

Contact Closure Interface

Contact Closure Interfaces allow simple integration of the HomeWorks® system with other equipment throughout the house. Equipment such as motion sensors, photocells, and security systems are able to activate lighting scenes and other HomeWorks system events through the use of Contact Closure Input Interfaces (HWI-CCI-8). Equipment such as shades, screens, gates, spas, and thermostats can be controlled by the HomeWorks system through the use of Contact Closure Output Interfaces (HWI-CCO-8). In addition, both the HWI-CCI-8 and the HWI-CCO-8 provide an infrared (IR) input that can be used to initiate HomeWorks system events using IR remote controls.

Contact Closure Interfaces (HWI-CCI-8 and HWI-CCO-8) can be mounted in any of four different enclosures: HWI-LV32-CE, HWI-LV24-CE, HWI-LV17-230, and HWI-ENC-CC.

Note: seeTouch™ keypads and 2-button keypads also include contact closure inputs.

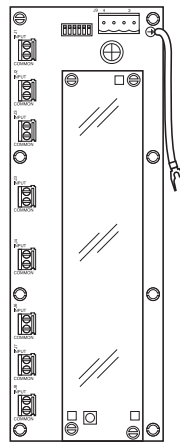
CONTACT CLOSURE INPUT INTERFACES

Many electronic systems and devices have the capability to provide status or control in the form of dry contact closure outputs. Contact closure inputs are programmed in the same fashion as the buttons on a HomeWorks keypad. For example, a motion sensor can be connected to a CCI Interface and programmed to activate a “Welcome Home” scene.

Each of the contact closure inputs can be individually programmed as normally-open or normally-closed.

CONTACT CLOSURE INPUT INTERFACE (MODEL HWI-CCI-8)

Each dry contact closure input has an LED indicator that shows the state of the connected device. The CCI-8 has an IR receiver that is programmed independently of the contact closure inputs. This receiver allows Lutron® Handheld IR Transmitters (GRX-IT, and GRX-8IT) to control the system. The IR receiver can recognize 11 different IR codes. The Lutron IR codes can be learned by most learning remotes, allowing audio/video remotes to control the lighting system.



Contact Closure Input Interface (HWI-CCI-8)

CONNECTION TO PROCESSOR

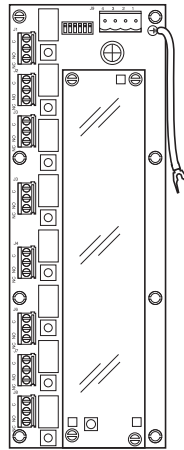
Each Contact Closure Interface uses one keypad address. Up to 32 can be connected to a configurable link on a HomeWorks processor using two pair [one pair 1.0mm² (#18 AWG), one pair 0.5-1.0mm² (#18-22 AWG) twisted shielded] Class 2/PELV cable. Contact Closure Interfaces must reside on a link that has been configured for keypads, and may be wired in a daisy-chain, home run, or T-tap configuration. The maximum total cable length of any wire run is 305m (1,000 feet) with up to 10 keypads or interfaces. The maximum total cable length is 1220m (4,000 feet).

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CONTACT CLOSURE OUTPUT INTERFACE (MODEL HWI-CCO-8)

Many electronic devices have dry contact closure inputs, allowing them to be controlled by other systems. The HomeWorks® system uses the Contact Closure Output board to control pumps, shades, thermostats, audio/video, and other equipment supplied with dry contact closure inputs. Each CCO interface has eight independent outputs and eight corresponding push buttons with LED indicators. Both normally-open and normally-closed relay contacts are provided for each output, and can be programmed to provide either momentary (pulsed) or maintained (latching) functionality.

These CCOs can be assigned to any keypad button or timeclock event in the same manner as any lighting load. In a typical application, a *HomeWorks* Keypad button can be programmed to activate an output on a CCO Interface that is connected to a motorised shade. The CCO Interface has an IR receiver. Refer to the HWI-CCI-8 for more information.



**Contact Closure Output interface
(HWI-CCO-8)**

CONNECTION TO PROCESSOR

Refer to the connection of the HWI-CCI-8 on *page 7.20*.

Web Keypads

The web keypads allow the homeowner to control the HomeWorks system from a computer using a web browser. The homeowner will be able to monitor and control selected keypads in the system. Web keypads can simulate actual keypads in the home or provide special functions only possible from the computer.

The web keypads can be accessed from most popular web browsers including Internet Explorer 6.0, Mozilla Firefox, and Safari. The web keypads will work on any browser that supports Javascript 1.2, Cascading Style Sheets and a screen with a minimum resolution of 800x600. Palm Pilots and Pocket PCs are not currently supported.

