

## Description



This integrated closing device can be applied on guards or protections of perimetric safety barriers, where it is required control on access to dangerous areas of a machinery or plant.

The new safety handle P-KUBE 2, which is installed in combination with the RFID safety switch with NG series block, provides an integrated locking system of the protections with related access control to dangerous areas; this new combination makes it possible to obtain, with a single device, an access control function with the maximum PL e safety level according to EN 13849-1 or SIL 3 according to EN 62061.

## Maximum safety with a single device

# PL e + SIL 3

Constructed with redundant electronic technology, the NG series switches in combination with the P-KUBE 2 handle make it possible to create circuits having maximum PL e and SIL 3 safety levels by installing just one device on the protection. This avoids expensive wiring on the field and allows quicker installation. Inside the panel, the two electronic safety outputs must be connected to a safety module with OSSD inputs or to a safety PLC.

## Connection of several switches in series

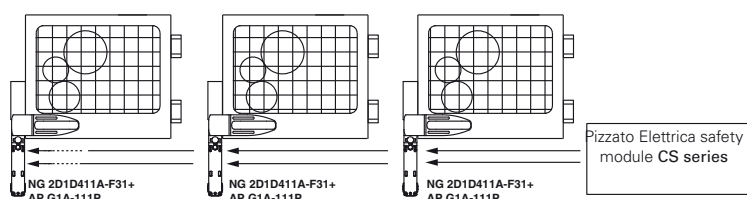
# PL e + SIL 3

One of the most relevant features of the NG in combination with the P-KUBE 2 handle line is the optional connection in series of several switches, up to a maximum number of 32 devices, while maintaining the maximum PL e safety level

prescribed by the EN 13849-1 standard and the SIL 3 safety level according to the EN 62061 standard.

This connection method is permitted in safety systems which, at the end of the chain, feature a safety module evaluating the outputs of last NG switch.

The fact that the PL e safety level can be maintained even with 32 switches connected in series indicates the presence of an extremely safe structure inside each individual device.

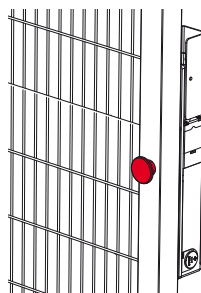


## RFID actuators with high coding level

The NG series features an electronic system based on RFID technology to detect the actuator. This system gives a different coding to each actuator and makes it impossible to tamper with a device by using another actuator belonging to the same series. The actuators may have millions of different coding combinations, and are therefore classified as actuators with a high coding level, according to EN ISO 14119.



## Emergency release button



The release button, oriented towards inside the machinery, allows the exit of the operator accidentally trapped also in case of possible black-out and in any other state of operation. To reset the switch, just return the button to its initial position.

The anti-panic button can be freely lengthened by means of appropriate extensions, so that it can also be mounted on very thick uprights (see accessories).

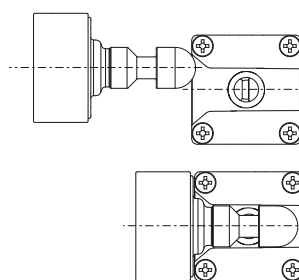
## High protection degree

# IP69K IP67

The NG series switches by Pizzato Elettrica, besides having an IP67 protection degree, have passed the test proving their IP69K protection degree according to the prescriptions established by the ISO 20653 standard.

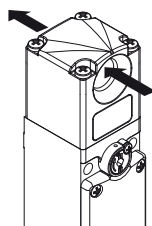
Therefore they are suitable for use in machineries subjected to intense washing with high pressure and high temperature water jets and for any condition or environment where a particular attention for cleanliness and hygiene is required, such as in food or pharmaceutical industry.

## Centering



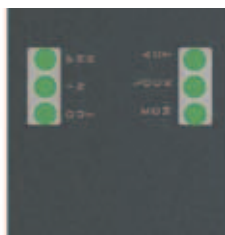
The switch is provided with a wide centering inlet for the actuator pin. Such solution makes it easier to align the actuator with the hole found in the head during the fitting stage. Moreover, this solution drastically reduces any probable collisions between the actuator and the switch, also allowing it to be fitted on inaccurate doors.

## Dustproof



The switch is provided with a through hole for inserting the actuator and, thanks to this peculiarity, any dust which may go inside the actuator hole can always come out of the opposite side instead of being left there. Moreover, the lock pin is provided with an external diaphragm gasket which makes it suitable for any environment where dust is present.

## Six LEDs for immediate diagnosis



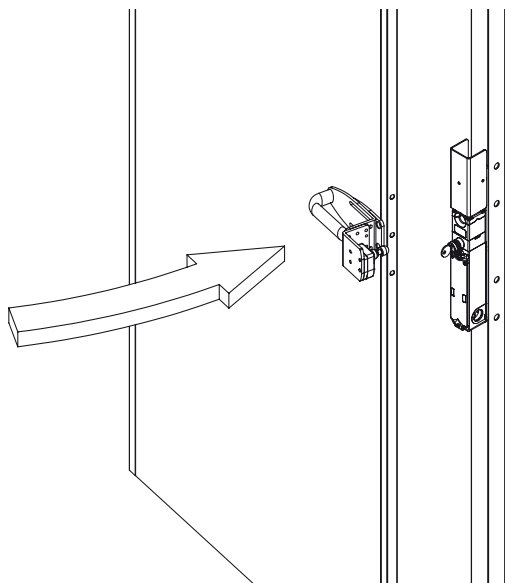
As the LEDs have been designed for quick immediate diagnosis, the status of each input and output is highlighted by one specific LED. This makes it possible to quickly identify the interruption points in the safe chain, which device is released, which door is opened and any errors inside the device. All that in a straightforward way without needing to decode complex blinking sequences.



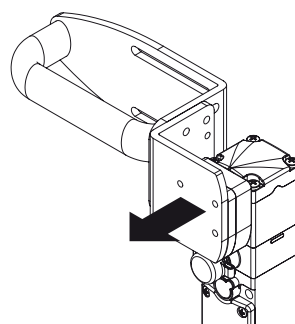
## Easy functioning

No specific action sequences are required to open or close the door, but just one opening/closing movement.

In case of door blocked by a handle provided with a release button, you can open it in a single operation even if under strain (panic situation).

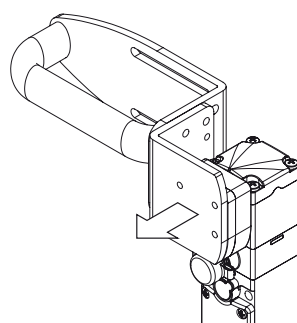


## Holding force of the locked actuator



**7500 N** The sturdy interlocking system guarantees the actuator a maximum holding force  $F_{zh}$  of 7500 N. This is one of the highest values available on the market today, making this device suitable for severe heavy-duty applications.

## 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 doors are unlocked simultaneously, but only one is actually opened. The device keeps all the unlocked doors in their position with a retaining force of 30 N~, stopping any vibrations or gusts of wind from opening them.

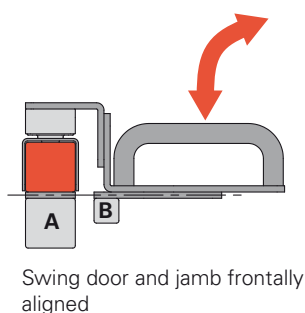
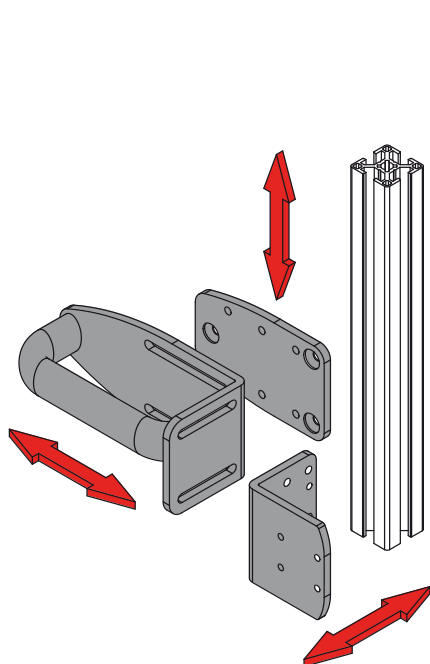
## Sturdiness and easy installation

The handle has been manufactured with 5 mm thick brackets in painted steel. The slots found in the brackets enable independent adjustments, so as to guarantee extremely easy mounting, without needing to modify the existing protection structure.

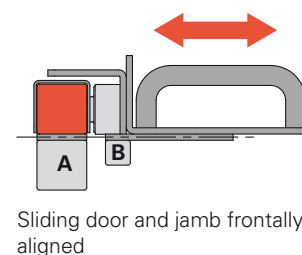
The adjustments make it possible to apply the handle on aluminium profiles or steel frame having various dimensions, from 40x40 mm to 80x80 mm for the frame jamb (A) and from 20x20 mm to 40x40 mm for the door (B).

Mounting can be carried out indifferently on swing doors and sliding doors, either right-handed or left-handed.

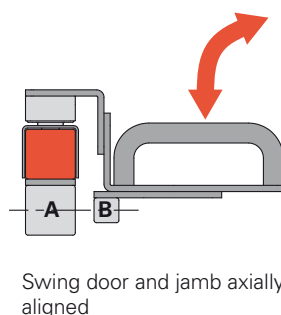
The handle is supplied with all the components ready to be fixed at the correct distances by means of anti-tampering screws. The installer should only assemble the parts according to the application, set the chosen switch (provided separately) and make centering adjustments.



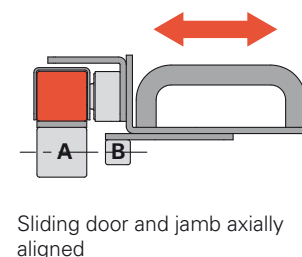
Swing door and jamb frontally aligned



Sliding door and jamb frontally aligned



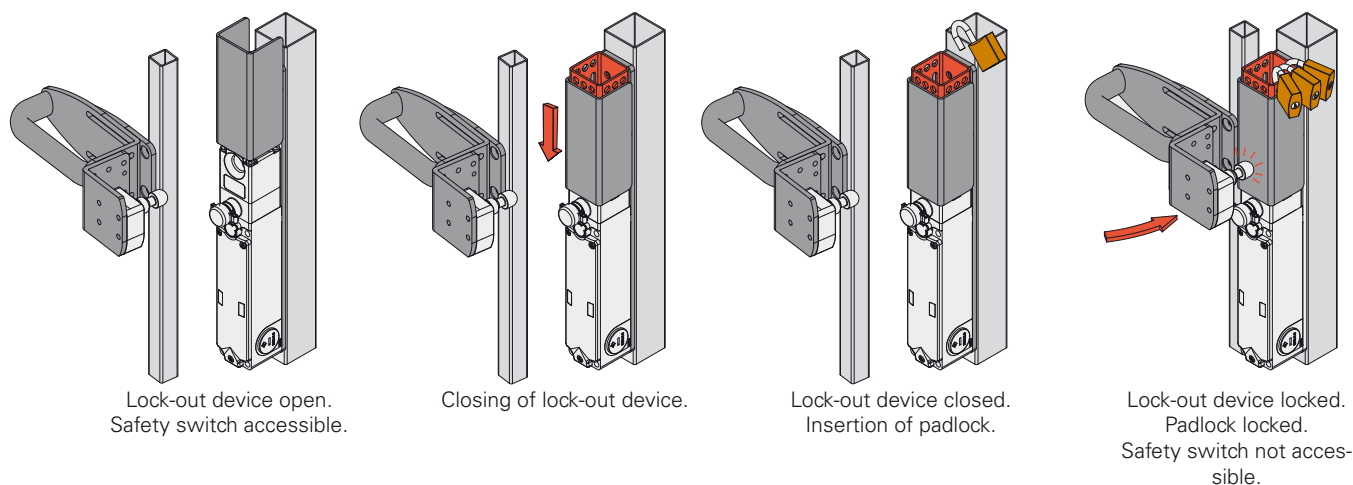
Swing door and jamb axially aligned



Sliding door and jamb axially aligned

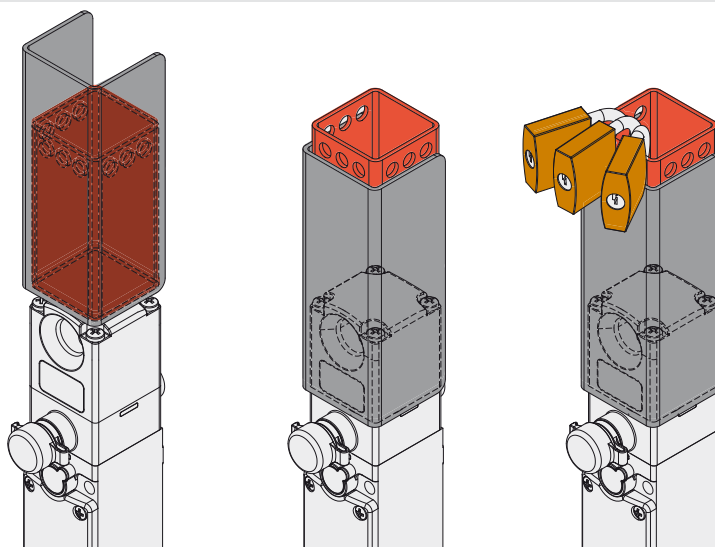
### Error-proof padlockable option

The lock-out device is activated by means of a simple vertical sliding action; such movement makes the padlock holes only accessible in a fully screened position, so as to exclude incorrect fitting of the padlocks. The padlock hole diameter is 7 mm and up to 9 padlocks can be fitted. Screening on 3 sides allows the lock-out device to be used, without any adaptation, on swing and sliding doors, either right or left-handed, also thanks to the fact that the switch head can be quickly rotated on all four sides by turning the fixing screws.



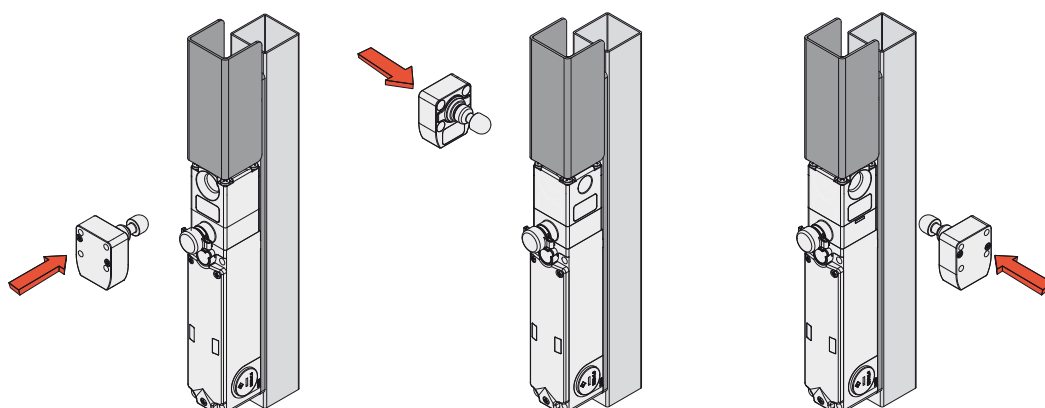
### LOCK OUT: maximum safety with just one movement

With one single operation, the lock-out device can close the centring hole found in the NG switch as well as screen the RFID recognition system, therefore locking both mechanical door closing and electrical switch commutation, and consequently preventing any accidental closing of the guard.



### Turning of the head

Screening on 3 sides allows the lock-out device to be used, without any adaptation, on swing and sliding doors, either right or left-handed.



**Code structure****Attention!** The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.**AP G1A-111P****LOCK OUT device**

<b>1</b>	LOCK OUT device
<b>0</b>	without LOCK OUT device

**Fixing on frame**

<b>A</b>	long plate
<b>B</b>	short plate
<b>Z</b>	without plate

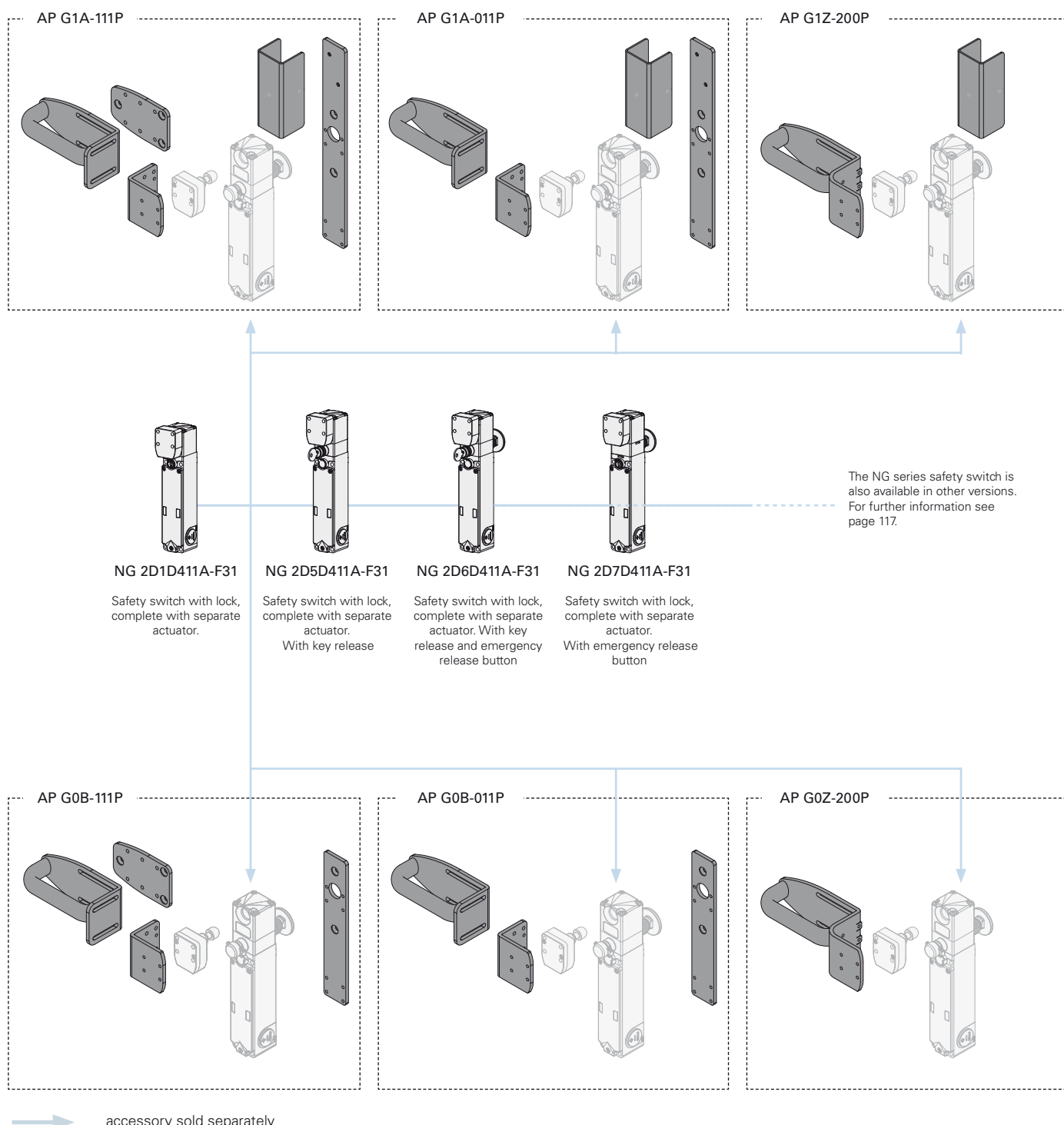
**Handle**

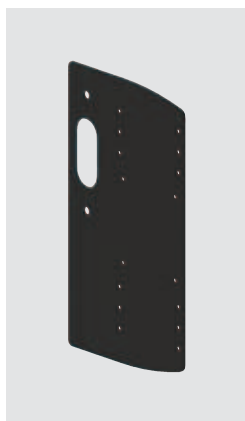
<b>P</b>	plastic handle
<b>M</b>	metal handle
<b>Z</b>	without handle

**Configuration of plates on doors**

<b>111</b>	configuration with 3 adjustable plates
<b>011</b>	configuration with 2 adjustable plates
<b>200</b>	configuration with 1 fixed plate

Note: the handle is supplied complete with fixing screws for the handle, the switch, and between the plates.  
For certain applications the LOCK OUT device is available separately: item AP G1Z-000Z.

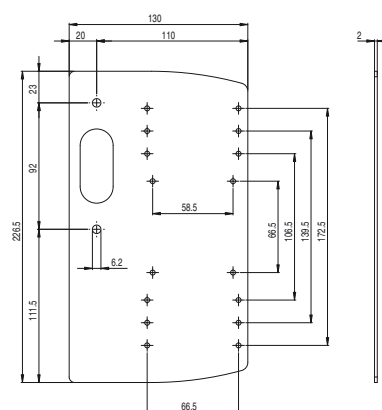
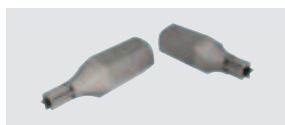


**Shaped plate**

Article	Description
AP A001	Lateral shaped plate for button panel



The shaped plate can be applied under the switch fixing plate. It can be fitted at the right or at the left, it is supplied with holes and used to fasten the boxes for Pizzato Elettrica EROUND push-button panels by means of commercial self-threading screws.

**Safety screws bits**

Bits for safety screws with pin with 1/4" hexagonal connection

Article	Description
VF VAIT1T25	Bits for M5 screws with Torx T25 fitting
VF VAIT1T30	Bits for M6 screws with Torx T30 fitting

**Adhesive labels for emergency release button**

Polycarbonate yellow adhesive, rectangular 300x32 mm, red writing. Applied on the internal part of the jamb it helps finding the emergency release button.

Article	Description and language	
VF AP-A1AGR01	PREMERE PER USCIRE	ita
VF AP-A1AGR02	PUSH TO EXIT	eng
VF AP-A1AGR04	ZUM OFFNEN DRUCKEN	deu
VF AP-A1AGR05	POUSSER POUR SORTIR	fra
VF AP-A1AGR06	PULSAR PARA SALIR	spa
VF AP-A1AGR07	НАЖАТЬ ДЛЯ ВЫХОДА	rus
VF AP-A1AGR08	NACISNAĆ ABY WYJŚĆ	pol
VF AP-A1AGR09	PRESSIONAR PARA SAIR	por

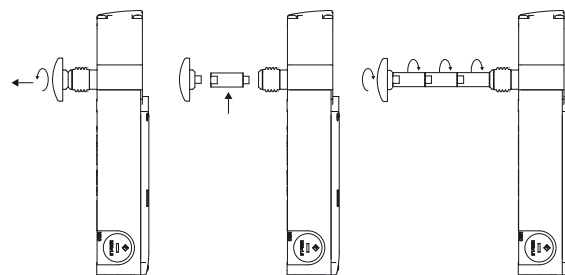
**Complete housings for shaped plate**

ES AC32010			
Description	Features		
<b>Button - 1NO</b> E2 1PU2R421L35 Contacts 1x E2 CF10G2V1	flush, spring-return, green	pos. 2 /	pos. 3 1NO
<b>Button - 1NC</b> E2 1PU2S321L1 Contacts 1x E2 CF10G2V1	projecting, spring-return, red	pos. 2 /	pos. 3 1NC ⊖
		pos. 1 /	
			Diagram
ES AC32043			
Description	Features		
<b>Indicator light</b> E2 1ILA210 LED unit E2 LF1A2V1	white	White LED, 12 ... 30 Vac/dc	
<b>Button - 1NO</b> E2 1PU2R4210 Contacts 1x E2 CF10G2V1	flush, spring-return, green	pos. 2 /	pos. 3 1NO
		pos. 1 /	
			Diagram
ES AC33047			
Description	Features		
<b>Illuminated button - 1NO</b> E2 1PL2R2210 LED unit E2 LF1A2V1 Contacts 1x E2 CP10G2V1	flush, spring-return, white	White LED, 12 ... 30 Vac/dc	
<b>Illuminated button - 1NO</b> E2 1PL2R5210 LED unit E2 LF1A2V1 Contacts 1x E2 CP10G2V1	flush, spring-return, yellow	White LED, 12 ... 30 Vac/dc	
<b>Emergency button Ø 40 mm- 2NC</b> E2 1PERZ4531 Contacts 2x E2 CF10G2V1	rotary release, Ø 40 mm, red	pos. 2 1NC ⊖	pos. 3 /
		pos. 1 1NC ⊕	
			Diagram



## Extensions for release button

Article	Description	Drawing
VN NG-LP30	Metal extension for release button. For max. wall thickness of 30 mm	
VN NG-LP40	Metal extension for release button. For max. wall thickness of 40 mm	
VN NG-LP50	Metal extension for release button. For max. wall thickness of 50 mm	
VN NG-LP60	Metal extension for release button. For max. wall thickness of 60 mm	

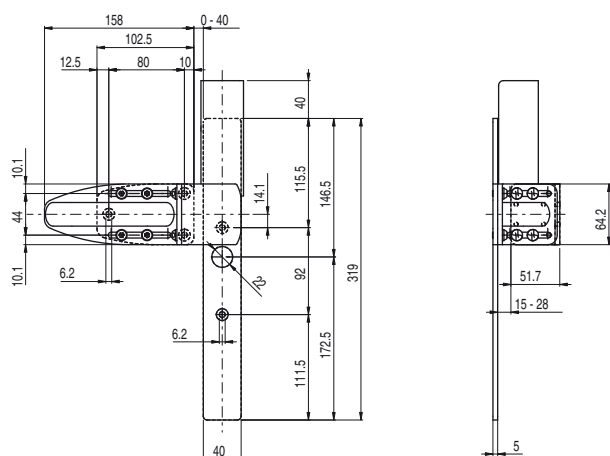


Metal extensions can be combined together until the required length is obtained. Do not exceed an overall length of 500 mm between the release button and the switch.

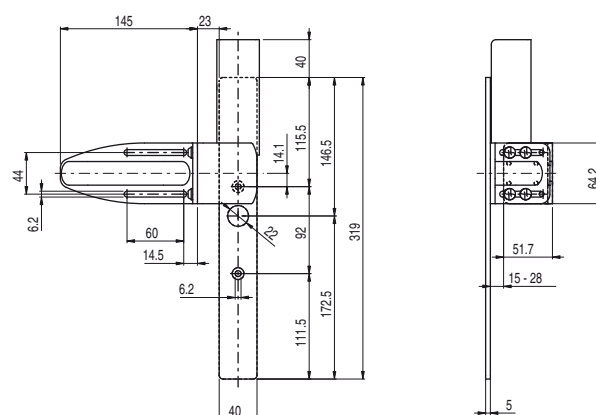
## Dimensional drawings

All measures in the drawings are in mm

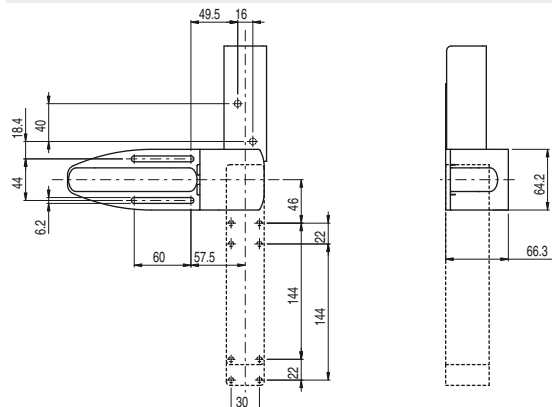
Safety handle AP G1A-111•



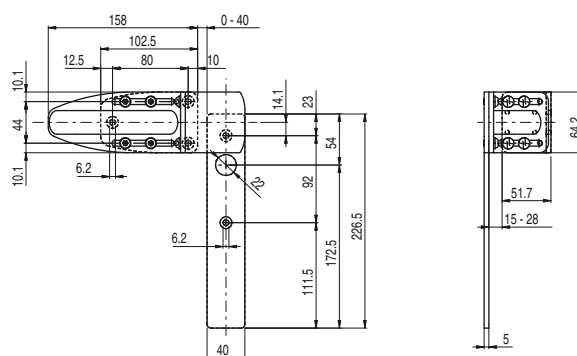
Safety handle AP G1A-011•



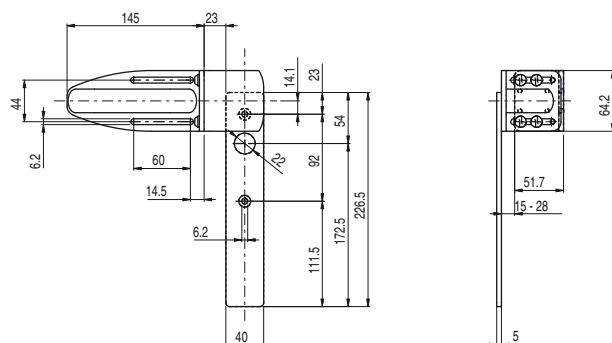
Safety handle AP G1Z-200•



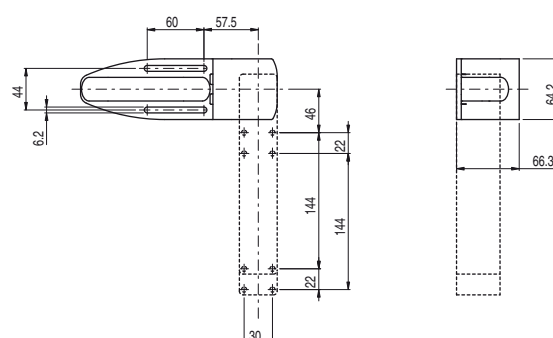
Safety handle AP G0B-111•



Safety handle AP G0B-011•



Safety handle AP G0Z-200•



Items with code on **green** background are stock items

→ The 2D and 3D files are available at [www.pizzato.com](http://www.pizzato.com)