Machine Safety Solutions
Basic to Complex

• Enhance worker safety through proper safeguarding
• Expert guidance in risk assessment, consulting and parts selection
• Global product support and availability
Omron has Safety covered

All machines need safety
Recent changes to safety standards now hold the end user and their chosen machine builders responsible for machine safety to prevent operator injury. Let Omron guide you through the risk assessment and hazard abatement process leading to component selection to deliver an outstanding solution that can reduce your liability.

Telling myth from truth
Do you believe machine safety slows productivity, makes operation and maintenance a hassle, and costs too much to implement? Let our Omron safety experts provide recent evidence to update your understanding of advances in safety and the not so obvious costs and risk exposure.

Safe, productive and efficient machines
Our goal is to protect personnel and increase overall machine performance. We offer full lines of safety and automation devices that reduce project costs through innovative connectivity.

One software, one program
A single software with integrated development environment for logic, safety, vision, motion, robotics, HMIs and networking. Your advantage is reduced programming and debugging time with flexibility for new build and retrofit projects. From basic equipment to full production lines, Omron can offer complete automation and safety solutions.

Complexity of Equipment

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Safety solutions scaled to your needs
We listen to your needs and offer expert advice and guidance for the application, integration and maintenance of safeguarding systems. This brochure shows examples of Omron safety and automation devices working together across a variety of applications.

- Basic machines and equipment
- Complex machines and equipment
- Distributed systems and production lines

Make Omron your safety and automation partner for comprehensive solutions.
Accessories to compliment your system

Your complete automation & safety provider

Choose from these complimentary Automation products to directly interface with the safety-related parts of the control system. Omron can provide a complete solution with its entire suite of products to fulfill all of your needs. You benefit from working with a single supplier to streamline support and purchasing to improve your time and cost efficiency. Because Omron can supply high level controls and devices right down to control panel switches allowing you to consolidate your purchase orders which reduces your internal costs and improves your project’s overall profitability.

Safeguarding devices, operator protection and emergency stop devices
Devices that capture information from the machine to determine if it can run.

Safety device monitoring and control
Devices that make safety-related decisions.

Output devices
Devices that interact with equipment in order to ensure the safety of personnel.
Basic machines and equipment

Cost effective, easy, compact, simple...

Basic machines and equipment sometimes need only simple products to solve machine safeguarding requirements. These products provide the required function and performance in a small package at an affordable price. If your machine has simple guarding requirements with 1-6 safety device inputs consider these products to meet this requirement.

1 Safety Light Curtains
F3SG-RE Economy Light Curtain
Satisfy the need for basic ON/OFF detection functionality with the highest level of protection to keep operators safe and productive.

2 Power Supplies
S8VK Series
Whether used to power safety devices or the automation control system, we offer a wide range of compact power supplies.

3 Safety Monitoring Relays
G9SE Series
For simple safety control that scales up in small increments choose slim profile G9SE with front panel terminals for quick access and reduced wiring costs.

4 Emergency Stop Devices
A22E 22mm/25mm Series
Industrial machines need an emergency stop device on the operator panel and the A22E series switches let you match machine aesthetics with different size actuators.

5 Switching Components
A22N Series Pushbuttons
Complete your operator panel design with 22mm lighted and non-lighted pushbutton switches used for safety system reset, machine start, and other manual functions.

6 Safety Door Switches
D4NS Series
Prevent unsafe operator access with compact plastic bodied safety door switches. An optional metal operation head increases life span.

7 Complementary Control Products
Programmable Logic Controllers
CP1E/CP1L/CP1H Compact PLC
Whether your machine operates stand-alone or as a process module, the CP1 series saves space with a Micro PLC footprint and offers the control capability of a modular PLC.
Complex machines and equipment

Easy to use, advanced functionality, monitoring and diagnostic capabilities with more I/O...

When machine guarding requirements become complex with different setup and maintenance modes or require more safety inputs in the same panel, consider the following products. Our programmable safety controllers are easy to use and can be directly connected to the machine control system for status and monitoring over EtherNet/IP and can provide up to 256 I/O.

8 Non-contact Switches
D40 Series
When you want to monitor the status of multiple access doors use series connected non-contact switches.

9 Power Supplies
S8VS Series
Let your panel power supply help diagnose problems using built-in multimeter functionality. It can display voltage, current, output run time, and life expectancy and provide alarm output.

10 Programmable Safety Controller
G9SP Series
Localize safety control with 10 or 20 inputs and directly connect to a supervising PLC via EtherNet/IP, or NB series HMI via serial communication.

11 Human Machine Interface
NB Dedicated Basic HMI
Easy to integrate HMI comes loaded with pre-built screens for status, monitoring and control of safety and non-safety I/O.

12 Programmable Safety Controller
NX Series Modular Safety I/O System
Cut through safety controller interface limits with direct connection to any PLC using EtherNet/IP coupler, and build a stand-alone system with up to 256 I/O.

13 Operator Controls
A22TK Trapped Key Switch
Prevent unauthorized control of equipment operation with a 3-position enabling grip to control machine grip start and stop.

14 Operator Controls
A4EG Enabling Grip
Protect operators during setup and maintenance with a 3-position enabling grip to control machine start and stop.

15 Complementary Control Products
Modular Programmable Logic Controllers
CJ2 Modular PLC
When your packaging or general machine automation projects need to connect to the safety system, choose CJ2 series PLCs for their simple connectivity using the built-in Ethernet port.
From basic to complex designs, we have your safety solution needs covered.

Distributed systems & production lines

Seamless integrated, fast, reliable, advanced...

For larger systems requiring a higher number of safety devices distributed over a larger area, we offer one of the faster most reliable networks, EtherCAT as a solution that integrates directly into the control architecture for seamless operation and rapid commissioning.

With a common programming software and direct access of safety I/O status within the controller makes it the easiest system to seamlessly integrate into any control architecture.

**Safety Door Switches**

D4SL-N Guard lock
Safety Door Switch

Prevent workers from being trapped inside hazardous areas of equipment with this switch and slide key, lockable in the open position with a trapped keys that can’t be closed until the area is clear.

**Safety Laser Scanners**

OS32C Safety Laser Scanner

If access to the safety hazard covers a large area use non-contact sensing to prevent equipment start-up or shut down when an intrusion occurs. Built-in EtherNet/IP allows remote device monitoring of status and information.

**Programmable Safety Controller**

NX Series Modular Safety I/O System

Build a safety control system with compact modular I/O that directly integrates and connects to Omron NJ and NX controllers using Safety over EtherCAT, or connects to your standard automation controller using Safety over EtherNet/IP. Use NX-S to build a modular I/O system with up to 256 or 1024 I/O.

The slim profile I/O units can be combined with standard I/O on the same bus coupler for panel space and cost savings. With re-usable function blocks you’ll never run out of memory.
Force-guided Relays
G7SA / G7S-E
Safety systems from the simplest to the most complex use these relays to switch different voltages and higher currents, and monitor faults.

Motion & Drives
G5 Servo Systems and MX2 Frequency Inverters
These products incorporate safety functionality with safe inputs to directly remove power to the output actuators without the need for additional hardware. Feedback is provided to ensure that the power has been removed.

Safety Mats
UMQ Universal Mats with Quick Disconnect
Whether you are trying to shutdown equipment or prevent it from starting up, safety mats provide personnel detection in the harshest of environments.

Safety Light Curtains
F3SG-RA Advanced series with F3W-MA Muting Actuators
When parts need to flow in and out of hazardous areas without stopping equipment, this combination provides a plug and play solution.

Complementary Control Products
NJ and NX7 Series Machine Automation Controllers
Simplify the integration of your safety systems with the NJ and NX series controllers. The EtherCAT network architecture delivers speed and ease of connectivity to seamlessly integrate the NX-5 safety unit. The NJ Series has sequence and motion functionality and offers CPU units with robotics function and SQL client. The NX7 is the highest performance Sysmac CPU, designed to address the most demanding industrial control and motion applications, laying the infrastructure for Big Data support.
Authorized Distributor:

Automation Control Systems
- Machine Automation Controllers (MAC) • Programmable Controllers (PLC)
- Operator interfaces (HMI) • Distributed I/O • Software

Drives & Motion Controls
- Servo & AC Drives • Motion Controllers & Encoders

Temperature & Process Controllers
- Single and Multi-loop Controllers

Sensors & Vision
- Proximity Sensors • Photoelectric Sensors • Fiber-Optic Sensors
- Amplified Photomicrosensors • Measurement Sensors
- Ultrasonic Sensors • Vision Sensors

Industrial Components
- RFID/Code Readers • Relays • Pushbuttons & Indicators
- Limit and Basic Switches • Timers • Counters • Metering Devices
- Power Supplies

Safety
- Laser Scanners • Safety Mats • Edges and Bumpers • Programmable Safety Controllers • Light Curtains • Safety Relays • Safety Interlock Switches

OMRON AUTOMATION AND SAFETY • THE AMERICAS HEADQUARTERS • Chicago, IL USA • 847.843.7900 • 800.556.6766 • www.omron247.com

OMRON CANADA, INC. • HEAD OFFICE
Toronto, ON, Canada • 416.286.6465 • 866.986.6766 • www.omron247.com

OMRON ELECTRONICS DE MEXICO • HEAD OFFICE
México DF • 52.55.59.01.43.00 • 01-800-226-6766 • mela@omron.com

OMRON ELECTRONICS DE MEXICO • SALES OFFICE
Apodaca, N.L. • 52.81.11.56.99.20 • 01-800-226-6766 • mela@omron.com

OMRON ELECTRONICA DO BRASIL LTDA • HEAD OFFICE
São Paulo, SP, Brasil • 55.11.2101.6300 • www.omron.com.br

OMRON ARGENTINA • SALES OFFICE
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OTHER OMRON LATIN AMERICA SALES
54.11.4783.5300

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OMRON EUROPE B.V. • Wegalaan 67-69, NL-2132 JD, Hoofddorp, The Netherlands. • +31 (0) 23 568 13 00 • www.industrial.omron.eu

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