



## Description

### General

The **3RH11** control relays are suitable for industrial use according to DIN VDE 0106 Part 100. They are available in either screw or Cage Clamp terminal versions.

The Sirius **3RH11** control relays are based on the S00 frame size (same size as the **3RT101** contactors). The contacts are NEMA A600/P600 rated.

These units have high contact reliability at low voltages and currents for electronic circuits (currents  $\geq 1$  mA at 17V).

Four contacts are available in the basic device. Four additional contacts in the form of snap-on contact blocks can be added to the front of these devices.

These relays share the same snap-on auxiliary contacts, timing modules, and contactor mountable timing relays that are used on **3RT101** contactors.

### Surge suppression

Surge suppression in the form of RC elements, varistors, diodes, or Zener-diode combinations can be easily plugged into the front of the relays. The units are "keyed" so that the plug-in direction is always correct.

**Note:** The opening times of the NO contacts and the closing times of the NC contacts increase if the relay coils are connected to surge suppression devices. Interference suppression diode increases times by 6 to 10 times. Diode combination increases times by 2 to 6 times. Varistors add 2 to 5 ms to the time.

### Interface Relays

The Sirius **3RH11** interface relays are designed for coupling to PLCs and other similar devices. The interface relays come with a 24V DC low power consumption coil standard. These devices also have built-in surge suppression to protect sensitive electronics from the voltage surges associated with de-energizing the relay coil.

### Cage Clamp

Both the control relays and interface relays are available in Cage Clamp versions for much faster and easier wiring and maintenance.

### AC and DC operation

IEC 947, DIN VDE 0660

## Relay & Relay Timing Attachment Module Description

### Relay timing attachment

These timing relays are functionally identical to stand alone timing relays, but are designed to mount to the front of **3RH11** control relays to take up less mounting space in a panel. They do not necessarily need to be used to control the relay on which they are mounted.

The timing relay, which is available in ON-delay and OFF-delay versions, allows time delayed functions up to 100 s in 3 distinct time ranges.

These units contain a relay with one NO contact and one NC contact. The contacts are switched either after an ON-delay or an OFF-delay, depending on the version.

The timing relay is plugged into the front of the control relay. The timing relay is powered by a direct plug-in parallel connection to the coil terminals A1/A2. The timing function is activated upon energizing the control relay on which the timing relay is mounted, i.e. power is applied to the coil. The OFF-delay version does not require an external power source for operation. However, a minimum ON-time of 200 ms is required for proper operation of the OFF-delay function. Also, a varistor is built into the timing relay to suppress opening voltage surges in the control relay coil.

### Relay timing module

The timing modules are used in conjunction with the **3RH11** control relays to delay the operation of the relays after an ON-delay or an OFF-delay, depending on the module version. Time delayed functions of up to 100 s in 3 distinct time ranges are allowed. Control relays with a timing module will open or close after a delay according to the set time.

With the ON-delay version of the timing module is connected in series with the control relay coil. Terminal A1 of the coil must not be connected to the power source for proper operation. Instead, connect the power source to terminal A1 of the timing module.

With the OFF-delay version, the control relay coil is powered by the timing module. Terminals A1/A2 of the coil must not be connected to the power source.

Instead, connect your coil power source to terminals A1/A2 of the timing module.

The timing modules are suitable for both AC and DC operation.

The timing module is plugged into the front of the control relay and then slid down into its latched position. By doing this, the timing module is connected by plug-in contacts to control relay coil terminals A1/A2. Any control relay coil terminals which are not required are sealed off by cover plates on the housing of the timing module. This prevents inadvertent improper connection of the coil terminals. A varistor is built into the timing module to suppress any opening surges in the control relay coil.