



Visualisation; Diagnostics

Easy to Configure

Programming IEC 61131-3

Rapid Installation

PIT es box flex

PILZ

THE SPIRIT OF SAFETY

► Control and signal devices

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Where unavoidable, for reasons of readability, the masculine form has been selected when formulating this document. We do assure you that all persons are regarded without discrimination and on an equal basis.

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SD means Secure Digital

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Introduction

Validity of documentation

This documentation is valid for the product PIT es box flex. It is valid until new documentation is published.

This operating manual explains the function and operation, describes the installation and provides guidelines on how to connect the product.

Using the documentation

This document is intended for instruction. Only install and commission the product if you have read and understood this document. The document should be retained for future reference.

Definition of symbols

Information that is particularly important is identified as follows:



DANGER!

This warning must be heeded! It warns of a hazardous situation that poses an immediate threat of serious injury and death and indicates preventive measures that can be taken.



WARNING!

This warning must be heeded! It warns of a hazardous situation that could lead to serious injury and death and indicates preventive measures that can be taken.



CAUTION!

This refers to a hazard that can lead to a less serious or minor injury plus material damage, and also provides information on preventive measures that can be taken.



NOTICE

This describes a situation in which the product or devices could be damaged and also provides information on preventive measures that can be taken. It also highlights areas within the text that are of particular importance.



INFORMATION

This gives advice on applications and provides information on special features.

Overview

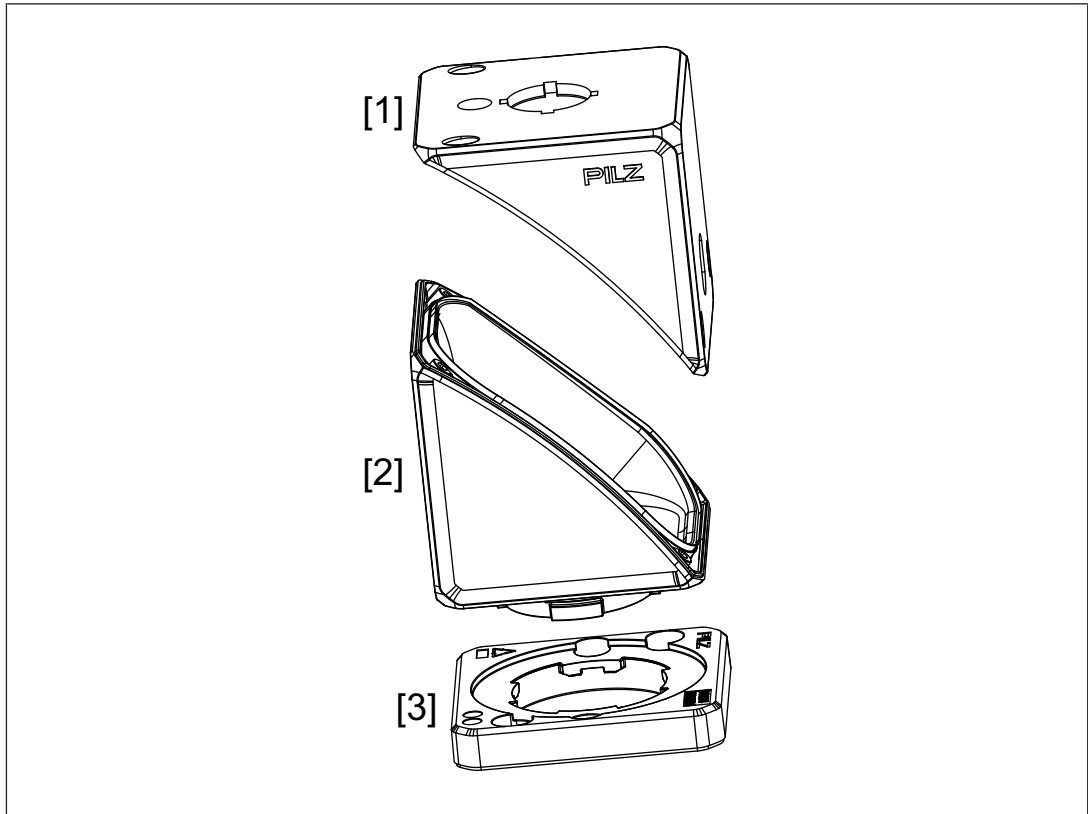



Fig.: Overview PIT es box flex

Legend

- [1] Upper part of the housing with preinstalled screws
- [2] Lower part of the housing with sealing tray and locking hook
- [3] Mounting plate

Housing features

- ▶ Small robust plastic housing with an edge length of 72 mm for indoor use
- ▶ Protection type IP65
- ▶ The protected mounting area is between the upper part of the housing and the sealing tray in the lower part of the housing
- ▶ E-STOP housing in accordance with EN 62208 and EN 60947-5-5
- ▶ Opening with a diameter of 22.3 mm and four recesses for assembly aids, for containing control and display elements in industrial standard of 22 mm

- ▶ Side opening with a diameter of 20.3 mm for installing screw connection with M20 threads
- ▶ The housing can be divided diagonally, the actuation direction can therefore be changed by rotated installation, if required
- ▶ The housing can be clipped to the mounting plate in 90 ° steps
- ▶ Integral manipulation protection, the device cannot be disconnected in installed state unless the upper part of the housing is removed
- ▶ To prevent or detect manipulation, you can affix security labels
- ▶ Bracket available as an accessory (see [Order reference](#)  13)

Labelling of the housing

The housing can be printed, lasered or pasted.

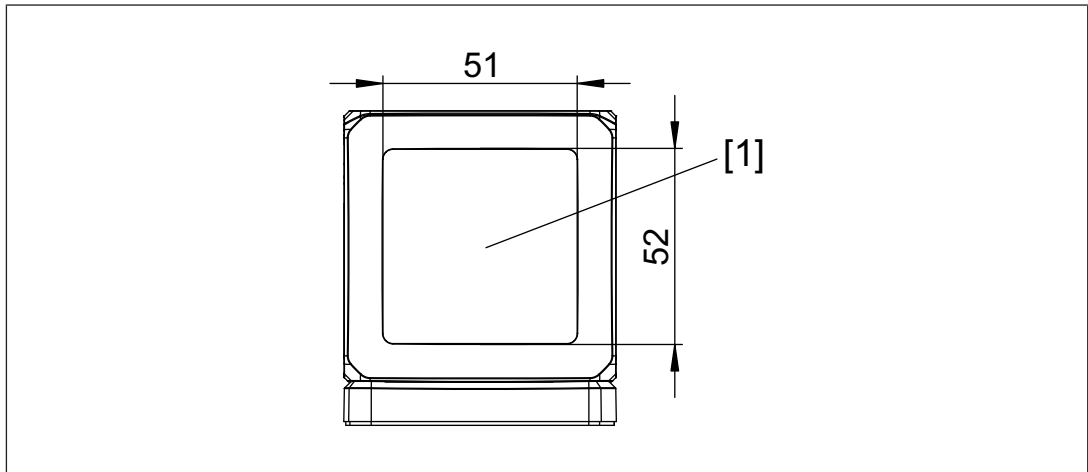




Fig.: Area for affixing a type label

Legend

[1] Area for type label

Installation

- ▶ The protection type specified in [Technical details](#)  12 is achieved only when the two openings of the housing are locked with elements of at least the same protection type.
- ▶ The rated insulation voltage specified in [Technical details](#)  12 applies to basic insulation and for protective isolation by increased insulation. The specified rated insulation voltage is achieved only when the elements in the two openings of the housing have sufficient electrical insulation properties for this.
- ▶ The housing must be fixed to a load-bearing base with the help of the mounting plate supplied.
- ▶ The fixing screws of the mounting plate must be protected from working loose by using an appropriate screw adhesive.

Install the mounting plate

- ▶ The mounting plate is at the underside of the housing, it can be installed in advance. The device is connected to the mounting plate with a bayonet type connector. To remove the mounting plate, slightly lift the slim end of the locking hook with your fingers or a small slotted-head screwdriver and turn the mounting plate a little to the left or right. Then you can rotate the mounting plate by 45 ° and remove the mounting plate from the device.

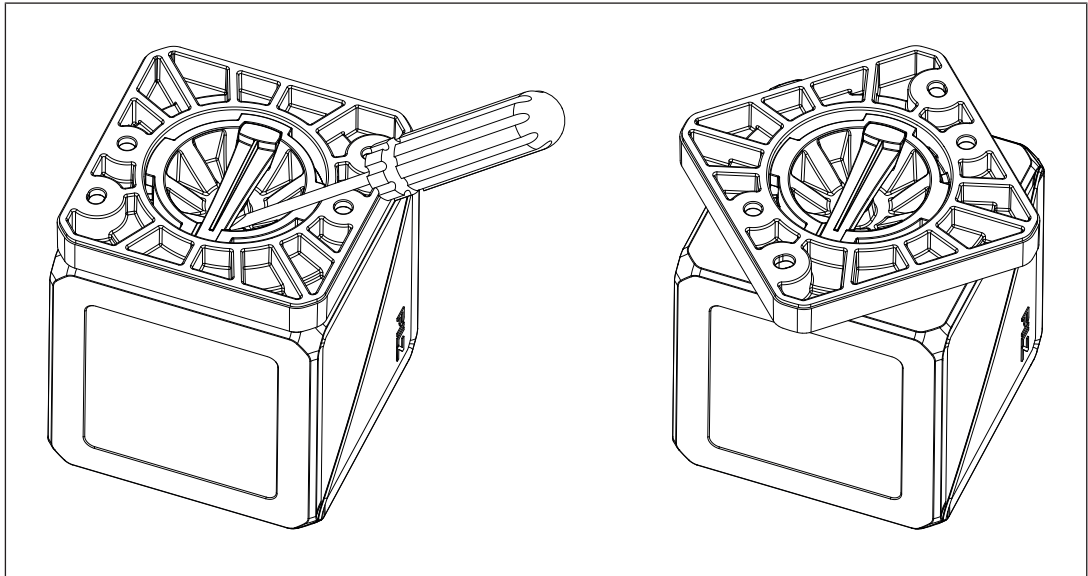


Fig.: Remove the mounting plate

- ▶ The mounting plate is suitable for the centred fixing on T slot profiles with screws and slot nuts and also for diagonal fixing with screws and nuts or threaded holes. Use M4 head cap screws to attach the mounting plate. Tighten the screws with a torque of 1 Nm. Use an appropriate screw adhesive to protect the screws from working loose.

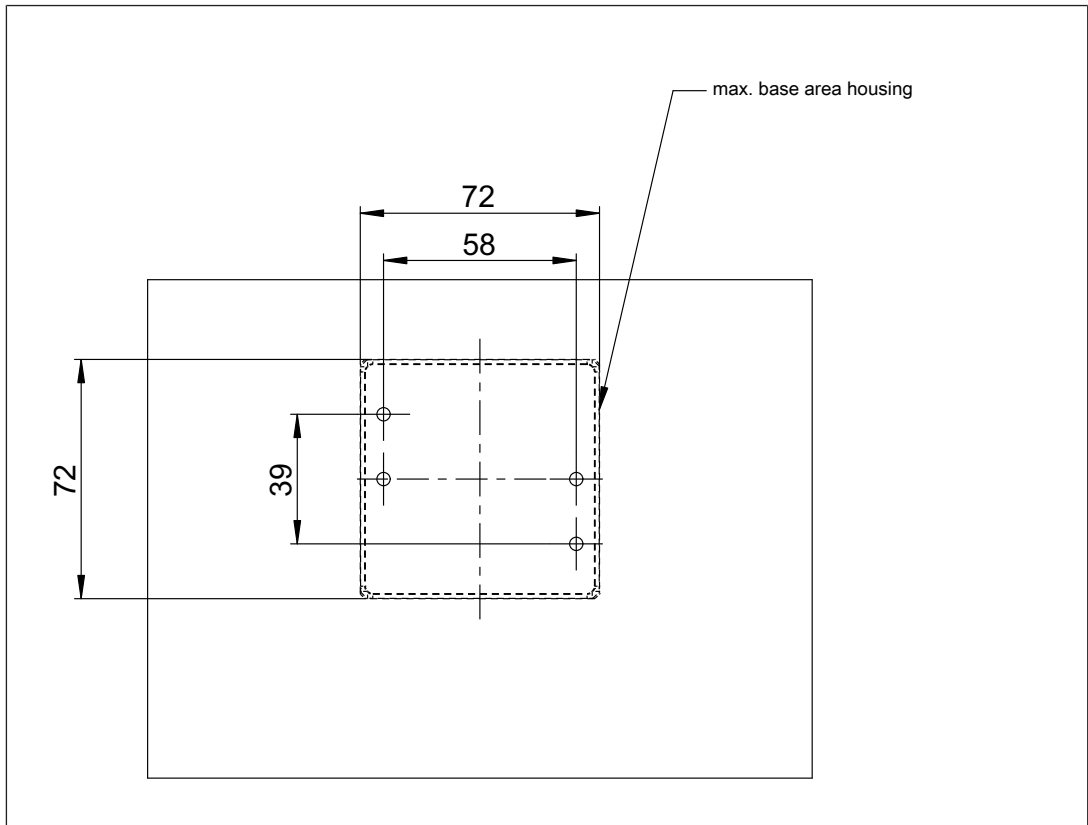


Fig.: Hole pattern of the mounting plate

Install the control or display elements in the upper part of the housing

- ▶ In the opening of the housing with a diameter of 22.3 mm [1] control or display elements are installed (pushbuttons, switches or signal lamps, for example). The opening of the housing with a diameter of 20.3 mm [2] is provided for installing an element for fixing cables (a cable screw connection, for example). When selecting the elements and when installing, make sure the required tightness and the electrical protective class of these two elements is observed.

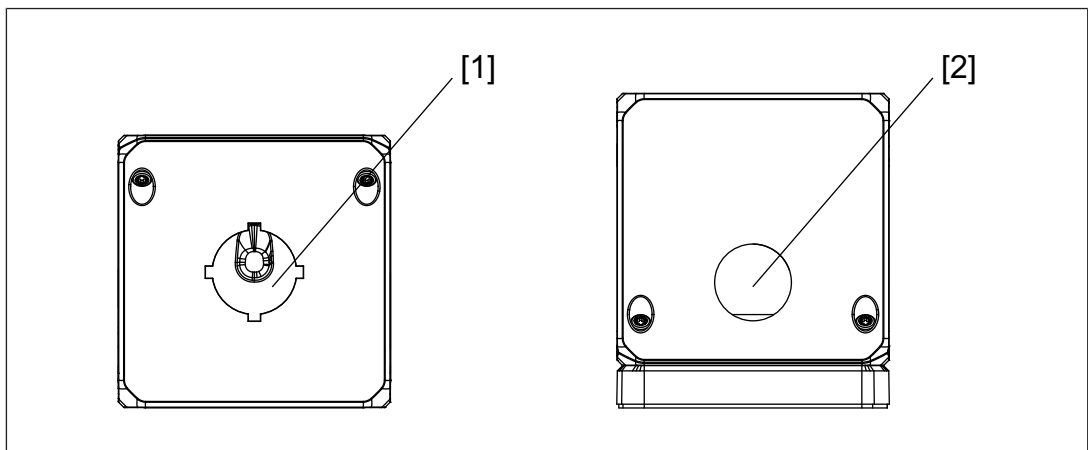


Fig.: Fixing areas for installing the control or display elements

- ▶ If required, you can make an auxiliary hole beside the opening of the housing with 22.3 mm, with a diameter of up to 9 mm (to connect the lighting, for example). On the inside or the upper part of the housing, there are two centring guides fixed at a distance of 19.5 mm to the centre of the central attachment.

Screw the upper part of the housing to the lower part of the housing

- ▶ Make sure that the sealing tray in the lower part of the housing is carefully inserted. Then press the ready preinstalled upper part of the housing in the required direction on the lower part of the housing.

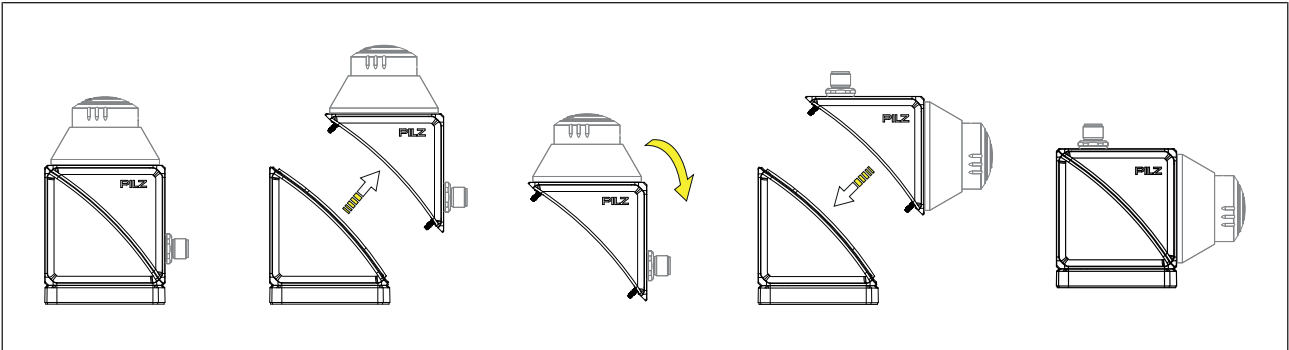


Fig.: Housing rotated by 180 °, example with mounted pushbutton

- ▶ Then tighten the preinstalled screws in the upper part of the housing crosswise with a torque of 0.5 Nm, using a TX10 screwdriver with internal serration (XZN).

Attach the housing on the mounting plate

- ▶ The housing can be attached to the mounting plate in all four directions. Insert the housing rotated by 45 ° into the hole of the mounting plate and lock it into place by turning it to the left or right until you hear it click into place.



INFORMATION

After the housing is locked into place in mounted state, it can no longer be disconnected unless the upper part of the housing is removed (manipulation protection).

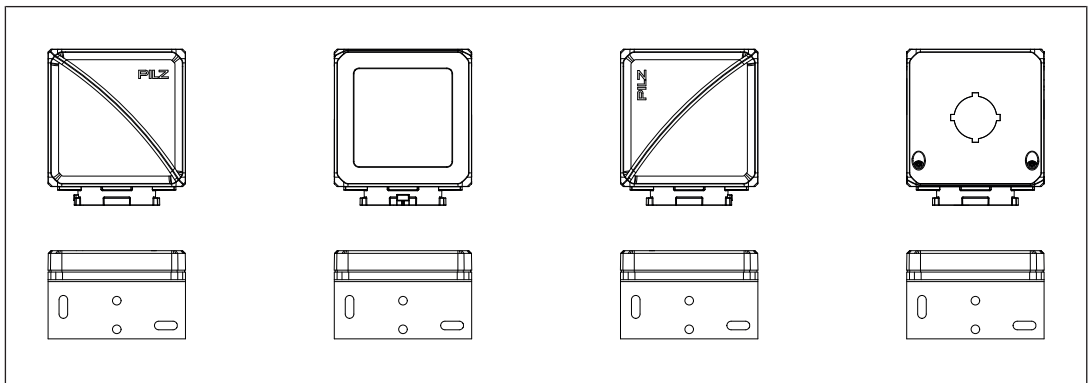


Fig.: Mounting of housing on the mounting plate, with mounting bracket

- ▶ The upper part of the housing can be installed rotated by 180 °. Loosen the 4 screws on the housing using a TX10 screwdriver with internal serration (XZN) and remove the upper part of the housing. Rotate the upper part of the housing around the diagonal axis by 180 °. Replace the upper part of the housing on the lower part of the housing and tighten the screws crosswise with a torque of 0.5 Nm.



NOTICE

In an open state, the electronics installed within the housing are no longer protected against environmental influences. In particular, you should avoid humidity, electrostatic discharge and the ingress of foreign bodies.

- ▶ To prevent manipulation, you can affix security labels (min. 19 mm x 7 mm) on the joint of the housing.

Uninstall the housing

- ▶ To loosen the housing from the mounting plate, you must open the housing. Loosen the 4 screws on the housing using a TX10 screwdriver with internal serration (XZN) and remove the upper part of the housing. Then press the release button on the inside on the base of the lower part of the housing and turn the lower part of the housing by 45 ° to the left or right.

Dimensions in mm

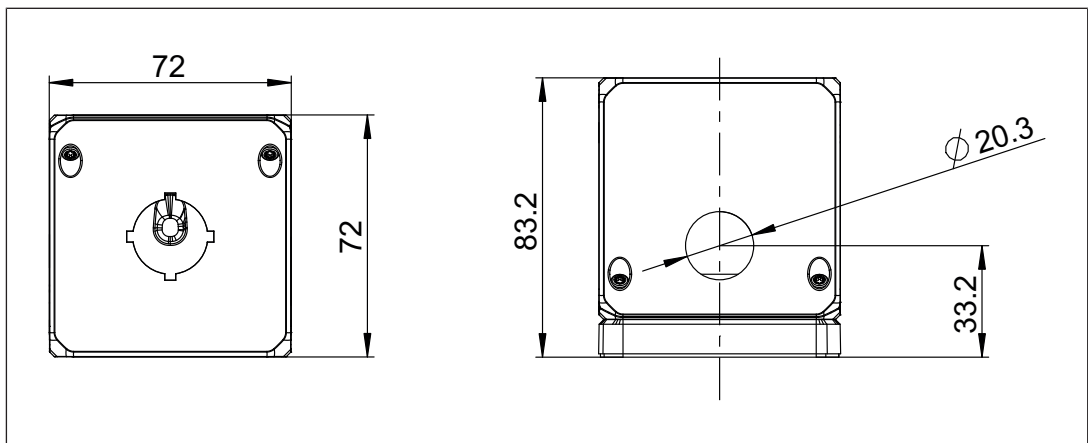
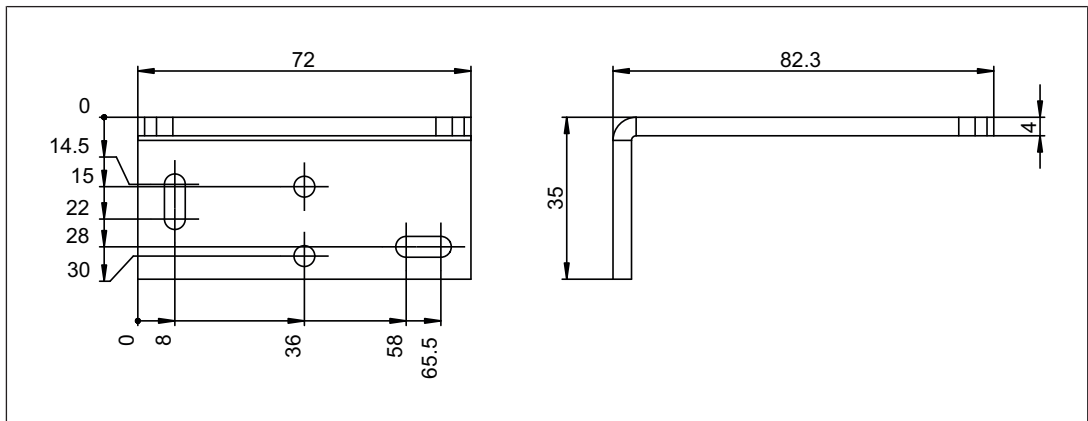


Fig.: PIT es box flex

► Mounting bracket (order no. 400 220)



Maintenance and testing

It is not necessary to perform maintenance work on the product in normal operation. Please return any faulty products to Pilz.

Technical details

| Electrical data | 400203 | 400204 |
|--|---------------------------|---------------------------|
| Max. permitted total power dissipation | 8 W | 8 W |
| Thermal resistance | 5,5 K/W | 5,5 K/W |
| Environmental data | 400203 | 400204 |
| Ambient temperature | | |
| Temperature range | -25 - 55 °C | -25 - 55 °C |
| Storage temperature | | |
| Temperature range | -25 - 70 °C | -25 - 70 °C |
| Vibration | | |
| In accordance with the standard | EN 60947-5-5 | EN 60947-5-5 |
| Frequency | 10 - 500 Hz | 10 - 500 Hz |
| Amplitude | 0,35 mm | 0,35 mm |
| Acceleration | 50 m/s² | 50 m/s² |
| Rated insulation voltage | 300 V | 300 V |
| Protection type | | |
| Housing | IP65 | IP65 |
| Housing shock resistance | IK04 | IK04 |
| Mechanical data | 400203 | 400204 |
| Mounting position | Any | Any |
| Load capacity, housing | 200 g | 200 g |
| Material | | |
| Housing | PC | PC |
| Seal pan | TPU | TPU |
| Dimensions | | |
| Height | 83,2 mm | 83,2 mm |
| Width | 72 mm | 72 mm |
| Depth | 72 mm | 72 mm |
| Weight | 185 g | 185 g |

Where standards are undated, the 2021-04 latest editions shall apply.

Order reference

Product

| Product type | Features | Order no. |
|------------------------|---|-----------|
| PIT es box flex yellow | Enclosure yellow-black IP65 for pushbuttons fitting a 22.3mm mounting hole including mounting plate; flexible pushbutton alignment; cable entries 1 x M20 | 400 203 |
| PIT es box flex | Enclosure light grey IP65 for pushbuttons fitting a 22.3mm mounting hole including mounting plate; cable entries 1 x M20 | 400 204 |

Accessories

| Product type | Features | Order no. |
|-------------------------|--------------------------------------|-----------|
| PIT es box flex bracket | Mounting bracket for PIT es box flex | 400 220 |

