

## **BACnet Router and Controller**



Part# G5CE



The Automated Logic® OptiFlex™ BACnet Gateway (Model G5CE) is an integral component of the WebCTRL® building automation system.

The OptiFlex BACnet Gateway is a BACnet Router (B-RTR) and BACnet Building Controller (B-BC) supporting routing between multiple BACnet networks. It also supports custom control programs to easily integrate with third party BACnet or Modbus equipment such as variable speed drives, boilers, and lighting.

#### **Key Features and Benefits**

#### **BACnet Features**

BACnet Device Types

- BACnet Router (B-RTR)
- BACnet Building Controller (B-BC)
- BACnet Broadcast Management Device (B-BBMD)
- Supports routing between BACnet/IP, BACnet/Ethernet, BACnet ARCnet, and BACnet MS/TP networks
- Supports up to
  - 12,000 network visible BACnet objects
  - 1,500 third party BACnet points
- Includes two additional BACnet ports for supporting either two simultaneous BACnet MS/TP networks (with up to 60 controllers each), or one ARCnet network (with up to 99 ARCnet controllers) and one BACnet MS/TP network (with up to 60 controllers)
- Can serve as a BACnet Broadcast Management Device (BBMD), routing any BACnet broadcast messages directly to other BBMD devices on the BACnet network
- Supports BACnet Foreign Device Registration (FDR)

#### **Modbus Features**

- · Can act as a master or slave on a Modbus serial network
- Can act as a server or client on a Modbus TCP/IP network
- Supports up to 25 Modbus points

#### **Hardware Features**

- Supports and executes control programs
- Supports up to two BACnet/IP networks on the Gig-E port
- Supports Gig-E, 1,000 Mbps BACnet IP and DHCP IP addressing
- Ethernet port provides local access for system start-up and troubleshooting
- Supports network captures for advanced diagnostics
- Provides network statistics numerically or as trend graphs inside the WebCTRL building automation system
- Supports DIN rail and screw mounting
- Capacitor-backed real-time clock keeps time in the event of power failure or network interruption for up to three days

#### **System Benefits**

- Connects seamlessly to the WebCTRL building automation system
- · Multiple serial comunication ports to simultaneously route and



The WebCTRL® 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 allows you to reduce energy consumption, increase occupant comfort, and achieve sustainable building operations.



#### **AUTOMATED LOGIC**

# OptiFlex BACnet Gateway

### **BACnet Router and Controller**



**BACnet Conformance** 

Conforms to the BACnet Router (B-RTR), BACnet Building Controller (B-BC), and BACnet Broadcast Management Device (B-BBMD) as defined in BACnet 135-2012 Annex L and tested to Protocol Revision 14.

**BACnet Device Types** 

- BACnet Router (B-RTR)
- · BACnet Building Controller (B-BC)
- BACnet Broadcast Management Device (B-BBMD)

Program Capabilities

	Controller	Programs	Programmed with	Objects   Points
	G5CE	999*	EIKON® software	Up to 12,000 network visible BACnet objects*
	* Depending upon available memory			Up to 1,500 third-party BACnet integration points*
				Up to 25 modbus integration points*

Power

24 Vac ±10%, 50-60 Hz, 50 VA

26 Vdc ±10%, 15 W

Gig-E port

10/100/1000 BaseT Ethernet port for BACnet/IP and/or BACnet/Ethernet and/or Modbus full duplex

S1 port

For communication with either of the following: A BACnet ARCNET network at 156,000 bps • A BACnet MS/TP network at 9,600 to 115,200 bps

· A Modbus at 1,200 to 115,200 bps

S2 port

For communication with a BACnet MS/TP network at 9,600 to 115,200 bps, or Modbus at 1,200 to 115,200 bps

Local Access port Rnet Port

Ethernet port at 10 or 100 Mbps for system start-up and troubleshooting Supports Rnet communicating ZS Sensors, OptiFlex™ and OptiPoint™ devices

Microprocessor

32-bit ARM Cortex-A8, 600 MHz, processor with multi-level cache memory, two Ethernet controllers, and

USB 2.0 host port

Memory

16 GBs eMMC Flash memory (120 MB available for use) and 256 MB DDR3 DRAM. User data is archived to non-volatile Flash memory when parameters are changed, every 90 seconds, and when the firmware is

deliberately shutdown or restarted.

Real-time Clock

Real-time clock keeps track of time in the event of a power failure for up to 3 days

Protection

Device is protected by a replaceable, fast acting, 250 Vac, 2A, 5mm x 20mm glass fuse The power and network ports comply with the EMC requirements EN50491-5-2

Env. Operating Range

32 to 140° F (0 to 60° C); 10 - 90% relative humidity, non-condensing

Physical Mounting Fire-retardant plastic ABS, UL94-5VA

Recommended Panel Depth

DIN rail mounting or screw mounting

Weight

2 3/4" (7cm)

1 lb. 1 oz. (0.482kg)











United States of America: FCC compliant to Title CFR47, Chapter 1, Subchapter A, Part 15, Subpart B, Class A;

UL Listed to UL 916, PAZX, Energy Management Equipment

Europe: Mark EN50491-5-2:2009; Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and light industry environment; EN50491-3:2009, Part 3: Electrical safety requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS); Low Voltage Directive: 2014/35/EU

RoHS Compliant: 2011/65/EU

ANZ: C-Tick Mark AS/NZS 61000-6-3





