Fixing ring

Packs of **20 pcs.**

Article	Description
VE GF121A	Technopolymer fixing ring

Article	Description
VE GF720A	Metal fixing ring

Fixing key

Article	Description
VE CH121A1	Technopolymer fixing key for VE GF•••• fixing rings

Ø 22 … Ø 30 mm adapter

Packs of **10 pcs.**

Technical data:

Body and ring material:	technopolymer	Tightening torque:	2 … 2.5 Nm
Protection degree:	IP67 and IP69K	Dowel can be removed with a simple screwdriver	

Article	Description
VE GF151A	Adapter with ring for panel fixing for Ø 22 devices on Ø 30 holes compliant with EN 60947-5-1

Not applicable on E2 •PD••••••• - E2 •PT••••••• - E2 •PQ••••••• double, triple, and quadruple buttons. Not applicable in presence of shaped rings, label holders, guards or protection caps. It does not alter the IP protection degree of the associated device.
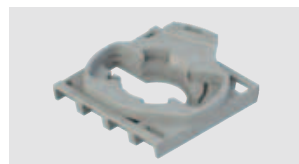
Mounting adapter

Packs of **10 pcs.**
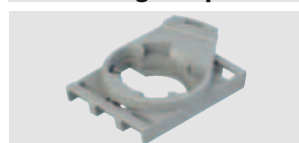
Article	Description
E2 1BAC11	3-slot mounting adapter for E2 CP contact blocks and E2 LP LED units
E2 1BAC12	3-slot mounting adapter, oriented, for E2 CP contact blocks and E2 LP LED units

Not combinable with E2 •PQ••••••• quadruple buttons.

Article	Description
E2 1BAC21	4-slot mounting adapter for E2 CP contact blocks
E2 1BAC22	4-slot mounting adapter, oriented, for E2 CP contact blocks

Combinable only with selectors E2 •SE•••••••••, key selector switches E2 •SC•••••••••, buttons E2 •PU•••••••, double buttons E2 •PD•••••••, emergency buttons E2 •PE•••••••, configured in the appropriate versions for 4-slot adapter.
Combinable with quadruple buttons E2 •PQ•••••••.
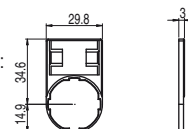
Plate holder

Plate holder for single device. Can be turned in 90° steps.
The switch labels of other manufacturers can be used (for example: 3M article KE-7270-2691-3 or GRAFOPLAST article SITM612X) as long as they have the following dimensions: base 27 +0/-0.4 mm, height 18+0/-0.4 mm, thickness 0.8 ±0.4 mm.
Not applicable on E2 •PD••••••• - E2 •PT••••••• - E2 •PQ••••••• double, triple, and quadruple buttons. **It does not alter the IP protection degree of the associated device.**

29.8   34.6   14.9   3

Article	Description	Pieces/pack.
VE PT32A00A0	Label holder provided with shaped hole, for 18x27 mm plate, without label	10
VE PT32A10A0	Label holder provided with shaped hole, for 18x27 mm label , and transparent protection label without engraving	10
VE PT32A09A•••	Label holder provided with shaped hole, for 18x27 mm label , and glossy aluminium-coloured label with black engraving	1

Not applicable in presence of shaped rings, adapters from Ø 22 to Ø 30 mm, guards or protection caps.

For ordering engraved labels: replace the dots ••• in the article code with the engraving code reported on the table at page 137. Example: Label holder provided with label, "STOP" engraving.
VE PT32A09A••• → VE PT32A09AGB0

Plates
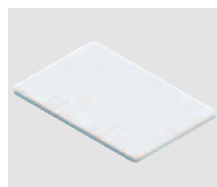
Article	Description
VE TR3A770	Protective label for VE PT label holders without engraving. Packs of **100 pcs.**

Rectangular label 18x27 mm, thickness 0.4 mm, transparent anti-glare polycarbonate. Ideal for protecting the label below

Article	Description
VE TR4A970	Label for VE PT label holders without engraving, for cutter or laser engraving. Packs of **100 pcs.**
VE TR4A91•••	Label for VE PT label holders with black indelible laser engraving

Rectangular label 18x27 mm, thickness 0,8 mm, white aluminium RAL 9006

For ordering engraved labels: replace the dots ••• in the article code with the engraving code reported on the table at page 137.
Example: Label with "STOP" engraving. VE TR4A91••• → VE TR4A91GB0

Adapter for DIN rail

Packs of **10 pcs.**

Brevetto depositato

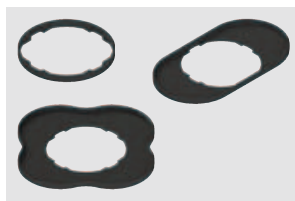| Article	Description
VE AD3PF9A0	Support with Ø22 hole for fixing on DIN rail of the signalling and control devices of the EROUND line

Not suitable for joysticks and quadruple buttons

Shaped ring

Article	Description	Pieces/pack.
VE GP12H1A	Shaped ring for single device	50
VE GP12L1A	Shaped ring for E2 •PD•••••• - E2 •PT••••••double and triple button	50
VE GP12M1A	Shaped ring for E2 •PQ••••••quadruple button	10

Not applicable in presence of label holders, adapters from Ø 22 to Ø 30 mm, guards or protection caps.
It does not alter the IP protection degree of the associated device.

Windowed protection guard

Article	Description
VE GP32A5A	Cylindrical yellow protection guard with 4 windows Ø 40x20 mm

It does not alter the IP protection degree of the associated device.

Connection block

Packs of **10 pcs.**

Connection blocks without electrical contacts and dimensions identical to those of the contact blocks. If combined with the VE DL series luminous disc it can be mounted without using terminals or crimping.

Article	Description
VE BC2PV1	Panel mounting connection block
VE BC2FV1	Connection block for base mounting

Open protection guard
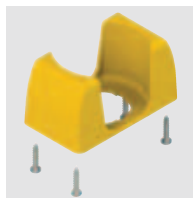
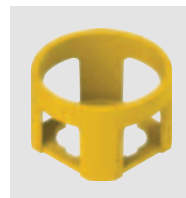| Article	Description
VE GP32F5A	Rectangular open yellow protection guard 66x38 mm, 35 mm high, complete with 4 screws (for panels of thickness from 1 to 3.5 mm)

It does not alter the IP protection degree of the associated device.
Not applicable in presence of shaped rings, label holders, adapters from Ø 22 to Ø 30 mm or protection caps.
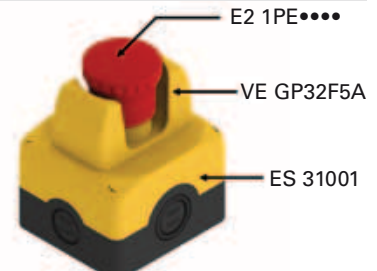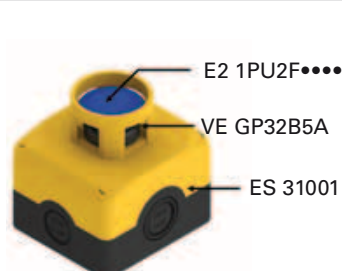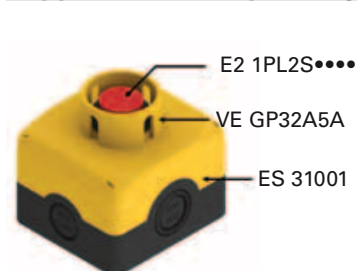
Cylindrical protection guard

Article	Description
VE GP32B5A	Cylindrical yellow protection guard Ø 43x27 mm

Not applicable on emergency buttons of the E2 •PE•••••• series

It does not alter the IP protection degree of the associated device.

Application examples of guards

E2 1PL2S••••
VE GP32A5A
ES 31001

E2 1PU2F••••
VE GP32B5A
ES 31001

E2 1PE••••
VE GP32F5A
ES 31001

Protection cap

Packs of **10 pcs.**

Technical data:
Material: silicon suitable for contact with food
Protection degree: IP67
Ambient temperature: 40°C … +80°C
Ideal for dusty food environments or in presence of water and sand.

Article	Description
VE CA1A1	Protection cap for single flush button (panel width from 1 to 5 mm)
VE CA1B1	Protection cap for single projecting button (panel width from 1 to 5 mm)
VE CA1C1	Protection cap for double and triple projecting buttons (panel width from 1 to 6 mm)
VE CA1D1	Protection cap for double flush button (panel width from 1 to 6 mm)

Not applicable in presence of shaped rings, label holders, adapters from Ø 22 to Ø 30 mm or protection guards.

Closing cap

Packs of **10 pcs.**

Technical data:
Body and ring material: technopolymer
Protection degree: IP67 and IP69K
Tightening torque: 2 … 2.5 Nm

Article	Description
E2 1TA1A110	Black closing cap for Ø 22 mm holes

Dust protection

Packs of **50 pcs.**

Article	Description
VE PR3A70	Transparent dust protection for E2 series contact blocks. Suitable for all panel mounting contact blocks.

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

ENGRAVINGS table (text)

Code	Symbol	Code	Symbol	Code	Symbol	Code	Symbol
		GB0	STOP	FR0	ARRÊT	DE0	HALT
IT1	AVVIO	GB1	START	FR1	MARCHE	DE1	START
IT2	CHIUSO	GB2	CLOSE	FR2	FERMÉ	DE2	ZU
IT3	SU	GB3	UP	FR3	MONTÉE	DE3	AUF
IT4	GIÚ	GB4	DOWN	FR4	DESCENTE	DE4	AB
IT5	SPENTO	GB5	OFF	FR5	ARRÊT	DE5	AUS
IT6	ACCESO	GB6	ON	FR6	MARCHE	DE6	EIN
IT7	IN SERVIZIO	GB7	RUN	FR7	EN SERVICE	DE7	BETRIEB
IT8	ERRORE	GB8	FAULT	FR8	PANNE	DE8	STÖRUNG
IT9	TEST	GB9	TEST	FR9	ESSAI	DE9	PRÜFUNG
IT10	SPENTO ACCESO	GB10	OFF ON	FR10	ARRÊT MARCHE	DE10	AUS EIN
IT11		GB11	MAN. AUTO	FR11	MAN. AUTO	DE11	HAND AUTO
IT12		GB12	MAN. 0 AUTO	FR12	MAN. 0 AUTO	DE12	HAND 0 AUTO
IT13		GB13		FR13		DE13	ANTRIEB
IT14	RIAVVIA	GB14	RESET	FR14	REARM.	DE14	ENTSPERREN
IT15	AVANTI	GB15	FORWARD	FR15	AVANT	DE15	VORWÄRTS
IT16	INDIETRO	GB16	REVERSE	FR16	ARRIÈRE	DE16	RÜCKWÄRTS
IT17	AUMENTA	GB17	RAISE	FR17	MONTER	DE17	HEBEN
IT18	DIMINUISCI	GB18	LOWER	FR18	DESCENDRE	DE18	SENKEN
IT19	SINISTRA	GB19	LEFT	FR19	GAUCHE	DE19	LINKS
IT20	DESTRA	GB20	RIGHT	FR20	DROITE	DE20	RECHTS
IT21	FRENO	GB21	BRAKE	FR21	FERMER/OUVRIR	DE21	BREMSEN
IT22	ALTO	GB22	HIGH	FR22		DE22	HOCH
IT23	BASSO	GB23	LOW	FR23		DE23	NIEDRIG
IT24	VELOCE	GB24	FAST	FR24		DE24	SCHNELL
IT25	LENTO	GB25	SLOW	FR25		DE25	LANGSAM
IT26	PIÚ VELOCE	GB26	FASTER	FR26		DE26	
IT27	PIÚ LENTO	GB27	SLOWER	FR27		DE27	
IT32	APRIRE	GB32	OPEN	FR32		DE32	ÖFFNEN
IT63	CHIAMATA	GB63	CALL	FR63		DE63	
IT64	OCCUPATO	GB64	OCCUPIED	FR64		DE64	
IT99	ARRESTO D'EMERGENZA	GB99	EMERGENCY-STOP	FR99	ARRÊT D'URGENCE	DE99	NOT-AUS

Other engravings on request

pizzato

ENGRAVINGS table (symbols)

Code	Standard	Symbol
L1	IEC 60417-2	○
L2	IEC 60417-2		
L3	-	||
L4	-	|||
L7	-	↑
L8	-	↓
L9	-	←
L10	-	→
L11	IEC 60417-2	+
L12	IEC 60417-2	—
L14	IEC 60417-2	⌂
L15	-	R
L16	IEC 60417-2	☼
L17	ISO 7000	
L18	ISO 7000	
L19	-	0 I
L20	-	0 I
L21	-	I 0 II
L22	-	I 0
L24	-	↗
L25	-	↕
L27	ISO 7000	@
L30	-	
L31	-	⇄
L54	-	
L59	-	
L60	-	
L61	-	
L65	-	1
L66	-	2
L67	-	3
L68	-	4
L69	-	5
L70	-	6
L71	-	7

Code	Standard	Symbol
L72	-	8
L73	-	9
L74	-	0
L76	-	
L77	-	
L78	-	
L83	-	
L84	-	
L86	-	
L91	-	⇕
L96	-	((•))
L130	-	100%
L140	-	
L142	ISO 7000	⚠
L143	ISO 7000	
L145	-	
L146	ISO 7000	
L147	ISO 7000	
L148	-	
L153	-	
L157	-	AIR
L161	-	
L162	-	
L165	-	
L170	-	↕
L172	-	
L188	-	
L213	-	☼
L226	-	
L227	EN 1501	
L230	-	
L236	-	
L240	-	

Code	Standard	Symbol
L241	-	
L242	-	
L243	-	
L244	-	
L245	-	
L246	-	
L247	-	
L248	-	
L249	-	
L250	-	POWER
L251	-	
L252	-	
L253	-	
L254	-	
L260	-	
L262	-	← 0 →
L276	-	START STOP
L277	-	
L278	-	
L279	-	
L280	-	
L287	-	
L293	-	
L295	-	
L304	-	
L305	-	
L311	-	
L312	-	
L315	-	24V=
L316	-	
L317	-	
L319	-	

Other engravings on request

Panel drilling according to EN 60947-5-1
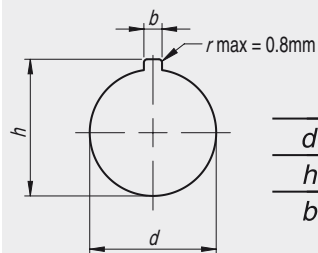
	Ø 22	Ø 30
d	$22,3$ +0,4 -0	$30,5$ +0,5 -0
h	$24,1$ +0,4 -0	$33,0$ +0,5 -0
b	$3,2$ +0,2 -0	$4,8$ +0,2 -0

r max = 0.8mm

Seal gasket

Thanks to its design, the seal gasket ensures a pre-fixing on the panel.

This allows to mount the ring without having to hold the device in position.
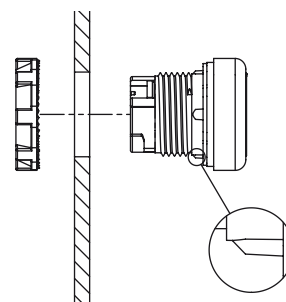
Reference dowel

The mounting reference dowel on the external diameter of all EROUND line devices enables perfect device alignment and mounting on the panel, while avoiding rotations.

In case of use on holes without reference notches, simply remove the dowel with a slight leverage effect using a screwdriver, making sure that the seal gasket does not get damaged.

The removal of the reference dowel, is not advisable for the selectors (series E2 •SE, E2 •SL, E2 •SC) and emergency buttons (series E2 •PE) with rotary release, as these devices are subject to rotary-type actuation.

Ø 22 mm hole with reference notch

Ø 22 mm hole without reference notch
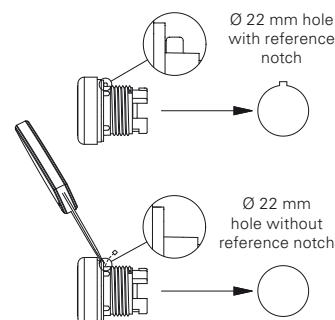
Device connection to mounting adapter

After its installation on the panel using the special ring, the control device can be fixed to the mounting adapter by turning the locking lever. The lever reports the free position (lock open) and locked position (lock closed) indications.

The locking lever rotation can be made smoother by using a flat-head screwdriver.
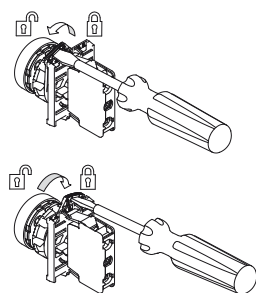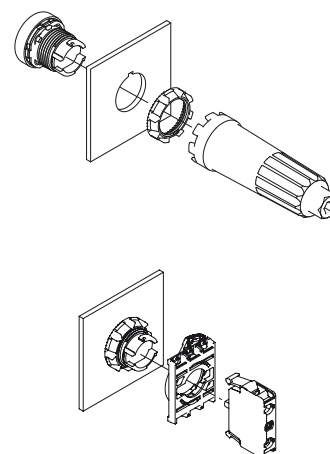
Panel fixing

The control and signalling devices have to be fixed on the rear of the panel with a fixing ring. This has to be tightened with the special fixing key which is supplied as an accessory.

The tightening torque for a correct fixing must be between 2 and 2.5 Nm.

Once the fixing ring has been tightened, the mounting adapter and then the contact blocks or LED units can be mounted on the panel.

Mounting of contact blocks and LED units

Contact blocks and LED units are provided with two snap-in mounting flaps that ensure a stable fixing between them and the mounting adapter (in the panel mounting version), or between them and the base of the housing (in the base mounting version). The panel contact blocks can be connected to each other, up to three, in observance of the limits specified for each actuator in the respective chapter.
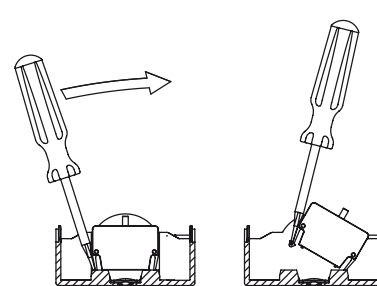Contact blocks and LED units can be quickly disassembled by using a flat-head screwdriver to leverage on the connection flaps.
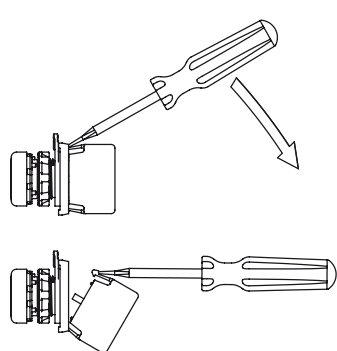
Release of the contact block from the base
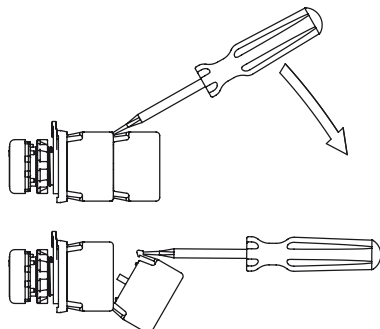
Release of the contact block from another unit

Release of the contact block from the base

pizzato

Lenses for E2 indicator lights

The E2 indicator lights are provided with interchangeable lenses in different colours. The lenses can be removed and mounted by simply turning them clockwise and anticlockwise respectively, without using tools.

For a correct colour rendering, it is necessary to use the correct combination between colour of the indicator light lens and colour of the LED unit applied to it.
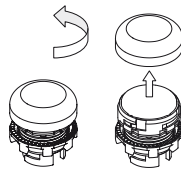
Lenses for buttons and illuminated buttons

The buttons and the illuminated buttons feature replaceable lenses. To remove the lenses, leverage them with a pointed object near the reference notch on the external diameter of the lens itself.
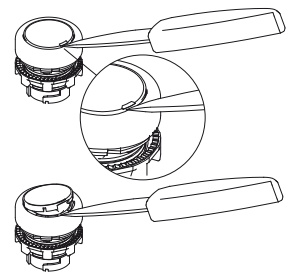
Screw caps insertion / removal

The cover caps supplied for housings of the EROUND series make it possible to close the screws seats, preventing thus the accumulation of dirt and tampering.

These caps are connected to surfaces of the housing. This creates thus a monolithic block showing no visible screws, making it aesthetically pleasing too.

The caps engage to the cover with a simple pressure until the flexible flap snaps in.

For their removal it is necessary to insert the point of a tool (e.g. a small screwdriver) in the special slot on each cap and to leverage on the coupling flap to open it.
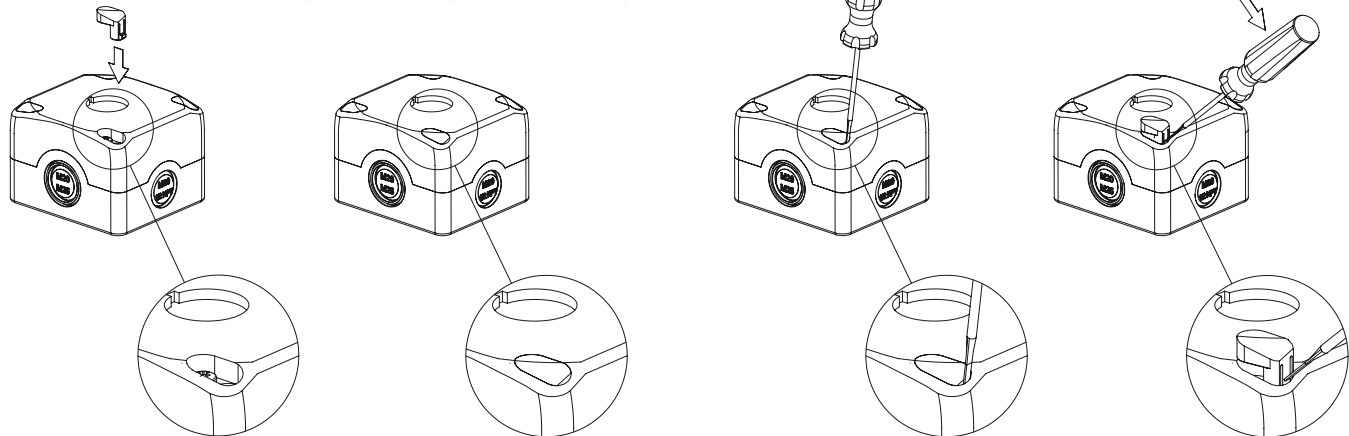
General prescriptions

The product was designed to be installed on switching cabinets or housings containing electrical circuits. All electrical components and devices of the EROUND series that are to be installed inside switching cabinets or enclosures (e.g. E2 CP, E2 CF, E2 LP, E2 LF), are not provided with suitable protections against: water, high quantities of dust, condensation, humidity, steam, corrosive agents, explosive gases, flammable gases or other polluting agents. The protection degree of switching cabinets or enclosures shall ensure the necessary protection to the electrical components of the EROUND series inside them, depending on the application area.

Device utilization

- All devices of the EROUND series are hand operated.
- Do not apply excessive force to the device once it has reached the end of its actuation travel.
- Do not exceed the maximum actuation travel.
- Do not disassemble or try to repair the device, in case of defect or fault replace the entire device.
- In case the device is deformed or damaged it must be entirely replaced. Correct operation cannot be guaranteed when the device is deformed or damaged.
- Always attach the following instructions to the manual of the machine in which the device is installed.
- These operating instructions must be kept available for consultation at any time and for the whole period of use of the device.

Shock and vibrations

- Avoid collisions with the devices. Excessive shock and vibrations may affect correct operation of the device.

Wiring and installation

- Installation must be carried out by qualified staff only.
- Observe minimum distances between devices.
- Observe the tightening torques.
- Keep the electrical load below the value specified by the utilization category.
- Disconnect the power before to work on the contacts, also during the wiring.
- Do not paint or varnish the devices.
- Devices can only be installed on perforated surfaces with a thickness of between 1 mm and 6 mm that comply with the IEC 60947-5-1 standard.
- The protection degree and the correct operation are only guaranteed if the product is installed on a level and smooth surface and if the diameter of the holes is compliant with the IEC 60947-5-1 standard.
- After and during the installation do not pull the electrical cables connected to the contact blocks. Due to high traction on the electrical cables, the contact blocks could detach from the actuator.
- During the coupling and uncoupling of the contact blocks from the mounting adapter or from the base, do not deform or put excessive stress on the coupling flaps. A possible deformation of the flaps could cause the detachment of the contact blocks from their mounting adapter.
- The housings in the EA and ES series are fitted with knock-out holes for the passage of electrical cables. Open these holes using a suitable tool to avoid damaging the housing. Refrain from using housings damaged or cracked as a result of erroneous manoeuvres performed when opening the knock-out holes. After opening the hole, remove any plastic residues and insert a cable gland (or similar device) into the hole with a degree of protection equal or superior to that of the housing.
- After installation and before commissioning of the machine, verify:
  • the correct operation of the device;
  • the correct and full locking of the E2 1BAC•• mounting adapter to the device;
  • the correct coupling of the contact blocks.
- Periodically check for correct device operation.
- Do not deform or modify the device for any reason.
- Before installation, make sure the device is not damaged in any part.
- Refrain from opening, disassembling or attempting to repair the device and replace it immediately if it appears to be damaged.
- Should the installer be unable to fully understand the utilization requirements, the product must not be installed and the necessary assistance may be requested.

Do not use in following environments:

- Environments where dust and dirt can cover the device and by sedimentation stop its correct working.
- Environment where sudden temperature changes cause condensation.
- Environments where coatings of ice may form on the device.
- Environments where the application causes knocks or vibrations that could damage the device.
- In environments with the presence of explosive or flammable gases.
- In environments containing strongly aggressive chemicals, where the products used coming into contact with the device may impair its physical or functional integrity.

Use limitations

- Use the devices following the instructions, complying with their operation limits and the standards in force.
- The devices have specific application limits (min. and max. ambient temperature, mechanical endurance, protection degree, etc.) These limits are met by the different devices only if considered individually and not if combined with each other. For further information contact our technical department.
- The utilization implies knowledge of and compliance with following standards: IEC 60204-1, IEC 60947-5-1, ISO 12100.
- Please contact our technical department for information and assistance (phone +39.0424.470.930 / fax +39.0424.470.955 / e-mail tech@pizzato.com) in the following cases:
  • Cases not mentioned in the present utilization requirements.
  • In nuclear power stations, trains, air planes, cars, incinerators, medical devices or any application where the safety of two or more persons depends on the correct operation of the device.

Additional prescriptions for safety applications

Provided that all previous requirements for the devices installed with operator protection function are fulfilled, further additional prescriptions have to be observed:
- The utilization implies knowledge of and compliance with following standards: IEC 60204-1, IEC 60947-5-1, EN 60954-1, EN ISO 13849-1, EN 62061, EN ISO 12100.
- In emergency buttons the safety circuit must be connected to the .1-.2 NC contacts with the actuator in rest position. The auxiliary contacts NO .3-.4 must be used in signalling circuits only.
- The protection fuse (or equivalent device) must be always connected in series with the NC .1-.2 contacts of the safety circuit.
- Periodically verify the correct working of the safety devices; the periodicity of this verification is settled by the machine manufacturer based on the machine danger degree and it does not have to be less than one a year.
- After installation and before commissioning of the machine, verify:
  • the correct operation of the device;
  • the correct and full locking of the E2 1BAC•• mounting adapter;
  • the correct coupling of the contact blocks.
- For the E2 •PEBZ•••• emergency buttons with key release do not leave the key inserted. A possible sudden activation of the emergency button with the key inserted could cause injuries to the operator.

- All the safety devices installed on the machine (e.g. emergency button, stop button, automatic/manual mode selector etc…) have a limited endurance. Although still functioning, after 20 years from the date of manufacture the device must be replaced completely. The date of manufacture is placed next to the product code, on the label attached to the packing. In case of particularly adverse weather conditions, the endurance of the device can be drastically reduced over time. Regularly check that the safety devices are working properly and if required, replace them, even prior to the above-mentioned expiry date.
- The device is provided with external marking on its packaging. Marking includes: Producer trademark, product code, batch number and date of manufacture. The batch's first letter refers to the month of manufacture (A=January, B=February, etc.). The second and third digits refer to the year of manufacture (17=2017, 18=2018, etc…).
- If the device is used for safety applications, inadequate installation or tampering can cause people serious injuries and even death.
- These devices must not be bypassed, removed, turned or disabled in any other way.
- If the machine where the device is installed is used for a purpose other than that specified by the producer, the device may not provide the operator with efficient protection.
- The safety category of the system comprising the safety device also depends on external devices and their connection. Check that the device is capable of performing the safety function envisaged by the risk analysis of the machine, as provided by EN ISO 13849-1.