Why should I use Safety Relays?

...to meet existing safety standards!

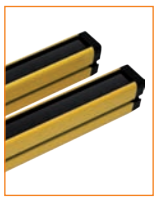
"A fault in the hardware or the software of the control system must not lead to hazardous situations." This is the requirement in the EU's Machinery Directive 2006/42/EG under the heading 1.2.1 "Safety and reliability of control systems". The directive implies that no person should be put at risk if for example, a relay sticks or if a transistor or two electrical conductors short-circuit.

A safety relay will fulfill these requirements. A safety relay has, for example, inputs that are checked for short-circuits and dual redundant circuits that are checked at each operation. This can be compared to the dual brake circuits in a car. If one of the circuits is faulty the other will stop the car. In a safety relay there is an additional function which only allows a machine to start if both circuits are ok.

The safety standard describes various safety categories depending on the level of risk and application. One single universal relay with selectable safety categories solves this.

...to supervise safety devices!

Light Beams



Light Curtains

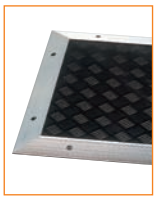
3-Position Devices

2-Hand Devices

Safety Interlock Switches

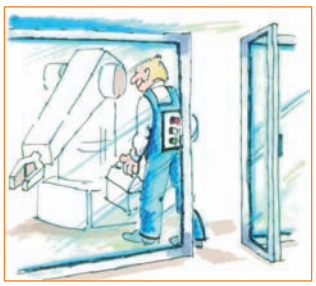
Emergency Stop Buttons

Safety Strips and Bumpers



Safety Guard Mats

...for safe stops and reliable restarts!



Dual stop signals when the gate is opened...

Entering or putting a hand or limb into a hazardous area, must cause all machines that can cause a personal injury to stop safely. Many serious accidents occur when machinery is believed to have stopped but is in fact only pausing in its program sequence. The safety relay monitors the gate interlock switch, the cables and gives dual stop signals.

Supervised reset when there can be a person within the risk area...

Make sure that nobody is within the restricted area when activating the reset button. A supervised reset button must be pressed and released before a reset can occur. Many serious accidents have been caused by an unintentional and unsupervised reset.

Timed reset when you cannot see the entire risk area...

Sometimes a double reset function is necessary to make sure that no one is left behind in the risk area. First, after ensuring no other person is inside the hazardous area, the pre-reset button must be activated, followed by the reset button outside the risk area within an acceptable time period e.g. 10 seconds. A safety timer and a safety relay can provide this function.

Automatic reset for small hatches...

Where body entry is not possible through a hatch, the safety circuit can be automatically reset.

The safety relays are reset immediately when the hatch interlock switch contacts are closed.