

## Application Note

# Relialign™ Interlock Switches for Residential Personal and Elevation Equipment

### Background

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Honeywell Relialign™ RDI Series Residential Door Interlock switches are electromechanical devices designed for use in residential swing door applications, specifically dumbwaiters, lifts for the mobility impaired and swing-door elevators in the USA. In Canada, the RDI is designed for use in residential swing door applications, specifically elevators and dumbwaiters but is not designed for use in lifts for the mobility impaired. The interlock holds the door in place and prevents it from being opened in potentially unsafe conditions (e.g. the elevator/lift car is not present at the door).

Featuring Honeywell MICRO SWITCH™ switches as an internal solenoid control mechanism, the Relialign™ Series of door interlocks may reduce complexity of the host controller, reduce power consumption, extend solenoid life, and reduce solenoid timeouts. Additional Honeywell MICRO SWITCH™ basic switches are used to indicate door closure and door lock status, providing an extra level of reliability. RDI Series interlocks are configurable and available in left- and right-hand versions, allowing for simplified installation, customization, and retrofitting into current designs.

### Solutions

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#### Secure and safe operation

Honeywell Relialign™ RDI interlocks assist in the secure and safe operation of manual elevation equipment. For example, residential elevators are found in many homes where the residents desire the ease of a powered elevator to take them to different floors. Honeywell's door interlock switches are designed with a housing that allows them to seamlessly fit into the application and the doorway. When installed, the RDI guards against accidental opening of the elevator door in a unsafe situation. If the elevator car is not present or in transit, the Relialign™ interlock will be engaged and not allow the door to be opened.



*A home elevator featuring a residential door interlock switch.*


#### Adaptable with many types of applications

Honeywell Relialign™ RDI interlocks are adaptable with many types of residential elevator applications. With the external solenoid control option, customers can integrate Honeywell's interlocks into their systems that already have solenoid control programming logic or devices. This differs from the internal solenoid control option that uses the basic switches in the inside of the unit to determine when the solenoid should be powered. Allowing an external controller to operate the power source for the internal solenoid permits the customer to customize their locking time intervals and power consumption.

# Application Note

## Relialign™ Interlock Switches

### for Residential Personal and Elevation Equipment

Relialign™ RDI Series	Features and Benefits
	<ul style="list-style-type: none"><li>• Compliance with ASME A17.1, cULus, and CAN/CSA B44</li><li>• Reliable performance and multiple design features minimize nuisance stoppage</li><li>• Manual override for easy actuation without user hazard reduces the potential for call-backs</li><li>• Door closure retention cam holds door with minimal key-to-interlock play; a new design material provides more pull force than competitive offerings</li><li>• Series or parallel wiring option for door closed and door locked switches</li><li>• MICRO SWITCH™ SX or ZX Series switch used to indicate door closure, providing an extra level of security</li><li>• 6-pin terminal block or one-piece Cat 5 connection for quick and easy connection</li><li>• Universal voltage for ac and dc applications</li><li>• Enhanced safety, and low power consumption</li></ul>

#### VALUE PROPOSITIONS (★ - competitive differentiator)

- ★ **Quick and easy installation:** Non-intrusive design does not require destruction of door or frame, allowing for lower installation costs. Packaged solution saves time and reduces cost by eliminating engineering, procurement, and installation associated with custom OEM-made products.
- ★ **Safety:** Dual mechanism action increases tamper resistance and safety. No open or exposed contacts reduce the risk of shock and manual overrides. Relialign™ Series meets ASME A17.1 & A18.1, cULus, and CAN/CSA B44 codes.
- ★ **Reliability:** Key engagement designed to reduce maintenance costs by minimizing nuisance stoppages.

- ★ **Flexibility:** Wiring capabilities designed for use across multiple styles of control systems. Available in series or parallel and multiple colors.
- ★ **Adaptability:** Options for solenoid control, internal basic switch control, and external CPU or control logic sources of control permits the customer to customize their locking time intervals and power consumption.
- **Less complexity:** Unique Cat 5 connections, as well as a 6-pin terminal strip.
- **Custom:** Configurable product platform may be customized for a variety of engineering designs and requirements.

#### Find out more

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office.

To learn more about Honeywell's sensing and control products, call **1-800-537-6945**, visit

**sensing.honeywell.com**, or e-mail inquiries to **info.sc@honeywell.com**

#### Sensing and Control

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**Warranty.** Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.