

# RF1V Force Guided Relays

# SF1V Relay Sockets



IDEC CORPORATION

# Enables flexible construction of safety circuits

## Complies with International Standards

Force guided contact mechanism  
(EN50205 Type A TÜV approved)



## Fast Response Time

Response time of 8 ms.  
Ensures safety by turning the load off quickly.  
(200 m/s<sup>2</sup> minimum)

## High Shock Resistance

High shock resistant suitable for use in machine tools and in environments subjected to vibration and shocks.

## Clear Visibility

Available with a built-in LED.

## Compact and Slim

Compact size enables size reduction of PC board.  
4-pole type: 13W × 40D × 24H mm  
6-pole type: 13W × 50D × 24H mm

## Socket Variation

PC board mount and DIN rail mount sockets are available.



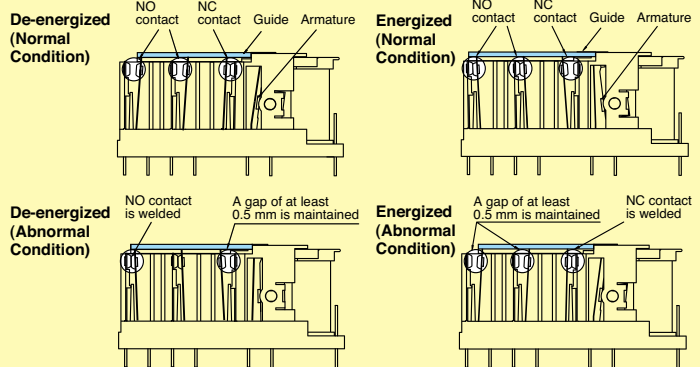
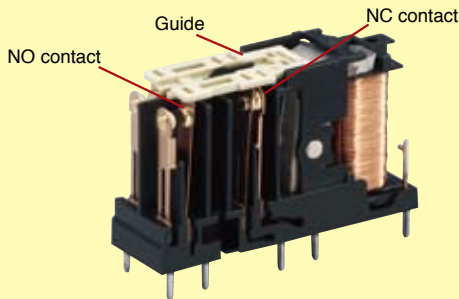
PC board mount

DIN rail mount

## What is a force guided relay?

Relays used in safety circuits to detect failures such as contact welding and damage to the contact spring.

Contacts of a force guided relay are forced to open and close by a guide connected to the armature. Due to requirements of standard EN50205, a force guided relay has independent NO and NC contacts. If a NO contact welds, a NC contact will not close even when the relay coil is turned off (de-energized) and must maintain a gap of at least 0.5 mm. Furthermore, if a NC contact welds, a NO contact will not close when the relay is turned on (energized) and must maintain a gap of at least 0.5 mm. (General-purpose relays do not have the above characteristics.)



## Applications

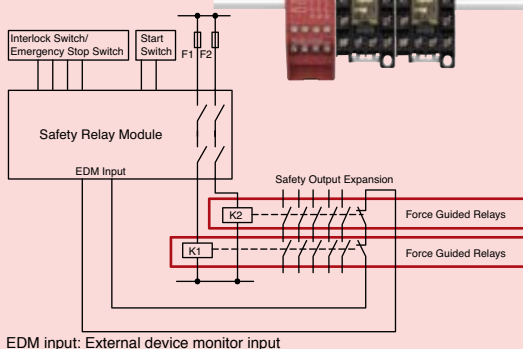
Force guided relays are used in safety circuits in combination with interlock switches, light curtains, and emergency stop switches to control outputs. They can also be used to expand outputs for safety relay modules and safety controllers.

## Output expansion for safety relay modules and safety controllers

### •HR1S Safety Relay Module

Cost effective and easy method to expand mechanical contact outputs.

#### •Circuit Example



### •FS1A Safety Controller

Solid state safety outputs of safety controllers can be converted to mechanical contact outputs.

#### •Circuit Example

