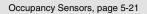
5-2, 5-3

# **Lighting Control And Integrated Home Systems**

**Lighting Control Product Overview** 

One Line Overview







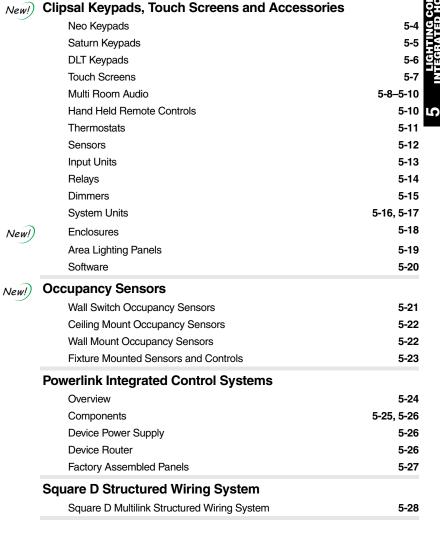
Powerlink Lighting Control Panelboards, page 5-24



Structured Wiring Systems, page 5-28



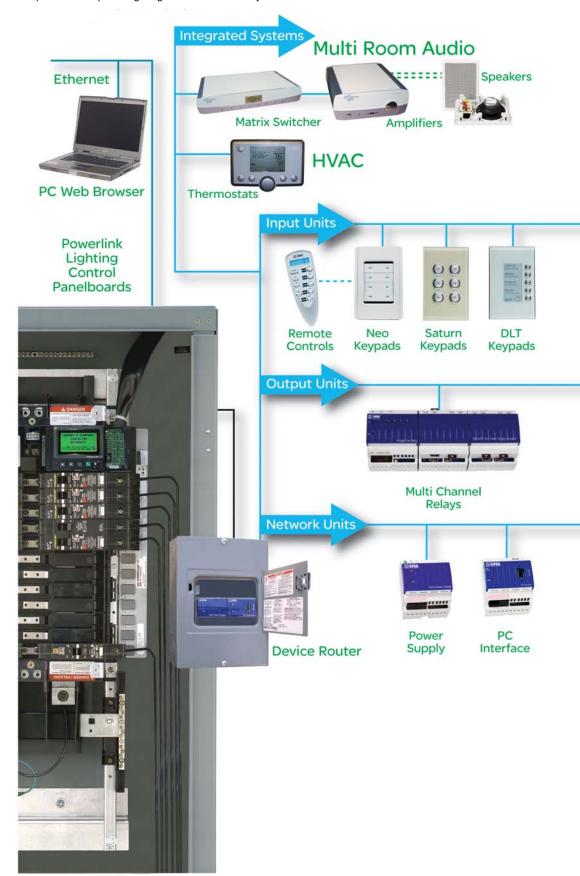
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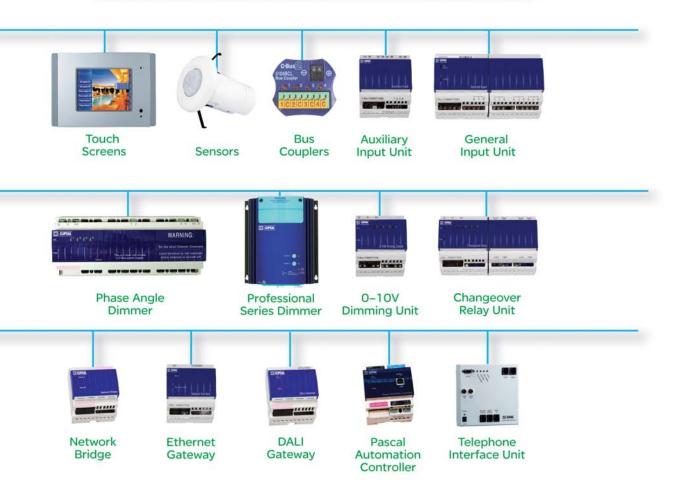
5

Square D Occupancy Sensors, Powerlink and Clipsal control systems can be used independently or combined to provide the optimal lighting control solution for your home or business











#### Neo™ Keypads

Clipsal Neo Keypads offer localized finger-tip control of lighting and other electrical devices. With over 1,000 custom color combinations available, these elegant keypads compliment any decor. Requires plaster mud ring or single gang box with minimum internal width of 2.05".

- Button configurations include multi-point switching and dimming, master ON/OFF switching, and scene settings
- Scene control includes ten group addresses per scene, four scenes per keypad
- Independent timers available for each button
- Standard built-in infrared receiver permits keypad control at a distance with an optional infrared handheld remote
- Dual-color LED windows on each button can glow in cool blue, orange, or combinations of both, indicating when a controlled device
- Auto "fallback" can dim button LEDs at a set time after the last key press
- Locator LEDs can illuminate the top and bottom of the button area in cool blue, helping a user find the keypad in dim light
- Clean-lined low-profile keypads are wall mounted without external fittings
- Optional button covers have ID windows, enabling quick identification of lighting scenes or controlled devices
- Distinctively designed multi-layer cover plate consists of button covers, an outer surround, and an inner surround
- Color schemes are easily customized and modified to suit personal taste or the décor

#### Standard Neo Keypads

Includes keypad, button covers, inner and outer surrounds.

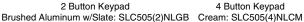
White: SLC505( )NLWE Cream: SLC505( )NLCM

Brushed Aluminum w/Slate: SLC505( )NLGB ) designates space for button configuration

**Table 5.1:** Standard Neo Keypad Assemblies

Catalog No.	Catalog Description	\$ Price
SLC5052NLGB	Neo, 2 button key input brushed aluminum	460.00
SLC5052NLWE	Neo, 2 button key input solid white	460.00
SLC5052NLCM	Neo, 2 button key input solid cream	460.00
SLC5054NLGB	Neo, 4 button key input brushed aluminum	500.00
SLC5054NLWE	Neo, 4 button key input solid white	500.00
SLC5054NLCM	Neo, 4 button key input solid cream	500.00
SLC5058NLGB	Neo, 8 button key input brushed aluminum	560.00
SLC5058NLWE	Neo, 8 button key input solid white	560.00
SLC5058NLCM	Neo, 8 button key input solid cream	560.00







4 Button Keypad



8 Button Keypad White: SLC505(8)NLWE

## **Custom Neo Keypad Assemblies**

To order custom Neo Keypad assemblies indicate the number of buttons desired on the keypad and the color of each customizable component (inner surround, outer surround, and botton cover).

For example, in the diagram below, SLC505(8)NL(2)(8)(2) represents a Neo Keypad with eight buttons, a white (#2) outer surround, a brushed aluminum (#8) inner surround, and white (#2) button covers.

**Table 5.2: Color Chart** 

Name	Color Number
Slate	1
White	2
Cream	3
Soft Gray	4
Desert Sand	5
Black	6
Brown	7
Brushed Aluminum▲	8
Gold▲	9

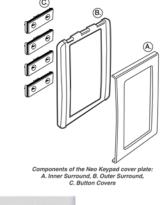
Only the inner surround is available in Brushed Aluminum and Gold.

S L C 5 0 5(8)N L(2)(8)(2) Catalog | Keypad Number Buttons 2 Two Four 8 Eight Outer Surround Color Inner Surround Color Button Cover Color

**Table 5.3: Neo Keypad Accessories** 

Catalog No.	Catalog Description	\$ Price
SLC5050IS()	Neo, inner surround, (5pk)	152.00
SLC5050OS()	Neo, outer surround, (5pk)	46.00
SLC5052NRP()	Neo, button covers, 5052L, (5pk)	60.00
SLC5054NRP()	Neo, button covers, 5054L, (5pk)	60.00
SLC5058NRP()	Neo, button covers, 5058L, (5pk)	60.00
SLC5052NRI()	Neo, button covers, with ID window, (10pk)	82.00

Accessories have unique catalog numbers. To specify colors for them. (see Table 5.1) add the color number to the end of the catalog number (Table 5.3). For example, SLC5052NR2 is the catalog number for a white button cover.



DEN

Neo button cover with ID window







Clipsal<sup>®</sup>

Saturn 2 Button Keypad



Saturn 4 Button Keypad



Saturn 6 Button Keypad

### Saturn™ Keypads

Clipsal Saturn Keypads incorporate a unique glass cover plate that creates a distinctive appearance. By virtue of the variety of button configurations available, one compact Saturn keypad can take the place of many single operation switches, ON/OFF toggles, dimmers, and timers. Available in two-, four-, or six-button keypads, Saturn's modern style is complemented by orange and blue LEDs that can instantly show the status of controlled devices. Requires plaster mud ring or single gang box with minimum internal width of 2.05".

- Button configurations include multi-point switching and dimming, master ON/OFF switching, and scene settings
- Scene control includes up to ten group addresses per scene and four scenes per keypad
- Independent timers available for each button
- Dual-color LED windows on each button can glow in cool blue, orange, or combinations of both, indicating when a controlled device is ON or OFF
- Auto "fallback" can dim button LEDs at a set time after the last button press
- Locator LED can illuminate the keypad, helping a user find it in dim light
- Clean-lined keypads are wall mounted without external fittings
- Low-profile design extends only 0.5 in. out from the wall
- Optional button covers with labels, enabling quick identification of lighting scenes or controlled

#### Saturn Keypads

**Table 5.4: Complete Saturn Keypads** 

Catalog No.	Catalog Description	\$ Price
SLC5082NL()	Saturn Full Plate, 2 button	634.00
SLC5084NL()	Saturn Full Plate, 4 button	668.00
SLC5086NL()	Saturn Full Plate, 6 button	700.00

Note: Color codes are: White (WE), Black (BK), Mocha (BR), Cream (CM). The catalog number for a two-button keypad in mocha would be SLC5082NLBR

#### **Table 5.5:** Saturn Keypad Accessories

Catalog No.	Catalog Description	\$ Price
SLC5080LC8	Saturn Button Labels	74.00
SLC5082FGF	Saturn Cover Plate White, 2 button	96.00
SLC5084FGF	Saturn Cover Plate White, 4 button	112.00
SLC5086FGF	Saturn Cover Plate White, 6 button	128.00
SLC5082F30	Saturn Cover Plate Cream, 2 button	96.00
SLC5084F30	Saturn Cover Plate Cream, 4 button	112.00
SLC5086F30	Saturn Cover Plate Cream, 6 button	128.00
SLC5082F60	Saturn Cover Plate Black, 2 button	96.00
SLC5084F60	Saturn Cover Plate Black, 4 button	112.00
SLC5086F60	Saturn Cover Plate Black, 6 button	128.00
SLC5082F70	Saturn Cover Plate Brown, 2 button	96.00
SLC5084F70	Saturn Cover Plate Brown, 4 button	112.00
SLC5086F70	Saturn Cover Plate Brown, 6 button	128.00



Saturn Style Keypad



Neo Style Keypad

#### **DLT Keypads**

Clipsal Saturn™ Dynamic Labeling Technology™ (DLT) Keypads combine a programmable keypad button, and easily customized labels on a backlit LCD screen that eliminates the need for custom labels. By virtue of the variety of button configurations available, one compact DLT keypad can take the place of many single-operation switches, ON/OFF toggles, dimmers, and timers. The five keypad buttons incorporate blue LEDs which complements the keypad's sleek lines while showing the status of controlled devices.

- Button configurations include multi-point switching and dimming, master ON/OFF switching, and scene settings
- Keypads have five physical buttons—four control buttons, and one scroll/page button—combined with two screens of labels, for a total of eight control buttons and two scroll/page buttons
- Scene control includes ten group addresses per scene, four scenes per keypad
- Independent timers available for each button
- Button LEDs can be used as locator lights in the dark
- 64 x 128 pixel LCD screen with a white backlight
- Editable LCD labels, available for each button or control group, can display text, symbols, and graphics.
- Dynamic graphic displays, such as bar graphs, can be enabled or disabled
- Bitmaps can be downloaded for each group address or scene
- Low-profile design, wall mounted without external fittings

Table 5.6: Saturn and Neo Style DLT Keypads

Catalog No.	Catalog Description	\$ Price
SLC5085DLWE	Saturn DLT White	966.00
SLC5085DLBK	Saturn DLT Black	966.00
SLC5085DLCM	Saturn DLT Cream	966.00
SLC5085DLBR	Saturn DLT Mocha	966.00
SLC5055DLGB	Neo DLT Brushed Aluminum	898.00
SLC5055DLWE	Neo DLT White	898.00
SLC5055DLBK	Neo DLT Black	898.00
SLC5055DLSG	Neo DLT Soft Grey	898.00
SLC5055DLCM	Neo DLT Cream	898.00
SLC5055DLDS	Neo DLT Desert Sand	898.00

Table 5.7: DLT Keypad Accessories

Catalog No.	Catalog Description	\$ Price
SLC5085DLFCM	Saturn DLT cover plate, Cream	110.00
SLC5085DLFBK	Saturn DLT cover plate, Black	110.00
SLC5085DLFBR	Saturn DLT cover plate, Mocha	110.00
SLC5085DLFWE	Saturn DLT cover plate, White	110.00
SLC5055DLFGB	Neo DLT cover plate, Brushed Aluminum and Slate	12.00
SLC5055DLFBR	Neo DLT cover plate, Brown	12.00
SLC5055DLFCM	Neo DLT cover plate, Cream	12.00
SLC5055DLFBK	Neo DLT cover plate, Black	12.00
SLC5055DLFSG	Neo DLT cover plate, Soft Gray	12.00
SLC5055DLFDS	Neo DLT cover plate, Desert Sand	12.00
SLC5055DLEWE	Neo DLT cover plate. White	12 00





Mark II touch screen with Cream Saturn style cover plate



Mark II touch screen desktop model



Color touchscreen in Neo style Brushed Aluminum and Slate

#### **Touch screens**

Clipsal Touch screens are unified wall-mounted panels for controlling lighting systems and accessories with the touch of a finger. They come in both monochromatic (Mark II) and color screen versions. Compact yet powerful, touch screens offer an attractive alternative to multiple single operation switches, ON/OFF toggles, dimmers, and timers which can clutter up even the nicest wall.

#### Mark II touch screen

- Control screens support multi-point switching and dimming, master ON/OFF switching, scheduling, and scenes with multiple loads.
- Preset scenes and functions automate the task of adjusting lighting levels to different lamps and fixtures.
- RS-232 port for third party device integration
- Standard real-time and astronomical clock permits time scheduling of lighting and other tasks
- Variable dimming fade rates can be configured according to load or lighting zone
- Locator option can be configured to help users find the screen in dim light
- Clean-lined low-profile touch screen can be wall-mounted without external fittings
- Infrared receiver for remote control

#### Mark II touch screen (desktop model)

- Screen swivels and pivots for optimal viewing
- Control screens support multi-point switching and dimming, master ON/OFF switching, scheduling, and scenes wtih multiple loads.
- Preset screens and functions automate the task of adjusting lighting levels to different lamps and fixtures.
- Standard real-time and astronomical clock permits time scheduling of lighting and other tasks
- Variable dimming fade rates can be configured according to load or lighting zone
- Locator option can be configured to help users find the screen in dim light
- Infrared receiver for remote control

#### Color touch screen

- Built-in RJ-45 Ethernet and C-Bus network, RS-232, and USB terminals
- Touch sensitive 6.4 inch (640 x 480) color LCD panel
- Control screens support multi-point switching
- Standard real-time and astronomical clock permits time scheduling of lighting and other tasks
- Variable dimming fade rates can be configured according to load or lighting zone
- Locator option can be configured to help users find the screen in dim light
- Clean-lined low-profile touch screen can be wall-mounted without external fittings
- Infrared receiver for remote control

#### **Table 5.8:**

Catalog No.	Catalog Description	\$ Price
Mark II Touch Screen		•
SLC5050CTL2WE	Mark II w/Neo Style Cover Plate, White	2439.00
SLC5050CTL2GB	Mark II w/Neo Style Cover Plate, Brushed Aluminum and Slate	2439.00
SLC5050CTL2BK	Mark II w/Neo Style Cover Plate, Black	2439.00
SLC5080CTL2WE	Mark II w/Saturn Style Cover Plate, White	2499.00
SLC5080CTL2CM	Mark II w/Saturn Style Cover Plate, Cream	2499.00
SLC5080CTL2BR	Mark II w/Saturn Style Cover Plate, Mocha	2499.00
SLC5080CTL2BK	Mark II w/Saturn Style Cover Plate, Black	2499.00
SLC5000CTL2SS	Mark II w/Stainless Steel Cover Plate	2499.00
Mark II Touch Screen		
SLC5000CTD2WE	Mark II desktop touchscreen, White	1920.00
SLC5000CTD2BK	Mark II desktop touchscreen, Black	1920.00
Color Touch Screen		
SLC5080CTC2WE	Color touch screen w/Saturn style cover plate, White	8480.00
SLC5080CTC2BK	Color touch screen w/Saturn style cover plate, Black	8480.00
SLC5080CTC2BR	Color touch screen w/Saturn style cover plate, Mocha	8480.00
SLC5080CTC2CR	Color touch screen w/Saturn style cover plate, Cream	8480.00
SLC5050CTCGB	Color touch screen w/Neo style cover plate, Brushed Aluminum and Slate	8480.00
SLC5050CTCWE	Color touch screen, w/Neo style cover plate, White	8480.00
SLC5050CTCBK	Color touch screen, w/Neo style cover plate, Black	8480.00
Accessories		
Mark II Accessories		
SLC5000CT2WB	Wall box for Mark II touch screen	68.00
SLC5080CT2FWE	Replacement cover plate Saturn style, White	203.00
SLC5080CT2FCR	Replacement cover plate Saturn style, Cream	203.00
SLC5080CT2FBR	Replacement cover plate Saturn style, Mocha	203.00
SLC5080CT2FBK	Replacement cover plate Saturn style, Black	203.00
SLC5000CT2FSS	Replacement cover plate, Stainless Steel	87.00
SLC5050CT2FWE	Replacement cover plate Neo style, White	16.00
SLC5050CT2FGB	Replacement cover plate Neo style, Brushed Aluminum and Slate	16.00
SLC5050CT2FBK	Replacement cover plate Neo style, Black	16.00
Color Touch Screen		
SLC5000CTCRM	Plasterboard Bracket for Color Touch Screen	90.00
SLC5000CTCNA	Nail Bracket for Color Touch Screen	60.00
SLC5000CTCWB	Wall box for Color Touch Screen	68.00
	Power supply for Color Touch Screen	263.00
SLC5000CTCPS		
SLC5080CTCFBR	Replacement cover plate Saturn style, Mocha	
SLC5080CTCFBR SLC5080CTCFBK	Replacement cover plate Saturn style, Black	356.00
SLC5080CTCFBR SLC5080CTCFBK SLC5080CTCFCM	Replacement cover plate Saturn style, Black Replacement cover plate Saturn style, Cream	356.00 356.00
SLC5080CTCFBR SLC5080CTCFBK SLC5080CTCFCM SLC5080CTCFWE	Replacement cover plate Saturn style, Black Replacement cover plate Saturn style, Cream Replacement cover plate Saturn style, White	356.00 356.00 356.00
SLC5080CTCFBR SLC5080CTCFBK SLC5080CTCFCM SLC5080CTCFWE SLC5080CTCFGB	Replacement cover plate Saturn style, Black Replacement cover plate Saturn style, Cream Replacement cover plate Saturn style, White Replacement cover plate Neo style, Brushed Aluminum and Slate	356.00 356.00 356.00 29.00
SLC5080CTCFBR SLC5080CTCFBK SLC5080CTCFCM SLC5080CTCFWE	Replacement cover plate Saturn style, Black Replacement cover plate Saturn style, Cream Replacement cover plate Saturn style, White	356.00 356.00 356.00 356.00 29.00 29.00



## Clipsal® Multi Room Audio

Extend the capabilities of a Clipsal system by incorporating award winning Clipsal multi-room audio into your next project. Multi-room audio augments a Clipsal lighting control system, providing high quality sound throughout a home or business.

Clipsal multi-room audio readily integrates with other Clipsal controls, providing a single source for audio and lighting from a single keypad or touch screen. Sound is distributed throughout the home through the Matrix Switcher and routed to local amplifiers.

A typical Clipsal Multi Room Audio system distributes up to four analog audio inputs, five if an Audio Distribution Unit is used, and one optical input. These inputs are distributed up to 8 zones, each consisting of one or more amplifier. Additionally, each amplifier is capable of accepting a local analog audio input, providing up to seven stereo audio channels for each amplifier.









Matrix Switcher

#### **Matrix Switcher**

The Clipsal Audio Matrix Switcher provides a revolutionary means for distributing audio throughout a home. This Matrix Switcher provides eight zones of audio output from six source inputs (four analog, one optical and one digital). Audio sources can be switched via the front panel or by any Clipsal input device such as touch screen keypads.

The matrix switcher is ideal for multi-room audio environments. Keypads and other Clipsal devices connect to the matrix switcher with CAT-5 modular jacks. Outputs to remote and desktop amplifiers are made with low voltage wiring. In addition to the six source inputs, two mono broadcast annunciation inputs are provided for connection to intercoms or other systems. Broadcast annunciation input can be given priority over other source inputs and feature fully adjustment volume and over-stepping mute features.

- Fully digital noise-free audio reproduction
- Stereo analog inputs (4 X RCA pairs)
- Two mono broadcast annunciation inputs
- Voice annunciation of channel changes (configurable)
- One fiber optic SPDIF input (digital audio compatible)
- One custom digital input for cascading on multiple matrix switchers
- Eight stereo zone outputs (45m of ea. star wired output)
- Cat-5 cable jack for connection to C-Bus™ network
- Reticulated IR support
- User interface LCD display and switches
- Integral C-Bus PC serial interface for connection to personal computers





Remote Amplifier

#### **Remote Amplifiers**

Clipsal Multi Room Amplifiers provide efficient, high fidelity audio to individual rooms. Available in either desktop or remote mount versions, these amplifiers are specifically designed to operate on the C-Bus network as an extension of a lighting control system, without third party gateways or custom integration. This means the ability to control amplifiers with the same keypad or touch screen used to control lighting levels.

When combined with the Clipsal Matrix Switcher, these amplifiers deliver excellent stereo sound. Connections are provided for up to two sets of 8 ohm speakers. Both desktop and remote amplifiers provide a local input connection for attaching to CD or mp3 players, etc. In addition, the desktop amplifier will accept remote commands via its infrared receiver. Infrared remote included.

- 10 Watt digital efficient stereo amplifier, 25 Watts when connected to local power supply (optional)
- Super quiet design
- On board 8 ohm loudspeaker connections
- Local source input RCA jack
- C-Bus connection (connects with CAT-5 cable)
- Volume control (desktop model)
- On-board IR receiver (desktop model)
- Stereo headphone connection (desktop model)
- Infrared remote included (desktop model only)



Audio Distribution Unit

## **Audio Distribution Unit**

The Clipsal Audio Distribution Unit is an optional device that can be used in conjunction with the C-Bus™ Multi Room Audio System to further enhance Clipsal's C-Bus enabled audio product family.

The Clipsal Audio Distribution Unit distributes a single digitized stereo audio input source to multiple locations via amplifiers wired in a parallel format. Functions such as Volume, Bass, Treble and Balance can be adjusted from a C-Bus input device at any of the audio output locations. The Clipsal Audio Distribution Unit converts a single analog stereo audio input to a digital audio output. That output can then be connected to the Matrix Switcher as an additional input or to the Clipsal Desktop or Remote Amplifier as a stand-alone configuration.

- Distributes a single stereo audio source to C-Bus Audio Amplifiers via a digitized signal over Cat-5 cable
- Does not require any C-Bus programming (hardware only)
- One stereo analog audio source input (2 X RCA)
- One digital audio output
- Output can be looped between C-Bus Audio Amplifiers
- IR emitter port

Table 5.9: Clipsal Multi Room Audio Components

Catalog No.	Catalog Description	\$ Price
SLC560884T	Matrix Switcher	4274.10
SLC560125D	Desktop Amplifier	1908.15
SLC560125R	Remote Amplifier	1609.79
SLC560011	Audio Distribution Unit	790.41
SLC5600P24500S	Amp External Power Supply (only needed if Audio distribution unit is used to provide an additional digital input for the Matrix Switcher)	53.22
cessories		
SLC5600P243750T	Audio Amplifier Power Supply	445.93
SLC560125MB	Remote Amplifier Mounting Bracket	42.24



Indoor Ceiling Mount Speakers



Indoor Wall Mount Speakers



Indoor/Outdoor Speakers

#### **Audio Speakers**

Clipsal Audio Speakers are available as indoor or outdoor models and are designed to be used with home theater, multi-room, and outdoor audio applications.

The indoor speakers come in wall or ceiling mount versions that are installed with the front of the speaker flush with the mounting surface.

The indoor/outdoor speakers are available in black or white and can be placed on a shelf or hung on a surface by using the included bracket.

- Flush-mount, shelf-mount, and surface-mount models
- Indoor and outdoor models
- High-impact plastic components and powder coated metal grills produce a long-lasting unit suitable for indoor and outdoor use
- 8 ohm impedance
- Available with Kevlar® (indoor units only) or polypropylene drivers (indoor and outdoor units) for high-quality sound in all applications
- All models are off the floor, saving floor space
- Indoor/Outdoor Speakers have a pre-installed, removable mounting bracket
- Indoor/Outdoor Speakers can be placed on a shelf or hung from a surface by their bracket (included)
- Tracing/painting template included

#### **Multi-Room Audio Speakers**

	Catalog No.	Catalog Description	\$ Price
ľ	SLC5600IWP	In-Wall Polypropylene speakers	429.58
	SLC5600IWK	In-Wall Kevlar speakers	560.00
	SLC5600ICP	In-Ceiling Polypropylene speakers	408.53
•	SLC5600ICK	In-Ceiling Kevlar speakers	521.09
	SLC5600ODPBK	Outdoor Black speakers	468.30
	SLC5600ODPWE	Outdoor White speakers	468.30

#### **Hand Held Remote Controls**

Clipsal remote controls are designed for use with Clipsal keypads, multi-sensors, and touch screens. available in both four and eight button versions, these remotes have a range up to 50 feet (line of sight).

The universal remote control unit allows a single remote control unit to replace various other remotes including VCRs, CD players, DVRs, and TVs. Up to sixteen remote control codes are supported.

Table 5.11: **Handheld Remote Controls** 

Catalog No.	Catalog Description	\$ Price
SLC5084TX	Handheld infrared remote 4 button	200.00
SLC5088TX	Handheld infrared remote 8 button	400.00
SLC5030URC	Handheld universal remote control	440.00



8 button remote control



Universal remote control

**Thermostats** 





4 Zone Thermostat



Single Zone Thermostat

## Single and 4 Zone Network Thermostats

Clipsal<sup>®</sup> Thermostats are used to regulate the air temperature of zones by controlling heating-ventilation-air conditioning (HVAC) equipment. The air temperature is monitored by the unit's temperature sensor or optionally via an external C-Bus<sup>™</sup> temperature sensor.

Clipsal single and programmable 4 Zone Thermostats may operate as stand alone devices, or be controlled via other C-Bus devices such as wall switches or touch screens.

Programmable 4 Zone Thermostats can schedule up to four set points during a day, and unique schedules can be programmed for each day of the week.

Both models include setback mode, (saves power by using a wider acceptable temperature range within which heating or cooling is not performed) and temperature guard, (ensures the temperature is maintained within a specified temperature range).

- Easy to read, large LCD display
- Control by keypads and other devices on the C-Bus network
- Available in black, white and stainless steel fascias
- Setback mode
- Temperature guard mode
- Internal Timer
- Daily schedule set points (4 Zone model)
- Display temperature in Celsius or Fahrenheit
- RWG interface (relay models only)
- Easily configured by using the Clipsal Toolkit software program

#### Table 5.12:

Catalog No.	Catalog Description	\$ Price
SLC5070THBWE	Single Zone, White, no relay	649.00
SLC5070THPWE	4 Zone, White, no relay	799.00
SLC5070THBBK	Single Zone, Black, no relay	649.00
SLC5070THPBK	4 Zone, Black, no relay	799.00
SLC5070THBSS	Single Zone, Stainless, no relay	649.00
SLC5070THPSS	4 Zone, Stainless, no relay	799.00
SLC5070THBRWE	Single Zone w/relay, White	724.00
SLC5070THPRWE	4 Zone w/relay, White	899.00
SLC5070THBRBK	Single Zone w/relay, Black	724.00
SLC5070THPRBK	4 Zone w/relay, Black	899.00
SLC5070THBRSS	Single Zone w/relay, Stainless	724.00
SLC5070THPRSS	4 Zone w/relay, Stainless	899.00

Light Level Sensor





360° Indoor PIR Sensor



Outdoor PIR Sensor



90° Indoor PIR Sensor



360° PIR Multi Sensor



#### **Light Level Sensor**

The Clipsal Light-Level Sensor measures ambient light levels and automatically issues ON, OFF, or ramp commands over a C-Bus™ network. The light-level sensor can control relays, dimmers, or remotely operated circuit breakers, changing their status according to pre-set ambient lighting levels. The Clipsal light-level sensor has a dynamic range between 5-150 foot candles, and compensates for noise and rapid light intensity fluctuations.

#### **Outdoor Light Level Sensor**

Clipsal Outdoor Light-Level Sensor measures ambient light levels and automatically issues ON/OFF or ramp commands over a C-Bus network to maintain outdoor lighting levels. Primarily designed for outdoor use, this light-level sensor is also suitable for indoor setting in which a water resistant casing is desirable.

The light-level sensor can control up to two C-Bus group addresses: one address controls ON/OFF switching of a lamp circuit according to a pre-determined ambient light level, while the other is used to continuously regulate the light-level output of any number of lampsl

The target light level, the margin, and other sensor options are easily configured by using the C-Bus Toolkit software.

- Outdoor use, wall- and ceiling-mounted low-profile unit
- Can maintain a constant illumination level of 5-150 footcandles
- Adjustable lumin setpoint
- Control of up two C-Bus group addresses
- Sensors receive data and power over a single C-Bus twisted-pair cable, so they do not require power packs or line-voltage connections
- 180° field of view

Table 5.13: Clipsal Light Level Sensor

Catalog No.	Catalog Description	\$ Price
SLC5031PE	Light level sensor, 0 - 150fc, indoor	208.00
SLC5031PEWP	Light Level Sensor, 5 - 150fc, Outdoor	278.00

### **Occupancy Sensors**

Clipsal occupancy sensors are available for both indoor and outdoor applications. All Clipsal sensors incorporate reliable passive infrared detection (PIR) circuits for occupancy detection along with integral light level sensors to prevent switching of lights if sufficient ambient light is present. Sensors feature programmable adjustments for sensitivity and time delay, walk test LED for commissioning and optical bandpass filtering with dual element detectors to minimize false triggering.

- $90^{\circ}$  Indoor sensors are intended for wall or ceiling mounting. These sensors have a continuous detection field of 400 square feet and a 90° field of view.
- 360° Indoor sensors are intended for flush mounting in drop ceilings. They have a minor motion detection field of 800 square feet making them ideal for use in offices, copier rooms, closets, and restrooms where it can be mounted in the center of the detection area.
- 360° Multi-Sensors combine a passive infrared receiver (PIR) for occupancy sensing, a light-level sensor, and an infrared remote receiver into a small, highly versatile unit. The multi-sensor's 2.8 inch face diameter makes it unobtrusive and ideally suited for flush mounting on the ceiling with effective IR coverage up to 800 square feet. The built-in IR receiver accepts commands from an optional handheld remote controller, making the sensor ideal for classrooms and conference room areas.
- Outdoor PIR Motion Sensor combines reliable thermal-radiation-based control of lighting with rugged construction suitable for outdoor requirements. The unit's advanced circuits and flat multisegmented lens provide coverage of up to 3000 square feet in a 110° field of view.

Table 5.14: Clinsal Occupancy Sensors

Catalog No.	Catalog Description	\$ Price
SLC5750WPL	Occupancy sensor, multi, outdoor, 110 deg	283.00
SLC5751L	Occupancy sensor, PIR, indoor, 90 deg	227.00
SLC5753L	Occupancy sensor, PIR, indoor, 360 deg	213.00
SLC5753PEIRL	Occupancy sensor, multi, indoor, 360 deg	268.00

CLIPSAL





Clipsal Four-Channel Auxiliary Input Units increase the versatility of the C-Bus network by facilitating remote access with any dry-contact switch mechanism. DIN-rail mounted for quick installation, the auxiliary unit can be configured with standard C-Bus control functions such as remote scene triggering, ON/OFF, toggle, dimmer, or timer.

- Provides four isolated inputs for external voltage-free mechanical switches
- Control options include remote scene triggering, ON/OFF, toggle, dimmer, or timer operations
  - LEDs indicate operational status of each channel
- Standard built-in C-Bus network connectors: (2) RJ-45
- Non-volatile memory stores operating status for recovery from a power outage
- DIN style construction 4M wide: 3.4"(L) x 2.8"(W) x 2.6"(H)
- Compatible with all Clipsal devices and the Square D Powerlink™ NF3000G3C controller

# 1234

Four-Channel Auxiliary Input unit

General Input unit

# **General Input Unit**

Four-Channel General Input Units measure TTL digital and real-world analog quantities and generate messages about the measurements to the C-Bus network. By acting as an interface with Various external sensors, the general input unit enables integration of the C-Bus network with a variety of system types, such as those for HVAC and for power monitoring. Configuration options include selectable input types, eight adjustable decision thresholds per channel, definable actions, selectable filtering, broadcast rates, and a separate hysteresis value per channel.

- Measures TTL digital quantities including voltage, current, or resistance from external sensors such as light level, pressure, and temperature
- Four channels of input, each with an adjustable hysteresis value, eight decision thresholds, and a software-selectable input value transformation in the form y =ax +b
- Input channels are compatible with a range of third-party sensors
- Control functions include load switching, dimming, trigger applications, enable control applications, and measurement applications
- Includes 120V/24Vdc power pack
- Dimensions: 5.67 in. (144mm) wide x 2.60 in. (66mm) deep x 3.35 in. (85mm) tall
- Compatible with all Clipsal devices and the Square D Powerlink NF3000G3C controller



Four-Channel Bus Coupler

## **Bus Couplers**

Bus Couplers provide an interface between dry-contact mechanical switches and the C-Bus network. Available in two-and four-channel models, the bus coupler is small enough to be used in restricted spaces such as wall boxes with existing switches. Configuration options include standard control functions such as ON/OFF, toggle, dimmers, and timers.

- Provides two or four non-isolated inputs for external voltage-free mechanical switches. Two-channel units feature independent remote LED outputs
- Two-way removable terminal block for the C-Bus connection
- Receives data and power over a network, so it does not require power packs or line voltage connections
- Scene capabilities
- 2.2"(L) x 1.9"(W) x 0.7"(H)
- Compatible with all Clipsal devices and the Square D Powerlink NF3000G3C controller

#### Table 5.15: **Input Units**

Catalog No.	Catalog Description	\$ Price
SLCLE5504AUX	4 Channel auxiliary input unit	544.00
SLCE5504TGI	4 Channel general input unit	1194.00
SLC5102BCLEDL	2 Channel bus coupler	212.00
SLC5104BCL	4 Channel bus coupler	243.00



Changeover Relay



4-Channel 10A Relay



4-Channel 20A Relay

#### Relays

Clipsal Relay Units are intended for switching resistive, inductive, fluorescent and incandescent low-voltage loads. Relay units are designed to be mounted in suitable DIN style enclosures. Relay units feature:

Relay Units Class 1250

- Local toggle buttons to allow individual channels to be toggled
- Remote ON and OFF facilities permitting all channels to be turned ON or OFF without C-Bus Network communications
- Two (2) Convenient built-in C-Bus™ network connectors (RJ-45)
- LED Indicators to show the status of the network and the unit
- Units available both with and without a 200ma power supply on-board.
- Compatible with all Clipsal devices and the Square D Powerlink<sup>®</sup> NF3000G3C controller

#### **Changeover Relay**

Clipsal 2A Changeover Relays are designed to operate three-speed motors and two-way motor control devices. Some of their most common applications include operating motorized blinds, shutters, curtains and skylights (open/closed) where they provide a much simpler alternative to traditional and obtrusive relay interlocking systems.

- Four (4) isolated independently operating relay channels
- 120Vac and 277Vac units
- 2A motor rating
- Dimensions: 5.67 in. (144mm) wide x 2.60 in. (66mm) deep x 3.35 in. (85mm) tall

#### Table 5.16: Changeover Relays

Catalog No.	Catalog Description	\$ Price
SLC5504TRVFC	4 Channel Changeover Relay, 125V, with power supply	1100.00
SLC5504TRVFCP	4 Channel Changeover Relay, 125V, without power supply	1010.00
SLC5504HRVFC	4 Channel Changeover Relay, 277V, with power supply	1100.00
SLC5504HRVFCP	4 Channel Changeover Relay, 277V, without power supply	1010.00

#### 10 Amp Relay

Clipsal 10A Relays feature a zero crossing magnetically latching relay designed for switching the harsh electrical loads associated with today's high efficiency lighting systems.

- Four (4) or twelve (12) independently operating voltage free relay contacts
- 120Vac and 277Vac units
- 10A rating
- Dimensions: 5.67 in. (144mm) wide x 2.60 in. (66mm) deep x 3.35 in. (85mm) tall

#### Table 5.17: 10 Amp Relay

Catalog No.	Catalog Description	\$ Price
SLC5512TRVF	12 Channel Relay, 120V, 10A with power supply	2168.00
SLC5512TRVFP	12 Channel Relay, 120V, 10A without power supply	1973.00
SLC5504TRVF	4 Channel Relay, 120V,10A with power supply	1043.00
SLC5504TRVFP	4 Channel Relay, 120V, 10A without power supply	843.00
SLC5512HRVF	12 Channel Relay, 277V, 10A with power supply	2168.00
SLC5512HRVFP	12 Channel Relay, 277V, 10A without power supply	1973.00
SLC5504HRVF	4 Channel Relay, 277V,10A with power supply	1043.00
SLC5504HRVFP	4 Channel Relay, 277V, 10A without power supply	843.00

#### 20 Amp Relay

Clipsal 20A Relays feature a zero crossing magnetically latching relay designed for switching the harsh electrical loads associated with today's high efficiency lighting systems.

- Four (4) independently operating voltage free relay contacts
- 120Vac and 277Vac units
- 20A rating
- Dimensions: 8.46 in. (215mm) wide x 2.60 in. (66mm) deep x 3.35 in. (85mm) tall

#### Table 5.18: 20 Amp Relay

Catalog No.	Catalog Description	\$ Price
SLC5504TRVF20	4 Channel Relay, 120V, 20A with power supply	1320.00
SLC5504TRVF20P	4 Channel Relay, 120V, 20A without power supply	1142.00
SLC5504HRVF20	4 Channel Relay, 277V, 20A with power supply	1320.00
SLC5504HRVF20P	4 Channel Relay, 277V, 20A without power supply	1142.00





Phase Angle Dimmer with Power Supply



Professional Dimmer



Analog Output Unit

#### **Phase Angle Dimmers**

Clipsal Phase Angle Dimmers are intended for controlling incandescent and compatible low-voltage and florescent lighting. Each of the unit's channels can independently control loads to create dynamic lighting scenes. These dimmer units automatically compensate for voltage and frequency fluctuations and employ advanced phase-control techniques to reduce flicker and increase lamp life.

- Four (4) independent channels supporting up to 4A continuous load per channel, eight (8) independent channels supporting up to 2A continuous load per channel
- Units available both with and without a 200mA power supply on-board.
- 120Vac
- Dimensions: 8.46 in. (215mm) wide x 2.60 in. (66mm) deep x 3.35 in. (85mm) tall

#### **Professional Dimmer**

Clipsal Professional Dimmers can control incandescent and compatible low-voltage and florescent lighting. These dimmers are ideal for larger heavily loaded circuits. Each channel provides independent dimming and incorporates thermal overload and over-current protection. These dimmer units automatically compensate for voltage and frequency fluctuations and employ advanced phase-control techniques to reduce flicker and increase lamp life.

An optional terminal box is available for conduit connections. Configuration options include network monitoring of the channel load and network voltages, adjustable delays for dimming levels, and master override.

- Specialized dimming modes—soft turn on/off and linear brightness control
- Built-in power supply sources 60 mA to the C-Bus network
- Individual channels can be turned On/Off at the unit or via C-Bus commands
- LEDs indicate the status of the network at the unit and the status of the unit's load and power
- Optional terminal box for connecting conduit
- 120Vac
- Dimensions: 7.5 in. (190mm) wide x 3.0 in. (75mm) deep x 7.7 in. (195mm) tall

#### Table 5.19: Clipsal Four Channel and Pro Dimmers

Catalog No.	Catalog Description	\$ Price
SLC5504TD4A SLC5504TD4AP SLC5508TD2A SLC5508TD2AP	4 x 4A dimmer, incan/mag, 125V, 4A, with power supply 4 x 4A dimmer, incan/mag, 125V, 4A, without power supply 8 x 2A dimmer, incan/mag, 125V, 2A, with power supply 8 x 2A dimmer, incan/mag, 125V, 2A, without power supply	1024.00 800.00 1024.00 800.00
SLC5104TD5 SLC5102TD10 SLC5101TD20 SLCU5100TB	4 x 5A dimmer, incan/mag, 125V, with power supply 2 x 10A dimmer, incan/mag, 125V, with power supply 1 x 20A dimmer, incan/mag, 125V, with power supply Termination box for SLCLU510X Series dimmer units	1926.00 1926.00 1926.00 78.00

## 0-10V Dimming Unit

The Clipsal Analog Output Unit provides four channels of analog 0-10Vdc for controlling electronically dimmable fluorescent lighting ballasts.

- Produces four independently controllable channels of 0-10Vdc for controlling dimmable lighting ballasts or other loads
- Individual channels can be turned ON/OFF at unit, via C-Bus commands, and through a remote override option
- 120V or 277Vac models available
- DIN style construction 4M wide: 3.4"(L) x 2.8"(W) x 2.6"(H)

#### Table 5.20:

_	Catalog No.	Catalog Description	\$ Price
	SLCLE5504TAMP	4 Channel 0 - 10V Output, 120V	624.00
	SLCLE5504HAMP	4 Channel 0 - 10V Output, 277V	624.00



Network Bridge



Power Supply

Power Supply

**Network Bridge** 

The Clipsal Power Supply is specifically designed to operate with the C-Bus network as a power source for passive Clipsal devices. Up to five power supplies can be connected to a single C-Bus network.

The Clipsal Network Bridge provides a communication channel between Clipsal units on separate networks, expanding

Expands the total number of Clipsal devices that can operate on the system by isolating devices to individual networks

Compatible with Powerlink G3 3000C controller and all Clipsal components, including keypads, sensors, and dimmers

- Available in 120 and 277Vac models
- Regulating power supply compensates for line voltage and frequency variations, so there is constant output
- Sources up to 350 mA to the C-Bus network

Indicates each network's status level

- UL listed to operate in parallel with other Clipsal power supplies, up to five on a single C-Bus network
- Incorporates short circuit and reverse polarity protection
- DIN style construction 4M wide: 3.4"(L) x 2.8"(W) x 2.6"(H)

Uses built-in connectors to connect to a C-Bus network

DIN style construction 4M wide: 3.4"(L) x 2.8"(W) x 2.6"(H)

#### **PC Interface**

The Clipsal PC Interface (PCI) expands options for configuring, controlling, and monitoring C-Bus networks by providing an interface between the network and a personal computer (PC). The Clipsal PCI module easily mounts to a DIN rail and connects to the C-Bus network. Power to the unit is provided through the C-Bus network.

#### Serial

Unit/Comms LED shows the status of the unit's power and of any data transmissions

the total number of units that can be configured, controlled, and monitored.

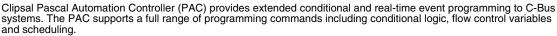
Increases transmission distances by acting as a repeater station for data transmission

- Three RS-232 serial connectors for connecting to a PC or to external devices: (1) 9-pin D-type serial connector (female) and (2) 8-pin RJ-45 connectors
- Two C-Bus network connector ports: RJ-45 sockets
- Data cable for connecting PCI and personal computer, including DB9 connectors

#### **USB**

- Unit/Comms LED shows the status of the unit's power and of any data transmissions
- Two C-Bus network connector ports: RJ-45 sockets
- USB PC connection
- Data cable for connecting PCI and personal computer

## **Pascal Automation Controller**



Systems integrators will appreciate the built-in scheduling tools, scene tools, and wizards for creating basic logic programs. Full programming capabilities can be achieved utilizing the free-form script editor based off the pascal programming language.

- Connects directly to C-Bus network
- Powered from the C-Bus network
- USB port for connection to personal computer
- (2) RS232 ports for third party device control
- Real time, astronomical and C-Bus system clock included with 24 hour internal capacitor backup and external 12 Vdc battery terminals

Programming capabilities including: i.e. Conditional logic (if, then, and, or, not, etc.), Flow Control (for, repeat, while), Variables (integer, real, Boolean, character, string), Control and monitoring of group addresses, Control and monitoring of scenes.

## **DALI Gateway**

The Clipsal Digital Addressable Lighting Interface (DALI) Gateway provides an isolated two-way communications path between a C-Bus network and two DALI networks, making it possible to use Clipsal devices to control DALI ballasts.

- Provides two-way communications between C-Bus and DALI networks, routing selected messages from one to the other
- Unit is transparent and invisible to DALI ballasts
- Receives data and power over the network, so the unit does not require power packs or line-voltage connections
- DIN style construction 4M wide: 3.4"(L) x 2.8"(W) x 2.6"(H)



PC Interface



**DALI Gateway** 





Clipsal<sup>®</sup>



Ethernet Network Interface

Telephone Interface Unit

#### **Ethernet Network Interface**

The Clipsal Ethernet Network Interface unit is a C-Bus system device designed to provide an isolated communications path between an Ethernet 10Base-T Network and a C-Bus Network. This allows high-speed control and monitoring of a Clipsal installation via the TCP/IP protocols used in computer networks and by the Internet. System integrators and installers will also benefit from having remote access to the system. With the Clipsal Ethernet Network Interface unit, access to a single or multiple networks can be as close as the nearest Ethernet connection.

- Remote access to Clipsal systems
- Bridge multiple C-Bus networks together over LAN or WAN
- Fully supports all Clipsal commands
- Small size, mounts in standard DIN enclosure (4M wide)
- Includes 12 Vdc power supply

#### **Telephone Interface Unit**

Clipsal Telephone Interface Unit offers a dial-in and dial-out capability for control of a C-Bus system. Remote location override, monitoring, diagnostics and configuration of a C-Bus system is possible with this unit. The Clipsal Telephone Interface Unit is programmed using a connection to a PC running TICA (Telephone Interface Commissioning Application) configuration software. The interface can also act as a C-Bus PC Interface. The Telephone Interface Unit can be installed in a Clipsal 36 or 60M enclosure or as a wall mountable stand-alone item with connection to C-Bus.

- Remote location override
- Voice prompts and confirmation
- Password protected
- 32 supported devices
- Automatic dial out on present conditions
- Local or remote site access to C-Bus system
- Audio Out

#### **Bar Code Reader**

The Clipsal Bar Code Reader allows installers and integrators to quickly scan Clipsal devices with serial numbers and import them into Clipsal Toolkit software. Using a USB connection to a PC, users can easily identify and track Clipsal Unit locations on a floorplan/network.

#### **Network Analyzer**

The Clipsal Analyzer is a C-Bus device designed to help an installer quickly analyze, detect, and troubleshoot potential problems on a C-Bus network. The device analyzes the network parameters and prompts the user for appropriate actions via its front LED (Light Emitting Diode) indicators.

Table 5.21: System Units

Catalog No.	Catalog Description	\$ Price
SLC5500NB	Network bridge	663.00
SLC5500TPS	120V Power supply, 350mA	500.00
SLC5500HPS	277V Power supply, 350mA	500.00
SLC5500PC	RS-232 PC Interface	488.00
SLC5500PCU	USB PC Interface	488.00
SLC5502DAL	2 Channel DALI Gateway	1014.00
SLC5500PACA	Pascal Automation Controller	586.00
SLC5500CN	Ethernet Network Interface	664.00
SLC5100TUS	Telephone Interface Unit	898.00
Accessories		
SLC5100BCS	Bar Code Reader	604.00
SLC5100NA	C-Bus Network Analyzer	328.00

by Schneider Electric www.squaredlightingcontrol.com



12M Enclosure





24M Enclosure



36M Enclosure

#### **8M Enclosure**

The 8M enclosure is specifically designed for distributed applications. Suitable for surface mounting, the 8M enclosure consists of a box with a cover and a DIN rail for mounting one 8M or two 4M Clipsal units. The enclosure also has provisions for mounting neutral and ground bars.

- Surface-mount NEMA 1 enclosure
- Welded sheet steel with knockouts
- Gray baked enamel, electrodeposited over cleaned, phosphatized steel
- Triple-lead cover screws for fast installation of cover
- DIN rail, suitable for mounting one 8M or two 4M Clipsal DIN modules

### 12M Enclosure

The 12M enclosure is specifically designed for distributed applications that require physical proximity between DIN units and keypads, sensors or controlled loads. Suitable for surface mounting, the 12M enclosure consists of a box with a cover and a DIN rail for mounting three 4M Clipsal units, one 8M unit plus one 4M unit or one 12M unit. The enclosure also has factory mounted neutral and ground bars.

- Surface-mount NEMA 1 enclosure
- Welded sheet steel with knockouts
- Gray baked enamel, electrodeposited over cleaned, phosphatized steel
- Triple-lead cover screws for fast installation of cover
- DIN rail, suitable for mounting one 12M or three 4M Clipsal DIN modules

#### 24M Enclosure

The 24M enclosure is specifically designed for distributed applications that require physical proximity between DIN units and keypads, sensors or controlled loads. Suitable for surface mounting, the 24M enclosure consists of a box with a cover and two rows for mounting Clipsal DIN-mounted C-Bus™ units. Each row can hold one 12M unit, one 8M unit plus one 4M unit, or three 4M units. The enclosure also has provisions for additional neutral and ground bars.

- Surface-mount NEMA 1 enclosure
- Welded sheet steel with knockouts
- Gray baked enamel, electrodeposited over cleaned, phosphatized steel
- Triple-lead cover screws for fast installation of cover
- DIN rail, suitable for mounting Clipsal DIN-mounted C-Bus units. Each row can hold one 12M unit, one 8M unit plus one 4M unit, or three 4M units

#### 36M and 36MS Enclosure

The 36M and 36MS enclosures provide a multi-purpose means for housing Various Clipsal DIN-mounted devices. Suitable for flush or surface mounting, the enclosure consists of a mounting pan assembly, and a cover assembly. The box is to be ordered separately, allowing for its installation with the rough-in of field wiring. Enclosures feature:

- NEMA 1 enclosure suitable for flush or surface mounting
- Welded sheet steel with knockouts
- Gray baked enamel paint, electrodeposited over cleaned, phosphatized steel
- Triple-lead cover screws for fast installation of cover
- 3 DIN mounting rails, each accommodating up to one 12M unit, one 8M unit with one 4M unit, or three 4M units
- Complete with barriers for separation of Class 2 circuits from line voltage (36M only)
- The 36MS offers a reduced footprint than the 36M

#### **60M Enclosure**

The 60M enclosure provides a means for housing DIN style relays and dimmers. Suitable for flush or surface mounting, the enclosure consists of a mounting pan assembly, and a cover assembly. The box is to be ordered separately, allowing for its installation with the rough-in of field wiring. Enclosures feature:

- NEMA 1 enclosure suitable for flush or surface mounting
- Welded sheet steel with knockouts
- Gray baked enamel paint, electrodeposited over cleaned, phosphatized steel
- Triple-lead cover screws for fast installation of cover
- 5 DIN mounting rails, each accommodating up to one 12M unit, one 8M unit with one 4M unit, or three 4M units
- Complete with barriers for separation of Class 2 circuits from line voltage

#### Table 5.22: Enclosures and Accessories

Catalog No.	Catalog Description	\$ Price
8M Enclosure	·	•
SLC8M	Clipsal single row enclosure, surface mount	110.00
12M Enclosure		
SLC12MSG	Clipsal single row enclosure, surface mount	120.00
24M Enclosure		
SLC24MSG	Clipsal dual row enclosure, surface mount	240.00
36MS Enclosure		
SLC36SC	Clipsal box for small three row interior	120.00
SLC36MSFG	Clipsal small three row interior with flush gray cover	690.00
SLC36MSFW	Clipsal small three row interior with flush white cover	690.00
SLC36MSSG	Clipsal small three row interior surface mount gray cover	690.00
36M Enclosure		
SLC36C	Clipsal box for three and five row interiors	136.00
SLC36MFG	Clipsal three row interior with gray cover, flush mount	740.00
SLC36MFW	Clipsal three row interior with white cover, flush mount	740.00
SLC36MSG	Clipsal three row interior surface gray	740.00
60M Enclosure		
SLC36C	Clipsal box for three and five row interiors	136.00
SLC60MFG	Clipsal five row interior with gray cover, flush mount	1233.00
SLC60MFW	Clipsal five row interior with white cover, flush mount	1233.00
SLC60MSG	Clipsal five row interior surface gray	1233.00
Accessories		
PK7GTA	Ground/Neutral Bar	7.80
PKGTAB	Neutral Insulator Kit	29.20
SLC4CSF8	Filler Plate, 4M	18.00







#### **Area Lighting Panels**

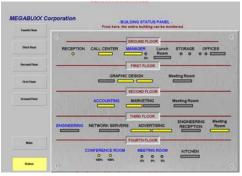
Clipsal<sup>®</sup> Area lighting Panels are ideally suited to meet lighting control energy code requirements in classrooms, offices and other small spaces. Area Lighting Panels are designed to be used with Clipsal input units, including: keypads, sensors (occupancy and light level detection) and touch screens. A simple CAT-5 cable is all that is required for connecting of these devices.

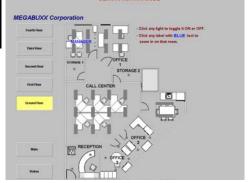
Clipsal Area Lighting Panels provide on/off switching, stepped dimming or continuous dimming. All relays feature rugged 20 A rated contacts for switching electronic ballast loads. Models with continuous dimming capabilities are available with phase angle or 0–10V control. Clipsal Area Lighting Panels can operate independently or as part of an entire facility wide lighting control system. Enclosures can easily be mounted in electrical closets or in ceiling spaces. They include all necessary connections and are UL® Listed. Area Lighting Panels can also be used in conjunction with Powerlink® panels.

- Relay models: Four (4) or Eight (8) channel relay outputs, rated 20 A
- Phase Angle Dimmer Model: Four (4) channels of 4 A outputs for incandescent lighting loads.
- 0–10V outputs available for control of 0–10V dimmable fluorescent ballast
- Integral neutral and ground bar terminal strips
- Meets NEC 300.22 requirements to be installed above ceilings and other spaces that handle environmental air
- Bypass mode to facilitate quick start up
- Meets NEC Article 409
- UL Listed 508 A

#### Table 5.23: Clipsal Area Lighting Panels

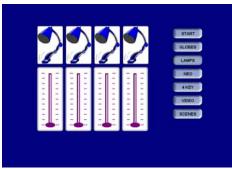
Catalog No.	Description	\$ Price
4 Channel 20 A	Relay Models	
SLCZ042000T	4 Channel 20 A Relay @ 120 V with power supply▲	1769.00
SLCZ042000H	4 Channel 20 A Relay @ 277 V with power supply▲	1769.00
SLCZ042000TP	4 Channel 20 A Relay @ 120 V without power supply	1675.00
SLCZ042000HP	4 Channel 20 A Relay @ 277 V without power supply	1675.00
8 Channel 20 A	Relay Models	
SLCZ082000T	8 Channel 20 A Relay @ 120 V with power supply▲	2646.00
SLCZ082000H	8 Channel 20 A Relay @ 277 V with power supply▲	2646.00
SLCZ082000TP	8 Channel 20 A Relay @ 120 V without power supply	2462.00
SLCZ082000HP	8 Channel 20 A Relay @ 277 V without power supply	2462.00
4 Channel 20 A	Relay Models with 0-10 V Output Units	
SLCZ04204AT	4 Channel 20 A Relay @ 120 V with power supply and 4 Channel 0-10 V Output Unit▲	2492.00
SLCZ04204AH	4 Channel 20 A Relay @ 277 V with power supply and 4 Channel 0-10 V Output Unit▲	2492.00
SLCZ04204ATP	4 Channel 20 A Relay @ 120 V without power supply and 4 Channel 0-10 V Output Unit	2308.00
SLCZ04204AHP	4 Channel 20 A Relay @ 277 V without power supply and 4 Channel 0-10 V Output Unit	2308.00
4 Channel 20 A	Phase Angle Dimmer Models	
SLCZ00004DT	4 Channel 20 A Phase Angle Dimmer @ 120 V with C-Bus power supply▲	1144.00
SLCZ00004DTP	4 Channel 20 A Phase Angle Dimmer @ 120 V without C-bus power supply	920.00
4 Channel 20 A	Relay Models with Phase Angle Dimmer Units	
SLCZ04204DT	4 Channel 20 A Relay @ 120 V with C-Bus power supply and 4 Ch. Phase Angle Dimmer Unit▲	2630.00
SLCZ04204DTP	4 Channel 20 A Relay @ 120 V without C-Bus power supply and 4 Ch. Phase Angle Dimmer Unit	2182.00





Schedule Plus Software Screen Captures

SCENES



HomeGate Software Screen Captures

#### C-Bus™ Toolkit Software

The C-Bus Toolkit Software includes the C-Bus Installation and programming Software, Project Manager, and C-Bus Calculator. The software works under Windows™ 98, ME, 2000 and XP and supports a unique barcode scanning feature. This allows the installer to scan the C-Bus packaging of each new unit to add the unit to the database. The software prints adhesive labels that can be affixed to building plans. These labels include the Unit Address and the physical location that the unit is to be installed. Labels are duplicated so that one label can be affixed to the unit and one to the electrical plan for the installation. The labels have barcodes on them so that units can be easily re-identified if required.

NOTE: C-Bus Toolkit Software is a free download from the Square D Lighting Control web site, www.squaredlightingcontrol.com

#### Schedule Plus Software V.4

Clipsal Schedule Plus Version 4 includes a number of major features, including enhanced scheduling features, support for monitoring load run times, load power and energy consumed, support for fully customizable multilevel, password protected, access level control, support for sunrise and sunset times, support for daylight saving times, support for 128 bit encrypted secure Internet connectivity allowing control and monitoring via any Web Browser. The software also includes a graphic display as well as a fully featured programmable logic engine. The USB Code Key works under Windows XP Home, XP Professional, Server 2003, Vista Ultimate, Vista Business and Vista Enterprise.

NOTE: An evaluation version of Schedule Plus is available for download from the Square D Lighting Control web site, http://www.squaredlightingcontrol.com/downloadcenter.cfm

#### HomeGate Software V.4

Residential application PC control of a Clipsal C-Bus Control System. C-Bus HomeGate Version 4 includes a number of major features, including support for 128 bit encrypted secure Internet connectivity allowing control and monitoring via any Web Browser, irrigation system control feature, enhanced scheduling features, support for sunrise and sunset times, support for daylight saving times. The software also includes a fully featured programmable logic engine. The C-Bus USB Key works under Windows XP Home, XP Professional, Server 2003, Vista Ultimate, Vista Business and Vista Enterprise.

NOTE: An evaluation version of HomeGate is available for download from the Square D Lighting Control web site, http://www.squaredlightingcontrol.com/downloadcenter.cfm

#### Installer License Key

The C-Bus Software Installer License Key is a valuable tool for installers to create/commission projects using C-Bus Version 4 Schedule Plus & HomeGate software. This code key is time restricted and allows the software to operate in 'normal' mode for anywhere between 48 to 72 hours per use (the software then returns to evaluation/demo

**NOTE:** The installer code key will also be compatible with future software releases.

#### Table 5.24:

Catalog No.	Catalog Description	\$ Price
Schedule PlusV. 4		
SLC5000SDSP24	License Key for 2 Networks	792.00
SLC5000SDSP104	License Key for 10 Networks	1680.00
SLC5000SDSPU4	License Key for Unlimited Networks	2665.00
HomeGate V. 4	<u> </u>	•
SLC5000SDHG24	License Key for 2 Networks	352.00
SLC5000SDHG104	License Key for 10 Networks	680.00
SLC5000SDSP24	Installer key for Schedule Plus or Homegate (unlimited networks)	389.00

**Lighting Control** 

Class 1200



# www.squaredlightingcontrol.com



Wall Switch Occupancy Sensor

Commercial Grade

Wall Switch

New!

# Square D<sup>®</sup> Basic Wall Switch Occupancy Sensors

Wall Switch Occupancy Sensors are ideally used in commercial buildings to save energy that would otherwise be wasted to light unoccupied rooms or spaces. These Wall Switch Occupancy Sensors employ the latest in passive infrared (PIR) sensing technology to accurately sense when a room or space is occupied, then turn lights sense when a room or space is occupied, then turn lights on. When the room is unoccupied, the sensor turns lights off after a time delay of up to 30 minutes as determined by the user. Auto-ON and Manual-ON models available with decorator wall plate in white or ivory. Simply mount the sensor in place of existing single gang switch — no neutral connection required. Special multi-segmented lens creates a coverage pattern that accurately detects major creates a coverage pattern that accurately detects major motion in rooms up to 1000 sq. ft.

Input: 120/277Vac 60 Hz

Occupancy Sensors

- Output: 1000W Max. Load @ 120V (1000VA@120V 1800VA@277V)
- 1/4 HP Max. Motor Load
- UL and cUL Listed
- For use with electronic and magnetic ballasts
- CEC Title 24 Certified

## Square D Commercial Grade Wall Switch Occupancy Sensors

Maximum energy savings in a format that will complement any decor. Low profile sensors are available in white, ivory, gray, light almond and black with color-matched segmented lens.

Light Level Sensor Mode: Each sensor includes an adjusatble light level sensor to hold off artificial lighting when adequate natural light is present.

Walk-Through Mode: To maximize energy savings, the sensor detects when areas are briefly occupied as a result of a person walking through and turns off lighting based on a shorter time delay. (Dual circuit only)

Lamp Saver Mode: When the lamp saver feature is enabled, the sensor automatically alternates which load responds to motion. The result is more predictable lamp life and reduced maintenance.

**Adaptive Technology:** Commercial Grade dual technology and ultrasonic wall switch occupancy sensors feature a patented adaptive technology that significantly reduces the learning period typically associated with adaptive sensors. Square D adaptive sensors reduce the occurrence of nuisance on and nuisance off while at the same time extending lamp life and reducing maintenance.

- Available in white, ivory, gray, light almond and black with matching cover plate (included)
- Color matching multi-segmented lens
- Audible alert
- Selectable auto-on and manual-on modes
- Red LED motion indicator
- For use with electronic and magnetic ballasts
- 1000VA@120V, 1800VA@277V
- User adjustable light level, time delay, and sensitivity
- 30 second grace period in the manual-on mode

## Square D Residential Wall Switch Vacancy Sensors

Square D Residential Vacancy Sensor directly replaces standard light switches in bathrooms, garages, laundry rooms and utility rooms in accordance with Title 24 2005 requirements for residential lighting (Sections 119(d) and 150 (k)). The Square D Vacancy Sensor operates just like a standard light switch, requiring a button press to turn lights on. Lights may be turned off with a button press or the sensor will turn off lighting automatically when the area is unoccupied.

- No user time delay and sensitivity adjustments necessary
- Available in white or ivory

- Furnished with cover plate
- Manual On/Manual Off or Automatic Off operation
- No neutral or minimum load required
- Rated for both 120 V incandescent and fluorescent lighting
- Title 24 2005 Residential Lighting requirements, Sec. 150(k)
- No override on
- Manual-on only (no auto-on mode)
- 30 minute time delay

#### Table 5.25:

Auto-ON/Auto-OFF  SLSPWS1277AW White Wall Switch Occupancy Sensor SLSPWS1277AW White Wall Switch Occupancy Sensor Wanual-ON/Auto-OFF  SLSPWS1277MW White Wall Switch Occupancy Sensor SLSPWS1277MW White Wall Switch Occupancy Sensor Nesidential Vacancy Sensor SLSPWS1277MW Wall Switch Vacancy Sensor Wall Switch Vacancy Sensor SLSPWS120VW Wall Switch Vacancy Sensor, ivory SLSPWS120VW Wall Switch Vacancy Sensor, white Commercial Grade Wall Switch Occupancy Sensors  Single Circuit PIR  SLSPWS1277UW White SLSPWS1277UW White SLSPWS1277UB Gray SLSPWS1277UB Gray SLSPWS1277UB Black  Dual Circuit PIR	81.00 81.00 62.00 62.00 42.00
SLSPWS1277AW White Wall Switch Occupancy Sensor SLSPWS1277AI   vory Wall Switch Occupancy Sensor Manual-ON/Auto-OFF SLSPWS1277MW   White Wall Switch Occupancy Sensor SLSPWS1277MW   White Wall Switch Occupancy Sensor Residential Vacancy Sensor   SLSPWS120VI   Wall switch vacancy sensor, ivory SLSPWS120VW   Wall switch vacancy sensor, white   Commercial Grade Wall Switch Occupancy Sensor   Single Circuit PIR   SLSPWS1277UW   White SLSPWS1277UW   White SLSPWS1277UW   Gray SLSPWS1277UL   Light Almond   Black   Supplementary   Black   Supplementary   SLSPWS1277UB   Black   Black   Switch Occupancy Sensor   Supplementary   SLSPWS1277UB   Black   Black   Black   Switch Occupancy Sensor   Supplementary   Supplementary   Supplementary   Supplementary   Switch Occupancy Sensor	62.00 62.00 42.00
SLSPWS1277AI   vory Wall Switch Occupancy Sensor  Manual-ON/Auto-OFF SLSPWS1277MW   White Wall Switch Occupancy Sensor SLSPWS1277MI   Wall Switch Occupancy Sensor Residential Vacancy Sensor SLSPWS120VI   Wall switch vacancy sensor, ivory SLSPWS120VW   Wall switch vacancy sensor, white Commercial Grade Wall Switch Occupancy Sensors Single Circuit PIR SLSPWS1277UW   White SLSPWS1277UW   White SLSPWS1277UG   Gray SLSPWS1277UG   Light Almond Black	62.00 62.00 42.00
Manual-ON/Auto-OFF  SLSPWS1277MW White Wall Switch Occupancy Sensor   Ivory Wall Switch Occupancy Sensor   Ivory Wall Switch Occupancy Sensor   SLSPWS1207W   Wall switch vacancy sensor, ivory   SLSPWS120VW   Wall switch vacancy sensor, white   Commercial Grade Wall Switch Occupancy Sensors   Single Circuit PIR   SLSPWS1277UW   White   SLSPWS1277UW   Ivory   SLSPWS1277UG   Gray   SLSPWS1277UL   Light Almond   Black   Summercial Sensor   Summercial Grade Wall Switch Occupancy Sensors   Single Circuit PIR   SLSPWS1277UW   Ivory   SLSPWS1277UG   Gray   SLSPWS1277UB   SLSPWS1277UB   Black   Summercial Grade Wall Switch Occupancy Sensor   Summercial Gr	62.00 62.00 42.00
SLSPWS1277MW White Wall Switch Occupancy Sensor SLSPWS1277MI Ivory Wall Switch Occupancy Sensor Residential Vacancy Sensor  SLSPWS120VI Wall switch vacancy sensor, ivory SLSPWS120VW Wall switch vacancy sensor, white  Commercial Grade Wall Switch Occupancy Sensors  Single Circuit PIR  SLSPWS1277UW White SLSPWS1277UW White Ivory SLSPWS1277UG Gray SLSPWS1277UL Light Almond Black	62.00 42.00
SLSPWS1277MI   vory Wall Switch Occupancy Sensor  Residential Vacancy Sensor  SLSPWS120VI   Wall switch vacancy sensor, ivory SLSPWS120VW   Wall switch vacancy sensor, white  Commercial Grade Wall Switch Occupancy Sensors  Single Circuit PIR  SLSPWS1277UW   White SLSPWS1277UG   Vory SLSPWS1277UG   Gray SLSPWS1277UL   Light Almond Black	62.00 42.00
SLSPWS120VI SLSPWS120VW Wall switch vacancy sensor, ivory Wall switch vacancy sensor, white  Commercial Grade Wall Switch Occupancy Sensors  Single Circuit PIR  SLSPWS1277UW White Ivory SLSPWS1277UG Gray SLSPWS1277UL SLSPWS1277UL Light Almond Black	
SLSPWS120VW Wall switch vacancy sensor, white  Commercial Grade Wall Switch Occupancy Sensors  Single Circuit PIR  SLSPWS1277UW White lvory SLSPWS1277UG Gray SLSPWS1277UL Light Almond Black	
Commercial Grade Wall Switch Occupancy Sensors  Single Circuit PIR  SLSPWS1277UW White SLSPWS1277UI lory SLSPWS1277UG Gray SLSPWS1277UL Light Almond Black	42.00
Single Circuit PIR SLSPWS1277UW White SLSPWS1277UI lvory SLSPWS1277UG Gray SLSPWS1277UL Light Almond Black	
SLSPWS1277UW White SLSPWS1277UI lvory SLSPWS1277UG Gray SLSPWS1277UL SLSPWS1277UB Black	
SLSPWS1277UI SLSPWS1277UG SLSPWS1277UL SLSPWS1277UB Black	00.00
SLSPWS1277UG SLSPWS1277UL SLSPWS1277UB Black	90.00
SLSPWS1277UB Black	90.00
	90.00
Dual Circuit PIR	90.00
CL CDWD40771 IWI White	1117.00
SLSPWD1277UW White SLSPWD1277UI Ivory	117.00 117.00
SLSPWD1277UG Gray	117.00
SLSPWD1277UL Light Almond	117.00
SLSPWD1277UB Black	117.00
Single Circuit Ultrasonic	1440.00
SLSUWS1277UW White SLSUWS1277UI Ivory	142.00 142.00
SLSUWS1277UG Gray	142.00
SLSUWS1277UL Light Almond	142.00
SLSUWS1277UB Black	142.00
Dual Circuit Ultrasonic	1405.00
SLSUWD1277UW White SLSUWD1277UI Ivory	165.00 165.00
SLSUWD1277UG Gray	165.00
SLSUWD1277UL Light Almond	165.00
SLSUWD1277UB Black	165.00
Single Circuit Dual Technology SLSDWS1277UW   White	1107.00
SLSDWS1277UW   White SLSDWS1277UI   Ivory	187.00 187.00
SLSDWS1277UG Gray	187.00
SLSDWS1277UL Light Almond	187.00
SLSDWS1277UB Black	187.00
Dual Circuit Dual Technology SLSDWD1277UW  White	210.00
SLSDWD1277UI Ivory	210.00
SLSDWD1277UG Gray	210.00
SLSDWD1277UL Light Almond	210.00
SLSDWD1277UB Black Blank Cover Plates	210.00
SLSWP2DBW   White	7.50
SLSWP2DBI Ivory	7.50
SLSWP2DBG Gray	7.50
SLSWP2DBL Light Almond	7.50
SLSWP2DBB Black Toggle Cover Block	7.50
Toggle Cover Plates SLSWP2DTW   White	7.50
SLSWP2DTI Ivory	7.50
SLSWP2DTG Gray	7.50
SLSWP2DTL Light Almond	7.50
SLSWP2DTB Black Buttonless Cover Plates	7.50
SLSBCW Buttonless Adjustment Access Covers, White	15.00
SLSBCI Buttonless Adjustment Access Covers, Write	15.00
SLSBCG Buttonless Adjustment Access Covers, Gray	15.00
SLSBCL Buttonless Adjustment Access Covers, Light Almond SLSBCB Buttonless Adjustment Access Covers, Black	
Duttorness Aujustment Access Covers, Black	15.00



Blank Cover Plate

with decorator style opening

Toggle Cover Plate with decorator style opening



**Dual Technology Wall Mount** 



**Dual Technology Ceiling Mount** 



Power Pack

## **Square D Wall Mount Occupancy Sensors**

Square D Wall Mount Occupancy Sensors accurately detect occupancy and automatically switch lighting on and off as needed. These sensors are wall or ceiling mounted for superior motion detection. Sensors employ Passive Infrared (PIR) and Ultrasonic technology. Dual Technology model features combined PIR and Ultrasonic detection for the ultimate performance. The PIR Occupancy Sensor has 3 interchangeable lenses for custom coverage patterns. Wide Angle, Long Range and High Bay. Wall mount sensors also incorporate an integral light level sensor, and features an isolated relay for use with building automation, security and HVAC systems.

- Adjustable Sensitivity
- Adjustable time delay
- UL and cUL Listed
- CEC Title 24 Certified
- FCC Part 15, Class B
- ASHRAE/IES 90.1

#### **Square D Ceiling Mount Occupancy Sensors**

Ceiling Mount Occupancy Sensors are ideal for offices, conference rooms, class rooms and other shared areas to automatically turn lights on and off based on occupancy. Sensors employ Passive Infrared (PIR) and Ultrasonic technology. Dual Technology model features combined PIR and Ultrasonic detection for the ultimate performance. Requires power pack. Set of normally closed and normally opened auxiliary contacts for use with building automation and security systems.

- Input: 24 Vdc
- Output: +24 Vdc
- Adjustable Sensitivity
- Low Profile Housing
- Adjustable Light Level Sensor
- UL and cUL Listed
- CEC Title 24 Certified
- FCC Part 15, Class B
- ASHRAE/IES 90.1

#### Table 5.26: **Wall Mount and Ceiling Mount Sensors**

Catalog No.	Catalog Description	\$ Price
Wall Mount Occupancy	y Sensors	
SLSWPS1500	PIR occupancy sensor	161.00
SLSWUS1500	Ultrasonic occupancy sensor	191.00
SLSWDS1500	SLSWDS1500 Dual Technology occupancy sensor	
Ceiling Mount Occupa	ncy Sensor	
SLSCPS1000	PIR occupancy sensor	134.00
SLSCUS2000	SLSCUS2000 Ultrasonic occupancy sensor	
SLSCDS2000	Dual Technology occupancy sensor	231.00

## **Power Pack**

For use with wall and ceiling mount sensors to supply power to sensor and switch the load when the sensor detects occupancy. May supply power to multiple sensors and auxiliary relays up to 100mA nominal load.

- Input: 120/277 Vac 50/60 Hz
- Output: 24 Vdc/100mA Nom.
- Relay rating: 20A Max. Ballast Load at 120Vac (20A Max. at 277V)
- UL cUL Listed

#### **Auxiliary Relay**

For use with wall and ceiling mount sensors to turn lights on when an area is occupied or off when it is not. Requires power pack to supply input power to operate relay.

- Input: 24 Vdc/36mA Nom.
- Relay rating: 20A Max. Ballast Load at 120Vac (20A Max. at 277V)
- UL cUL Listed

Table 5.27: **Power Pack and Auxiliary Relay** 

_						
	Catalog No.	Catalog Description	\$ Price			
	SLSPP1277	Power Pack	46.50			
	SLSSP24	Auxiliary Relay	36.00			

**Lighting Control** 





Indoor Occupancy Sensor

## Square D<sup>®</sup> Fixture Mounted Sensors and Controls

Square D extends its occupancy-sensing capability with a range of line voltage sensors based on passive infrared (PIR) technology. These sensors feature rugged housings that resist moisture and dust typical of manufacturing and shipping dock areas. Sensors incorporate universal power supply, relay and PIR element in a single housing ready for direct attachment to popular high-bay and low-bay luminaires.

Sensors are available either as stand alone sensor-per-fixture devices or equipped with connectors for low-cost plastic optical fiber cable. Plastic optical fiber connectivity between sensors allows implementation of control zones within aisles and work areas without backpulling signaling wire in conduit. Each sensor acts as a network repeater, allowing 200 foot spacing between sensors. Plastic fiber can be cut and terminated without special tools or installer training.

- All sensors feature oversized Fresnel lenses and premium, low-noise pyroelectric elements for reliable PIR sensing at mounting heights up to 45 feet.
- Both area- and aisle-sensing Fresnel lenses ship with each sensor. Color-coded snap-out lenses
  can be swapped in the field.
- Switch packs open and close based on fiber optic commands from fiber sensors
- Universal power supply design adapts to AC line voltages 208-480VAC, 50/60Hz without jumpers or taps.
- Single-pole/close-on-motion relays sized for switching dry contact, magnetic HID or electronic ballast loads.
- Mounts directly to reflector with included pinch bracket or to ballast housing with "NPT threaded pipe nipple.
- Built-in manual override test switch and diagnostic LED to assist in installation. Diagnostic LED can be seen at distance to assist in walk test.
- Fifteen minute power ON warm-up timer assures rated lamp life even if the fiber network is broken.
- User adjustable sensitivity and delay time settings (0-15 minutes)

#### Table 5.28: Table Line Voltage Occupancy Sensors

Catalog No.	Catalog Description	\$ Price
SLSPIP210	Occupancy sensor, indoor PIR, no fiber connectivity	141.00
SLSPIP211	Occupancy sensor, indoor PIR, one fiber input, one fiber output	166.00
SLSPIP212	Occupancy sensor, indoor PIR, two fiber inputs	166.00
SLSPSP101	Fiber optic switch pack, indoor, one fiber in, one fiber output	141.00
SLSPSP102	Fiber optic switch pack, indoor, two fiber inputs	141.00
SLSPCW001	Fixture-mounted counterweight for HID	13.00
CL CDIDDDDACKET	Bracket for off fixture mounting	11.00

Powerlink available in

column width design

Up to eight panels can be controlled from a single controller.

Class 1210

by Schneider Electric www.squaredlightingcontrol.com

Powerlink G3 systems are ideally suited for controlling lighting and other loads in commercial, institutional, and industrial facilities. Such systems are typically used to lower utility cost by switching branch circuits OFF during non-occupied periods when lighting is unnecessary or during peak demand periods when a partial reduction in load can save significant money.

These systems utilize remotely operated circuit breakers to switch branch circuits ON and OFF via a time schedule or by an externally generated signal (typically a low voltage wall switch, photocell, access system, fire alarm or building management system). All Powerlink components mount inside a standard lighting panelboard to provide a compact, space saving installation.

Powerlink G3 systems feature a powerful microprocessor based controller that provides system intelligence for 168 remotely operated branch circuits. Master panelboards contain the control electronics, power supply, and control bus strips for up to 42 branch circuit breakers. Slave panels extend the capability of the system by allowing remotely operated branch circuit breakers to be operated from the master controller via a simple, 4-wire, sub-net connection.

All Powerlink G3 systems have the capability of being networked together and operated from a central workstation or via a remote modem connection. PCS software allows users to remotely configure the system, change time schedules, monitor circuit breaker or input status, and override zones and breakers.

# New!) BACnet Capability

The Building Automation and Control network (BACnet) communication protocol is incorporated into the Powerlink® G3 controller design. The addition of the BACnet protocol allows Powerlink panels to be easily integrated into a Building Automation System (BAS) employing this open communication standard without the need for communication bridges or gateways.

#### Controller Models

The following Powerlink G3 controller models support 'native' BACnet communications:

- NF2000G3 Ethernet communications, shared remote inputs, network time synchronization
- NF3000G3 Email upon alarm, onboard web pages for status/control/configuration
- NF3000G3C C-Bus communications (ability to interface with a Clipsal® lighting control network)

#### **Factory Assembled System**

The following factory engineered pricing procedure may be used to price either 240V or 480Y/277V Powerlink G3 systems:

- Select system type and interior size from Table 5.45 on 5-27. All Powerlink G3 panels are furnished with either 1 or 2 control bus strips.
- Select panelboard base price from Table 5.46. All Powerlink G3 panels use NF type panelboard interiors, boxes, and trims and are suitable for either 240V or 480Y/277 V systems.
- Select branch circuit breaker requirements from Table 5.47. Powerlink G3 panels can accommodate both ECB-G3 remotely operated circuit breakers and EDB, EGB and EJB standard branch circuit
- Refer to panelboard section for additional panelboard accessories.
- For complete price, order by description.
- Apply appropriate discount schedule.

#### 240V Factory Assembled System Example:

500 level system with 225A MLO panelboard rated for 208Y/120V, 3Ø4W, 10kAIR, Type 1, surface mount with ground bar and (12) 20A 1-pole bolt-on remote operated circuit breakers.

#### Table 5.29:

Item	Page No.	\$ Price
System Type: 500 controller with 12 ckt bus	5-25	3376.50
Panel type: 250A MLO	5-27	864.00
Branch circuit breakers: (12) 20A 1-pole	5-27	2628.00
Ground bar	5-27	28.50
Total price		6897.00

#### Table 5.30:

Feature	System Level			
reature	500	1000	2000	3000
Inputs				
2 - wire	8	16	16	16
2 - wire with status feedback	8	8	8	8
3 - wire	8	8	8	8
Time Scheduler				
7 day, each configurable	_	16	16	16
Daily on/off periods	_	24	24	24
Holiday events	_	32	32	32
Automatic daylight savings	_	X	X	X
Sunrise/sunset tracking	_	X	X	X
Networking				
Modbus® ASCII/RTU	X	X	X	X
Modbus TCP	_	_	X	X
Johnson Controls N2	_	X▲	_	_
DMX	_	X	X	X
C-Bus	_	_	_	X■
BACnet MSTP/IP	_	_	X	X

- Specify N2 suffix
- Specify C suffix

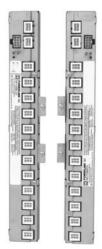








ECB-G3 Circuit Breaker



Control Bus



Power Supply



NF500G3 Controller



NF1000G3 Controller

#### Table 5.31: ECB-G3 Circuit Breakers Bolt-On Remotely Operated

Ampere Rating	One-Pole 277Vac – 14,000 120Vac – 65,000		Two-Pole 480Y/277Vac – 14,00 240Vac – 65,000A		Three-Pole 480Y/277Vac - 14,00 240Vac - 65,000	
naulig	Catalog Number	\$ Price	Catalog Number	\$ Price	Catalog Number	\$ Price
15 20 30	ECB14015G3 ◆ ECB14020G3 ◆ ECB14030G3	237.00	ECB24015G3 ♦ ECB24020G3 ♦ ECB24030G3	558.00	ECB34015G3 ◆ ECB34020G3 ◆ ECB32030G3 ★	890.00

#### Table 5.32: **ECB-G3 Circuit Breakers for Emergency Lighting** (requires 2-pole spaces)

Ampere Rating	One-Pole 480Y/277 - 14,000AIR 240V - 65,	000AIR
Ampère naung	Catalog No.	\$ Price
20	ECB142020G3EL	558.00

Note: All are listed as HACR type for use with air conditioning, heating and refrigeration equipment having motor group combinations and marked for use with HACR type circuit breakers. UL listed as HID rated for use with high intensity discharge lighting systems. (1) #12–8 Al or (1) #10–8 Cu. Suitable for use with 75°C conductors.

- UL listed as SWD (switching duty) rated. Rated for 240Vac only 42,000AIR

#### Table 5.33: Control Bus

Catalog No.	Panel Orientation Catalog No.	Required Interior Size	Max. No. of Control Circuits
NF12SBLG3 NF12SBRG3		30 30	12 12
NF18SBLG3 NF18SBRG3		42 42	18 18
NF21SBLG3 NF21SBRG3		54 54	21 21

#### Table 5.34: **Power Supply**

Voltage	Primary Source	Catalog No.	\$ Price
120V	Panel Bus	NF120PSG3	791.00
240V	Panel Bus	NF240PSG3	
277V	Panel Bus	NF277PSG3	
120V	External	NF120PSG3L	899.00
240V	External	NF240PSG3L	
277V	External	NF277PSG3L	

#### Table 5.35: Controller

Description	Catalog No.	\$ Price	
500	NF500	1946.00	
1000	NF1000	3968.00	
1000N2 (N2 protocol)	NF1000G3N2	8288.00	
2000	NF2000G3	7107.00	
3000	NF3000G3	9741.00	
3000C (C-bus	NF3000G3C	9741.00	

## Remote Source Controller (for additional inputs)—

Includes NEMA 1 enclosure, source controller and power supply

Voltage	Catalog No.	\$ Price
120V	RSC16G3120	3045.00
240V	RSC16G3240	3045.00
277V	RSC16G3277	3045.00

#### Table 5.37: Cables & Accessories

Description	Catalog No.	\$ Price		
Control bus cables				
Harness standard panel	NF2HG3	88.50		
Sub-net accessories & cables				
Slave address selector▼	NFSELG3	172.50		
6' sub-net cable	NFSN06	75.00		
10' sub-net cable	NFSN10	105.00		
25' sub-net cable	NFSN25	234.00		
50' sub-net cable	NFSN50	405.00		
Serial cables				
Controller front panel cable	NFFPCG3	102.00		

One slave address selector required for each slave panel.

#### Table 5.38: Miscellaneous Hardware

Description	Catalog No.	\$ Price
Circuit Breaker Handle Padlock (Lock On or Off) Fixed Barrier Remote Mounting Adapter	HPAFD △ NFASBKG3 NFADAPTERG3	25.50 177.00 102.00

#### Software Table 5.39:

Description	Catalog No.	\$ Price
Powerlink Controller Software	PCS101	1523.00

**Device Power Supply** 

Powerlink Device Router

Remote Mount Controller (for externally mounted electronics Table 5.40: Includes NEMA 1 enclosure, controller, and power supply

Voltage	Catalog No.	Controller Type	\$ Price	
120V	RMC500G3120	NF500G3	3272.00	
240V	RMC500G3240	NF500G3	3272.00	
277V	RMC500G3277	NF500G3	3272.00	
120V	RMC1000N2G3120	NF1000N2G3	9615.00	
240V	RMC1000N2G3240	NF1000N2G3	9615.00	
277V	RMC1000N2G3277	NF1000N2G3	9615.00	
120V	RMC1000G3120	NF1000G3	5294.00	
240V	RMC1000G3240	NF1000G3	5294.00	
277V	RMC1000G3277	NF1000G3	5294.00	
120V	RMC2000G3120	NF2000G3	8435.00	
240V	RMC2000G3240	NF2000G3	8435.00	
277V	RMC2000G3277	NF2000G3	8435.00	
120V	RMC3000G3120	NF3000G3	9606.00	
240V	RMC3000G3240	NF3000G3	9606.00	
277V	RMC3000G3277	NF3000G3	9606.00	
120V	RMC3000G3C120	NF3000G3C	9606.00	
240V	RMC3000G3C240	NF3000G3C	9606.00	
277V	RMC3000G3C277	NF3000G3C	9606.00	

## **Device Power Supply**

The Powerlink Device Power Supply is used to distribute power on a C-Bus network. Placed at critical points on the network, device power supplies will provide the current necessary for operating a variety of passive Clipsal devices. A Powerlink Device Power Supply consists of a Clipsal 8M enclosure containing one or two 4M Clipsal Power Supplies (120 or 277Vac).

- Surface-mount NEMA 1 enclosure, with cover
- Unit and C-Bus LEDs indicate the status of the line voltage and the network
- Sources up to 700 mA (dual power supplies) to the C-Bus network
- 120V or 277Vac models available
- Dimensions: 8.9 in. (226mm) wide x 3.8 in. (97mm) deep x 12.57 (319mm) tall

#### **Device Router**

The Powerlink Device Router allows the exchange of data between a Powerlink NF3000G3C controller and Clipsal devices. This device router receives data from Clipsal input devices such as keypads and touchscreens and sends data to the Powerlink system and isa versa. The device router consists of a Clipsal 8M enclosure containing a Clipsal PC Interface and a Clipsal Power Supply (120Vac or 277Vac). Communication between the device router and the NF3000G3C controller is made with the included 50-foot serial cable.

- Surface-mount NEMA 1 enclosure, with cover
- Unit, Unit/Comms, and C-Bus LEDs indicate the status of data transmission and power to the unit
- System network clock for synchronizing communications data
- Network power source, supplying up to 350 mA
- 120Vac or 277Vac models available
- Dimensions: 8.9 in. (226mm) wide x 3.8 in. (97mm) deep x 12.57 in. (319mm) tall

Powerlink Device Routers A Table 5.41:

Description	Catalog No.	\$ Price
120V Device Router	NFDR120G3C■	1632.00
277V Device Router	NFDR277G3C■	1632.00
A Required for interfere to Clineal units		

- DE-8 Discount.

Table 5.42: Powerlink Device Power Supplies ◆

Description	Catalog No.	\$ Price
Single Supply 120V	NFDP1120G3C★	900.00
Dual Supply 120V	NFDP2120G3C★	1650.00
Single Supply 277V	NFDP1277G3C★	900.00
Dual Supply 277V	NFDP2277G3C★	1650.00
Filler Plate	SLC4CSF8	27.00

- Extends C-Bus power to Clipsal devices.
- DE-8 Discount

## **Powerlink Network Accessories**

Table 5.43: **Powerlink Network Accessories** 

Description	Catalog No.	\$ Price
RS232/485 Converter	6382RS485G3KIT	526.50

Table 5.44: Powerlink Remote Modem Support▼

Description	Catalog No.	\$ Price
Modem Kit (for G3 Controllers)	6382G3MODEM	876.00

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Requires 2000 and 3000 controller and either Analog or Ethernet modem connection to each master panel.



## G3 NF Panelboards 240V and 480Y/277V Factory **Assembled Systems**

### Maximum Voltage 480Y/277Vac

Table 5.45: **Powerlink G3 System Price** 

List	30 ckt l	nterior	42 ckt l	Interior	54 ckt Interior		
System Type	12 ckt bus	24 ckt bus	18 ckt 36 ckt bus bus		21 ckt bus	42 ckt bus	
Slave Panel	1650.00	3450.00	2025.00	4200.00	2370.00	4890.00	
NF500G3	6753.00	8553.00	7128.00	9303.00	7473.00	10143.00	
NF1000G3★	10728.00	12528.00	11103.00	13278.00	11448.00	14118.00	
NF2000G3	17298.00	19098.00	17673.00	19848.00	18018.00	20688.00	
NF3000G3	21072.00	22872.00	21447.00	23622.00	21792.00	24462.00	

#### Table 5.46: Panelboard Base Price (including solid neutral)

	Mair '			Main Circuit Breaker (Circuit Breaker Interrupting Rating—6-2 through 6-8)▲▼										
Mains	Main L	Lugs		Standard IC			HIC			Extra HIC			I-Limiter <sup>®</sup>	
Rating	2-pole	3-pole	Circuit Bkr.	2-pole	3-pole			Circuit Bkr.	2-pole	3-pole	Circuit Bkr.	2-pole	3-pole	
100A	_	_	ED■	2454.00	2823.00	EG■	3150.00	3624.00	HJ	4872.00	5397.00	FI	6375.00	7326.00
125A	1269.00	1458.00	ED■	5058.00	5643.00	EG■	6486.00	7464.00	_	_		_		
150A		'	HD	4905.00	5430.00	HG	6072.00	6597.00	HJ	6105.00	6630.00	_	1	1
225A		'	JD	6180.00	6570.00	JG	7605.00	8100.00	JJ	9930.00	10995.00	KI	10899.00	12528.00
250A	1503.00	1728.00	JD	6750.00	7710.00	JG	8985.00	9270.00	JJ	10785.00	12675.00	KI	13731.00	15783.00
400A	1989.00	2286.00	LA	7995.00	9189.00	LH	11568.00	13296.00	LC	12759.00	14664.00	LI	14025.00	16119.00
600A◆	3549.00	3933.00	_	_	<u> </u>	<u> </u>	_	T	LC	14331.00	16326.00	LI	20460.00	23517.00
800A◆	5325.00	5850.00	_	_	_	<u> </u>	<b>–</b> 1	<u> </u>	_	T — I	<u> </u>	T,	T — 1	

- HL and JL frame circuit breakers are also available as main circuit breakers.
- Backfed Main Circuit Breaker-54 circuit only.
- Copper Bus Only. For N2 protocol, add \$3819.
- Contact your nearest Square D/Schneider Electric sales office for MICROLOGICTM trip main circuit breakers

#### Branch Circuit Breaker - Price Per Circuit Breaker Table 5.47:

Po	Powerlink G3—ECB Bolt-On 65 kA AIR@240Vac, 14 kA AIR@480Y/277			Standard Breakers—EDB Bolt-On 18 kA AIR 1-pole, 25 kA AIR 2 & 3-pole @ 240V, 18 kA AIR@480Y/277				Standard Breakers HIC—EGB Bolt-On 65 kA AIR@240Vac, 35 kA AIR@480Y/277				Standard Breakers Extra HIC—EJB Bolt-On 100 kA AIR@240Vac, 65 kA AIR@480Y/277							
Voltage	Ampere Rating	1-pole	2-pole	3-pole	Voltage	Ampere Rating	1-pole	2-pole	3-pole	Voltage	Ampere Rating	1-pole	2-pole	3-pole	Voltage	Ampere Rating	1-pole	2-pole	3-pole
240	15-20	438.	1215.	1929.		15–60	288.	663.	1122.		15–60	486.	1119.	1896.		15-60	777.	1767.	3036.
Vac	30	438.	1215.	1929.	480Y/	70	513.	1308.	1569.	480Y/	70	867.	2211.	2565.	480Y/	70	1386.	3540.	4245.
480Y/277	15-20	438.	1215.	1929.	277	80-100	_	1308.	1569.	277	80-100	_	2211.	2655.	277	80-100	_	3540.	4245.
Vac	30	438.	1215.	_	Vac	110-125	_	3825.	4845.	Vac	110-125	_	6171.	7131.	Vac	110-125	-	7950.	9450.
Space	e Only	63.	126.	189.		Space Only	63.	126.	189.		Space Only	63.	126.	189.		Space Only	63.	126.	189.

Note: All EC, ED, EG and EJ branch circuit breakers are UL Listed as HACR type

#### **Sub-Feed Circuit Breaker**

- Available on 1Ø or 3Ø, 125-800A main lugs or 125-600A main circuit breaker
- One sub-feed JD, JG, JJ or JL circuit breaker per 250A panelboard
- Two sub-feed JD, JG, JJ or JL circuit breakers per 400A panelboard \( \text{\text{}}
  - LC and JJ may not be combined.

#### Table 5.48: Sub-Feed Circuit Breaker (150-400A)

No. of Poles	JD	JG	JJ□	JL	LA	LH	LC <sub>□</sub>	Space
2	2265.00	3165.00	3844.50	4230.00	2985.00	4150.50	6475.50	619.50
3	2527.50	3825.00	4665.00	5296.50	3687.00	4882.50	7617.00	619.50

JJ and LC sub-feed circuit breakers cannot be used together.

#### Table 5.49: **Sub-Feed Breaker Cabinet Data**

Max. No. of Branch Spaces (Does not include sub-feed breaker spaces)	Box Height (20" W x 5.75" D)								
	250A		400A LA/LH		600A		800A		
	Main Lugs	Main Circuit Breaker	Main Lugs	Main Circuit Breaker	Main Lugs⊽	Main Circuit Breaker ☆	Main Lugs ⊋		
30	56	68	68	80	68	80♦	68		
42	62	74	74	86	74	86♦	74		
54	68	80	80	92	80	92◊	80		

- Dimensions also for 400A LC/LI main circuit breaker panels.
- 600A main lug panelboards require an 8" deep, 26" wide box.
- 600A main lug panelboards require an 8.75" deep box.
- 800A main lug panelboards require an 8.75" deep, 26" wide box.

To obtain pricing for the following Special Features please refer to the Supplemental Digest.

- PowerLogic® metering
- Customer equipment space
- Increased box depth
- Box extensions top, bottom and side
- Drip hoods
- Non-standard paint
- NEMA 1 gasketed
- NEMA 4 Stainless steel enclosure
- NEMA 4X Fiberglass enclosure (NQOD and NF)
- Stainless steel trim front (NQOD, NF and I-LINE)
  - Padlockable hasp
- Special locks (Corbin, Yale, Best)
- Equal height boxes
- Common trip to cover two equal height boxes
- Panelboard skirthides conduits feeding a panelboard
- Panelboard wireway for terminating conduit in wireway endwall
- Panelboard interiors and special fronts to fit existing boxes

# Square D<sup>®</sup> Multi-Link Structured Wiring System

Class 1400 / Refer to Catalog 1400CT0101



The Square D Multi-Link Structured Wiring System devices organize the way a house is wired to coordinate telephone, video, and data services for unmatched flexibility and convenience. Installed during construction, these devices increase capabilities without adding significant cost to the home.

#### Table 5.50: System Components

Description	Cat. No.	\$ Price	Grid Mounting Space (in.)	Standard Package
Mounting Brackets and Enclosures		l l		
Surface mounting bracket, 6 <sup>1</sup> / <sub>2</sub> "w x 10"h, white	SDM10BW	22.80	10	10
Cover for SDM10BW, white	SDM10CW	42.90	_	1
Enclosure w/mounting grid, 14"w x 18"h, white	SDM18BW	67.00	34▲	1
Cover for SDM18BW, white	SDM18CW	24.50	_	1
Enclosure w/mounting grid, 14"w x 36"h, white	SDM36BW	129.00	70■	1
Cover for SDM36BW, white	SDM36CW	42.00	_	1
Combination Video/Telephone Hubs				
Combo hub, video splitter (1 input x 4 TVs) / phone (2 lines x 6 phones), grid mount	SDM26P14V	87.00	3	1
Combo hub, video splitter (1 input x 4 TVs) / phone (4 lines x 6 phones), grid mount	SDM46P14V	116.00	3	1
Telephone Hubs				
Telephone master hub, 4 lines x 6 phones, grid mount	SDM46P	87.00	3	1
Telephone expansion hub, 4 lines x 8 phones, grid mount	SDM48PX	87.00	3	1
Telephone interface hub, 4 lines x 11 phones, grid mount, RJ45 jacks	SDM412PJ	111.00	3	1
Video Hubs	3DIVI412F3	111.00	3	
	0014010		•	
Video splitter, (1 input x 3 TVs), grid mount	SDM13VS	28.70	2	1
Video splitter, (1 input x 4 TVs), grid mount	SDM14VS	34.40	2	1
Video splitter, (1 input x 8 TVs), grid mount  Video amplifier hub (1 input x 6 TVs), bi-directional CATV or antenna,	SDM18VS SDM16VAB	63.00 144.00	3	1
grid mount, 120 Vac power supply included Video amplifier hub (3 inputs x 8 TVs), bi-directional CATV, grid mount,	SDM38VBIR	429.00	2.5	1
120 Vac power supply included  Video amplifier hub (3 inputs x 8 TVs), CATV or antenna, grid mount,	SDM38VHIR	429.00	2.5	1
120 Vac power supply included  Data Hubs	ODIVIOUVIIII	423.00	2.0	'
Data termination hub provides termination point for Cat-5 wiring, 100				
Base-T certified, 8 bridgeable circuits (8 - 110 punch down blocks connected to 8 - RJ-45 jacks)	SDM8D	101.00	3	1
Data termination hub provides termination point for Cat-5 wiring, 100 Base-T certified, 16 bridgeable circuits (16 - 110 punch down blocks connected to 8 - RJ-45 jacks)	SDM8DB	131.00	4.5	1
Accessories				
AC outlet accessory, mounts in enclosures, 2 duplex receptacles (not included) accepts 2 power supplies, UL Listed, 120 Vac	SDM4AC	45.80	5.5	1
AC outlet accessory, mounts in enclosures, 4 duplex receptacles (not included) accepts 4 power supplies, UL Listed, 120 Vac	SDM8AC	55.00	11▲	1
Telephone surge accessory, mounts in enclosures, 4-line telephone protector with tool-less IDC terminations	SDMSA4P	100.50	2	1
Video surge accessory, mounts in enclosures, dual line cable TV protection	SDMSA2V	100.50	2	1
Video surge accessory, mounts in enclosures, dual line satellite protection	SDMSA2VD	100.50	2	1
Adapter bracket to mount ChannelPlus 3400 or 8200 on Square D Multi-Link grid	SDM1A	28.70	2	1
Adapter bracket to mount RJ and type F connectors on Square D Multi-Link grid	SDM6A	28.70	2	1
Wire Spacer Mezzanine, Universal Grid, lifts modules 1" above grid, providing wire management capabilities, 11.2"h x 6.5"w	SDM12WS	43.80	12	1
Universal heavy duty isolation mounting bracket for non-Square D Multi-Link products. Load rated 60 pounds.	SDM1IMB	87.00	•	1
Universal light duty isolation mounting bracket for non-Square D Multi-Link products. Load rated 10 pounds.	SDM2IMB	42.90	•	1
Patch Cord 1 foot length, Cat-5, RJ-45 plugs on both ends	SDM1DC	11.60		1
Patch Cord 2 foot length, Cat-5, RJ-45 plugs on both ends	SDM2DC	14.40		1
Enclosure Coupling Tube for stacking enclosures, 2 inch conduit	SDM2C	22.80	_	1
Plastic grommet for 2" enclosure knockout, (5) pack	SDM2G	4.40		1
Cover Lock Kit	SDMLK	43.80		1
Replacement snap locks, lock Square D Multi-Link modules to grid, black (10) pack	SDM10SL	17.10		1
Low Pass Filter, Channel 91	SDM600LPF	58.00	_	1

- Two columns of grid mounting space, 17" of space per column. Two columns of grid mounting space, 35" of space per column.



SDM18CW and SDM18BW



SDM46P



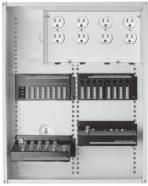
SDM8D



SDM38VBIR/SDM38VHIR



SDM46P14V



SDM18BW with optional modules