

## System Support

### C-Bus® BACnet Gateway

The C-Bus BACnet Gateway is an embedded device that provides a field bridge between Clipsal C-Bus lighting control systems and building management systems that support the BACnet open protocol. Clipsal part number is 5000BACnet.

C-Bus BACnet Gateway shall:

- provide 255 group addresses from a single application address. If more than one application address is necessary or more than 255 group addresses need to be mapped, then additional gateway devices will be required
- be supplied pre-configured from the manufacturer (Clipsal), however parameters need to be supplied by the customer to permit this configuration to occur
- allow message transfer in the BACnet internetwork, for this to occur each device's connection to a network shall have a unique address within the entire internetwork. This address is comprised of a pair of numbers. The first number is referred to as the MAC (Medium Access Control) address, which must be unique on the local network segment to which it is connected. The second part of every device's address is the device instance number. This number is required to be unique throughout the entire BACnet network

### Infrared Receiver

The infrared receiver shall receive signals transmitted by an infrared remote control and perform lighting control system functions in response. The unit shall support up to 4 channels, each responding to a pre-programmed infrared control code.

The infrared receiver shall be programmable through the lighting control system network, using PC based configuration software.

Connection to the lighting control system shall be via Cat-5 cable. Terminals shall accommodate 0.2 to 1.3 mm<sup>2</sup> wire. The unit shall be powered through this connection and draw no more than 18 mA of current.

The unit shall be Clipsal C-Bus Catalogue No. 5031NIRL

### Network Monitor

The network monitor shall monitor the lighting control system network and activate loads connected to the system in the event of a system network failure.

The network monitor shall be packaged in a 4M DIN rail mount enclosure. It shall provide 2 × RJ45 sockets for connection to the lighting control system. Connection to the lighting control system shall be via Cat-5 cable. The unit shall draw no more than 18 mA of current.

The unit shall be Clipsal C-Bus Network Monitor, Catalogue No. 5500NMA.

### System Ethernet Interface

The system Ethernet interface shall provide an isolated communication path between an Ethernet and lighting control system network. It shall allow devices in the lighting control system to be programmed, monitored and controlled by software on an Ethernet connected PC.

The system Ethernet interface shall incorporate Ethernet and lighting control system network status LEDs.

The unit's Ethernet settings shall be configurable via a PC using an Ethernet connection and web browser or other configuration software. Lighting control system specific programming shall be performed through the lighting control system network, using PC based configuration software.

The system Ethernet interface shall be powered via an external 12 V AC or DC power supply, and draw no more than 300 mA of current. It shall be packaged in a 4M DIN rail mount enclosure. It shall provide 2 × RJ45 sockets for connection to the lighting control system, and 1 × RJ45 socket for connection to the Ethernet network. Connection to the lighting control system shall be via Cat-5 cable.

The unit shall be Clipsal C-Bus Network Interface Catalogue No. 5500CN

### System Logic Controller

The system logic controller shall be capable of performing control operations in response to events, schedules and logical computations.

The unit shall incorporate a real time clock and two bidirectional RS-232 serial interface ports. The real time clock shall retain the time for at least 24 hours when the unit is not powered. The unit shall provide a connection for an external battery for the purpose of maintaining the time in extended power failure conditions.

The system logic controller shall incorporate LEDs to indicate the status of the unit and the lighting control system network.

The unit shall be programmed via PC based software using a USB cable. The PC based software shall use a Pascal based programming language. Lighting control system specific programming shall be performed through the lighting control system network, using PC based configuration software.

The system controller shall be packaged in a 4M DIN rail mount enclosure and provide 2 × RJ45 sockets for connection to the lighting control system. An additional 2 × RJ45 sockets shall be provided for the RS-232 ports.

Connection to the lighting control system shall be via Cat-5 cable. The unit shall be powered through this connection and draw no more than 32 mA of current.

The unit shall be Clipsal C-Bus Pascal Automation Controller Catalogue No. 5500PACA.

### System Network Bridge

The lighting control system network bridge shall link two lighting control system networks providing an electrically isolated communications path. This shall allow lighting control system devices on separate networks to communicate with each other.

The unit shall incorporate LEDs to indicate when active communication is detected on connected networks. The unit shall be programmable through the lighting control system network, using PC based configuration software.

The lighting control system network bridge shall be packaged in a 4M DIN rail mount enclosure. It shall provide 1 × RJ45 socket for connection to each of two lighting control system networks.

Connection to the lighting control system shall be via Cat-5 cable. The unit shall be powered through this connection and draw 18 mA of current from each connected network.

The unit shall be Clipsal C-Bus Network Bridge Catalogue No. 5500NB

### **System Power Supply**

The lighting control system power supply shall provide up to 350 mA of power suitable for the lighting control system network.

The power supply shall incorporate output current limiting, and mains and lighting control system network status LEDs.

The unit shall need no configuration. It shall be packaged in a 4M DIN rail mount enclosure and provide 2 × RJ45 sockets for connection to the lighting control system. Mains terminals shall accommodate 2 × 1.5 mm<sup>2</sup> or 1 × 2.5 mm<sup>2</sup> wire. Connection to the lighting control system shall be via Cat-5 cable.

The unit shall be Clipsal C-Bus Power Supply Catalogue No. 5500PS

### **System RS-232 Interface**

The system RS-232 interface shall provide an isolated serial communications path between a PC or other device, and the lighting control system network. It shall allow devices in the lighting control system to be programmed, monitored and controlled by software on a connected PC.

The system RS-232 interface shall incorporate communications and lighting control system network status LEDs. It shall be programmable through the lighting control system network, using PC based configuration software.

The system RS-232 interface shall be packaged in a 4M DIN rail mount enclosure. It shall provide 2 × RJ45 sockets for connection to the lighting control system, and 1 × 9 pin D type serial connection socket. Connection to the lighting control system shall be via Cat-5 cable. The unit shall draw no more than 32 mA of current.

The unit shall be Clipsal C-Bus PC Interface Catalogue No. 5500PC.

### **System USB Interface**

The system USB interface shall provide an isolated serial communications path between a PC and the lighting control system network. It shall allow devices in the lighting control system to be programmed, monitored and controlled by software on a connected PC.

The system USB interface shall incorporate communications and lighting control system network status LEDs. It shall be programmable through the lighting control system network, using PC based configuration software.

The system USB interface shall be packaged in a 4M DIN rail mount enclosure. It shall provide 2 × RJ45 sockets for connection to the lighting control system, and 1 × USB type B serial connection socket. Connection to the lighting control system shall be via Cat-5 cable. The unit shall draw no more than 22 mA of current.

The unit shall be Clipsal C-Bus USB Interface Catalogue No. 5500PCU.