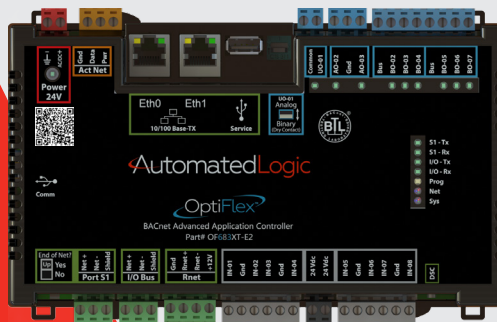# OPTIFLEX™ OF683XT-E2

## ADVANCED EQUIPMENT CONTROLLER

**Automated Logic**



## CONTROLLER FOR THE WEBCTRL® BUILDING AUTOMATION SYSTEM

The OptiFlex advanced equipment controller, model OF683XT-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.

## 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

- Dual ethernet ports support daisy chain BACnet over IP; Spanning Tree Protocol (STP) enabled

- Supports 50 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



**WebCTRL®**

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 #        | OF683XT-E2<br>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 135-2001 2012 Annex L, Protocol Revision 14 |
| Power | 24 Vac +/- 15% , 50 - 60Hz, 55 VA | 24 Vdc +/- 10%, 20W |
| **Communication** | |
|     BAS Primary Port | 10/100 BaseT, full duplex, Ethernet ports for BACnet/IP and/or BACnet/Ethernet, or Modbus TCP/IP communication |
|     Serial Port | Communication with a Modbus serial network at 9,600 to 115,200 bps. |
|     I/O Bus Port | For communication with future expanders |
|     Rnet Port | 12 VDC @ 260 mA supporting:<br>-Up to 10 wireless and/or ZS sensors - freely mix ZS zone, ZS duct, ZS immersion and ZS outdoor sensors<br>-One OptiPoint IAQ displays and OptiPoint equipment interfaces |
|     Act Net Port | Supports Act Net communicating devices such as actuators and OptiPoint smart valves |
|     USB Service Port | Supports OptiPoint IAQ display and OptiPoint equipment Interface support | configuration | wireless service access | firmware updates and controller recovery via USB drive |
|     USB Comm Port | For future use |
| **Inputs** | |
|     Universal | 8 Universal Inputs configurable for 0-5 Vdc, 0-10 Vdc (Dry |Thermistor | Pulse Counter) Resolution: 12 bit A/D |
|     24 Vdc Terminal | 24 Vdc to external I/O devices @ 100 mA |
| **Outputs** | |
|     Universal Output | 1 Output configurable to 0-10 Vdc | PWM 12 Vdc @ 80 Hz | Normally Open Dry Contact rated 30Vac/Vdc @ 3.75A |
|     Digital Outputs | 6 Digital Outputs Normally Open Dry Contact rated 30Vac/Vdc @ 3.75 Amps, Max of 100VA / 4.2A per relay bank |
|     Analog Outputs | 2 Analog output, 0–10 Vdc (10 mA max) |
|     Output Resolution | 12 bit D/A |
| Status Indicators | LED's indicate status of communications, running, errors, power, and outputs |
| Environmental Range | -40°F to 158°F (-40 to 70°C), 10–95% relative humidity, non-condensing |
| Memory | 4 GBs eMMC Flash memory and 256 MB DDR3 DRAM. User data is archived to non-volatile flash memory when parameters are changed, every 90 seconds |
| 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 A. 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 A; 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 |
| Optional Accessory | Wire-covers (#PLM-KIT), to support plenum mounting where code or specification requires |

**Figure 1: Physical Dimensions**
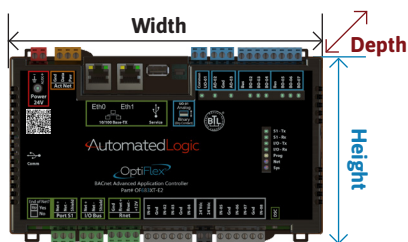


|          | in.      | cm        |
|----------|----------|-----------|
| Width:   | 7.78     | 19.76     |
| Height:  | 5.88     | 14.94     |
| Depth:   | 2.00     | 5.08      |
| Weight:  | 1.2 lbs  | 0.54 kg   |

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