

# Installation Instructions

## Square D® Clipsal® Neo™ and Saturn™ DLT™ Keypads

SLC5055DL Neo and SLC5085DL Saturn  
For Use with Wired C-Bus™ Networks

Instruction Bulletin  
Retain for future use.



## HAZARD CATEGORIES AND SPECIAL SYMBOLS

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### **DANGER**

Danger indicates an immediately hazardous situation which, if not avoided, will result in death or serious injury.

### **WARNING**

Warning indicates a potentially hazardous situation which, if not avoided, can result in death or serious injury.

### **CAUTION**

Caution indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.

## CAUTION

Caution, used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, can result in property damage or improper operation.

*NOTE: Provides additional information to clarify or simplify a procedure.*

### PLEASE NOTE

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. This document is not intended as an instruction manual for untrained persons. No responsibility is assumed by Square D for any consequences arising out of the use of this manual.

### Class B FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## INTRODUCTION

Square D® Clipsal® Neo™ and Saturn™ keypads are a range of high-end network switches with Dynamic Labeling Technology™ (DLT). These keypads feature five physical buttons that control up to eight control groups. The LCD interface displays labels and status information for each button/control group. Keypads have scene management and learn mode capability.

Labels can consist of text (in several languages) or graphics. They may also be changed dynamically by other devices to reflect a change in functionality.

Learn mode enables you to create associations between buttons on keypads such as the DLT, and loads on output units such as dimmers. It allows you to add functionality such as timers and scenes without using the C-Bus™ Toolkit software.

Scene capability allows you to perform a series of actions across multiple outputs by pressing a single button. For example, on arrival home you could use a scene to switch on lights in the hallway and kitchen, dim lights in the lounge, and switch on a heater.

Using the C-Bus™ Toolkit software, DLT units can be programmed so their controls can be enabled and disabled (locked) from another unit.

Catalog Number	Product Range
U5055DL	Neo DLT keypad
U5085DL	Saturn DLT keypad

## Before You Begin

Before installing Neo and Saturn keypads, inspect them carefully. Verify the catalog number on the box label.

**Table 1: Contents of the Box**

Part Description	Part No.	Quantity
Neo DLT keypad Saturn DLT keypad	SLC5055DL SLC5085DL	1
Neo DLT keypad cover plate* or Saturn DLT keypad cover plate		1
Insulated bootlace terminals		4 (2 required, 2 extra)
Hardware (mounting screws)		2

\* Neo keypad cover plate consists of 1 inner surround and 1 outer surround.

## SAFETY PRECAUTIONS

This section contains important safety precautions that must be followed before attempting to install or maintain electrical equipment. Carefully read and follow the safety precautions below.

### DANGER

#### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- This equipment must be installed and serviced by qualified electrical personnel.
- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- Turn off all electrical power supplying this equipment before working on or inside the equipment.
- Always use a properly rated voltage sensing device to confirm that power is off.
- Replace all devices, doors, and covers before turning on power to this equipment.

**Failure to follow these instructions will result in death or serious injury.**

## INSTALLATION

Follow the procedures in this section to properly install Neo and Saturn keypads.

### Selecting a Location

It is important to select the right location to install Neo and Saturn DLT keypads. Some considerations are listed below:

- Provide easy access to unit.
- Avoid obstructions that might impede infrared signals coming from a remote control.
- Locate DLT keypads where they will not be subject to water, humidity, direct sunlight, or heavy dust.
- Do not cover unit.
- Only use DLT keypads indoors.

### Network Considerations

The Neo and Saturn keypads draw 22 mA from the C-Bus network. Adequate C-Bus power supply units must be installed to support the connected devices. Consult the C-Bus Calculator – Network Design Verification Software Utility to determine the total network current load.

### Recording Each Unit's Location

Before installing this unit, record its location.

## CAUTION

### HAZARD OF UNEXPECTED OR IMPROPER SYSTEM BEHAVIOR

- Properly record the physical location of each unit using the lift-and-peel label provided on the box and a site plan or location log.
- Retain location records and provide it to the person(s) responsible for configuring and commissioning the network.

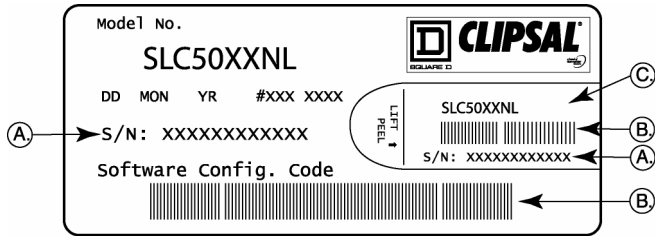
**Failure to follow these instructions can result in unexpected or improper system behavior.**

This unit is identified by a unique serial number found on the box label. This serial number provides important information for recording each unit's location. The bar code on the box label provides information when using an infrared scanner to record the unit location. Recording each unit's location is required when configuring with C-Bus™ Toolkit software.

**Figure 1: Box Label with Lift-and-Peel Label**

KEY:

- A. Serial Number
- B. Bar code
- C. Lift and peel label

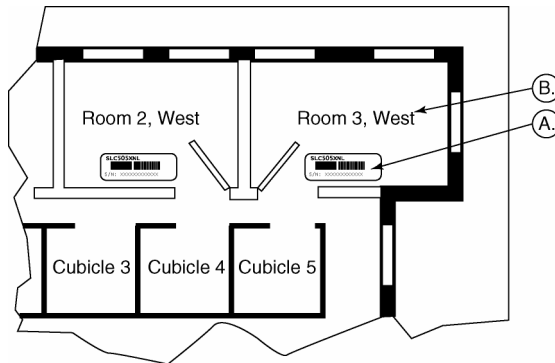


To record unit locations remove the "Lift-and-Peel" label from the box label. Attach it to the site plan (see "Recording Locations on a Site Plan") or another document (see "Recording Locations in a Log") to record the physical location where each unit is installed.

**Figure 2: Recording Locations on a Site Plan**

KEY:

- A. Lift-and-peel label
- B. Location

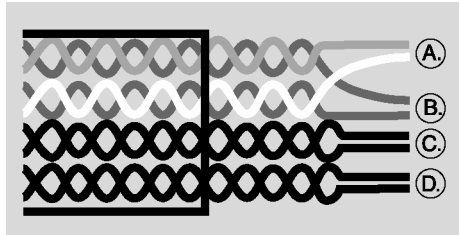




**Figure 5: Wiring Connections Key Diagram**

KEY:

- A. C-Bus positive (+): blue + orange
- B. C-Bus negative (-): blue/white + orange/white
- C. Remote OFF: brown + brown/white
- D. Remote ON: green + green/white



C-Bus Connection	Color	C-Bus Keypad
Remote ON	green/white	Not connected
Remote ON	green	Not connected
C-Bus neg (-)	orange/white	C-Bus neg (-)
C-Bus pos (+)	blue	C-Bus pos (+)
C-Bus neg (-)	blue/white	C-Bus neg (-)
C-Bus pos (+)	orange	C-Bus pos (+)
Remote OFF	brown/white	Not connected
Remote OFF	brown	Not connected

CAUTION
HAZARD OF EQUIPMENT DAMAGE
Do not Megger® test C-Bus data cabling or terminals. Megger testing can result in equipment damage.
<b>Failure to follow this instruction can result in damage to the C-Bus network.</b>

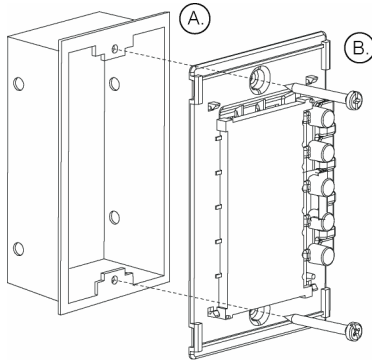
## Mounting the Keypad

Neo and Saturn keypads are low-voltage Class 2 device and are designed for mounting into a plaster (mud) ring. A single-gang wall box may also be used. Interior width of the plaster (mud) ring or the single gang box must be at least 1.7 inches (43 mm).

**Figure 6: Mounting a DLT Keypad**

KEY:

- A. Plaster (mud) ring
- B. Keypad



After the proper wiring connections to the C-Bus network have been made, mount the keypad to the plaster (mud) ring or wall box using the two mounting screws provided with the keypad. Be sure that the UP arrows on the back keypad are pointing up.

1. Align the mounting holes in the keypad grid plate with the mounting holes in the plaster ring or wall box.
2. Place each of the screws into the mounting holes. Thread the screws into the holes of the plaster ring or wall box.
3. Use a flat blade or Phillips screwdriver to tighten each screw until the back of the grid plate is flat against the surface of the wall.
4. Refer to the following sections to install Neo or Saturn DLT keypad cover plates.

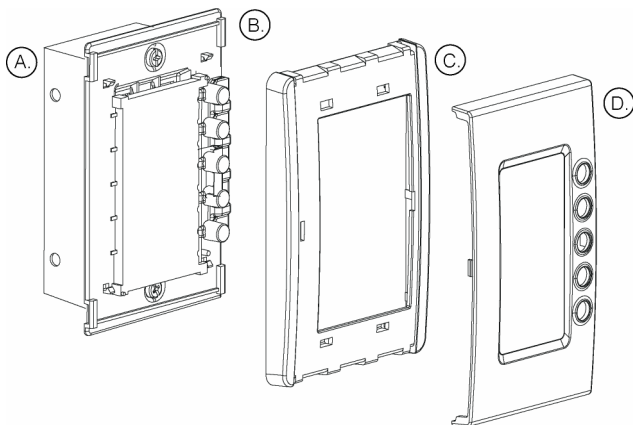
## Installing a Neo Cover Plate on a DLT Keypad

Follow the steps below to install a Neo cover plate on a DLT keypad.

### Figure 7: Installing a Neo DLT Keypad Cover Plate

KEY:

- A. Plaster (mud) ring
- B. Keypad
- C. Outer surround
- D. Inner surround



5. Align the outer surround over the keypad grid plate .
6. Snap the outer surround into place.
7. Snap the inner surround into place.

## Removing a Neo Cover Plate from a DLT Keypad

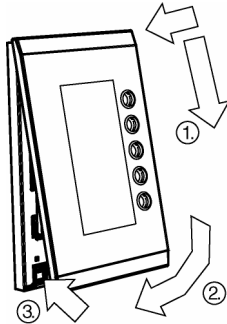
Follow the steps below to remove the Neo keypad cover plate.

1. Using a flat-blade screwdriver or your fingertips, gently pull the bottom edge of the inner surround off of the outer surround. Then repeat the same procedure at the top.
2. Gently pull the bottom edge of outer surround off of the keypad.
3. Gently pull the outer surround off both sides and finally pull the outer surround off the top of the keypad.

## Installing an Saturn Cover Plate on a DLT Keypad

Follow the steps below to install a Saturn cover plate on a DLT keypad.

**Figure 8: Installing a Saturn Cover Plate on a DLT Keypad**

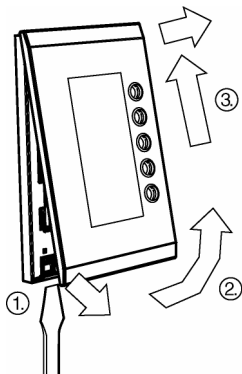


1. Fit the upper clips into the slots at the top of the grid plate
2. Align the button apertures on the cover plate to match the buttons on the keypad and lower the bottom of the cover plate toward the bottom of the keypad.
3. Engage the bottom clips.

## Removing an Saturn Cover Plate from a DLT Keypad

Follow the steps below to remove a Saturn cover plate from a DLT keypad.

**Figure 9: Removing a Saturn Cover Plate from a DLT Keypad**



1. Use a small flat head screwdriver to push each of the (2) release locks up to disengage the lower clips.
2. Swing the lower end of the cover plate away from the grid plate slightly.
3. Push the cover up gently and pull to release the upper clips.

## SPECIFICATIONS

**Table 2: Neo DLT Keypad Specifications**

Catalog Number	SLC5055DL Neo DLT
C-Bus Supply Voltage	15 to 36V DC @ 22 mA required for normal operation. Does not provide current to the C-Bus network.
AC Input Impedance	50k ohms @ 1 kHz
Electrical Isolation	3.75 kV RMS from C-Bus to mains (provided externally)
Control Functions	Load switching, dimming, timers, scene control
Status Indicators	User configurable Orange and Blue LED light
Locator Light Option	Allows blue LED backlight illumination at low brightness level
Warm-Up Time	5 seconds
C-Bus Connection	One terminal block to accommodate 24 to 16 AWG (0.2-15 mm) – CAT 5 UTP cable required
Dimensions (L x W x H)	4.57 x 3.0 x 1.25 in. (116 x 76 x 32 mm)
Mounting Centers	3.31 in. (84 mm)
Weight	3.31 oz (95 g)
Operating Temperature Range	32 to 113°F (0 to 45°C)
Operating Humidity Range	95% RH; non-condensing
Color Options	Slate Gray, Brushed Aluminium

**Table3: Saturn DLT Keypad Specifications**

Catalog Number	SLC5058DL Saturn DLT
C-Bus Supply Voltage	15 to 36V DC @ 22 mA required for normal operation. Does not provide current to the C-Bus network.
AC Input Impedance	50k ohms @ 1 kHz
Electrical Isolation	3.75 kV RMS from C-Bus to mains (provided externally)
Control Functions	Load switching, dimming, timers, scene control
Status Indicators	User configurable Orange, Blue and Blue LED light
Locator Light Option	Allows blue LED backlight illumination at low brightness level
Warm-Up Time	5 seconds
C-Bus Connection	One terminal block to accommodate 24 to 16 AWG (0.2-15 mm) – CAT 5 UTP cable required
Dimensions (L x W x H)	4.57 x 2.99 x 1.18 in. (116 x 76 x 30 mm)
Mounting Centers	3.31 in. (84 mm)
Weight	5.30 oz (150 g)
Operating Temperature Range	32 to 113°F (0 to 45°C)
Operating Humidity Range	95% RH; non-condensing
Color Options	White, Cream, Mocha, and Black

## Dimensions

Figure 10: Neo DLT Keypad Dimensions

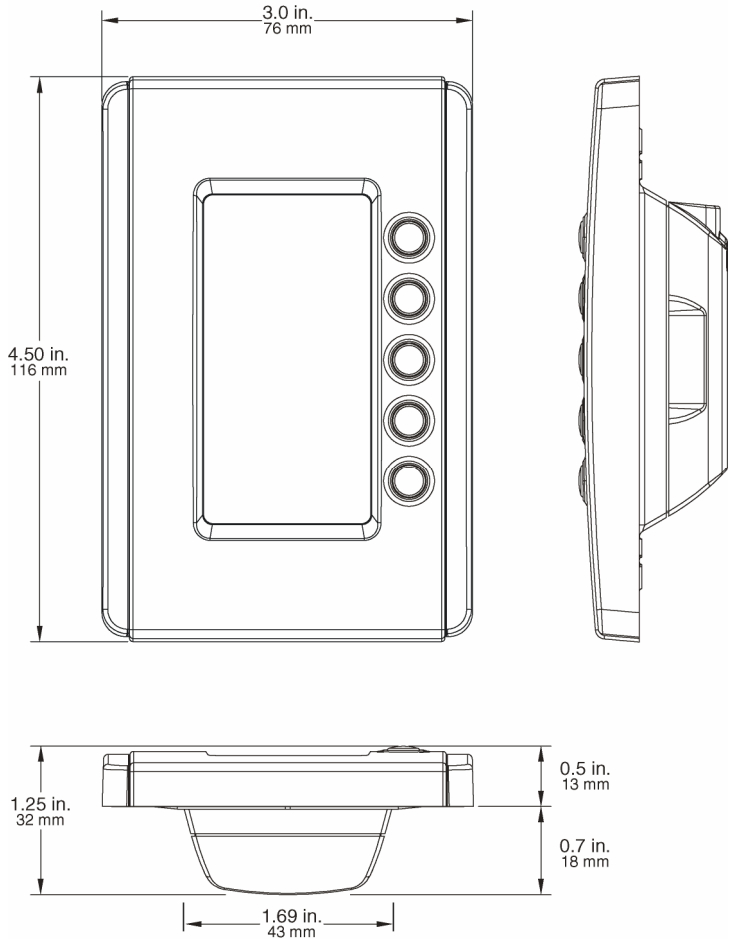
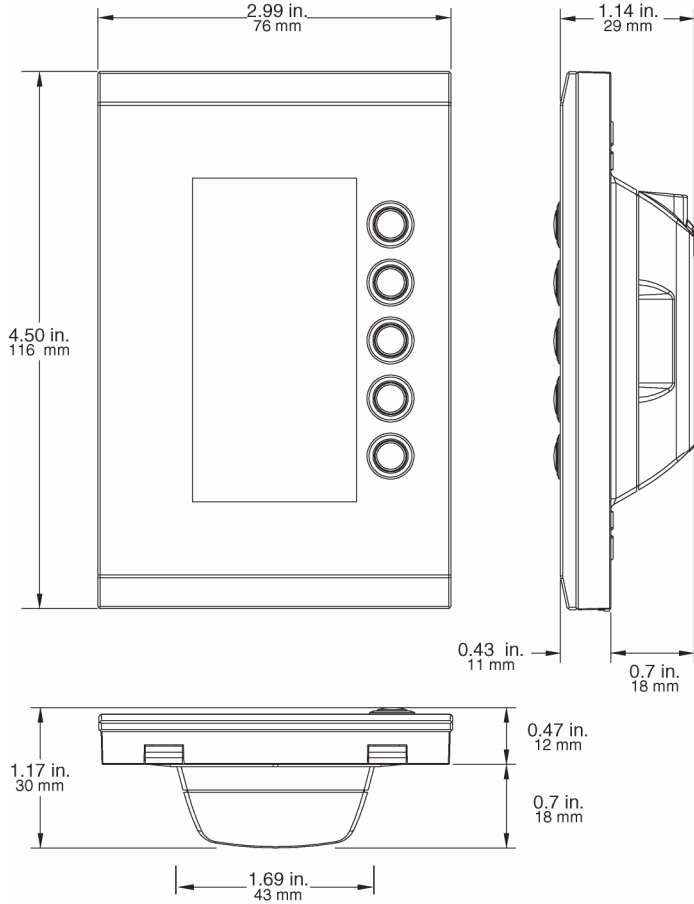


Figure 11: Saturn DLT Keypad Dimensions



## STANDARDS

Clipsal Neo and Saturn DLT keypads comply with the following standards:

**Table 4: UL Standards**



UL Standards	Title
UL916	Energy Management Equipment

**Table 5: CSA Standards**



CSA Standards	Title
CSA C22.2 Spec 205	Signal Equipment

**Table 6: FCC Regulations**



Standards/Regulations	Title
FCC	Part 15.101, Class B Digital Device for Home or Office Use

**Table 7: Australian/New Zealand EMC and Electrical Safety Frameworks and Standards**



C-Tick Framework	Standard	Title
EMC	AS/NZS1044; IEC/CISPR14-1	RFI Emissions Standard

## SUPPORT AND SERVICE


Contact the Square D Customer Information Center for technical support by phone at 1-888-Square D (1-888-778-2733) or e-mail at [lightingcontrol.support@us.schneider-electric.com](mailto:lightingcontrol.support@us.schneider-electric.com).

Contact your local Square D service representative or Square D® Clipsal® certified installer for repairs or service to your network.

You may also find helpful information on our web site at [www.squaredlightingcontrol.com](http://www.squaredlightingcontrol.com).

Square D Company  
295 Tech Park Drive, Suite 100  
La Vergne, TN, 37086  
1-888-SquareD (1-888-778-2733)  
[www.squaredlightingcontrol.com](http://www.squaredlightingcontrol.com)

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