

Systems and solutions for every elevator.  
Everywhere.

# ELEVATORS AND ESCALATORS PRODUCT LINE OVERVIEW

NORTH AMERICAN EDITION



# INTRODUCTION

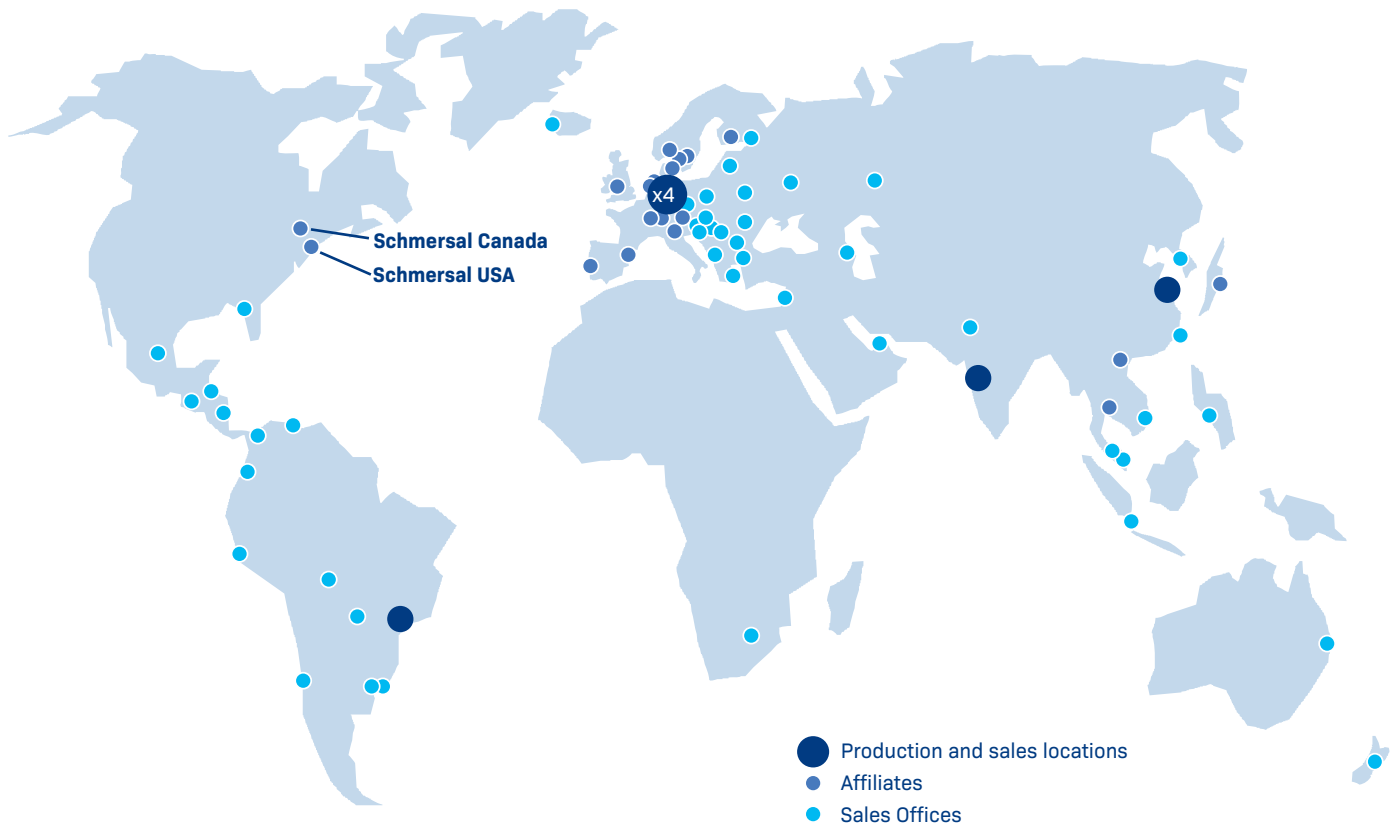
For over 75 years, Schmersal has been manufacturing industry-leading elevator and machine safety products. Our long history has allowed our products to evolve continually and exceed expectations by producing new and cutting-edge innovations while maintaining a loyal commitment to our customers. While Schmersal products are used in many industries, the elevator and escalator industry has been one of our primary focuses. By working closely with OEMs and service companies, we ensure that passengers are safe and that our products are designed to meet all local codes and standards.

In addition to our seven global manufacturing sites and our HQ in Wuppertal, Germany, we also have a network of strategically placed distribution centers around the world that allow us to deliver our products quickly

and help meet the needs of our partners. Our ongoing commitment to our North American customers has allowed us to substantially grow our inventory of elevator products at our New York operation, and our local team works hard to get orders out quickly to ensure that you can keep your elevators operating safely and reliably. We are also growing our partnerships with elevator parts companies across the USA to make finding Schmersal elevator and escalator components even easier.

While we can supply industry-leading components, our ultimate goal is to provide complete custom kit solutions. With many engineers on our team ready to help, we can create custom products, kits, and assemblies that are designed to meet your requirements. Whether there is a need for a simple component or a complex custom design, we are eager to help.

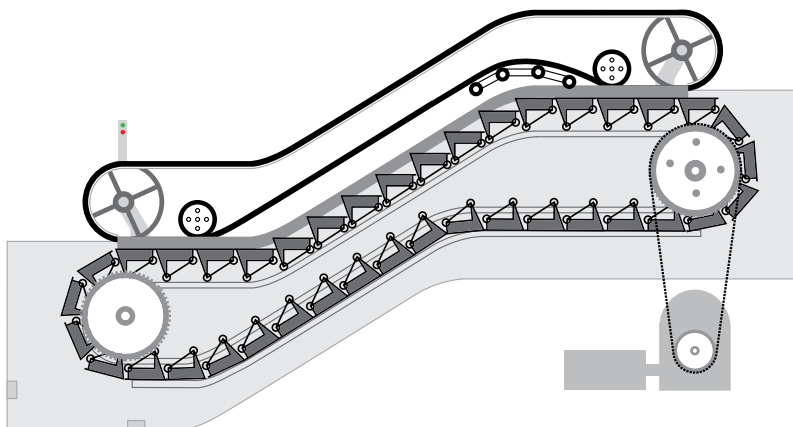
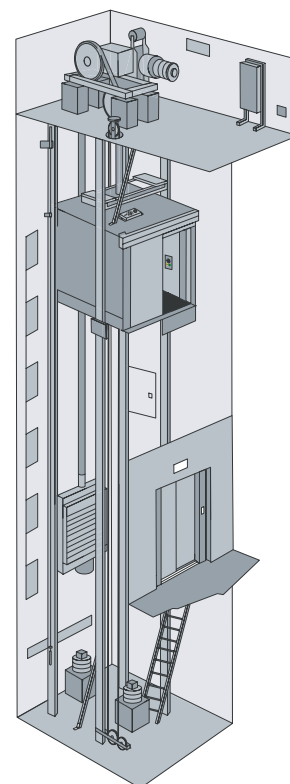
**Stock at New York and Ontario warehouses. Can ship same day to US and Canada.**



## ELEVATOR SOLUTIONS

We have components and solutions for all areas of the elevator:

- Brake monitor release / wear
- Emergency phones and communications systems
- Elevator controller
- Emergency-Stop button
- Governor monitoring
- Terminal, slow down, or positioning limit switches
- Emergency escape hatch monitoring
- Top of Car call station
- Top of Car inspection controls
- Position switch for door drives
- Door lock monitoring
- Apron monitoring
- Catch monitoring
- Maintenance access door monitoring
- Door locking devices
- Pit access and controls
- Pit-ladder position monitoring
- Counterweight buffer monitoring
- Car buffer monitoring
- Slack rope monitoring



## ESCALATOR SOLUTIONS

We have components and solutions for all areas of the escalator:

- Speed monitoring
- Handrail entry and speed monitoring
- Comb plate detection
- Skirt switches
- Missing or damaged step detection
- Chain tension and break monitoring
- Maintenance cover monitoring
- Remote inspection controls
- Maintenance controls
- Emergency stopping
- Step level switches

# SAFETY RATED LIMIT AND POSITION SWITCHES

## PS SERIES



The PS-series is Schmersal's latest line of switches with many upgrades from previous models. The modular design, along with an easily adjustable head and many actuators to choose from, provides countless potential configurations. These are easily adjustable in the field or can be factory configured to your exact requirements.

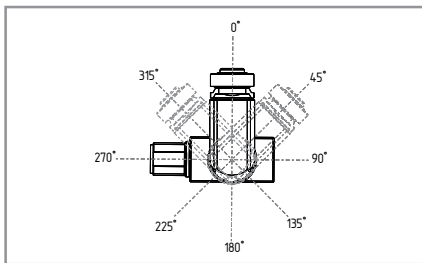
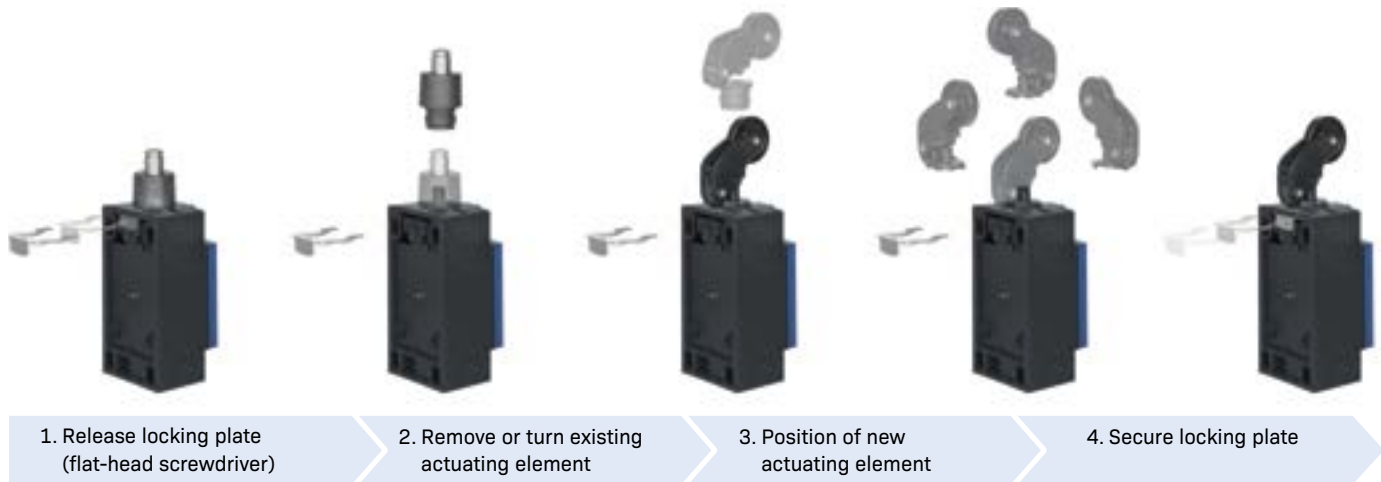
PS switches are available in slow or snap-action and can house up to 3 NO and/or NC contacts (overlapping, staggered, latching, and other arrangements available too – just ask). The IP66 and IP67 ratings ensure that these robust switches are resistant to water spray or even being temporarily submerged, and adapters come with every switch to accommodate NPT, M20, or other common cable entries. Manual reset and remote reset options also available, and even some with built-in LED indicator lights too.

Whatever your need, this product line can provide.



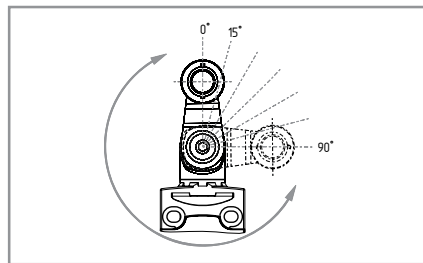
online catalog

### ACTUATOR ADJUSTMENT AND REPLACEMENT



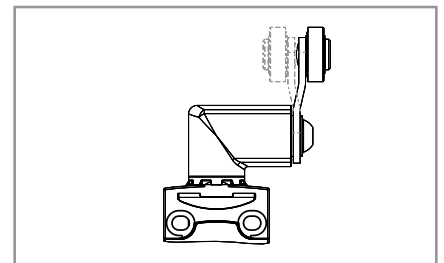
#### Adjustable actuator elements

All actuating elements can be rotated in 45° increments and can be quickly replaced



#### Adjustable lever

Roller lever can be set in 15° steps.



#### Reversible lever

For versions with a rotatable roller lever, the lever can be fitted so that the roller is on the inside.

## ACTUATORS



... AND MORE.

## BODY TYPES



### PS116

Metal & Plastic  
31 x 64 x 16.6 mm  
1.22 x 2.51 x 0.65 in



### PS215

Metal  
31 x 75.5 x 33 mm  
1.22 x 2.9 x 1.3 in



### PS216

Thermoplastic  
31 x 75.5 x 33 mm  
1.22 x 2.9 x 1.3 in



### PS226

Thermoplastic  
59 x 56.2 x 33 mm  
2.32 x 2.21 x 1.3 in



### PS315

Metal  
40 x 87 x 37.2 mm  
1.57 x 3.42 x 1.46 in



### PS316

Thermoplastic  
40 x 87 x 37.2 mm  
1.57 x 3.42 x 1.46 in

# SAFETY RATED LIMIT AND POSITION SWITCHES

## Z/T 235 / 236 / 255 / 335 / 336 / 355

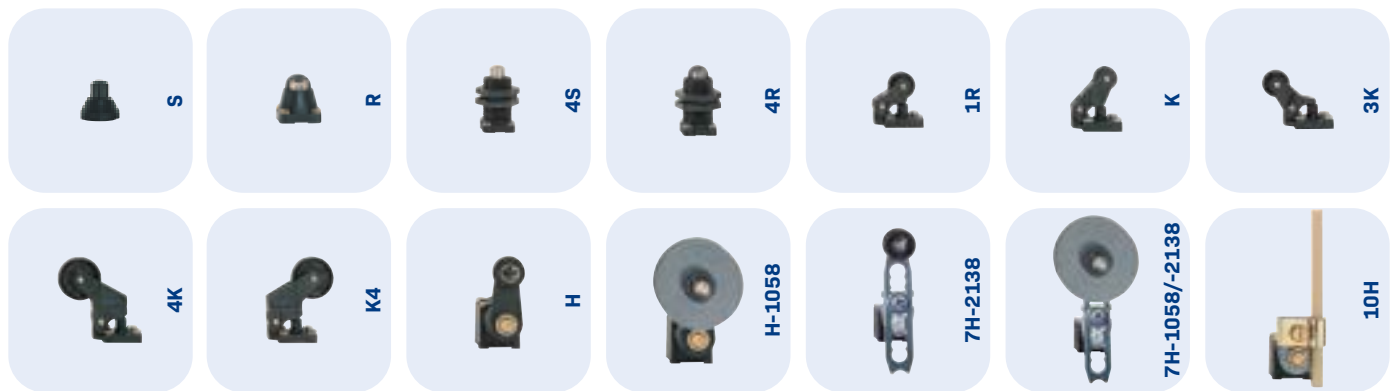


Our legacy line of switches have stood the test of time. These proven switches are available in all of the options you've come to expect and can support up to 2 sets of NO and/or NC contacts. These budget-friendly options can still be relied upon to hold up in even the most rugged of applications, whether that be a new-installation, modernization, or a service/repair job.

This established family of switches may offer some cost-savings over the PS-series, but can be relied upon to hold up in even the most rugged of applications, whether that be a new installation, modernization, or a service/repair job.



### ACTUATORS



### BODY TYPES



**Z/T 235**

Metal

30 x 63.5 x 30 mm  
1.18 x 2.5 x 1.18 in

**Z/T 236**

Thermoplastic

30 x 58.5 x 30 mm  
1.18 x 2.3 x 1.18 in

**Z/T 255**

Metal

63 x 63.5 x 30 mm  
2.48 x 2.5 x 1.18 in

**Z/T 335**

Metal

40.5 x 76 x 38 mm  
1.59 x 2.99 x 1.5 in

**Z/T 336**

Thermoplastic

38 x 40.5 x 103.5 mm  
1.5 x 1.59 x 4.07 in

**Z/T 355**

Metal

66.7 x 76 x 38 mm  
2.63 x 2.99 x 1.5 in

# DOOR CONTACTS AND MAGNETIC REED SWITCHES

## DOOR CONTACTS

Elevator doors are one of the most common causes for service calls, and low-quality components are often to blame. The best OEMs know this, and that's why many of them rely on Schmersal door contacts when designing their elevator systems.

The AZ family of door contacts come in various styles, some with the contact pins built into the switch, and others with the pins attached to the actuator bridge. All contacts are self-cleaning, positive opening, and all of the enclosures are compact and made with self-extinguishing thermoplastic.



online catalog



**AZ 05**



**AZ 06/07**



**AZ 051/052/053**



**AZ 061/062/063**

## MAGNETIC REED SWITCHES

Schmersal manufactures a wide range of magnetic reed switches that actuate in the presence of a magnetic field and often used to create zone or leveling signals in a hoistway. These contactless switches are available in rectangular or cylindrical "cigar" profiles, with metal or thermoplastic housings, and offer incredibly long service life.

These magnetic reed switches have been successfully applied as position sensors in elevators, suspension railways, and amusement park rides. A wide variety of magnet actuators are available, based on desired sensing distance, housing material, and mounting type.



online catalog



**BN65**

Cylindrical

13 mm Dia x 103 mm

0.51 in Dia x 4.06 in



**BN310**

Rectangular

13 x 88 x 25 mm

0.51 x 3.46 x 0.98 in



**Magnet actuators**

# ADDITIONAL ELEVATOR PRODUCTS



## DOOR LOCKS

Our range includes electric door locks for various types of lifts. We offer versions with metal or plastic housing, optionally in right-hand or left-hand versions. Depending on the model, they have one or two locking elements, levers, pull straps or attached trestles. Depending on the model, they have one or two locking elements, levers, pull straps or attached trestles. In an emergency, the emergency release can be operated from the outside with a triangular key.



online catalog

**AV15, AV18, AV20, AV21, AV25, AV28**



## HEAVY DUTY SWITCHES & MICRO-SWITCHES

Whether you need to replace an escalator micro-switch or need a robust limit switch for a rack-and-pinion construction lift, Schmersal has the parts to get the job done! Even if you need it to be explosion-proof or to come with a specific NEMA rating, we can help – just reach out.



online catalog

Heavy Duty: **T016, T/M064, T067, T130, T136, T/M471, T/M035, T/M250**

Micro switches: **M302**



## KEYED INTERLOCK SWITCHES

Keyed interlocks, AKA 'pull-out switches', are actuated with a separate 'key' actuator, and this design offers a lot of flexibility to use in unique applications. Capable of something as simple as door position monitoring, it can also be used in more creative ways like the monitoring of elevator emergency escape hatch openings, and even to ensure that compensation chain has not been ripped out.

With the rotatable switch head and the multiple openings to insert the actuator, these can be fine-tuned to meet a project's unique requirements.



online catalog

**AZ15, AZ16, AZ17, AZ3350, AZ415**



# BUTTONS AND CONTROLS



## TOP OF CAR INSPECTION BOXES

These inspection boxes provide manual controls from the elevator cartop for inspections or routine maintenance. The boxes meet all North American elevator code and come standard with an Inspection switch, Emergency-stop, Up, Down, Common pushbuttons, an American GFCI, and a work light. Additional options and custom branding or text is available. We offer the boxes fully-assembled, or can even provide the individual components, or a partially assembled unit – whatever you require



online catalog



## PENDANT STATIONS

Our line of elevator and escalator pendant stations provide are installed around the globe and have proven incredibly reliable. Standard options include an Emergency Stop, Up, Down, Common buttons, all built into a durable enclosure. Additional Delivered fully assembled and ready for use.

Compact housing is applicable for all kind of installation location (Door Frame, Machine Room, Machine Room Less (MRL)



## E-STOPS AND PUSHBUTTONS

As a leader in safety products and solutions, Schmersal understands just how vital an emergency stop switch is to anyone working on heavy equipment. Our E-Stops, are made with the highest quality components and enclosed in a very robust boxes with an IP65 rating that's made to last. Our Engineers can also work with you to design custom boxes or solutions, all with custom labeling to meet your needs. Our boxes are available in different sizes and colors, and can include options such as: illuminated buttons and indicators of various colors, momentary buttons, selector switches, and contact blocks.



online catalog

Our wide range of control devices include pushbuttons, mushroom buttons, selector switches, keyed selector switches, indicator signals, and Emergency Stops. There are several lines available, constructed from metals or plastic, in square or circular design. These control devices use modular terminal contact block systems to allow for customized application. We also provide a wide range of enclosures, in metal or plastic, to mount these devices.

# EMERGENCY COMMUNICATION SYSTEMS

## PHONE SYSTEMS FOR ELEVATORS



2N® is the global leader in IP door intercoms and has manufactured emergency elevator communication products for more than 20 years. Based in the Czech Republic, 2N® is part of the Axis group led by Axis Communications AB of Sweden. 2N® elevator products are trusted by leading OEMs worldwide giving 2N® scale and independent elevator firms confidence. Our products offer quality at an attractive price with stringent QA testing and code-compliance. 2N®'s telecom heritage and commitment to innovation ensures it will lead elevator communications in the future as well as digital services to better connect and manage devices.



website

## CELLULAR GATEWAYS

Industry-leading LTE emergency communication cellular gateway EasyGateIP is ideal as a landline alternative and is certified on AT&T and operates also on T-Mobile currently.



### 2N® EASYGATE IP

- Plug & Play design for easy installation.
- Code-compliant and a very competitively priced.
- Rugged IP43 construction with wide operating temperature (-40 °F to +185 °F)
- Proven at scale with massive supply to multinational elevator OEM's.
- Dual-SIM enabling option of 2nd back-up cellular operator.
- Option of VoIP with SIP for clearer voice and DTMF needing a data-plan only SIM.
- Remote management and monitoring including firmware updates via 2N®'s Elevator Centre cloud application.

## ELEVATOR EMERGENCY AUTO-DIALERS

The Lift1 Auto-dialers are a high-quality yet cost-effective range of analog emergency phone stations for the elevator cabin, machine room and/or hoistway. They can be configured remotely or on-site via a voice menu or thru a text messaging service.



### 2N® LIFT1

- Variety of models available for easy installation.
- Automated test calls.
- Reliable DTMF signaling through to call center.
- Supports CPC and P100 protocols.
- Extended 3-year warranty.

## CONNECTED CAB

Elevators have become more connected with monitoring and IoT giving often advance warning of problems. Now the attention turns to the elevator cab and making the user (passenger) experience safer and more enjoyable.

2N®'s LiftGate can deliver broadband to the elevator cab to support a myriad of services including video surveillance, streaming HD media displays, access control reader and IoT for things like environmental monitoring.

Make every elevator a safe, secure, internet connected space with 2N®'s unique IP solution of LiftGate gateway and LiftIP auto-dialer. An industry leading solution that delivers clear emergency calling and reliable DTMF signaling.



### 2N® LIFTGATE

- Connection LTE (4G) with dual-SIM capability
- Local (LAN) network connectivity option included.
- IP connectivity over 2-wire in the elevator trailing cables.
- 4 ethernet (internet) connections to elevator cab, 2 have PoE with power backup.
- Possibility of video-audio emergency call combination.
- 4-hour battery backup.
- Extended 3-year warranty.

## SOFTWARE / APPLICATIONS



### 2N® Elevator Center Cloud Application

The 2N® Elevator Center gives you non-stop control over all installed 2N® elevator devices. Manage and monitor your IP communicators and gateways from your office through a web browser connected to the 2N® cloud. You don't need any IT skills. Once installed every device will automatically connect to the portal in just a few seconds.

- Manage and configure devices centrally.
- Monitor connected devices.
- Plug and play.



### 2N® Call Center Application

The 2N® Call Centre is a Windows® based software solution for the comprehensive management of emergency elevator communicators. The solution allows you to handle alarms and control calls. You get not only a detailed overview of all your calls from elevators, but the option to archive them or export the data for customer reports.

- Management of control and alarm calls.
- No additional hardware needed.
- Support for CPC and P100 protocols.

# ELEVATOR CONTROLLERS

## BP408

The heart and brains of an elevator system is the controller, that's why its so important to choose the best available. The BP408 is the latest iteration from Schmersal Böhne + Partner's line of controllers that have been installed around the world for decades and is now available in North America.

This premium elevator control board has been designed to meet the most demanding of projects, yet it is very compact and is capable of being installed in tight spaces (like a door frame) or it can be delivered in a classic cabinet – whatever you need. The BP408 is designed for either traction or hydraulic elevators, supports up to 128 stops, and this modular system can be expanded with additional I/O, and add-on modules, and supports common interfaces and protocols like CANopen LIFT, DCP, USB.



online catalog



**1,500+**  
Built-in features

**COMPATIBLE**  
with common interfaces  
(CANopen LIFT, DCP, USB)

### SERVICE AT ITS BEST

- Replace and upgrade solutions
- On-site support or virtual tech support
- Initial commissioning
- User training
- Replacement parts available for repairs

### VERSATILE

Designed for both traction and hydraulic elevators.

### COMPACT

Applicable for all kind of Installation Location (Door Frame, Machine Room, Machine Room Less (MRL)).

### SAFETY ON BOARD

Safety circuit integrated  
No further modules needed for:

- UCM
- Pre-Opening Doors
- Re-Leveling
- Fast Start

# SAFETY CONTROLLERS PROTECT SERIES



Safety controllers increase the reliability of the machine guarding safety system. Their ability to detect safety circuit faults, and shut down the machine until the fault is corrected, greatly heighten the safety level.

In addition to detecting actuated switches, open doors, and/or activated Estop switches, safety controllers can also detect issues in the overall system, interconnected wiring and components. Detect open-circuit, short-circuit, or short-to-ground in interconnection wiring; switch/sensor failure or welded contacts in input or output devices; and insufficient operating voltage.

Schmersal provides safety relay modules for various safety technology applications (e.g. for emergency stop and guard door monitoring) as well as centralized programmable safety controllers and decentralized field bus systems, e.g. a modular concept for safety functions control on small machines.



online catalog



## PROTECT SRB-E



- Multi-purpose use, easy installation, low cost solution
- SRB-E-series covers a broad range of applications with a small number of versions
- SRB301ST for lift applications and equipment of combustion plants, approvals in accordance with EN 81-20/50 and EN 50156-1
- Versions also for areas at risk of explosion



## PROTECT SELECT



- Up to 6 safety functions can be realised
- Adaptation to individual requirements thanks to simple parameterisation
- Numerous parameters such as short-circuit monitoring can be configured
- Save space in the control cabinet
- Display of clear text messages during troubleshooting



## PROTECT PSC1



- Freely programmable
- Scalable with expansion modules (up to 272 Inputs/Outputs)
- Decentralized expansion possible
- Safe drive monitoring functions
- Axis monitoring for up to 12 axes in accordance with DIN EN 61800-5-2
- Integrated SD Gateway
- Easy to integrate into existing fieldbus environments
- Easy programming software



# MODULAR GUARDING SYSTEMS

## SATECH GUARDING

# SATECH

Modular Machine Guards



Schmersal North America is pleased to offer SATECH modular guarding systems in the US and Canada.

These guards prevent people from accessing hazardous areas around machines, open floor panels, or open elevator shaft doors. The bright yellow posts give a visible warning, while the black colored panels allow for easy viewing of the hazard beyond the barrier.

Guards are custom designed for each client. We collaborate on the design to meet the specific requirements of each customer. SATECH's patented 3D AutoCAD program with a built-in library of parts enables the design of complex layouts in a very short time. A layout can be designed directly onto a customer's drawing – which immediately picks the optimal modular components. This service also provides a 3D drawing and a complete parts list which can be easily understood by assembly personnel.



### FASTGUARD

- Designed for fast, easy assembly
- Perfect for temporary applications
- Panels slip onto footer stands, no posts



### BASIC

- 40 x 40 mm profile post
- Extruded steel tube
- Height (mm): 2060, 2640



### STRONG

- 60 x 60 mm profile post
- Extruded steel tube
- Height (mm): 2060, 2640



website

#### WEBSITE

[www.schmersalusa.com/products/additional-products/satech-guarding](http://www.schmersalusa.com/products/additional-products/satech-guarding)



#### CONTACT

888-496-5144

# ENGINEERING SERVICES

## TEC.NICUM

# tec.nicum

## Schmersal Group

Functional machine safety is a complex matter which involves complying with a range of standards and directives. tec.nicum offers all machine manufacturers, operators and distributors a completely product and manufacturer-neutral consultancy on all currently relevant statutory regulations and supports them in ensuring their machines and workplaces are designed to comply with the relevant standards.

Experts at tec.nicum advise and support customers and clients with training, on-site consultation, documentation and planning and implementation, such as the installation of protective equipment and safety systems.

tec.nicum is the Schmersal Group's service division and comprises a global consultancy network of TÜV Rheinland-certified Functional Safety Engineers and Machinery CE Experts. Services can be called upon around the world. tec.nicum's core philosophy is to offer advice that is independent of manufacturers and as objective as possible.

We strive to develop the best possible safety-related solution for each individual application, to implement it and completely safeguard its intended use – always in line with our commitment **"excellence in safety – we care!"**

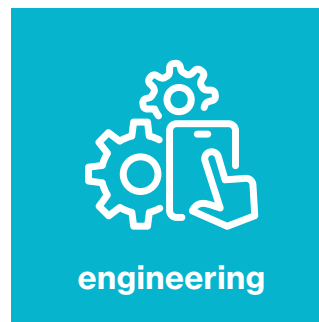
tec.nicum services cover four areas, which can be obtained as individual modules or as complete packages:



- Education seminars
- In-house or online training
- Customer-specific workshops



- Risk assessments
- Lockout/Tagout services
- Schematic review



- Technical project planning
- Validation of safety functions
- Measurements and tests



- Conversion / Retrofitting
- Installation and programming
- Integration of safety functions



website

#### WEBSITE

[www.schmersalusa.com/service/tecnicum-engineering-services](http://www.schmersalusa.com/service/tecnicum-engineering-services)



#### CONTACT

888-496-5142



# SCHMERSAL

## THE DNA OF SAFETY

In the demanding field of machine safety, the owner-managed Schmersal Group is one of the international market leaders. The company, which was founded in 1945, has a workforce of about 2,000 people and seven manufacturing sites on three continents along with its own companies and sales partners in more than 60 countries.

Customers of the Schmersal Group include global players from the area of mechanical engineering and plant manufacturing as well as operators of machinery. They profit from the company's extensive expertise as a provider of systems and solutions for machine safety. Furthermore, Schmersal specialises in various areas including food & beverage, packaging, machine tools, lift switchgear, heavy industry and automotive.

A major contribution to the systems and solutions offered by the Schmersal Group is made by tec.nicum with its comprehensive range of services: Certified Functional Safety Engineers advise machinery manufacturers and machinery operators in all aspects relating to machinery and occupational safety – and do so with product and manufacturer neutrality. Furthermore, they design and realise complex solutions for safety around the world in close collaboration with clients.



### SAFETY PRODUCTS

- Safety switches and sensors, solenoid interlocks
- Safety controllers and safety relay modules, safety bus systems
- Optoelectronic and tactile safety devices
- Automation technology: position switches, proximity switches

### SAFETY SYSTEMS

- Complete solutions for safeguarding hazard areas
- Individual parametrisation and programming of safety controllers
- Tailor-made safety technology – be it for individual machines or a complex production line
- Industry-specific safety solutions

### SAFETY SERVICES

- tec.nicum academy – Seminars and training
- tec.nicum consulting – Consultancy services
- tec.nicum engineering – Design and technical planning
- tec.nicum integration – Execution and installation

The details and data referred to herein have been carefully checked. Subject to technical amendments, errors, product improvements, and new variants since publication. Product received may differ from pictured. Images shown are for illustrative purposes only. Version 01.2023

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