



New products 2021-2022



FY series safety switches

Description

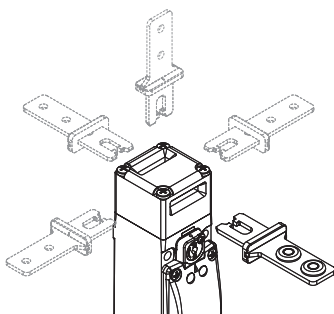


These switches are used on machines where the hazardous conditions remain for a while, even after the machines have been switched off, for example because of mechanical inertia of pulleys, saw disks, parts under pressure or with high temperatures. Thus, the switches can also be used if individual guards are only to be opened under certain conditions.

The new FY series safety locking switches, which are equipped with a technopolymer housing, are a new evolution of the FG series switches. Designed for all applications that do not require the mechanical strength of metal housings, the FY series switches have the same spacing between the fixing holes and the same overall dimensions as the FG series switches to which they add the option of installing up to two control devices and the respective contact blocks using the appropriate version of the housing.

- Housing made of glass fibre reinforced technopolymer, self-extinguishing and shock-proof;
- Head and release device both made of metal;
- 3 knock-out threaded conduit entries M20x1.5;
- Degree of protection IP65, IP67 and IP69K and SIL 3, PLc;
- Ambient temperature: -25°C ... +60°C;
- Actuator holding force F_{max} : 2800 N;
- Versions with key release and escape release button;
- Versions with integrated control devices;
- 4 types of stainless steel actuators;
- Head and release devices individually turnable and non-detachable.

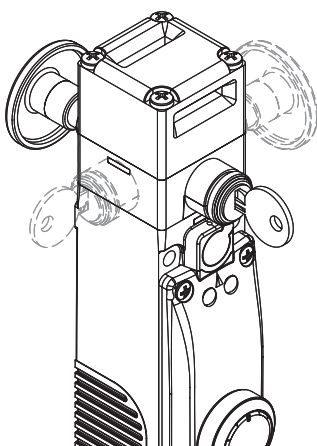
Heads and devices with variable orientation



After loosening the 4 screws on the holding head, the holding head can be aligned relative to all four sides of the switch.

The key release device and the escape release button can also be rotated and secured independently of one another in steps of 90°. The device can thus assume 32 different configurations.

Key release device and escape release button

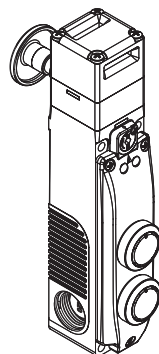


The key release device (auxiliary release) is used to permit unlocking of the actuator only by personnel in possession of the key. The device also functions with no power supply and, once actuated, prevents the guard from being locked.

The escape release button allows actuator release and immediate opening of the guard. Generally used in machines within which an operator could inadvertently become trapped, it faces towards the machine interior, to allow the operator to exit even in the event of a power failure. The button has two stable states and can be freely extended in length with suitable extensions.

Both devices can be positioned on the four sides of the switch. As a result, it can be installed both towards the interior and towards the exterior of the machine.

Integrated control devices



The switch is also available with integrated control devices, allowing up to two devices and related contact blocks, such as buttons, emergency stop buttons, indicator lights or selectors to be mounted.

The result is a compact solution with direct access to control devices without needing to install them separately on the switch panel or in their own housing.

The devices can be illuminated and, thanks to the PUSH-IN spring-operated connections, wiring is quick and intuitive.

LED display unit, type A

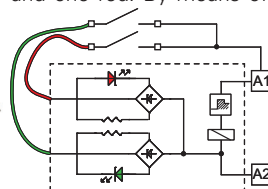


In the version with LED display unit of type A, two green LEDs are switched-on directly by the power supply of the solenoid. Wiring is not necessary.

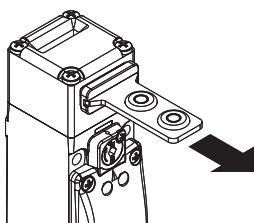
LED display unit, types B and C



In the version with LED display unit of type B, connection wires from two LEDs are available, one green and one red. By means of suitable connections on the contact block, various operating states of the switch can be displayed externally.



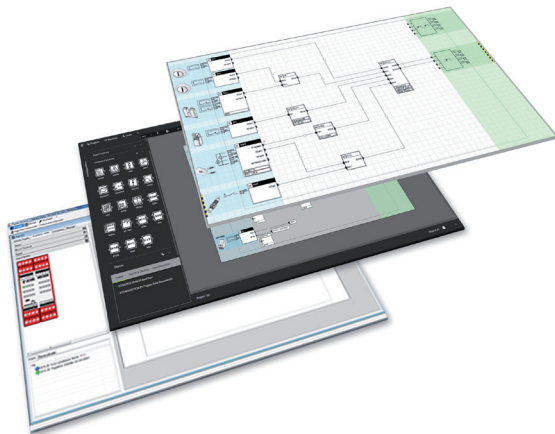
Holding force of the unlocked actuator



The inside of each switch features a device which holds the actuator in its closed position. Ideal for all those applications where several guards are unlocked simultaneously, but only one is actually opened. The device keeps all the unlocked guards in their position with a retaining force of approx. 30 N, stopping any vibrations or gusts of wind from opening them.



New version of the Gemis Studio software



The software for programming the modules of the Gemis series will soon be available in the new Gemis Studio version 12 which has a fully updated graphic layout and new programming functionality.

The Gemis Studio software is a graphic development environment for the creation, simulation and debugging of programs designed for uploading to Gemis line modules.

Gemis series safety modules can implement safety circuits with a safety category of up to SIL 3 according to EN 62061, PLe and category 4 according to EN ISO 13849-1.

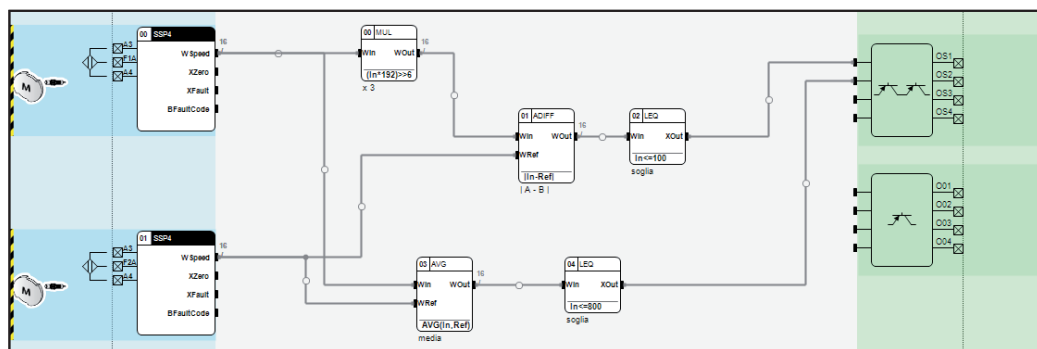
- Completely updated graphics;
- New remote support management;
- Optional selection of "light theme" or "dark theme";
- New function blocks;
- Option of disabling the test pulses of the PNP safety outputs.

New function blocks

Gemis Studio 12 includes new function blocks for performing mathematical functions that are very useful for applications with frequency inputs for speed control or with current inputs for analogue sensors.

The new function blocks, available only for modules equipped with Kernel 12, are:

- **SUM** performs addition of the input data and a second value
- **ADIFF** calculates the absolute difference between the input data and a second value
- **AVG** calculates the arithmetic mean of two values
- **MUL** performs the mathematical function of multiplying two values
- **WTOB** converts data in Word format into a value in Byte format
- **BTST** allows verification of the value of a given bit within the input data



Option of disabling the test pulses of the PNP safety outputs

The electronic safety outputs of the Gemis modules are always protected and monitored for dangerous faults. In order to perform this monitoring, test impulses (i.e. very short switch-offs of the outputs) are created in the safety outputs while the outputs are active. These test impulses are generally undetectable on passive loads (contactors or similar); in rare cases, however, they can disturb the inputs of digital devices such as PLCs or electronic drives.

With Gemis Studio 12, it will be possible to disable the test impulses of the PNP safety outputs in cases where the application requires it. Faults such as short-circuits to the external positive pole are still detectable when the outputs are switched off.

Nome	Topografico	Disabilita Impulsi di Test
OS1		<input checked="" type="checkbox"/>
OS2		<input checked="" type="checkbox"/>
OS3		<input type="checkbox"/>
OS4		<input type="checkbox"/>

Retro-compatibility with the K10 and K11 modules

The new Gemis Studio 12 software is completely retro-compatible and capable of programming modules from previous generations equipped with Kernel 10 or 11. It will be sufficient to compile the program for the desired module generation (the current software version already features a command that allows you to select the kernel version).

However, bear in mind that the new function blocks for mathematical operations cannot be used with modules K10 and K11.

New interface

The new Gemis Studio 12 programming software has a completely new look.

With retractable side panels housing the sensors and function blocks, the field available for working in the programme is now larger and neater.

Among the new settings available is the option of choosing between light and dark display themes.

Remote escape release for NG and NS series safety switches

Description



The remote escape release is operated via a flexible cable and facilitates remote unlocking of the safety switch in cases where conventional release devices (lock-type, by screwdriver, push button, etc.) are not easily accessible due to the configuration of the machinery.

The remote escape release is particularly suitable in situations where the switch must be installed in a difficult-to-reach position, for example on top of a guard or inside a shield in order to prevent tampering.

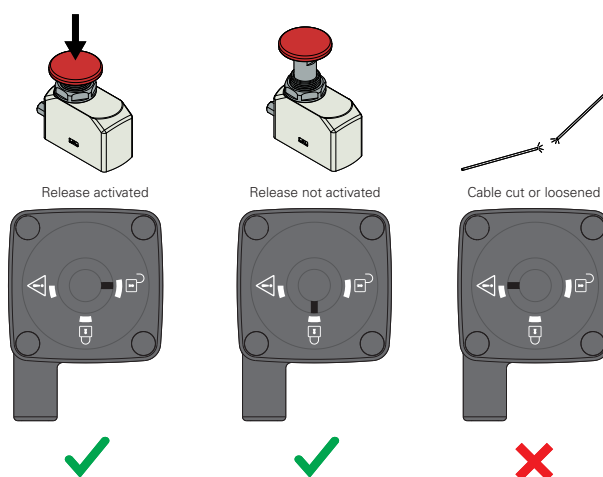
The remote escape release can be used with NG and NS series RFID safety switches with guard locks.

- Self-monitoring of cable tension to stop the machinery safely in case of cut or loosened cable;
- Available for NG and NS series RFID safety switches with guard locking;
- Signalling of the device status and the correct tension of the actuation cable;
- Device can be turned in 90° steps;
- Flexible mounting of the remote release device.

Self-monitoring of cable tension

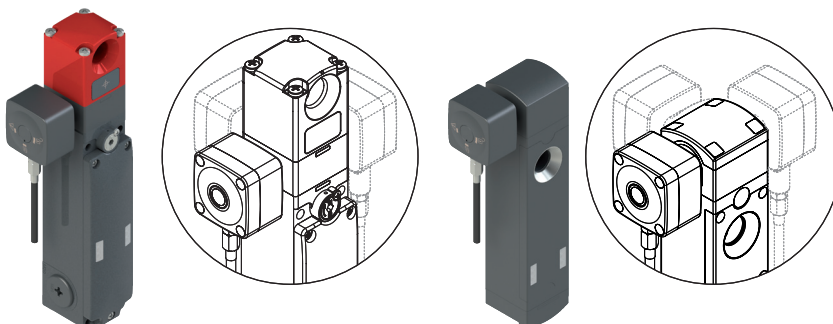
Unlike other similar solutions on the market, the Pizzato Elettrica remote escape release is equipped with an innovative mechanical control system which safely stops the machinery, if the cable is cut or loosened.

When the device is activated, the square control indicator is positioned at the ◻ symbol; in the event of a fault or anomaly, the square control indicator is positioned at the ⚠ symbol facilitating a quick diagnosis by the user.



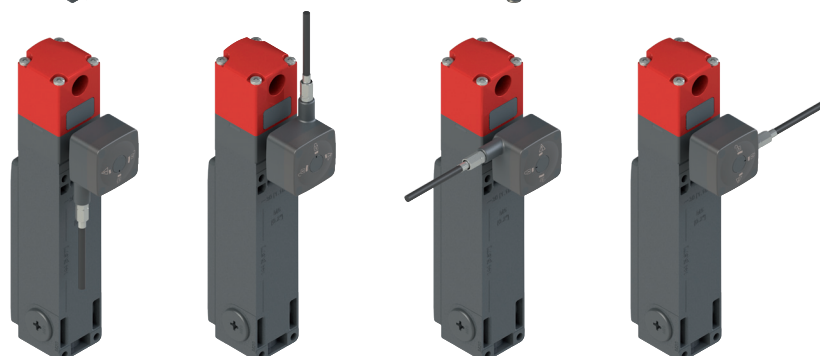
Orientable device

The remote escape release device can always be oriented to one of the four sides of the switch by simply unscrewing the four fixing screws of the switch head. This feature of the NG and NS switches facilitates a unique degree of flexibility in the installation of this type of device.



The remote escape release device can also be ordered with four different cable exit orientations in order to choose the most suitable orientation for the application on the machine.

Standard devices are configured with the cable exit direction oriented downwards.

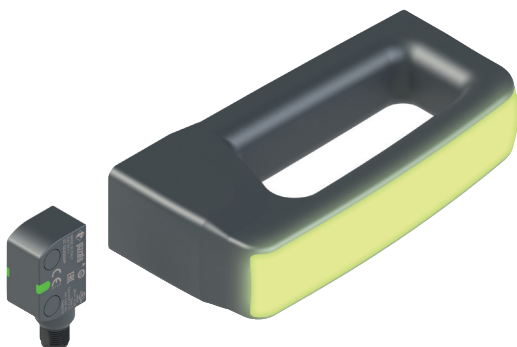


Description

P-KUBE Smart safety handle can be used together with the RFID safety sensors of the ST series to create a modern and effective interlock system for all guards of machines without inertia.

These products combine the characteristics of a robust handle for safety enclosures, with an ergonomic, rounded grip and customisable functions for the customer, with various illuminated signalling options, to reflect the state of the guard, or other operating conditions the manufacturer wishes to indicate.

Depending on user needs, the new handles also allow integration of a control device (e.g. a button), directly in the grip.



- Evolution of the P-KUBE Krome series technology in a more compact device;
- Grip with front strip in satin chrome and backlit white finishes;
- High visibility multicolour RGB LED in green, yellow, red, blue, white, purple and light blue;
- Horizontal or vertical installation on hinged or sliding doors that open to the right or to the left;
- Version with fixing directly on the grip for lightweight applications;
- Version with internal auxiliary steel plate for fixing in heavy duty applications;
- PVC cable connections or with cable and integrated M12 connector;
- Versions without RFID tags available.

Chrome-plated or illuminated grip

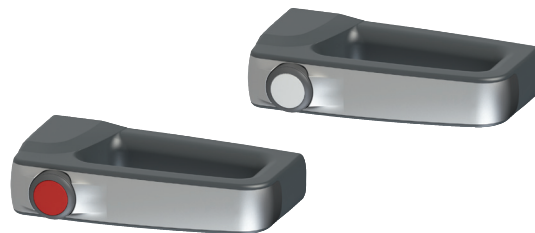
The grip is available with front strip in two finishes: satin chrome, and illuminated white. In the second version, the grip can be illuminated using RGB LED technology.

The modern, ergonomic design, combined with fully concealed fixing screws and wiring, allows implementation of machines and guards with particularly pleasing aesthetics.



Integrated control device

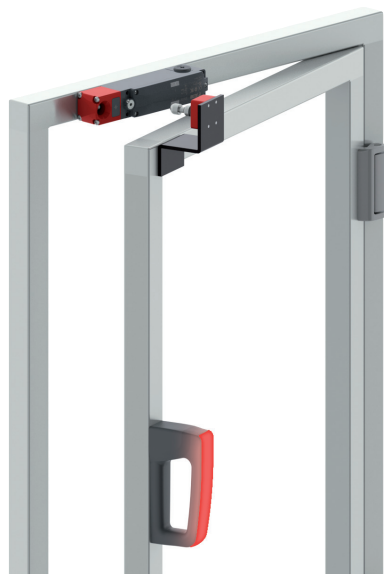
In the grip of the P-KUBE Smart handle, a spring-return button with 1NO contact can be integrated. This can be illuminated with a LED, and thus allows interaction with the machinery; for example to request machine stop, or transmit a reset command. The button is available in white, red, green, yellow, blue, and black.



Universal handle

The P-KUBE Smart handle is also available in the version without RFID tag, so that it can be used as a simple handle to open a guard, regardless of the type of safety switch with which the door interlock is made of.

In this configuration, it is possible to use the versions with illuminated grip, to create an integrated visual signal system without the need to install further devices on board of the machine.

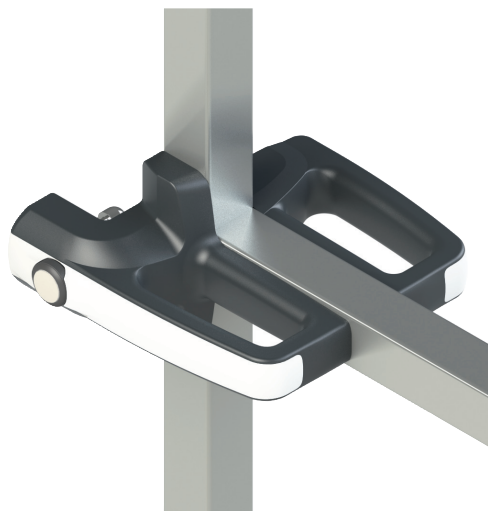


Compatible with P-KUBE Krome

Designed with the same handle size and the same interaxle spacings for the fixing holes of the inner plate, the P-KUBE Smart series can be used as inner handle in guards using the P-KUBE Krome safety handle for NS and NG series RFID safety switches with lock.

The mounting turns out to be practical and quick, as the two handles can be fixed by using only two holes passing through the frame and two screws of adequate length.

All these elements put together form a system with uniform lines and with aesthetic continuity between the inner and outer handle.



ST G - ST H series safety sensors

Description



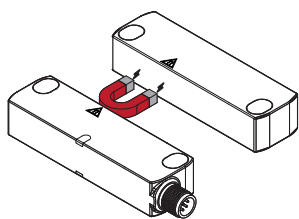
The RFID safety sensors of the ST G - ST H series represent the evolution of the ST D series already known and appreciated by machine builders and users.

The symmetry of the housing allows the same sensor to be used on both left and right doors; by simply rotating the sensor onto itself. The mounting hole spacing (22 mm for the ST G series, 78 mm for the ST H series) was especially realised to perform a technological upgrade of the traditional magnetic sensors of the SR A and SR B series, replacing these with an evolved RFID safety sensor, without changing the machine's mounting hole spacing.

The monolithic housing – free of resins for encapsulation – can be used in even the most aggressive of environments; such as, for example, in the food and pharmaceuticals sector.

- Can be used with several high level coded actuators;
- Each actuator produces a different response from the sensor;
- Can communicate with a PLC;
- Brand-new solution on the market;
- Wide range of programming options to meet the customer's needs;
- User configurable magnetic holding force of the actuator;
- Easy to mount thanks to its symmetrical housing.

Magnetic holding of the actuator

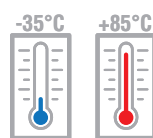


Devices of the ST H series can be ordered with a permanent magnet installed inside the housing, able to generate a holding force between sensor and actuator.

This way, the guard can be kept closed even when there are vibrations or when there is a recoil during the closing stage.

The magnetic holding force can be selected in three different magnitudes to best adapt to any usage situation.

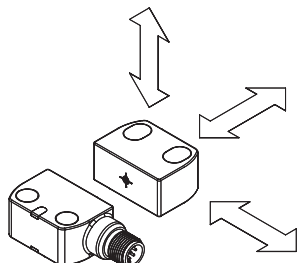
Extended temperature



Devices with a T8 code extension can be installed in environments with temperatures from -35°C to +85°C and are especially indicated for machines in the food and pharmaceutical sector, allowing to use ST sensors in a broad field of application.

The extended temperature versions are available for both articles with a cable, and those with a stainless steel connector.

Actuation from many directions



The sensors were designed to be activated from various directions, thereby providing the customer with maximum flexibility when positioning the sensors on the guards.

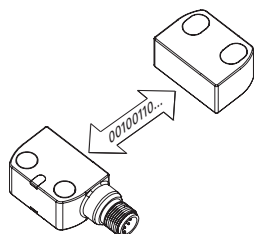
Programmability

Programmable sensor versions are available. Here, with a simple and brief operation, the sensor can be programmed to recognise the code of a new actuator.

By activating a special input, the sensor is switched to a safe state, during which it waits for a new code to be accepted. As the actuator approaches, the sensor performs a number of checks on the code being received, whereby the code must adhere to certain parameters of RFID technology.

If the checks are successful, the sensor uses LEDs to signal the successful completion of the procedure.

After programming has been completed, the sensor only recognises the code of the last programmed actuator, thereby preserving the safety level and the reliability of the system in which it is installed.



Versions for mobile applications

10-30V

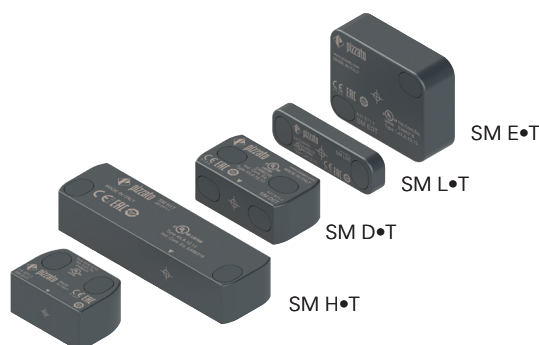
The RFID safety sensors of the ST H series are now also available in the version with 10-30 V supply voltage, designed for mobile applications where

a supply voltage of 12 V is usually available, but also for situations in which the supply voltage is far from the 24 V commonly available in industrial environments.

Compatible with all SM ••T actuators

Designed for use in conjunction with the SM G•T and SM H•T series actuators, together they form a complete assembly, even from an aesthetic point of view; the ST G and ST H sensors are also compatible with all actuators available for the ST series, with either high or low level of coding.

This is particularly useful in applications where the actuator must have specific characteristics; such as, for example, increased activation distance (SM E•T actuators), compact installation dimensions (SM L•T actuators), or fixing holes positioned on two different sides (SM D•T).





Description



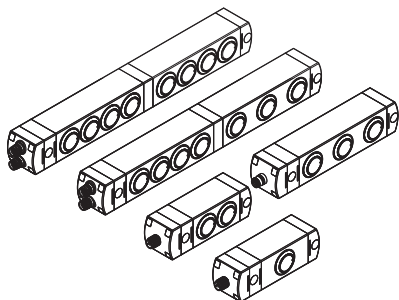
The new modular control device units of the BN series from Pizzato Elettrica can be combined perfectly with the RFID safety switches with lock of the NS series. Machine manufacturers who already use these products thereby have the possibility to attach a control device unit directly next to the safety switch that is identical in shape and dimensions.

The control device units of the BN series are available in configurations with 1 to 8 devices.

The unique design with individually turnable modules allows the user to select from a number of combinations. He receives a very versatile product that is immediately ready for use.

- Technopolymer housing;
- Min. dimensions 40x40 mm;
- Ambient temperatures from -25°C up to +70°C;
- Protection degree IP65;
- Configurable with several types of connections;
- Turnable and non-detachable modules;
- Various types of contact blocks available;
- Customisation option using laser engraving on the button lenses and the housing.

Individually and freely configurable



The control device unit is available in various configurations: for standard applications there are configurations with 1 to 4 devices, while configurations with 6, 7 or 8 devices are available for more complex applications that allow a larger number of control and signalling devices to be attached at the same location for the user.

Minimal dimensions



One special feature of the control device units of the BN series is the slim thickness of just 40 mm.

The control devices are embedded in the housing of the unit and protrude only slightly out of the front.

This protects the control devices from unintended impacts, thereby increasing the service life of the devices and, at the same time, giving the devices an attractive design, making them predestined for use on modern machines in which this aspect is also given special consideration.

NS series safety switches

Description

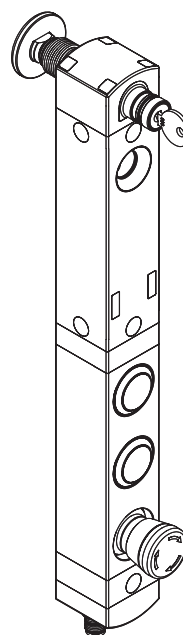


These switches are used mainly on machines where the hazardous conditions persist even after the machine has been switched off. Mechanical parts such as pulleys, saw blades, etc., could continue to move after the machine is switched off. Thus, the switches can also be used if individual guards are only to be opened under certain conditions.

Versions with mode 1 and 3 (safety outputs active when guard closed and locked) are interlocks with guard locking acc. to ISO 14119; the product is labelled with the symbol shown.

- Elongated housing with the option of housing one to four control devices;
- Wide range of available control devices;
- Rotatable modules for the greatest installation flexibility;
- Configurable with various types of connection output;
- Compatible with P-KUBE Krome safety handles.

Integrated control devices



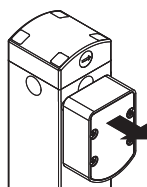
In addition to the basic version, the NS series switches are also available in a version with elongated housing with room for mounting one to four control devices, with the relative contact blocks, on the same body as the safety device. This version has the same modular and orientation features as the NS switches.

To meet requirements for a range of uses, a number of different colour and types of control devices can be adopted such as, for example: buttons, emergency stop buttons, indicator lights, selector switches. Button lenses are customizable by laser engraving.

The control devices can be illuminated and protrude only slightly out of the housing thanks to the recessed housing hole.

The result is a compact solution with direct access to control devices without needing to install them separately on the switch panel or in their own housing.

Holding force of the locked actuator



2100 N The strong interlocking system guarantees a maximum actuator holding force of $F_{1max} = 2100 \text{ N}$.