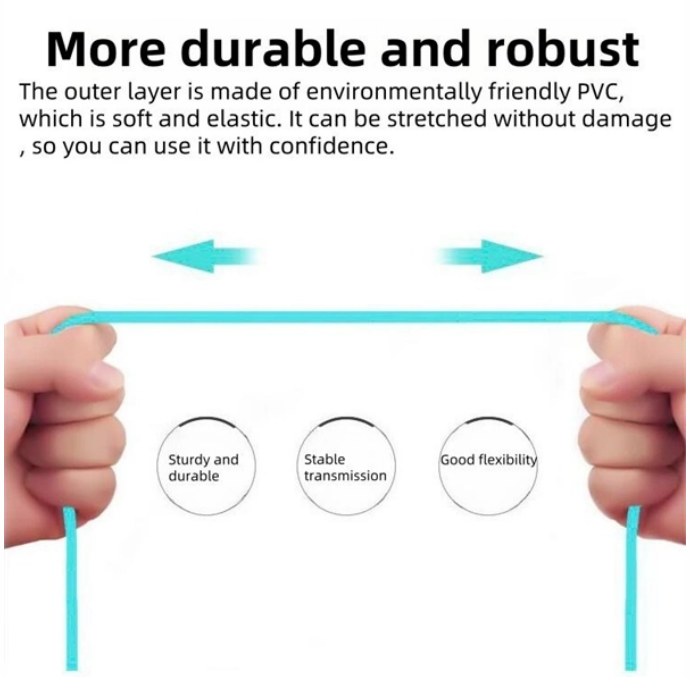
The function of the optocoupler quick-connect module



Overview

Designed for easy maintenance, they enable quick relay replacement without disconnecting wiring. The fully wired mounting carriers allow direct switching of actuators and other coupling elements in the field. An optocoupler (or opto-isolator) is a component that transfer signals between circuits using light. Optocouplers are very useful when you need to isolate different sections of a circuit, for example in power. Optocouplers, also known as opto-isolators, uses infrared light to transfer electrical signals between two electrically isolated circuits and are commonly classified by their photosensitive output device What is an Optocoupler?

An optocoupler (also called an opto-isolator, photo-coupler, or optical. The Schmitt inverter at the output performs several functions; it ensures that the output conforms to HCT voltage and current specifications, it also provides very fast rise and fall times for the output, and corrects the signal inversion caused by the phototransistor being operated in common. This circuit can safely control the high voltage side using a low voltage signal. The signal is coming from the microcontroller IC or Low voltage from a battery. Inside the

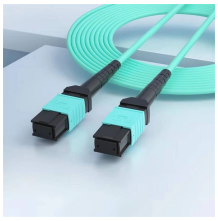
© 2026 HHC Networks & Smart City Solutions - All rights reserved

package, an infrared LED on the input side shines onto a phototransistor on the output side.

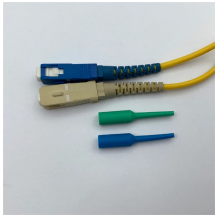
© 2026 HHC Networks & Smart City Solutions - All rights reserved

The function of the optocoupler quick-connect module

In this application, the optocoupler is used to detect the operation of the switch or another type of digital input signal.



Designed for easy maintenance, they enable quick relay replacement without disconnecting wiring. The fully wired mounting carriers allow direct switching of actuators and other coupling elements in the ...



Communication within an optocoupler occurs when an applied CMOS logic input generates an input-side current, which then creates a proportional LED output for transmission through the molding ...

The attached second design shows optocoupler module designed to respond to reflected IR signals. The IRED and the phototransistor are installed in separate compartments in the module ...

In systems with multiple voltage rails (3.3V, 5V, 12V, 24V), use the optocoupler module to safely pass signals between voltage domains without level-shifting ICs.

© 2026 HHC Networks & Smart City Solutions - All rights reserved

An optocoupler, also known as an opto-isolator, is an electronic component that transfers electrical signals between two isolated circuits using light. It typically consists of an LED (light ...

Unlike transformers or capacitors, which can only transfer AC signals across the isolation barrier, optocouplers can transfer both DC and AC signals alike. This makes them very popular in ...

In this example a PC817 optocoupler is shown isolating a circuit using HCT logic via a 7414 Schmitt inverter gate.

An optocoupler (or opto-isolator) is a component that transfer signals between circuits using light. In this guide, you''ll learn how they work and how you can use one in your own projects.

The optocoupler provides electrical isolation between the control side and the relay side. This circuit also protecting high voltage sensitive circuits from noise, voltage spikes and damage.

© 2026 HHC Networks & Smart City Solutions - All rights reserved

BenefitsMechanismDesignDefinitionExampleEffectsTypesApplicationsConstructionAdvantagesAn optocoupler or opto-isolator consists of a light emitter, the LED and a light sensitive receiver which can be a single photo-diode, photo-transistor, photo-resistor, photo-SCR, or a photo-TRIAC with the basic operation of an optocoupler being very simple to understand.See more on electronics-tutorials.ws.b_imgcap_altitle p strong,.b_imgcap_altitle .b_factrow strong{color:#767676}#b_results .b_imgcap_altitle{line-height:22px}.b_imgcap_altitle{display:flex;flex-direction:row-reverse;gap:var(--mai-smtc-padding-card-nested-default)}.b_imgcap_altitle .b_imgcap_img{flex-shrink:0;display:flex;flex-direction:column}.b_imgcap_altitle .b_imgcap_main{min-width:0;flex:1}.b_imgcap_altitle .b_imgcap_img>div,.b_imgcap_altitle .b_imgcap_img a{display:flex}.b_imgcap_altitle .b_imgcap_img img{border-radius:var(--mai-smtc-corner-card-default)}.b_hList img{display:block}.b_imagePair ner img{display:block;border-radius:6px}.b_algo .vtv2 img{border-radius:0}.b_hList .cico{margin-bottom:10px}.b_title .b_imagePair> ner,.b_vList>li>.b_imagePair> ner,.b_hList .b_imagePair> ner,.b_vPanel>div>.b_imagePair> ner,.b_gridList .b_imagePair> ner,.b_caption .b_imagePair> ner,.b_imagePair> ner>.b_footnote,.b_poleContent .b_imagePair> ner{padding-bottom:0}.b_imagePair> ner{padding-bottom:10px;float:left}.b_imagePair.reverse> ner{float:right}.b_imagePair .b_imagePair:last-child:after{clear:none}.b_algo .b_title .b_imagePair{display:block}.b_imagePair.b_cTxtWithImg>*{vertical-align:middle;display:inline-block}.b_imagePair.b_cTxtWithImg> ner{float:none;padding-right:10px}.b_imagePair.square_s> ner{width:50px}.b_imagePair.square_s{padding-left:60px}.b_imagePair.square_s> ner{margin:2px 0 0 -60px}.b_imagePair.square_s.reverse{padding-left:0;padding-right:60px}.b_imagePair.square_s.reverse> ner{margin:2px -60px 0 0}.b_ci_image_overlay:hover{cursor:pointer} sightsOverlay,#OverlayIFrame.b_mcOverlay sightsOverlay{position:fixed;top:5%;left:5%;bottom:5%;right:5%;width:90%;height:90%;border:0;border-radius:15px;margin:0;padding:0;overflow:hidden;z-index:9;display:none}#OverlayMask,#OverlayMask.b_mcOverlay{z-index:8;background-color:#000;opacity:.6;position:fixed;top:0;left:0;width:100%;height:100%}Learn about Electronics

© 2026 HHC Networks & Smart City Solutions - All rights reserved

Contact Us

For more information, pricing, or custom network solutions, please contact us:

Website: https://hashherbcafe.co.za
Email: hello@hashherbcafe.co.za
Phone: +27 63 814 7295
Address: 15 Galaxy Road, Linbro Business Park, Johannesburg, 2065, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

© 2026 HHC Networks & Smart City Solutions - All rights reserved