Selection diagram

SIGNALLING TYPE

Z	F
without	windowed

RELEASE TYPE

P	R	B
push-pull	rotation	with lock

MUSHROOM COLOUR

3	1
red (EMERGENCY function)	black (STOP function)

BODY COLOUR

5	7
yellow	yellow with green indication

FIXING RING

1	3
plastic ring	metal ring

Code structure

article | options

E2 1PERZ4531-T6

Fixing ring and shaped ring

1	plastic ring (standard)
2	plastic fixing ring and shaped ring
3	metal ring
4	metal fixing ring and shaped ring

Release type

P	push-pull
R	rotary release
B	key release with key PY333 (standard) (not available in the windowed version)
C	key release with key PY334 (not available in the windowed version)
D	key release with key PY335 (not available in the windowed version)
...	....

Other combinations on request.

Signalling type

Z	without
F	windowed

Mushroom diameter

4	Ø 40 mm mushroom

Ambient temperature

	-25°C … +80°C (standard)
T6	-40°C … +80°C

Actuator type

1	for 3-slot base
4	for 4-slot base

Mushroom button colour

1	black
3	red

Body colour

5	yellow
7	yellow with green indication

Technical data

General data

Protection degree:	IP67 acc. to IEC 60529
	IP69K acc. to ISO 20653
Ambient temperature:	-25°C … +80°C
Safety parameters:	
B_{10d}:	600,000
Mechanical endurance:	300,000 operating cycles[1]
Max. actuation frequency:	3600 operating cycles[1]/hour
Actuation travel:	4 mm (NO contact), 4 mm (NC contact)
Actuating force:	25 N
Actuating force at limit of travel:	Push-pull 18.5 N (without contacts)
	Rotary release 35 N (without contacts)
Maximum travel:	9 mm
Tightening torque of the fixing ring:	2 … 2.5 Nm
Utilization requirements:	see page 124

(1) One operation cycle means two movements, one to close and one to open contacts, as defined in EN 60947-5-1.

In conformity with standards:

IEC 60947-1, IEC 60947-5-1, IEC 60947-5-5, IEC 60204-1, EN 60947-1, EN 60947-5-1, EN 60947-5-5, EN 60204-1, EN ISO 13850, UL 508, CSA 22-2 N°14

⚠ Installation for safety applications:

Use only contact blocks marked with the symbol ⊕. Always connect the safety circuit to the **NC contacts** (normally closed contacts: .1-.2) as stated in standard EN 60947-5-1, encl. K, par. 2.

In conformity with the requirements of:

Low Voltage Directive 2006/95/EC, Machinery Directive 2006/42/EC and EMC Directive 2004/108/EC.

Positive contact opening in conformity with standards:
IEC 60947-5-1, EN 60947-5-1.

Main features

- Protection degrees IP67 and IP69K
- 3 different release modes
- Windowed version
- -40˚C versions

Markings and quality marks:

CE ⓂY EAC

IMQ approval:	CA02.04805
EAC approval:	RU C-IT ДМ94.B.01024

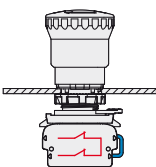## General data

Visual signalling

The versions of the emergency buttons with pull or rotary release can also visually signal the status with a mechanical indicator. The signalling windows change from green to red to signal the change of status of the button, namely from idle to actuated respectively.

Self-monitored contact

Specially designed for emergency mushroom buttons, the self-monitored contact makes it possible to reach a high level of self-control. Possible anomalies, such as the detachment from the emergency mushroom button, are immediately signalled by the opening of the safety circuit. This highlights immediately failures that will be otherwise difficult to detect. Indeed, the detachment of a normal NC contact from the mushroom, allows the machine to continue to function and make the emergency stop unusable. For details see page 79.

Shaped ring

The shaped ring can be used when no label holders or other devices are applied; it prevents dirt and other residues from settling between the button and the panel or box.
This turns out to be particularly useful in the sectors where high standards of cleanness and hygiene are required.
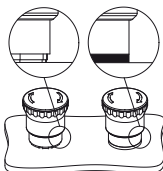
Illuminated disc

The illuminated disc can also be used in all situations when it is necessary to highlight the emergency button on the machine compared to the other devices, or where there are more mushrooms and it is necessary to know which one has been pressed. With high brilliancy, it is available in the versions with continuous or blinking light. Protected with protection degree IP67, it can be customised with writings or symbols upon request. For details see page 119.

Protection degrees IP67 and IP69K

IP69K
IP67

These devices are designed to be used in the toughest environmental conditions and they pass the IP67 immersion test acc. to IEC 60529. They can therefore be used in all environments where the maximum protection of the housing is required. Special measures also allow devices to be used even in machines which are subjected to washing with high pressure warm water jets. In fact these devices pass the IP69K test according to ISO 20653, using jets of water to 100 atmospheres at a temperature of 80°C.
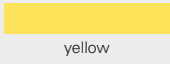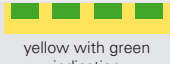
Extended temperature range

-40°C

This range of switches is also available in a special version with an ambient operating temperature range of -40ºC to +80ºC.
They can be used for applications in cold stores, sterilisers and other devices with low temperature environments. Special materials that have been used to realize these versions, maintain unchanged their features also in these conditions, widening the installation possibilities.

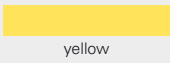## Selection table for emergency buttons
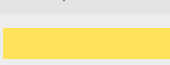
Body colour and marking	Actuator colour	Push-pull	Rotary release	Windowed push-pull	Windowed rotary release	Key release Key number PY333
yellow	red	E2 1PEPZ4531	E2 1PERZ4531	E2 1PEPF4531	E2 1PERF4531	E2 1PEBZ4531
yellow with green indication	red	E2 1PEPZ4731	E2 1PERZ4731	E2 1PEPF4731	E2 1PERF4731	E2 1PEBZ4731
yellow	black	E2 1PEPZ4511	E2 1PERZ4511	-	-	E2 1PEBZ4511

Attention! For safety applications, only use red mushrooms, black mushrooms can only be used for stop functions.

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

Complete units with emergency buttons
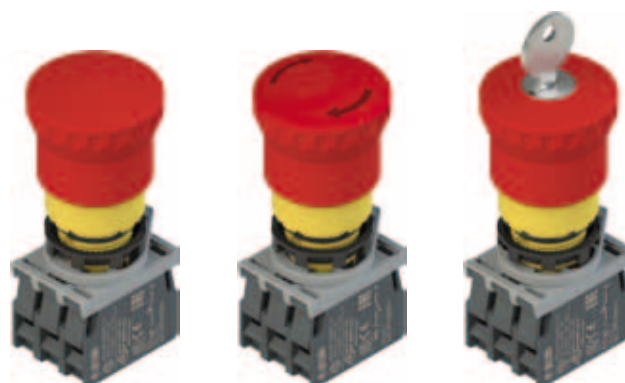
Body colour and marking	Actuator colour	Contacts			Push-pull	Rotary release	Key release Key number PY333
		pos. 2	pos. 3	pos. 1			
yellow	red	-	1NC ⟳	-	E2 AC-DXBC1005 E2 1PEPZ4531 + E2 1BAC11 + E2 CP01G2V1	E2 AC-DXBC1006 E2 1PERZ4531 + E2 1BAC11 + E2 CP01G2V1	E2 AC-DXBC1007 E2 1PEBZ4531 + E2 1BAC11 + E2 CP01G2V1
yellow	red	-	1NC ⟳ SELF-MONITORED	-	E2 AC-DXBC1022 E2 1PEPZ4531 + E2 1BAC11 + E2 CP01S2V1	E2 AC-DXBC1023 E2 1PERZ4531 + E2 1BAC11 + E2 CP01S2V1	E2 AC-DXBC1024 E2 1PEBZ4531 + E2 1BAC11 + E2 CP01S2V1
yellow	red	1NC ⟳	-	1NC ⟳	E2 AC-DXBC1010 E2 1PEPZ4531 + E2 1BAC11 + E2 CP01G2V1 + E2 CP01G2V1	E2 AC-DXBC1002 E2 1PERZ4531 + E2 1BAC11 + E2 CP01G2V1 + E2 CP01G2V1	E2 AC-DXBC1011 E2 1PEBZ4531 + E2 1BAC11 + E2 CP01G2V1 + E2 CP01G2V1
yellow	red	1NC ⟳	1NC ⟳	1NO	E2 AC-DXBC1012 E2 1PEPZ4531 + E2 1BAC11 + E2 CP01G2V1 + E2 CP01G2V1 + E2 CP10G2V1	E2 AC-DXBC1000 E2 1PERZ4531 + E2 1BAC11 + E2 CP01G2V1+ E2 CP01G2V1 + E2 CP10G2V1	E2 AC-DXBC1013 E2 1PEBZ4531 + E2 1BAC11 + E2 CP01G2V1+ E2 CP01G2V1 + E2 CP10G2V1

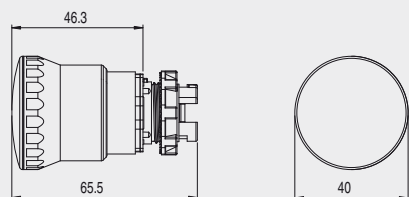Other combinations on request.

➜

Locking keys

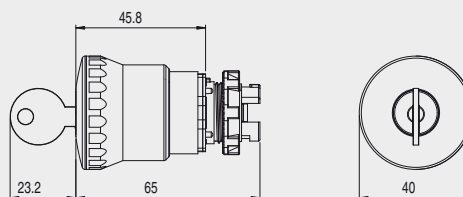| Article	Description
VE KE1A00-PY333	Locking key
	To order only if further keys besides the supplied one are needed. All keys have the same code. Other codes on request.

Dimensions

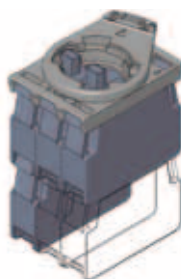All measures in the drawings are in mm

Emergency button

46.3
65.5
40

Emergency button key release

45.8
23.2
65
40

➔ The 2D and 3D files are available at **www.pizzato.com**

Maximum number of contacts

3-slot mounting adapter	4-slot mounting adapter
Emergency buttons E2 1PE●●●●●1	Emergency buttons E2 1PE●●●●●4

maximum number:
4 contact blocks
2 levels
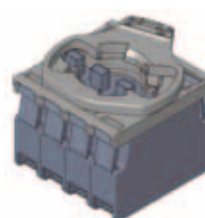
maximum number:
4 contact blocks
1 level
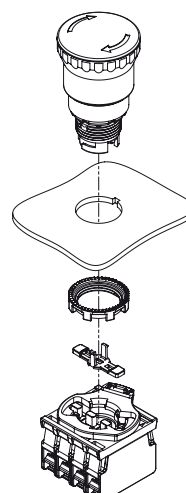
The mounting of the actuator for 4-slot base must
be carried out after fixing the button.

Contact
blocks

Alternative
position
Contact
blocks

Actuator for 4-slot base

10 pcs. packs

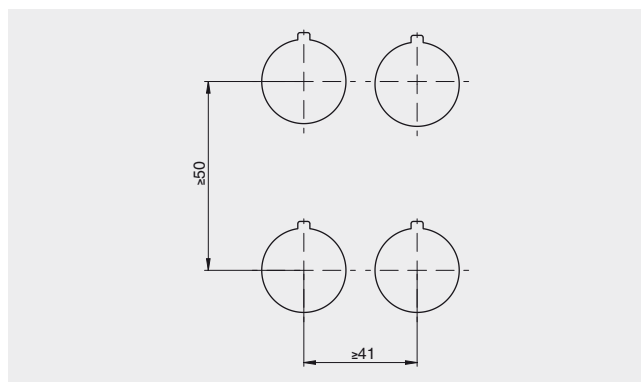| Article	Description
VE AS1218	Long closed actuator for 4-slot mounting adapter. It must be installed after fixing the button to the wall. For buttons E2 1PE••••••.

Accessories

➔ More ACCESSORIES on page 121

Minimum distances for installation

≥50

≥41

Plates with shaped hole

5 pcs. packs

Suitable for devices E2 1PE••••••.
In conformity with EN ISO 13850
Orientable in 90° steps.
Upon request with inscriptions in other languages.
It does not alter the IP67 and IP69K protection degree of the associated device.

Article	Description
VE TF32A5700	Plate with shaped hole, Ø 60 mm yellow disc, no writing
VE TF32D5700	Plate with shaped hole, Ø 90 mm yellow disc, no writing
VE TF32A5101	Plate with shaped hole, Ø 60 mm yellow disc, writing: STOP ▽ EMERGENZA ▽
VE TF32D5101	Plate with shaped hole, Ø 90 mm yellow disc, writing: STOP ▽ EMERGENZA ▽
VE TF32A5102	Plate with shaped hole, Ø 60 mm yellow disc, writing: EMERGENCY ▽ STOP ▽
VE TF32D5102	Plate with shaped hole, Ø 90 mm yellow disc, writing: EMERGENCY ▽ STOP ▽
VE TF32A5109	Plate with shaped hole, Ø 60 mm yellow disc, writing: STOP ▽ STOP ▽ STOP ▽ STOP ▽
VE TF32D5109	Plate with shaped hole, Ø 90 mm yellow disc, writing: STOP ▽ STOP ▽ STOP ▽ STOP ▽
VE TF32A5120	Plate with shaped hole, Ø 60 mm yellow disc, writing: STOP EMERGENZA ▽ ARRET D'URGENCE ▽ NOT AUS ▽ EMERGENCY STOP ▽
VE TF32D5120	Plate with shaped hole, Ø 90 mm yellow disc, writing: STOP EMERGENZA ▽ ARRET D'URGENCE ▽ NOT AUS ▽ EMERGENCY STOP ▽
VE TF32G5700	Plate with shaped hole, yellow, 30x60 mm rectangular, no writing
VE TF32G5103	Plate with shaped hole, yellow, 30x60 mm rectangular, writing STOP ▽
VE TF32G5110	Plate with shaped hole, yellow, 30x60 mm rectangular, writing STOP ▽

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

Illuminated disc

Yellow illuminated disc, Ø 60 mm, 24 Vac/dc
Features at page 119