

# Safety Relays

Omron's safety relays feature a wide-ranging safety functionality, low maintenance needs and different options to meet your panel space and functional safety requirements.



# Safety Relays – Product Selection Guide



OMRON |

Safety Relays  
Product selection guide






INTEGRATED | INTELLIGENT | INTERACTIVE

### Safety Relays

What type of Safety Relay is required?

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    graph TD
      Q1{Does the application require the monitoring of two-hand palm buttons?}
      Q2{Does the application require an expandable safety relay solution?}
      Q3{Does the application require a high number of actuations per hour*?}
      Q4{Does the application require monitoring, a safety light curtain or safety scanner?}
      Q5{Does the application require a slim body?}
      Q6{Does the application require a modular system?}

      Q1 -- Yes --> P1[G9SA-TH301]
      Q1 -- No --> Q2
      Q2 -- Yes --> Q6
      Q2 -- No --> Q3
      Q6 -- Yes --> P2[G9SX-BC202]
      Q6 -- No --> P3[G9SA-501]
      Q3 -- Yes --> Q4
      Q3 -- No --> P4[G9SE-X01]
      Q4 -- Yes --> Q5
      Q4 -- No --> P5[G9SA-301]
      Q5 -- Yes --> P6[G9SB-XXXX-A/C]
      Q5 -- No --> P5
      
```

Click on picture to link to product selection guide

# G9SB Safety Relay Unit



[Click on picture to link to datasheet](#)

A slim size safety relay for the most common safety devices in high demand applications.

- Power requirements – 24 VAC/DC
- Inputs – 1- and 2-input channel units
- Outputs – two N/O outputs
- 17.5mm- and 22.5mm-wide housing
- Manual and automatic reset units
- Modules G9SB-200-B/D and G9SB-301-B/D can be used for safety devices with OSSD inputs like safety light curtains and safety scanners
- Modules G9SB-2002-A/C and G9SB-2031-A/C can be used for emergency stop, door switches and rope pull

# G9SX Safety Modules



[Click on picture to link to datasheet](#)

A versatile safety relays series, ideal for scalable safety solutions.

- Power requirements – 24 VDC
- Inputs – single or dual N/C input channel
- Outputs – up to 4 depending module
- Segmentation of safety functions by "AND" connection
- LED indications enable easy diagnosis
- Dedicated Safety function units available:
  - Safety guard switch unit
  - Standstill monitoring unit
  - Limited speed monitoring unit
  - Non-Contact door switch unit
  - Time delayed units (Max. Off delay time 150s)

# G9SA Safety Relay Unit



[Click on picture to link to datasheet](#)

All purpose expandable safety relays series ideal for high demand applications.

- Power requirements – 24 VAC/DC
- Inputs – 1 or 2 channels possible
- Outputs – two N/O outputs
- 17.5-mm wide expansion Units with 3 poles and 3 OFF-delay poles
- Dedicated Safety function available:
  - Emergency Stop Units
  - Emergency Stop Off-delay units
  - Two-hand controller
  - Expansion units with delay options



# G9SE Safety Relay



[Click on picture to link to datasheet](#)

A compact safety relay for simple safety applications.

- Power requirements – 24 VDC
- Inputs – two dual N/C input channel
- Output - Up to 4 safety outputs
- 17.5 or 22.5 mm width to save mounting space
- Max. OFF-delay time up to 30 sec.
- Front side wiring using screw-less terminals
- Led indicators
- Universal inputs support a wide range of safety input devices like emergency stops, door switches, safety limit switches, etc.

# SR1 Safety Monitoring Relay



[Click on picture to link to datasheet](#)

A cost-effective option for standalone safety applications.

- Power requirements – 24 VAC/DC or 115 VAC
- Inputs – single or dual N/C input channel
- Outputs – two N/O safety outputs
- External Device Monitoring (EDM)
- Manual or Automatic Reset
- Dedicated Safety function units available:
  - Stop Motion Sensing Unit
  - Two-Hand Control
  - E-Stop or single channel monitoring
  - Time delayed units and expansion units

# G7SA Forcibly Guided Relays



[Click on picture to link to datasheet](#)

Compact, slim forcibly guided relays  
conforming to EN Standards

- Coil rated voltage: 12, 18, 21, 24, 48, 110 VDC
- 4 and 6 poles configurations are available
- Contact poles with NO and NC contacts options in different configurations
- Sockets for front-mounting, push-in plus terminals or screw terminals; or back-mounting, with PCB terminals
- Reinforce isolations between inputs and outputs and poles from different polarity
- Complies with
  - Machinery Directive
  - EN 50205 Class A (certified by VDE)



# We make machine safety easier



Easy-to use



Cost-effective



Easy-to maintain