdc, thermistor, dry contact, pulse counter	
Auxiliary Power	8 terminals supply 24Vdc to external I/O devices @ 200mA total (powered by AC) or 500mA total (powered by DC)	
Outputs		
Universal Output	1 Output configurable to 0-10 Vdc   PWM 12Vdc @ 80 Hz   Normally Open Dry Contact rated 30Vac/Vdc @ 3.75A	
Binary Outputs	2 banks of bussed outputs, 3 N.O. binary outputs per bank. Each relay contact rated at 3.75mA @ 30 Vac/Vdc. Each bank is limited to 100VA / 4.2A	
Analog Outputs	2 analog outputs, 0–10 Vdc (10mA max)	
Microprocessor	32-bit ARM Cortex A-8, 600 MHz, processor with multi-level cache memory	
Protection	A single, fast-acting 5mm x 20mm glass fuse for power	
Environmental Range	-40 to 158°F (-40 to 70°C), 10–95% relative humidity, non-condensing	
Memory	4 GBs eMMC Flash memory and 256 MB DDR3 DRAM (2 MB available)	
Real Time Clock	Real-time clock keeps track of time in the event of a power failure for up to 3 days	
Compliance	<b>United States:</b> FCC compliant to Title CFR47, Part 15, Subpart B, Class A. UL Listed, File E143900; CCN PAZX, UL916, Energy Management Equipment; <b>AS/NZS:</b> RCM Mark IEC 61000-6-3; <b>Canada:</b> UL Listed File E143900, CCN PAZX7, CAN/CSA C22.2 No. 205 Signal Equip., Industry Canada Compliant, ICES-003, Class A; CE Mark Compliant with 2014/30/EU, and RoHS Compliant: 2015/863/EU; <b>UKCA</b> Mark compliant with Electromagnetic Compatibility Regulations 2016 – Gov.UK and RoHS for Electrical and Electronic Equipment 2012	
Plastic Rating	Fire-retardant plastic ABS, UL94-5VA	
Mounting	35mm DIN rail mounting or screw mounting	

#### • Figure 1: Physical Dimensions

│, Width , / ↗			
		in.	cm
	Width:	7.78	19.77
	Height:	5.88	14.94
	Depth:	2.00	5.09
	Weight:	1.2 lbs	0.54 kg



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