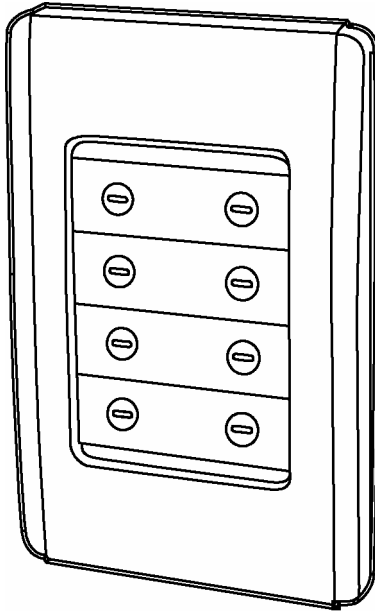


Installation Instructions

Square D® Clipsal® Neo™ Keypads

SLC5052NL, SLC5054NL and
SLC5058NL for use with Wired
C-Bus™ Networks

Instruction Bulletin
Retain for future use.



SQUARE D

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™ keypads are a range of high-end dedicated network switches with Learn Mode capability. These units feature a multi-button switching capacity and facility for infrared remote controls and scene management options.

Neo keypads are available in these configurations:

- SLC5052NL Two Button Neo Keypad
- SLC5054NL Four Button Neo Keypad
- SLC5058NL Eight Button Neo Keypad

Before You Begin

Before installing the Neo keypad, inspect it carefully. Verify the catalog number on the box label.

Table 1: Contents of the Box

Part Description	Quantity
Neo keypad	
SLC5052NL	1
SLC5054NL	
SLC5058NL	
Inner Surround	1
Outer Surround	1
Hardware (Mounting Screws)	2
Insulated Bootlace Terminals	4 (2 required, 2 extra)

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 keypads.

Selecting a Location

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

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

Installing Neo Keypads with IR Support

CAUTION

HAZARD OF UNPREDICTABLE OPERATION

Install multiple Neo keypads in locations where infrared reception zones will not overlap when using an infrared remote (IR) control.

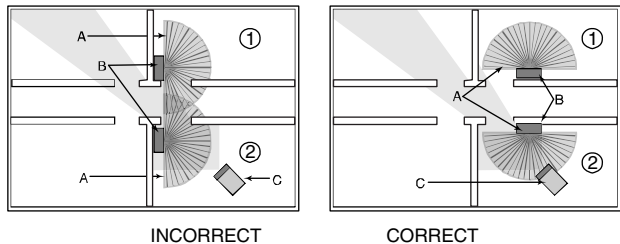
Failure to follow this instruction can result in unpredictable operation

Multiple Neo keypads can be installed on any C-Bus™ network. These units may be programmed to operate dependently or independently of each other. Be sure to install multiple Neo keypads in locations where infrared reception zones will not overlap when using an infrared remote (IR) control.

Figure 1: Infrared Reception Zones

KEY:

- A. Infrared reception zone
- B. Keypad
- C. Infrared remote control



Network Considerations

The Neo keypad draws 22 mA from the C-Bus™ network. Adequate C-Bus network 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.

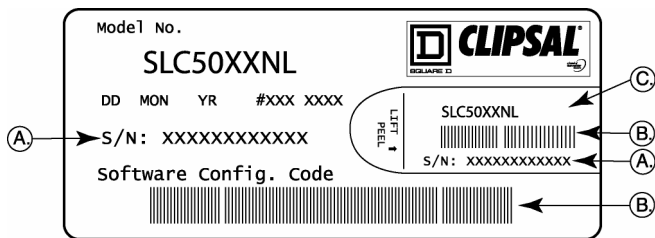
<h1>CAUTION</h1>
HAZARD OF UNEXPECTED OR IMPROPER SYSTEM BEHAVIOR
<ul style="list-style-type: none">• Properly record the physical location of each unit using the lift-and-peel label provided on the box and a site plan or location log.• Retain location records and provide it to the person(s) responsible 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 2: 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 3: Recording Locations on a Site Plan

KEY:

A. Lift-and-peel label

B. Location

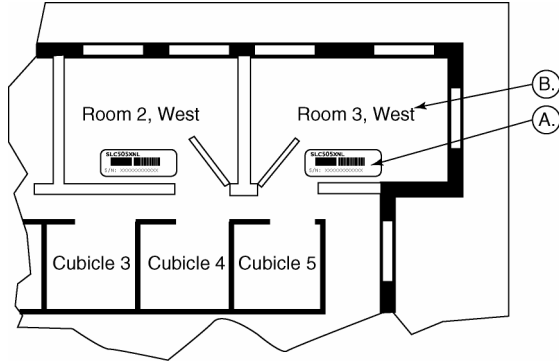
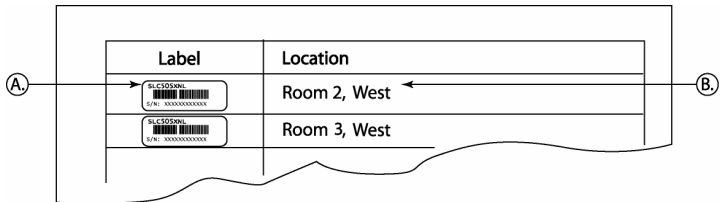


Figure 4: Recording Locations in a Log

KEY:

A. Lift-and-peel label

B. Location



Making C-Bus™ Connections

Install keypads onto the C-Bus network by connecting to the unshielded twisted pair C-Bus network cable. Connection should be made using Category 5 data cable. Use the insulated bootlace terminals provided.

NOTE: The C-Bus network connection is polarity sensitive. The polarity is clearly marked on the rear of the keypad.

⚠ WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not connect line voltage to wired keypads.

Failure to follow this instruction can result in personal injury or equipment or property damage.

Figure 5: Making Wiring Connections

KEY:

A. Insulated bootlace terminal

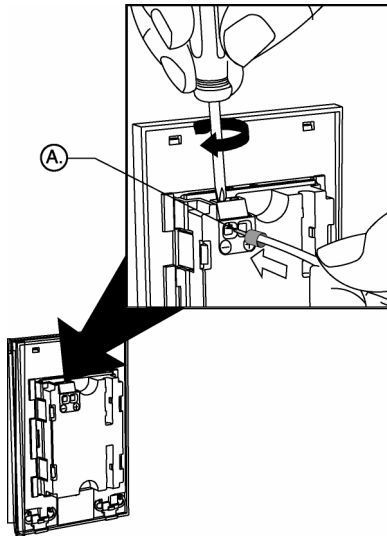
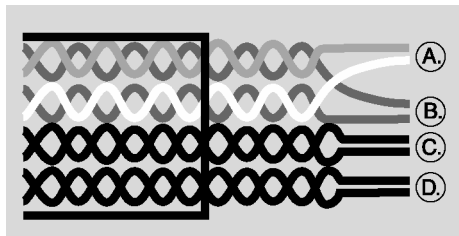


Figure 6: Wiring Connections Key Diagram

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.

Failure to follow this instruction will result in damage to the C-Bus network.

Mounting the Neo Keypad

Neo keypads are low-voltage Class 2 devices 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 2.05 inches (52 mm).

Figure 7: Mounting the Keypad

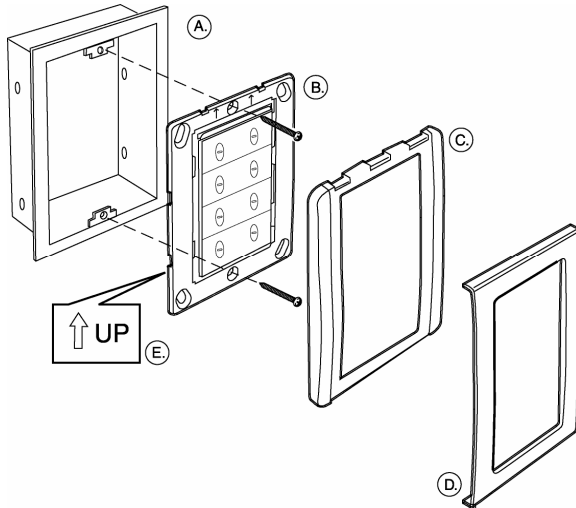
KEY:

A. Plaster (mud) ring
(not provided)
B. Grid plate and Neo
keypad assembly

Neo cover includes:

C. Outer surround
D. Inner surround
E. Mounting direction
label

*NOTE: Be sure to
mount the keypad and
grid plate assembly so
that all of the UP
arrows point UP.*



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

1. Align the mounting holes in the keypad grid plate with the plaster ring or wall box mounting holes.
2. Place each of the screws into the mounting holes. Thread the screws into 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.

Installing the Neo Keypad Cover Plate

The Neo keypad cover plate consists of an outer surround and an inner surround. See the illustration, "Mounting the Keypad." Follow the instructions below to install the Neo keypad cover plate.

1. Align the Neo outer surround over the grid plate/keypad assembly.
2. Snap the outer surround into place.
3. Snap the inner surround into place.

Removing the Neo Keypad Cover Plate

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.

Replacing Button Covers on a Neo Keypad

Follow the steps below to replace the button covers on a Neo keypad.

1. Remove the Neo keypad cover. See "Removing a Neo Keypad Cover Plate."
2. Remove the button covers using a flat blade screwdriver or a thin edged tool.
3. Gently pull one side edge of the button cover up then slide it toward the opposite side to unhook it.
4. Install the new button covers by aligning each new button cover in the available space. Press down gently on both sides until it clicks into place.
5. Re-install the Neo keypad cover. See "Installing a Neo Keypad Cover Plate."

STANDARDS

Table 2: Standards

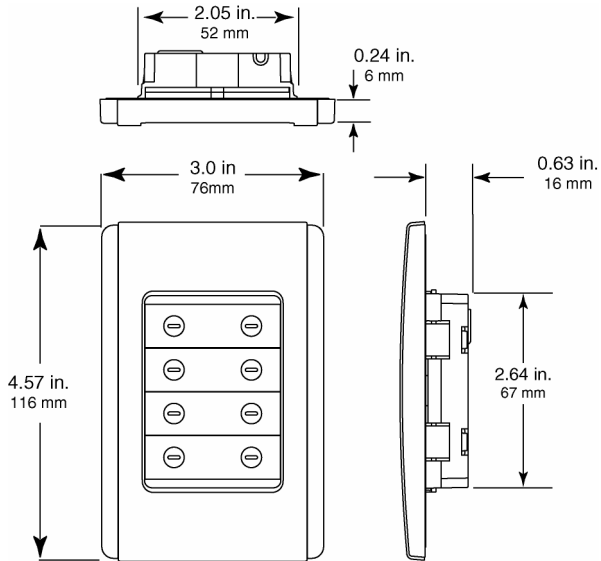
Standard	Title
UL916	Energy Management Equipment
CSA 22.2 Spec. 205	Signal Equipment
FCC	Part 15.101, Class B Digital Device for Home or Office Use
AS/NZS 3100:1997 inc Amd. 5	General Requirements for Electrical Equipment
AS/NZS 3108:1994 inc Amd. 6	Requirements for Safety; Extra-Low Voltage
IEC 742:1983 Amdt (1), IEC 60742 Am1 Ed 1.0b 1983 (Am 1992)	Isolating Transformers and Safety isolating transformers - Requirements
AS/NZS 1044:1995 EN 55014-1:1993 CISPR 14:1993	Electrical motor-operated and thermal appliances for household and similar purposes
EN60669-2-1:1996	Immunity and emissions for electronic switches
EN 61000-3-2:1995 A1, A2 IEC 61000-3-2:1995 A1, A2	Harmonic Current Emissions Standard
EN 61000-3-3:1995 IEC 61000-3-3: 1995	Voltage Fluctuations and Flicker Standard
EN 61000-4-2 IEC 61000-4-2	Immunity to Electrostatic Discharge Basic Standard
EN 61000-4-3 IEC 61000-4-3	Immunity to Radio Frequency Electromagnetic Field Basic Standard
EN 61000-4-4 IEC 61000-4-4	Immunity to Electrical Fast Transients Basic Standard
EN 61000-4-5 IEC 61000-4-5	Immunity to Electrical Surges Basic Standard
BS/EN 61000-4-6	Continuous Radiofrequency Emissions
89/336/EEC	European Union Directive on Electromagnetic Compatibility

SPECIFICATIONS

Table 3: Specifications

Catalog No.	SLC5052NL, SLC5054NL, SLC5058NL
Description	Neo keypads
C-Bus Supply Voltage	15 to 36 V DC @ 22 mA required for normal operation. Does not provide current to the C-Bus network.
AC Input Impedance	50 k ohms @ 1 kHz
Electrical Isolation	3.75 kV RMS
Control Functions	Load switching, dimming, timers, scene control
Status Indicators	User configurable orange and blue LED
Locater Lights	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 ²) – CAT 5 UTP cable required
Dimensions (L x W x H)	4.57 x 3.0 x 0.87 inches (116 x 76 x 22 mm)
Mounting Centers	3.31 inches (84 mm)
Weight	2.7 ounces (77 g)
Operating Temperature Range	32 to 113°F (0 to 45°C)
Operating Humidity Range	95% R.H., non-condensing
Color Options	Outer Surround and Button Covers: Slate, White, Cream, Soft Grey, Desert Sand, Black; Inner Surround: Same as outer plus Brushed Aluminum, Gold

Figure 8: Neo Keypad Dimensions



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.


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.

**Installation Instructions Square D® Clipsal® Neo™ Keypads
Instruction Bulletin**

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295 Tech Park Drive, Suite 100
La Vergne, TN, 37086
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www.squaredlightingcontrol.com

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