

A modern kitchen interior featuring dark wood cabinetry and a white countertop. A stainless steel sink and faucet are visible. Above the countertop, there is a shelf with various decorative items, including glass jars and a small framed picture. The lighting is warm and focused on the countertop area. A large green semi-transparent rectangle is overlaid on the left side of the image, containing the title and logo.

# CASEWORK INTEGRATED LED SYSTEM SOLUTION GUIDE

build better™  
**DIRTT**

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# OVERVIEW

## Features

- Blends function with form
- Allows for customizable placements of LEDs
- Offers two LED color options
- Integrates easily with DIRT Casework's quick-connect power packs
- Provides options for standard wall switches or Häfele integrated switches
- Includes a 10-year manufacturer's warranty

Incorporate DIRT Casework's Integrated LED System into the next casework project. The milky, translucent lens and deeper aluminum channel in this solution disperse a continuous soft glow. Customize each project and create the right mood by selecting a warm or cool color temperature.

The Integrated LED system pairs functional task lighting with a sleek integrated design. The LED lights work seamlessly with DIRT Casework's power pack quick-connect system, and the system renders bulky, unsightly task lights unnecessary. The versatile design of the solution can also be adjusted to accommodate many lighting applications.

Contact [caseworkdesign@dirtt.com](mailto:caseworkdesign@dirtt.com) for more information.

# INTEGRATED LED SYSTEM LOCATIONS

The Integrated LED Systems features a versatile design, so it can be installed in many (or any combination of these) locations:

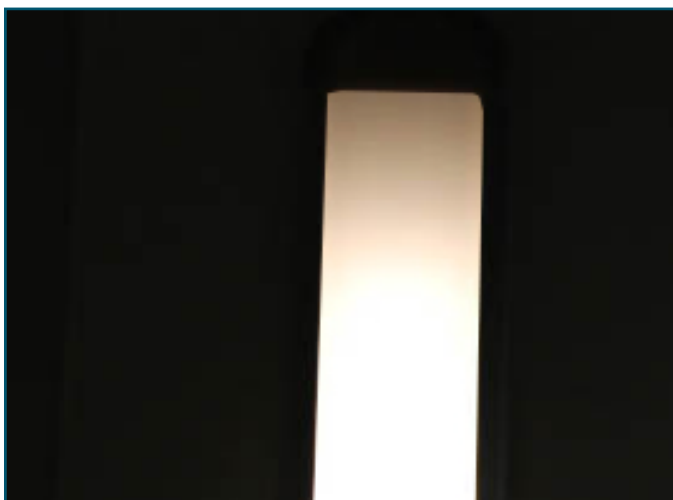
- Below upper cabinets for task lighting
- Below upper cabinets for accent lighting (e.g., wall-washing a backsplash)
- Above upper cabinets, storage cabinets, and wardrobe units as accent lighting
- Inside any cabinet
- Inside individual drawers
- As traditional toe kick lighting
- Under floating base cabinets
- Under floating shelves

# INTEGRATED LED SYSTEM FEATURES

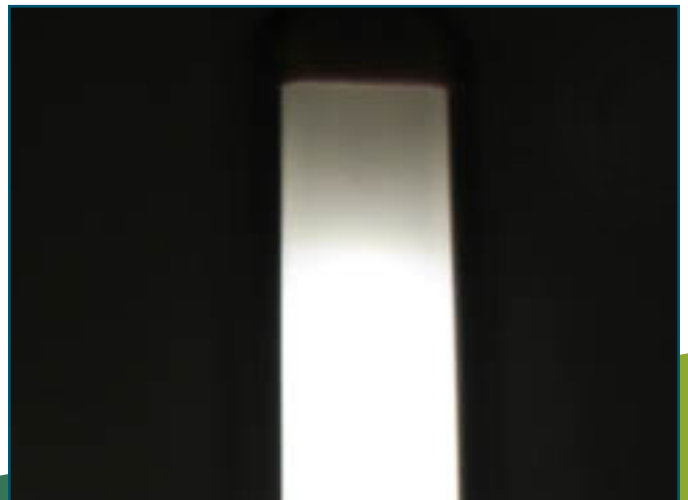
## Colour Temperature Options

To help create unique moods from the lighting, DIRTТ offers two color temperature options with the Integrated LED System:

1. Warm White
2. Cool White



Warm White (3000 Kelvin)



Cool White (4000 Kelvin)

## System Power

The power distribution design for the Casework Integrated LED System designates a cabinet to store the power source. A 6-way distribution block and transformer are placed in this designated cabinet and the LED drive sends a constant 12 volts of power to LEDs in other cabinets. For every 19 continuous linear feet of LED lighting, the LED system requires:

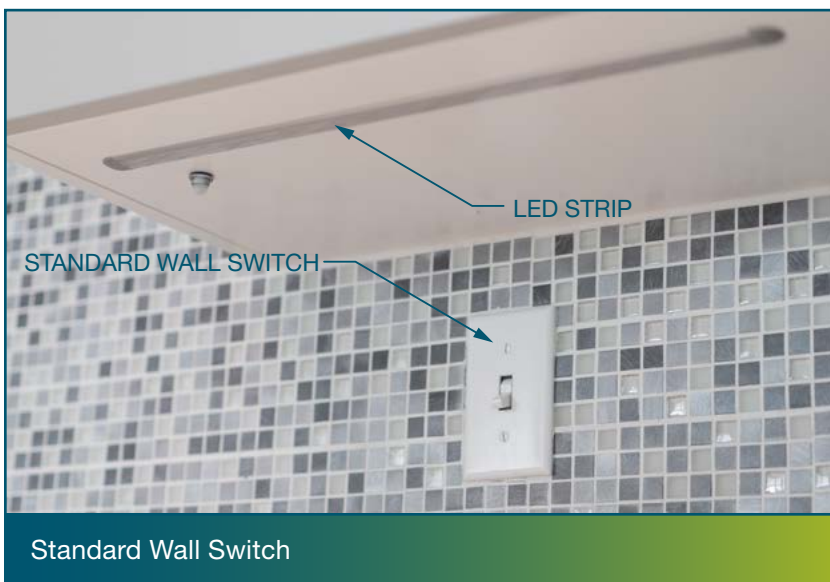
- An electrical outlet placed behind one cabinet.
- A DIRT™ Casework Power Pack (HW270).

Additional outlets may be necessary if the LED strips are not continuous or exceed 19 linear feet.

## Switch Options

### Standard Wall Switch

The Integrated LED System can be operated using a standard wall switch located in the room. The wall switch must be wired to the outlet accepting the power cord.



### Optional Integrated Switches

The Integrated LED System offers three integrated switch options:

1. Touchless sensor
2. Push button
3. Door sensor

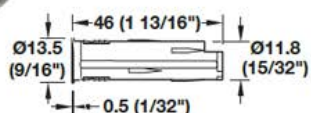
These switches operate the Integrated LED System at the cabinet location. One switch can operate an entire LED run, or an individual switch can operate an individual cabinet or drawer. The lead for any integrated switch must be connected to the power distribution block in the cabinet containing the power equipment. The placement of the switch must also be within the 6'-6" (2.0m) length of the integrated switch's power regulator (i.e., driver lead) for the LED run.

## Touchless Sensor Switch

The touchless sensor switch is installed on-site on the underside of the front of the cabinet. It can be attached on either the left or right side of the cabinet's front. Waving a hand in front of switch activates it.

### Häfele Loox sensor switch, modular - touch-free, soft on/off switching

#### TOUCH-FREE



- > Material/Colour: Plastic, silver coloured
- > Degree of protection: IP20
- > Sensor range: 0–80 mm (0–3 1/8")
- > Power consumption: ≤0.3 W
- > Drill hole Ø: 12 mm (1/2")
- > Supplied with: 1 switch

#### Description

Sensor switch

#### Item No.

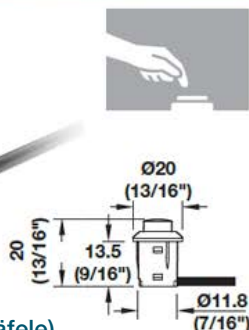
833.89.127

(Image and Item No. from Häfele)

## Push Switch

As DIRTT's most popular choice with the integrated LED system, the push switch is installed on-site on either side of the cabinet on the gable. It is usually installed toward the front of the cabinet, but it can also be placed at the right-hand front corner of the underside of the cabinet. Pushing on the switch activates it.

### Häfele Loox push switch - on/off switching



- > Material: Plastic
- > Length: 20 mm (13/16")
- > Drill hole Ø: 12 mm (1/2")
- > Supplied with: 1 switch with 2000 mm (78 3/4") lead

#### Colour

black

grey

#### Item No.

833.89.108

833.89.107

(Image and Item No. from Häfele)

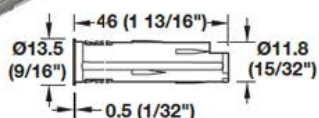


Drill hole Ø for plug: 12 mm (1/2")

## Door Sensor Switch

The door sensor switch is factory installed on the interior of the cabinet and is activated by opening or closing a door or drawer. This switch is most often used for interior cabinet lighting.

### Häfele Loox door sensor switch, modular - soft on/off switching



- > Material/Colour: Plastic, silver coloured
- > Degree of protection: IP20
- > Sensor range: 0–100 mm (0–4")
- > Power consumption: ≤0.3 W
- > Drill hole Ø: 12 mm (1/2")
- > Supplied with: 1 switch

#### Description

Door sensor switch

#### Item No.

833.89.128

(Image and Item No. from Häfele)

# INTEGRATED LED SYSTEM INSTALLATION

| MAS #                                            | DESCRIPTION                                                                                      | NICKNAME               | INSTALLED BY       |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------|--------------------|
| <b>LED Lighting Components</b>                   |                                                                                                  |                        |                    |
| 47142                                            | Aluminum Profile, for Recess Mounting, for Loox LED with Translucent Cover                       | Extrusion and Diffuser | Factory            |
| 47147                                            | End Cap, for Recessed Extrusion, for Loox LED                                                    | End Caps               | Factory            |
| 47148                                            | Flexible Strip Light, LOOX5 LED 2065, MONOCHROME, 12V, Cool 4000K                                | LED Light Strip (Cool) | Factory            |
| 47149                                            | Flexible Strip Light, LOOX5 LED 2065, MONOCHROME, 12V, Warm 3000K                                | LED Light Strip (Warm) | Factory            |
| <b>System Power Components</b>                   |                                                                                                  |                        |                    |
| 47150                                            | 6-Way Distributor, Loox5, Without Switching, 12V                                                 | Distribution Block B   | Factory            |
| 47136                                            | Extension Lead, 2000mm, 12V, Loox                                                                | Extension Leads        | Factory            |
| 47168                                            | Lead with 12V Plug System and Clip, for Loox LED Strip Light, MONOCHROME 8MM, 12V, AWG 18, 500mm | Extension Leads        | Factory            |
| 47027                                            | Metal Shelf Pin - 5mm                                                                            | Metal Shelf Pin        | Factory            |
| HW270                                            | DIRTT Casework Power Pack                                                                        |                        |                    |
| 47134                                            | LED Driver, 12V Constant, 0-40W                                                                  | Transformer            | Factory            |
| 47295                                            | Power Cord for Driver, Loox LED                                                                  | Flat Plug              | Factory            |
| 47152                                            | 6-Way Distributor, Loox5, With Switching, 12V                                                    | Distribution Block A   | Factory            |
| 40974                                            | Electrical Wire Clip                                                                             | Wire Clip              | Factory            |
| <b>Optional Integrated Sensor Hardware Packs</b> |                                                                                                  |                        |                    |
| HW619                                            | Touch Free Sensor Switch Pack                                                                    | Sensor Switch          | On-site technician |
| 47064                                            | Switch Housing, Loox, for Surface Mounting                                                       |                        |                    |
| 40788                                            | Sensor Switch, Touch Free On/Off                                                                 |                        |                    |
| 47110                                            | Driver Lead, Looz, for Modular Switches, 2000mm                                                  |                        |                    |
| HW620                                            | Push Sensor Switch Pack                                                                          | Push Switch            | On-site technician |
| 42917                                            | Loox Switch Push On/Off PL BLK                                                                   |                        |                    |
| 47064                                            | Switch Housing, Loox, for Surface Mounting                                                       |                        |                    |
| HW664                                            | Door Sensor Switch, Soft On/Off Switching                                                        | Door Sensor Switch     | Factory            |
| 40199                                            | Loox Switch Modular Door Sensor PL SILV                                                          |                        |                    |
| 47064                                            | Switch Housing, Loox, for Surface Mounting                                                       |                        |                    |
| 47110                                            | Driver Lead, Looz, for Modular Switches, 2000mm                                                  |                        |                    |



## NOTE

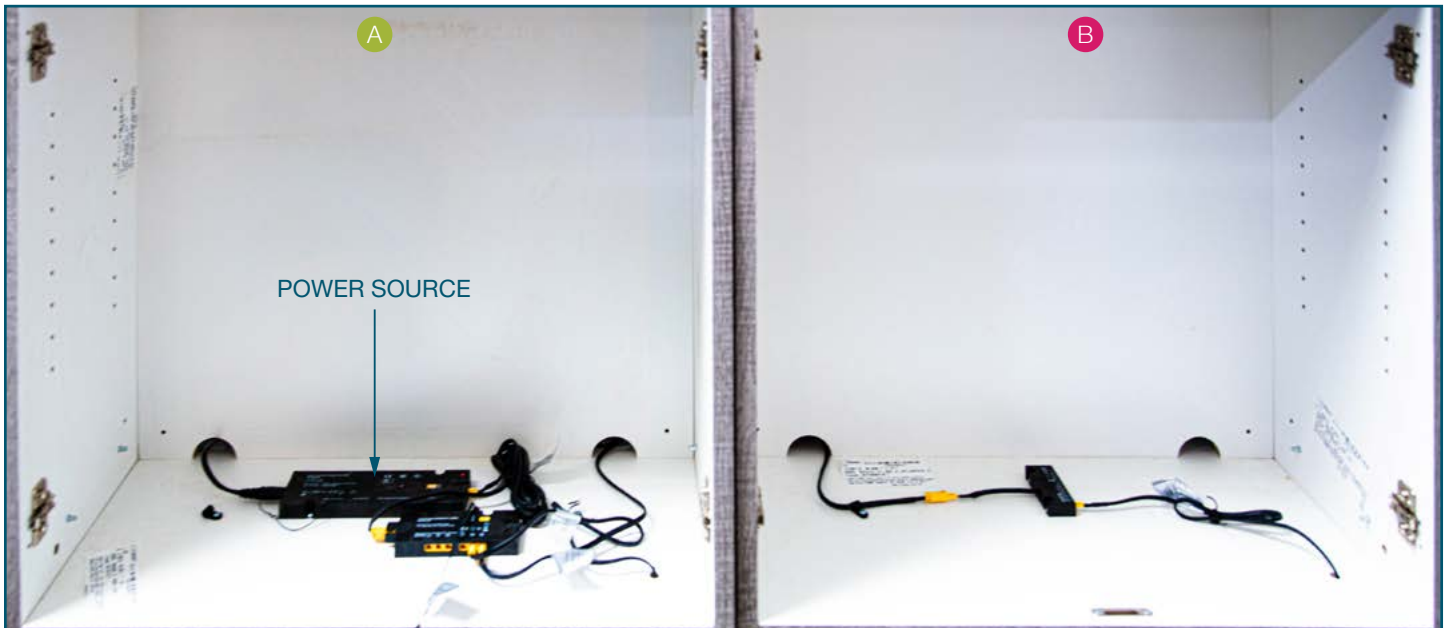
Part nicknames will be used in the installation steps

# Installation of Under Cabinet Lighting for Upper Cabinets

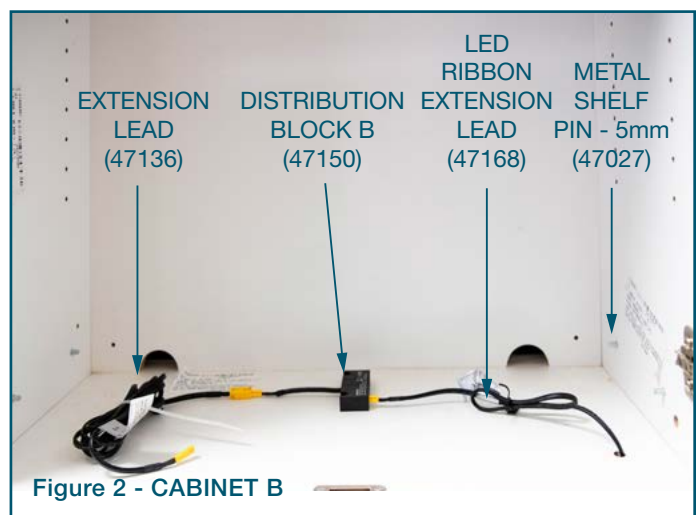
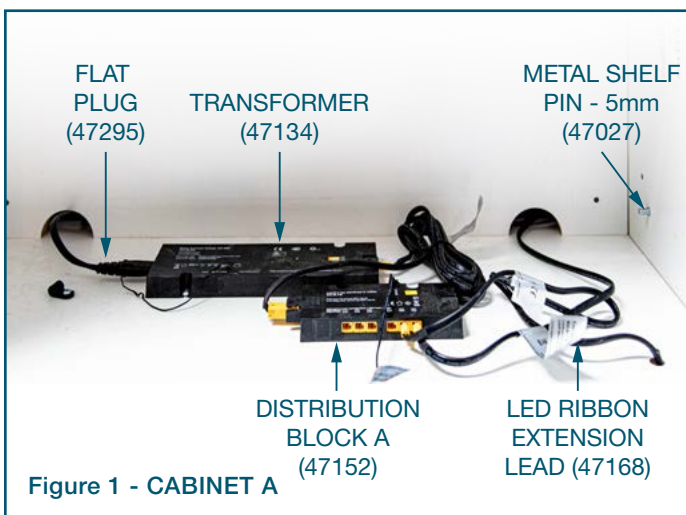
## Pre-installation Considerations

The installation of integrated LED lighting below upper cabinets is completed in factory. Some cabinets are pre-determined to have the designated power source. The initial drawing set for an individual project will indicate the location of the outlet in the wall.

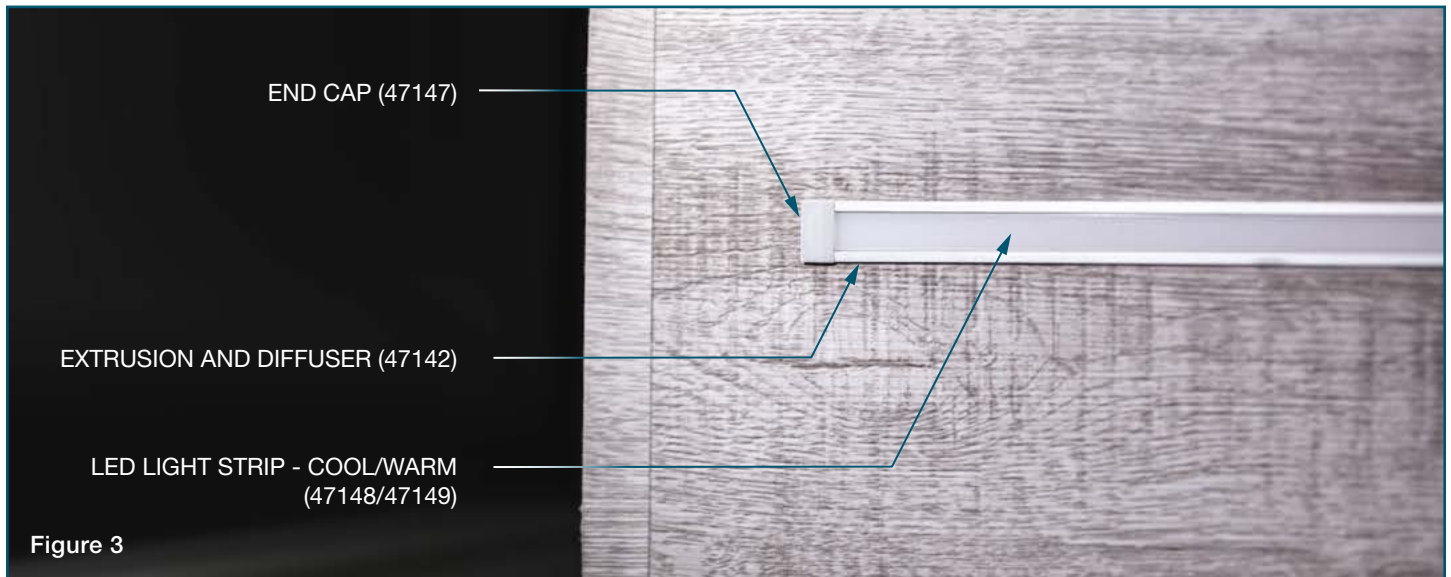
In this image, Cabinet **A** has the power source, while Cabinet **B** has no power source.



The cabinets ship to site with applicable components installed within each, including the correct power source in the correct cabinet (see Figures 1 and 2).



The underside of the cabinet will have the LED Light Strip (Cool)/(Warm) (47148/47149) installed with End Caps (47147) and Extrusion and Diffuser (47142) (see Figure 3).



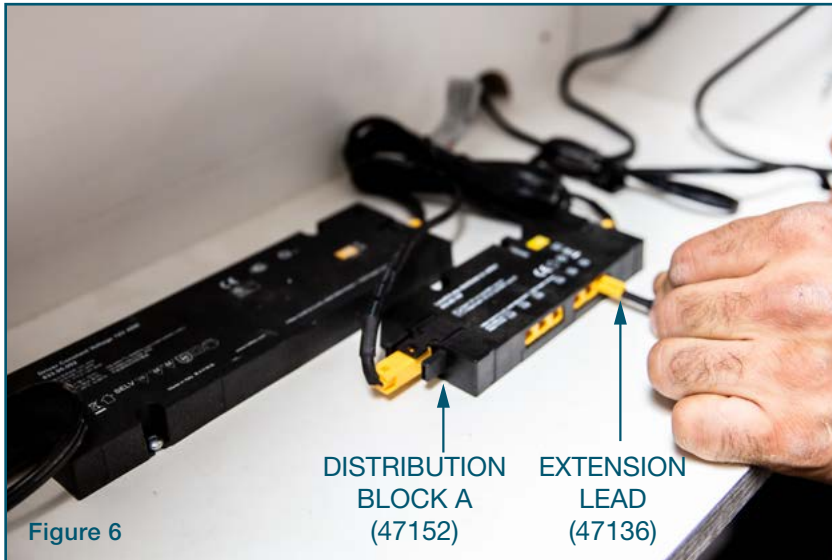
## Installation Sequence

- 01** With the cabinets installed on the wall, locate the holes between the powered and unpowered cabinets.
- 02** Drill through the pinhole in the powered cabinet to create an opening to the unpowered cabinet (see Figures 4 and 5).

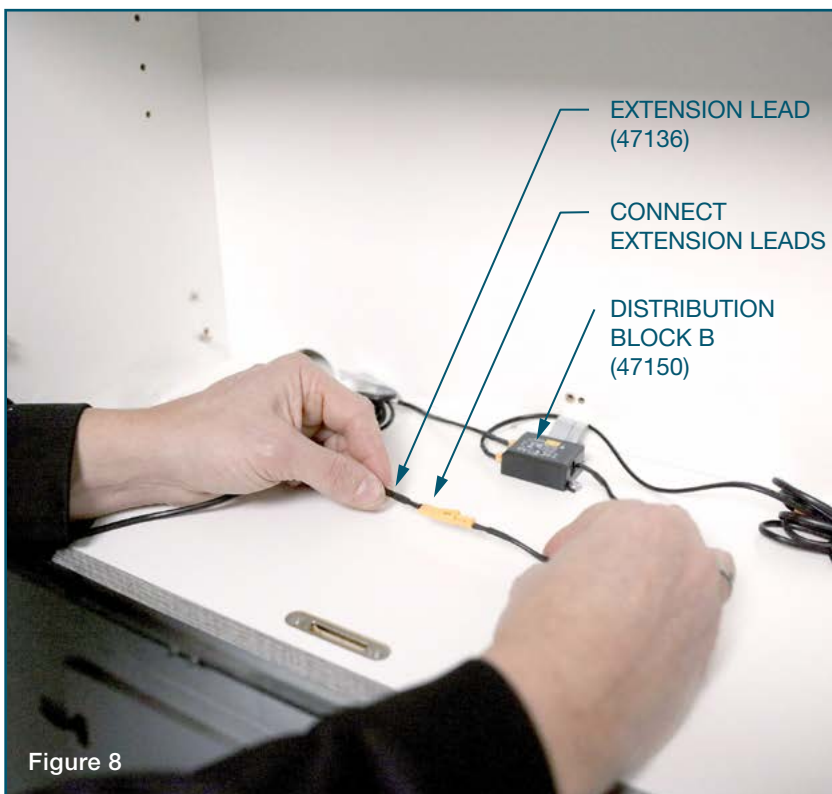


**03** In the powered cabinet, plug in the Extension Lead (47136) into Distribution Block A (47152) (see Figure 6).

**04** Feed one end of the extension lead through the hole from the powered cabinet to the unpowered cabinet (see Figure 7).



**05** In the unpowered cabinet, connect the extension lead to Distribution Block B (47150) by attaching the lead ends together (see Figure 8).



**06** Tether the excess cord on Extension Lead in the powered cabinet with the twist tie (see Figure 9).

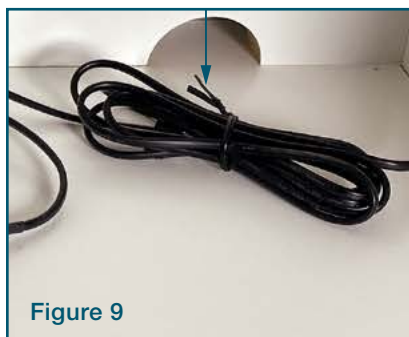


Figure 9

**07** Detach the Flat Plug (47295) from the Transformer (47134). Feed the prong end through the hole at the back of the cabinet and plug into an electrical outlet. Connect the flat plug end back into the transformer (see Figures 10 and 11).

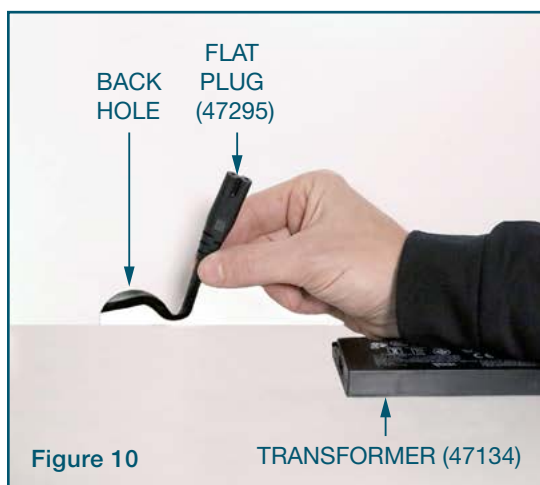


Figure 10

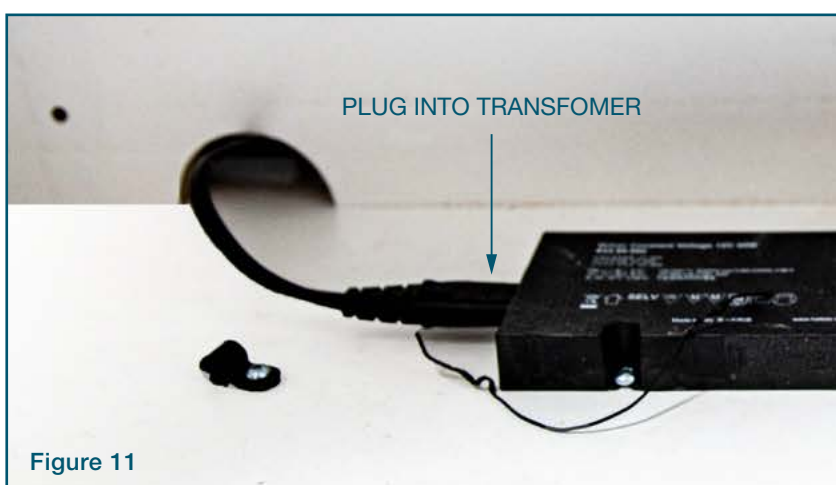
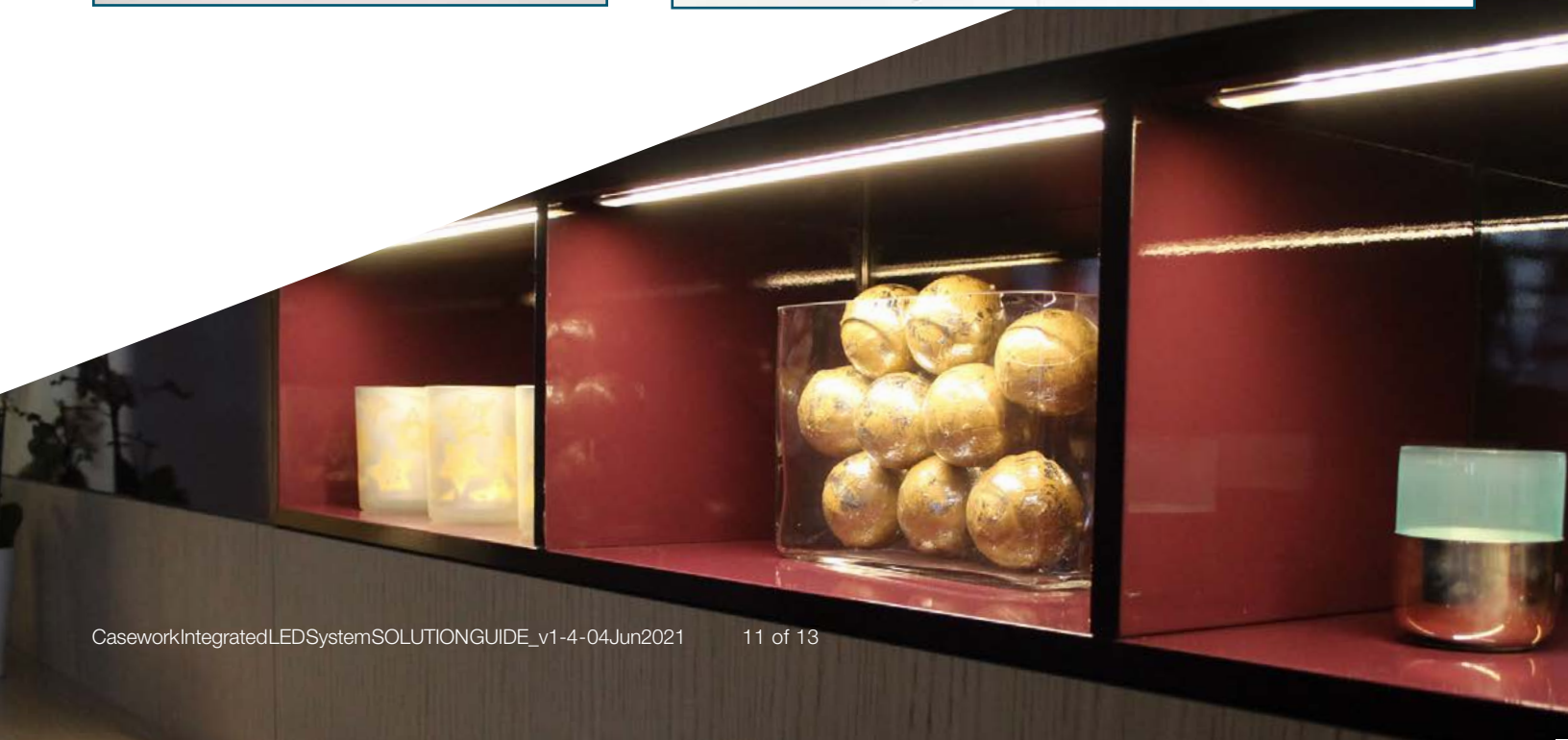


Figure 11



## Installation of Optional Sensor Switches



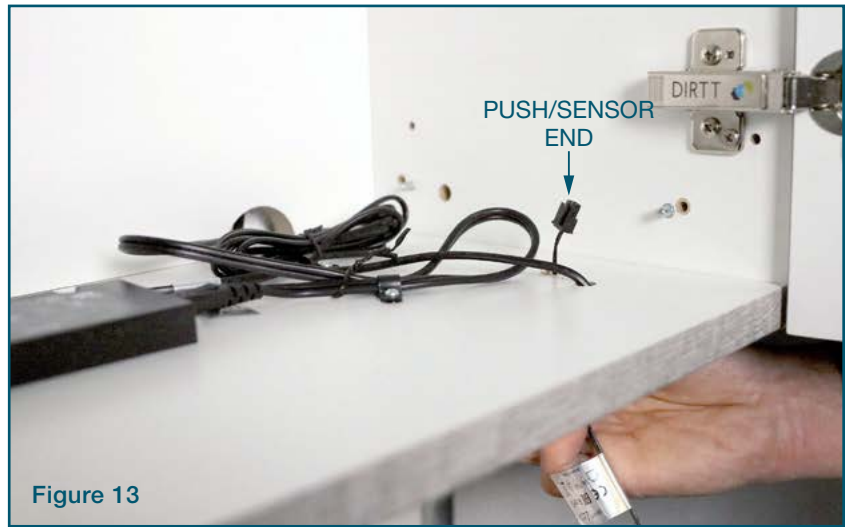
**IMPORTANT** For optional push or sensor switches, review their placement with the client before installing.

**08**

Drill a hole with a  $\frac{7}{16}$ " (12mm) drill bit through the bottom of the cabinet where the push or sensor switch will be located (see Figure 12).

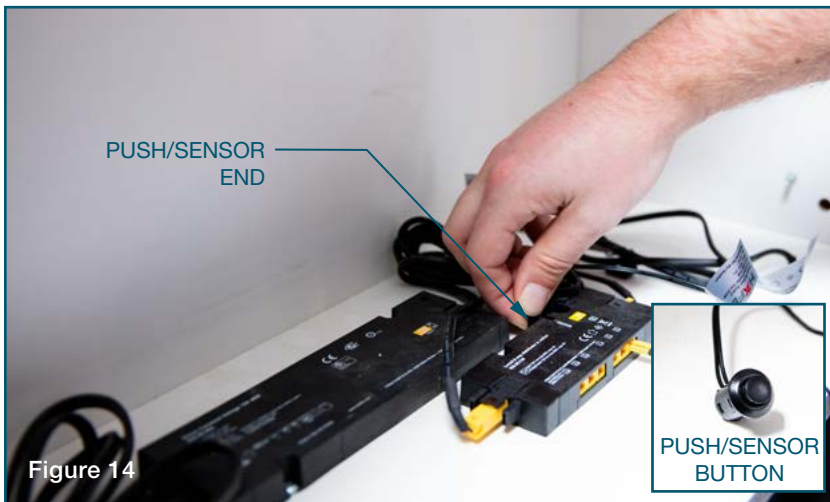
**09**

Feed the switch up through the hole (see Figure 13).



**10**

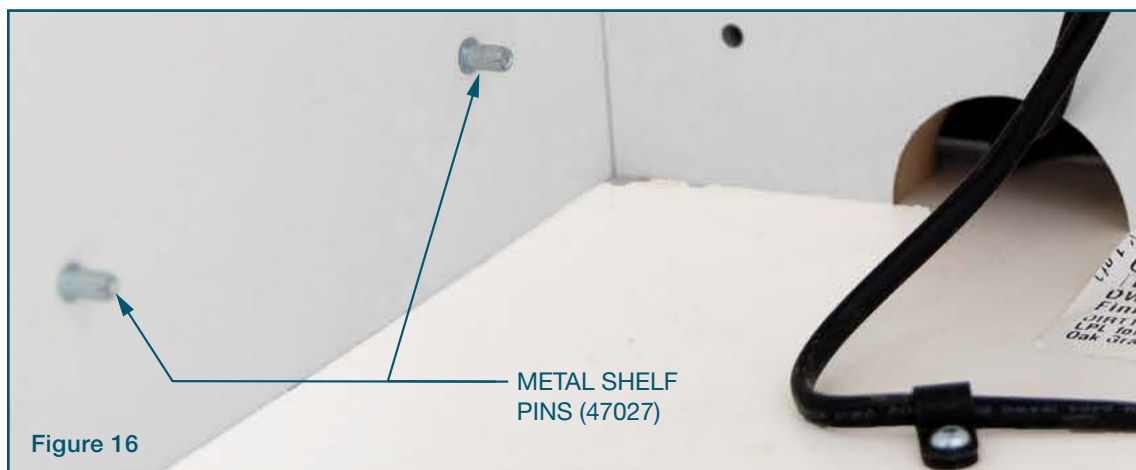
Plug the switch end into distribution block A (see Figure 14). Ensure the switch is snug in the hole (see Figure 15).



**NOTE**

If the switch is required elsewhere other than the underside of the cabinet, use the external housing in the switch hardware pack to install the switch in a different location.

- 11** Push the Metal Shelf Pins (47027) – QTY 4 into the holes on the side of inside cabinets (see Figure 16).



- 12** Slide valance shelf into cabinet by aligning the grooves on the edge of shelf with the pins (see Figures 17 and 18).

