

# PCE

Connection  
to the future



# OPOLE

NEW STATIONARY AND MOBILE EMPTY DISTRIBUTION BOX

User Manual EN

Original User Manual OPOLE: 09/2021

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# 1. General information

## 1.1 Using the user manual

This manual contains information which must be reviewed to ensure proper installation and operation of OPOLE empty enclosure in all phases of its operation. Safety information must be observed to guarantee the safe use of OPOLE empty enclosure for humans and the environment. This manual is part of OPOLE empty distribution box, please read the contents carefully before starting any work. This manual must be reviewed and understood by all specialists involved in the prefabrication process, operation and any work related to OPOLE empty distribution box.

## 1.2 Electrically skilled person

This user manual is intended for qualified electrotechnicians of the empty distribution box manufacturer.

## 1.3 Responsibility of the manufacturer of distribution box sets



The following information is binding for the manufacturer of distribution box sets.

The sole responsibility of the installation of distribution box sets covers:

- Allowing only electrically skilled person to work on OPOLE empty distribution box. Ensuring that proper training and instructions are provided.
- Providing the required documentation to electrically skilled person.
- Providing PPE.
- Observing national guidelines, safety regulations and applicable product standards. Ensuring that all tests and procedures are performed.
- Making sure that equipotential bonding and protective conductor of the installed equipment are installed correctly.
- Making sure that fastening elements are used as intended, documentation is followed and the necessary tests are completed.



For better understanding, the manufacturer of the distribution box set is referred to as the manufacturer further in this manual.

## 1.4 Disclaimer

PCE Polska Sp. z o.o. accepts no liability for any damage caused by:

- Failure to observe this user manual.
- Improper use.
- Allowing unqualified personnel to carry out activities on the distribution box.
- Using untested components from third party vendors.

## 2. Safety information

### 2.1 Symbols used



#### DANGER

Means imminent danger. Disregarding information marked with this symbol may lead to an accident causing severe or even fatal injuries.



#### WARNING

Means potential danger. Disregarding information marked with this symbol may lead to an accident causing severe or even fatal injuries.



#### CAUTION

Means potential danger. Disregarding information marked with this symbol may lead to an accident causing minor injuries.

#### NOTE

Means a potentially dangerous situation. Disregarding information marked with this symbol may result in damage to the product or nearby equipment.



Important information.

### 2.2 General safety information



#### WARNING

##### **Risk of electric shock due to live equipment!!!**

Take the following safety steps before beginning any work:

- Disconnect mains!
- Prevent reconnection!
- Test for absence of harmful voltages!
- Ground and short circuits!
- Cover or close off nearby live parts!

**WARNING****Danger of electric shock by damaged OPOLE distribution box!**

If the enclosure is damaged, the default degree of protection is no longer ensured.

- If the enclosure is damaged, turn off the distribution set immediately.
- Use appropriate personal protective equipment.

**WARNING****Risk of injury due to improper use in explosive atmosphere!**

OPOLE distribution box are not designed for use in explosive atmospheres.

- Observe the intended use of OPOLE distribution box.

**NOTE**

In order to guarantee the functionality and safety of OPOLE distribution box, it is recommended to use components and accessories manufactured by PCE Polska Sp. z o.o.



OPOLE empty distribution box may only be installation by qualified electricians.



Use appropriate and functional personal protective equipment for all work.

## 2.3 Intended use

OPOLE empty distribution box are suitable for:

- Installation of protection-, control- and plug-in devices.
- Erection of low-voltage switchgear assemblies see clause IEC/EN 61439 series of standards, etc.
- Use under specified operating conditions and specified limit values. See chapter "Technical Specifications"



Follow all specifications for installation of OPOLE empty distribution box and equipment. See chapter "No 7. Installation instructions".

## 2.4 Improper use

If used for purposes other than those specified in this user manual, the safety and performance of the product may be affected.



Any use beyond the instructions is considered improper. PCE Polska Sp. z o.o. accepts no liability for any damage to humans, environment or any property damages.

**NOTE**

OPOLE distribution boxes are not designed for use in explosive atmospheres.

## 3. Compliance

### 3.1 Guidelines

OPOLE empty distribution box fulfil the requirements of following directives:

- › Low voltage directive 2014/35/EU
- › RoHS 2011/65/EU and 2015/863/EU

### 3.2 Standards

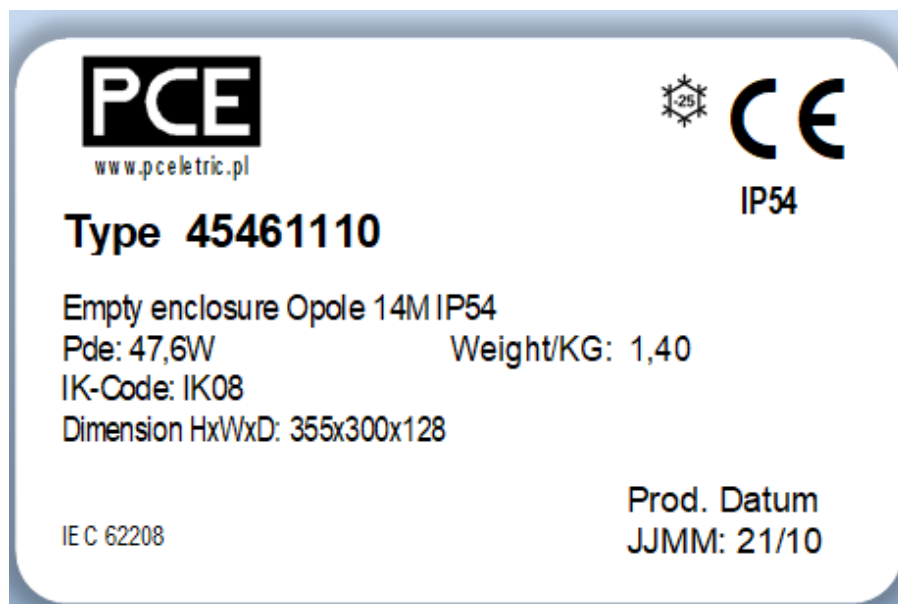
OPOLE empty distribution box fulfil the requirements of IEC 62208, EN 62208.

### 3.3 Type label

The type label is attached on the outside of OPOLE empty distribution box and contains information as presented in the picture below.



This nameplate is an example and may vary depending on the variant supplied. Refer to the nameplate (label) of each individual OPOLE empty distribution box for correct information.





## 4. Technical specification

External dimensions	WITH HANDLE	WITHOUT HANDLE
Height (mm):	405	355
Width (mm)	300	300
Depth (mm)	128	128

External dimensions	WITH HANDLE	WITHOUT HANDLE
Height (mm):	345	345
Width (mm)	292	292
Depth (mm)	95	95

	BLIND		WITH MOUNTING HOLES	
	WITH HANDLE	WITHOUT HANDLE	WITH HANDLE	WITHOUT HANDLE
Load capacity (max. kg)	8	8	8	8
Weight (kg)	1,4	1,5	1,4	1,5
Power dissipation capacity (Pde)	47,6	47,6	47,6	47,6

Ambient temperature	-25°C to +40°C
Storage and transport temperature	-25°C to +55°C / short-term (24h) +70°C
Humidity for indoor installation	Max. 50% at maximum temperature of +40°C
Humidity for outdoor installation	Temporarily 90% at max. ambient temperature of +20°C
at maximum ambient temperature of +20°C	-25°C to +40°C
IP degree of protection	IP54
IK impact resistance	IK08
Pollution degree	3
Insulation rated voltage	690 V
Maximum installation height above sea level	2000 m
Glow wire strength IEC/EN 60695-2-11	650 °C



The above technical specification are only valid for the intended use of OPOLE empty distribution box.

## 4.1 OPOLE empty distribution box - insulation material

OPOLE empty distribution box is made of ABS (ACRYL-BUTADIEN-STYRENE). The fuse window is made of PC (polycarbonate).

## 4.2 Degrees of protection

### IP degree of protection

The degree of protection of OPOLE empty distribution box is **IP54** with closed fuse window.

### IK impact resistance

OPOLE empty distribution box has an impact resistance of IK08. This corresponds to an impact energy of 5J.

The protection class was tested at -25°C.

## 4.3 Special operating conditions

### NOTE

Possible seal damage!

When used in sub-zero temperatures, the seal on the top of the enclosure and under the fuse window may be damaged by careless opening.

- Always use care when opening the fuse window.
- Replace the enclosure if the seals are damaged.

### NOTE

Possible damage to components due to condensation!

When installed outdoors in an environment with fluctuating temperature or high humidity, condensation water forms inside the distribution box . To prevent this:

- Ensure adequate ventilation of the distribution box .
- When selecting proper measures, the manufacturer must consider the required degree of protection.

## 4.4 Chemical compatibility

The enclosure is made of ABS, fuse window is made of PC.

Material resistance specifications are valid at room temperature, at other temperatures resistance may vary.



The following information must not be considered a guarantee and does not release from performing own tests to confirm the specific suitability of the product for the intended.

Chemical compound	Concentration	Resistance	
		PC	ABS
Acetone		-	-
Aldehydes		-	o /-
Alcohols		o	+ / o
Formic acid	4-5%	-	+
Amines		-	+
Ammonia	5%	-	+
Inorganic salts		+ / o	+
Gasoline		o /-	o /-
Benzene		-	-
Chlorine		o	-
Acetic acid	5%	+	+
Ester		o	-
Ethyl ether		-	-
Fat		+	+
Hydrofluoric acid		x	+
Formaldehyde	5%	-	+
Glycol		o	x
Glycerine		o	+
Ketones		-	-
Fuels		o	+
Methane		+	+
Mineral oils		+	+
Sodium hydroxide	10%	-	+
Caustic soda	2-8%	-	+
Nitrobenzene		-	x
Oil		+	+
Propanol		+	+
Nitric acid	2%	+	-
Hydrochloric acid	2%	o	o
Sulphuric acid	50%	+	+
Water, sea water, cold		+	+
Hot water		o	+
Hydrogen peroxide		+	+
Citric acid	10%	+	+

+ resistant

o conditionally resistant

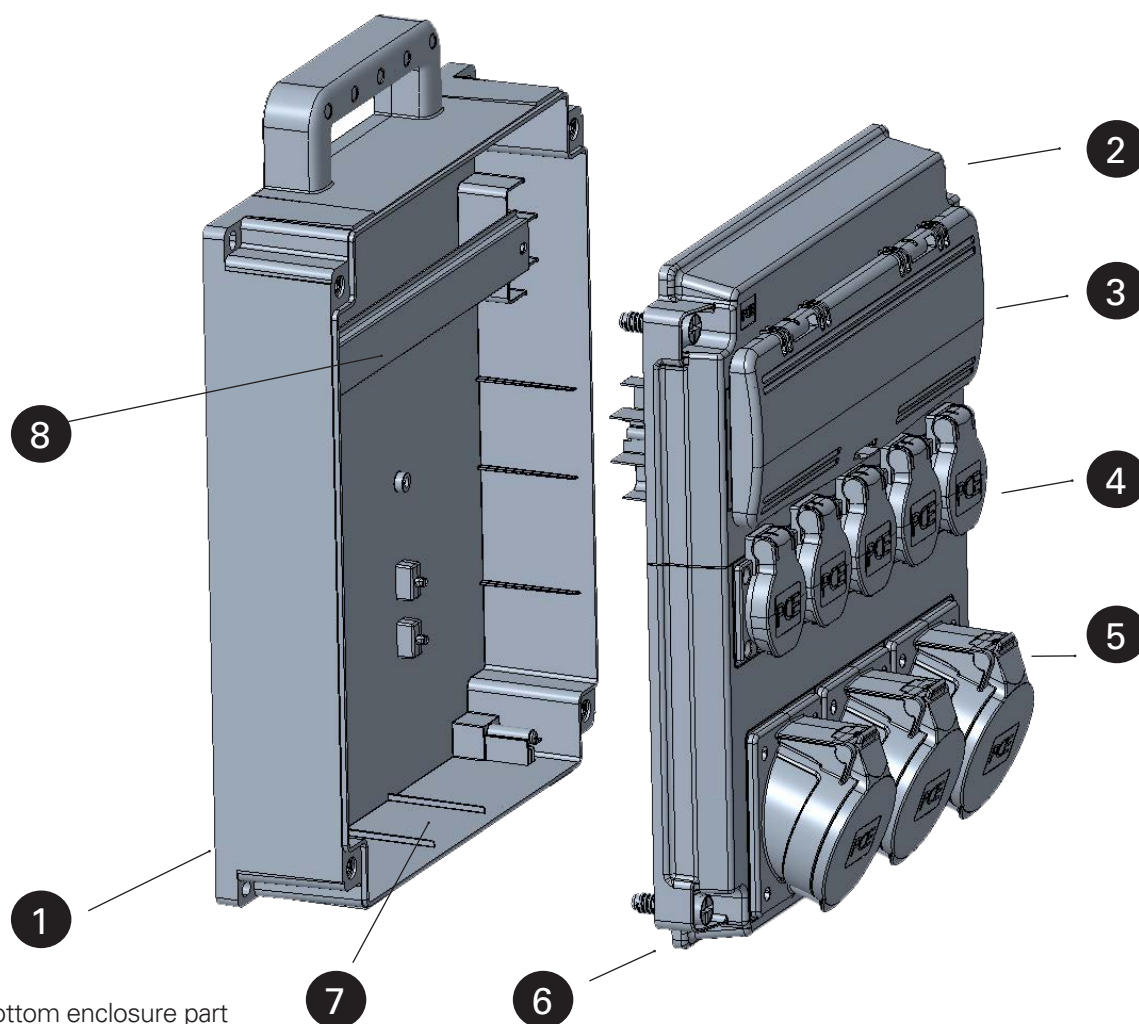
- not resistant

x no data

## 5. Product overview

### 5.1 Product description

OPOLE empty distribution box is a distribution enclosure made of ABS insulating material, with an fuse window of PC. OPOLE empty distribution box features a bottom and a top part. Installed in top part of the housing is a hinged fuse window. The protections under the fuse window are installed on the mounting rail. The mounting rail is delivered with the accessories necessary for its installation. The rail may be installed in either part of the distribution box



1. Bottom enclosure part
2. Top enclosure part
3. Hinged fuse window with snap lock
4. Pre-installed 230V mains socket (optional)
5. Pre-installed 400V CEE socket-outlet (optional)
6. Plastic enclosure screw (x4)
7. Drill mark for cable glands
8. Mounting rail TH35-7,5

Available are different types of top part of the enclosure- blind enclosure (without mounting holes), enclosure with mounting holes for 230V and CEE 400V socket-outlet, as well as different types of the bottom part of the enclosure (with or without a transport handle).

## 5.2 Model overview



**Empty distribution box with handle**



**Empty distribution box without handle**

Maximum number of modules	14M	14M
Mounting holes for sockets	–	–
<b>Part No.</b>	<b>9092110</b>	<b>9091110</b>



**Empty distribution box perforated with handle**

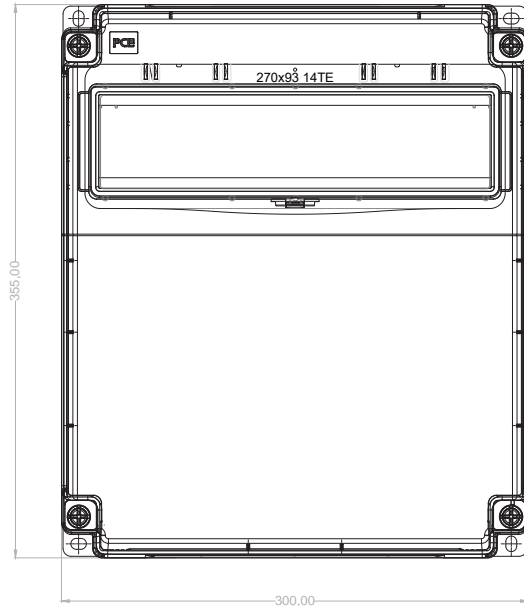
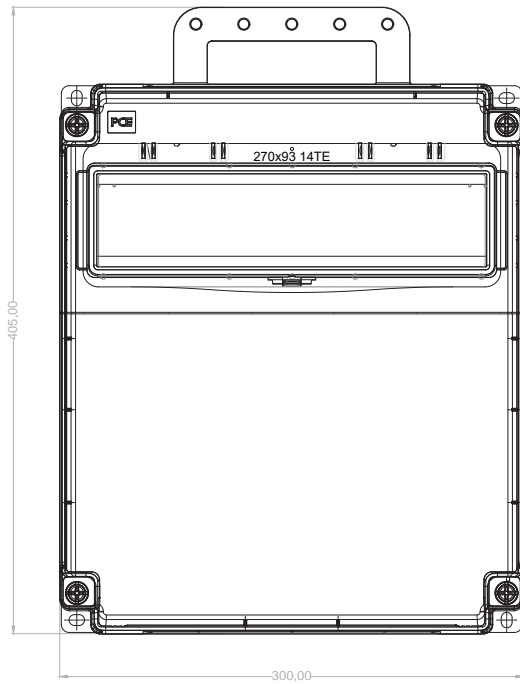


**Empty distribution box perforated without handle**

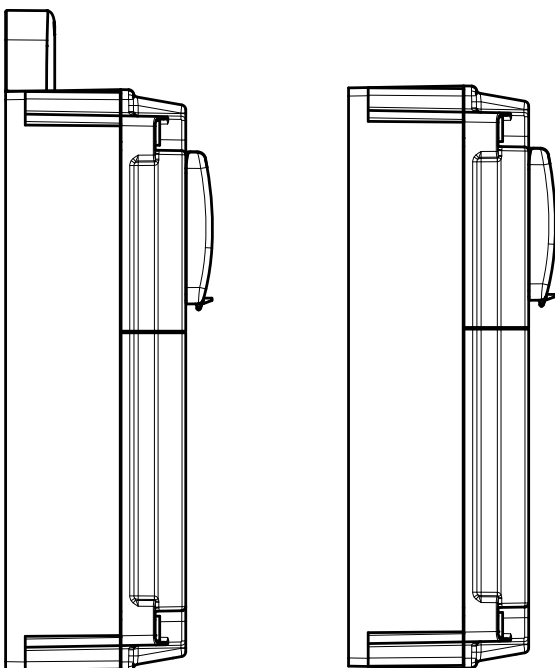
Maximum number of modules	14M	14M
Mounting holes for sockets	5-SS, 3-CEE	5-SS, 3-CEE
<b>Part No.</b>	<b>9092111</b>	<b>9091111</b>

### 5.3 Dimensional drawing 9092110 and 9091110

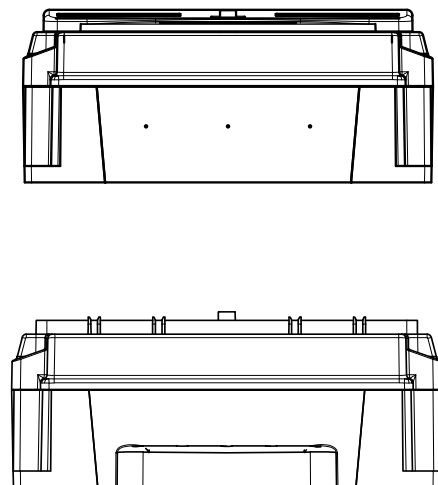
Front view



Side view

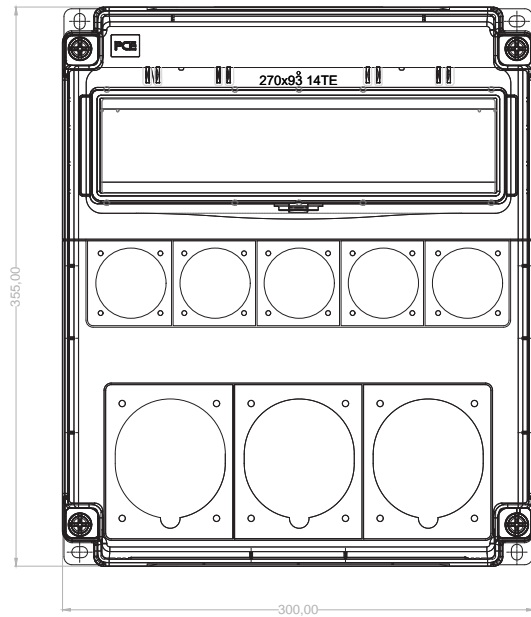
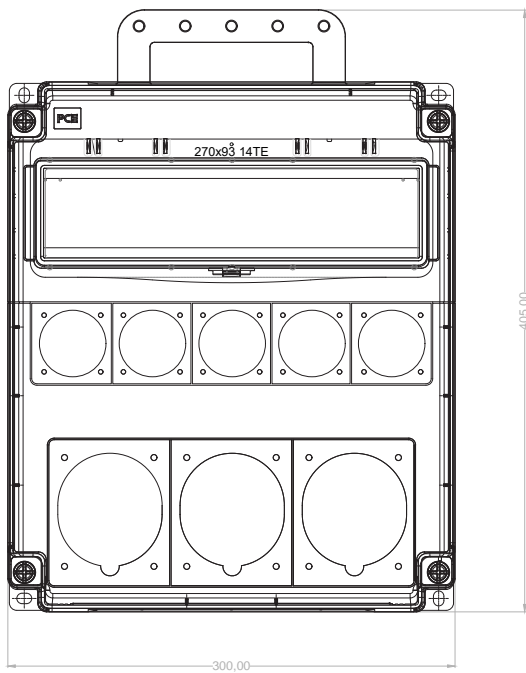


Top view

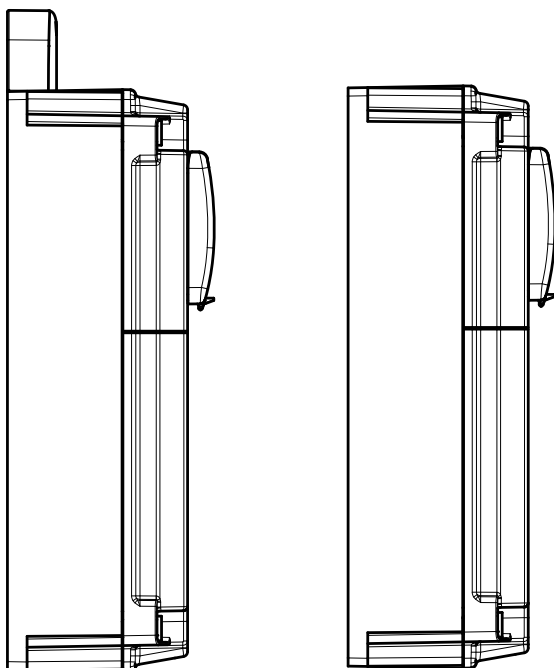


## 5.4 Dimensional drawing 9092111 and 9091111

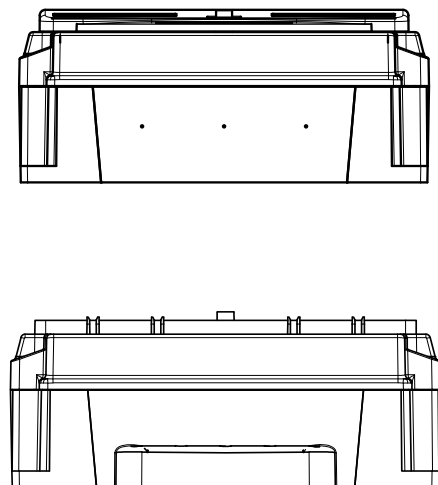
Front view



Side view



Top view

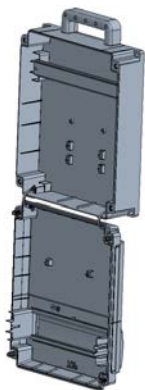


## 6. Available sets

### OPOLE 9092110

		Quantity
<b>1.1</b>	Bottom enclosure part with carrying handle	1
<b>2.1</b>	Top enclosure part, without mounting holes, with fuse window installed	1
<b>3</b>	Quick start guide	1
<b>4</b>	Plastic enclosure screw (x4)	4
<b>5</b>	TH35x7.5 285mm rail	1
<b>6</b>	Hinge (x2)	2
<b>7</b>	Screw for TH35x7.5 rail (top mounting) 4x35/15 (x2)	2
<b>8</b>	Screw for TH35x7.5 rail (bottom mounting) DIN 7981 CH 3,9x25mm (x2)	2
<b>9</b>	DIN 7983 3,9x13 A2 (x4) screw	4

**1.1**



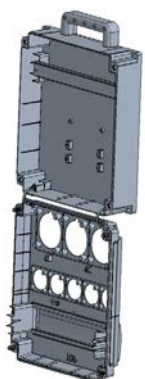
**2.1**



### OPOLE 9092111

		Quantity
<b>1.2</b>	Bottom enclosure part with carrying handle	1
<b>2.2</b>	Top enclosure part, with mounting holes, with fuse window installed	1
<b>3</b>	Quick start guide	1
<b>4</b>	Plastic enclosure screw (x4)	4
<b>5</b>	TH35x7.5 285mm rail	1
<b>6</b>	Hinge (x2)	2
<b>7</b>	Screw for TH35x7.5 rail (top mounting) 4x35/15 (x2)	2
<b>8</b>	Screw for TH35x7.5 rail (bottom mounting) DIN 7981 CH 3,9x25mm (x2)	2
<b>9</b>	DIN 7983 3,9x13 A2 (x4) screw	4

**1.2**



**2.2**



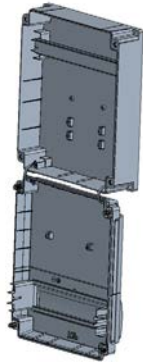


**OPOLE 9091110**

Quantity

<b>1.3</b>	Bottom enclosure part without handle	1
<b>2.3</b>	Top enclosure part, without mounting holes, with fuse window installed	1
<b>3</b>	Quick start guide	1
<b>4</b>	Plastic enclosure screw (x4)	4
<b>5</b>	TH35x7.5 285mm rail	1
<b>6</b>	Hinge (x2)	2
<b>7</b>	Screw for TH35x7.5 rail (top mounting) 4x35/15 (x2)	2
<b>8</b>	Screw for TH35x7.5 rail (bottom mounting) DIN 7981 CH 3,9x25mm (x2)	2
<b>9</b>	DIN 7983 3,9x13 A2 (x4) screw	4

**1.3**



**2.3**

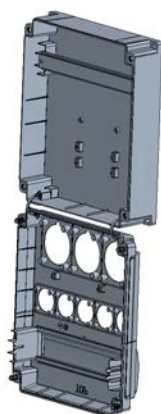


**OPOLE 9091111**

Quantity

<b>1.4</b>	Bottom enclosure part without handle	1
<b>2.4</b>	Top enclosure part, with mounting holes, with fuse window installed	1
<b>3</b>	Quick start guide	1
<b>4</b>	Plastic enclosure screw (x4)	4
<b>5</b>	TH35x7.5 285mm rail	1
<b>6</b>	Hinge (x2)	2
<b>7</b>	Screw for TH35x7.5 rail (top mounting) 4x35/15 (x2)	2
<b>8</b>	Screw for TH35x7.5 rail (bottom mounting) DIN 7981 CH 3,9x25mm (x2)	2
<b>9</b>	DIN 7983 3,9x13 A2 (x4) screw	4

**1.4**



**2.4**



Accessories:

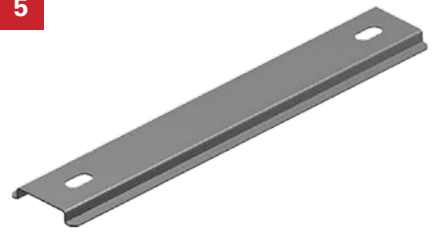
3



4



5



6



7



8



9



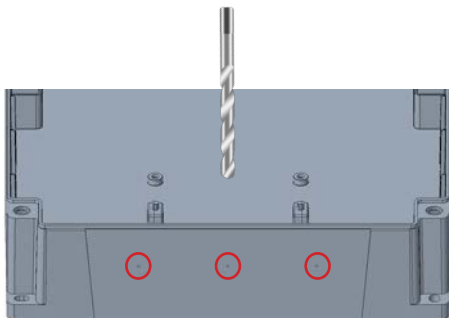
## 7. Assembly instruction



Recommended sequence of assembly of OPOLE empty distribution box using model 9091111 as an example, without installation of electrical equipment.

### 7.1 Drilling holes for glands

- Drill the holes for glands with a drill in the marked drilling points.



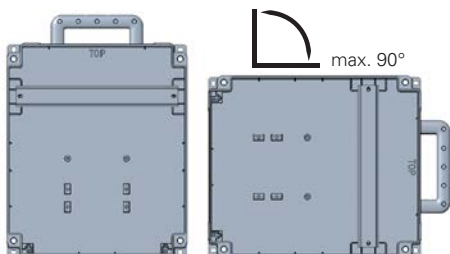
#### NOTE

Do not break out the holes for cable glands. Important- follow the installation instructions provided by the gland manufacturer.

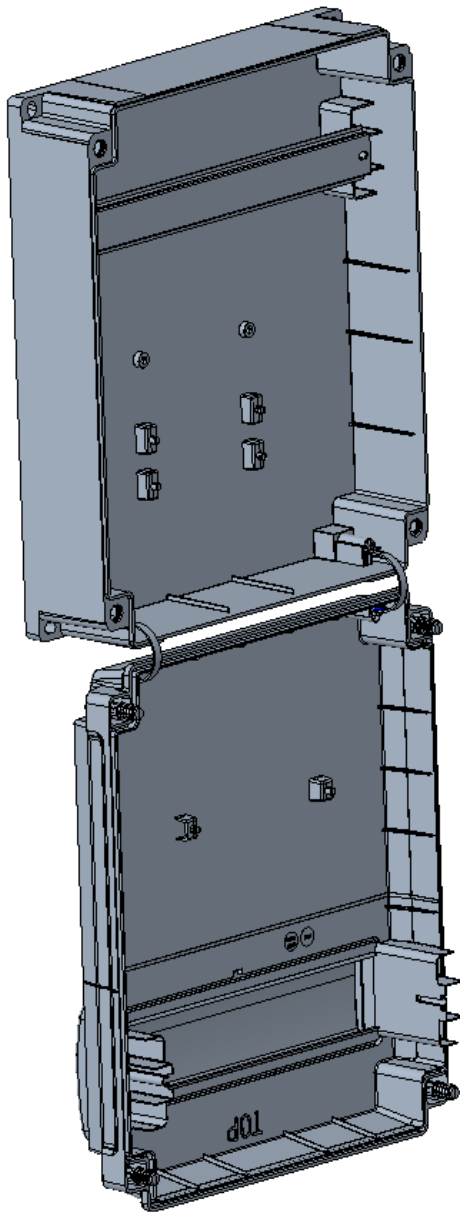
### 7.2 Wall-mounting of OPOLE empty distribution box



To ensure proper degree of protection, make sure to observe the permissible operating positions of the enclosure.

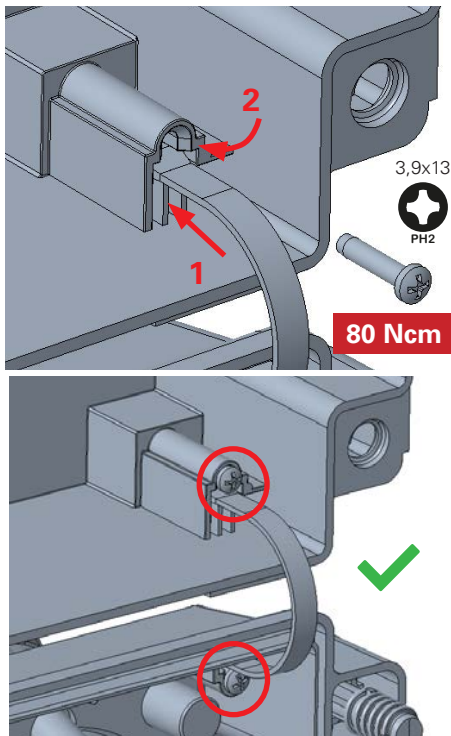


- IEC degree of protection of IP44 and IP44/54- vertical wall mounting.
- TOP marking at the top- wall mounting.
- TOP marking on the side, maximum angle 90° (see fig.).
- Mount the TH35x7.5 mounting rail using proper screws.
- Mount the TH35x7.5 rail in the top enclosure part (screws 4x35/15).



- Place the bottom enclosure part vertically on a smooth wall.
- Screw the bottom enclosure part to the wall using proper screws.
- Make sure that the TOP marking is at the top.

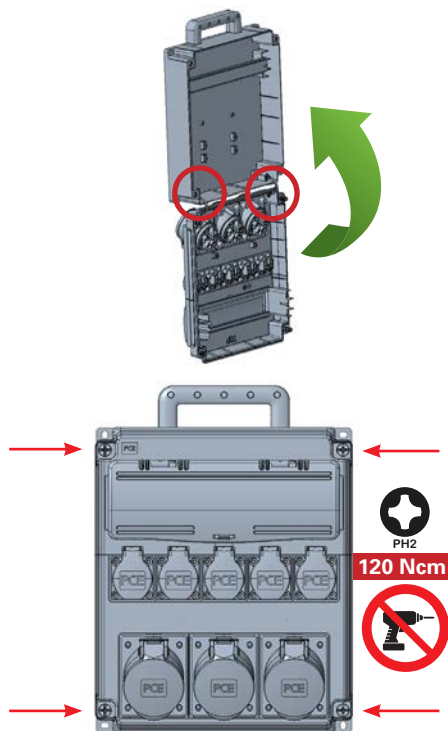
### 7.3 Mounting strap hinges (x2)



- Fit the strap hinges on the bottom enclosure part, then fit the strap hinges on the top enclosure part.

- Two strap hinges must be attached.

### 7.4 Combining the bottom and top enclosure part

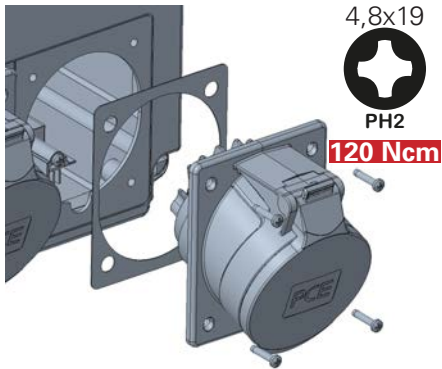


- Place the top enclosure part on top of the bottom enclosure part.
- Screw the top enclosure part to the bottom enclosure part.

#### NOTE

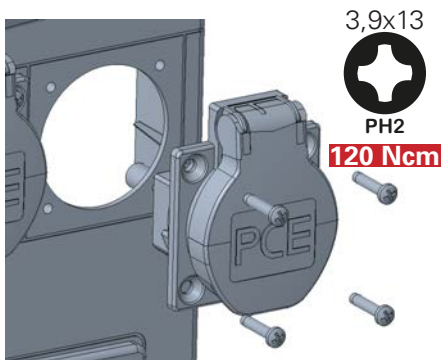
Use a PH2 or 8-13mm flathead screwdriver. Pay attention to the maximum tightening torque. Do not use a cordless screwdriver.

## 7.5 Installation of 400V CEE socket outlets (optional)



➤ Secure the CEE socket (80x97) and the seal using DIN 7981 CH 4.8x19 screws.

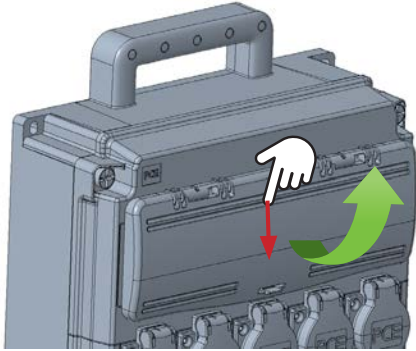
## 7.6 Installation of 230V mains sockets (optional)



➤ Secure the 230V mains socket using DIN 7983 CH 3,9x13.

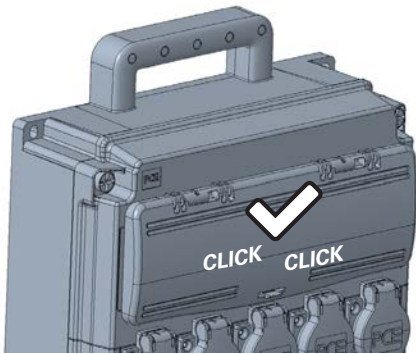
## 8. Service

### 8.1 Opening the fuse window.



- To open the fuse window, press the snap lock.

### 8.2 Closing the fuse window.



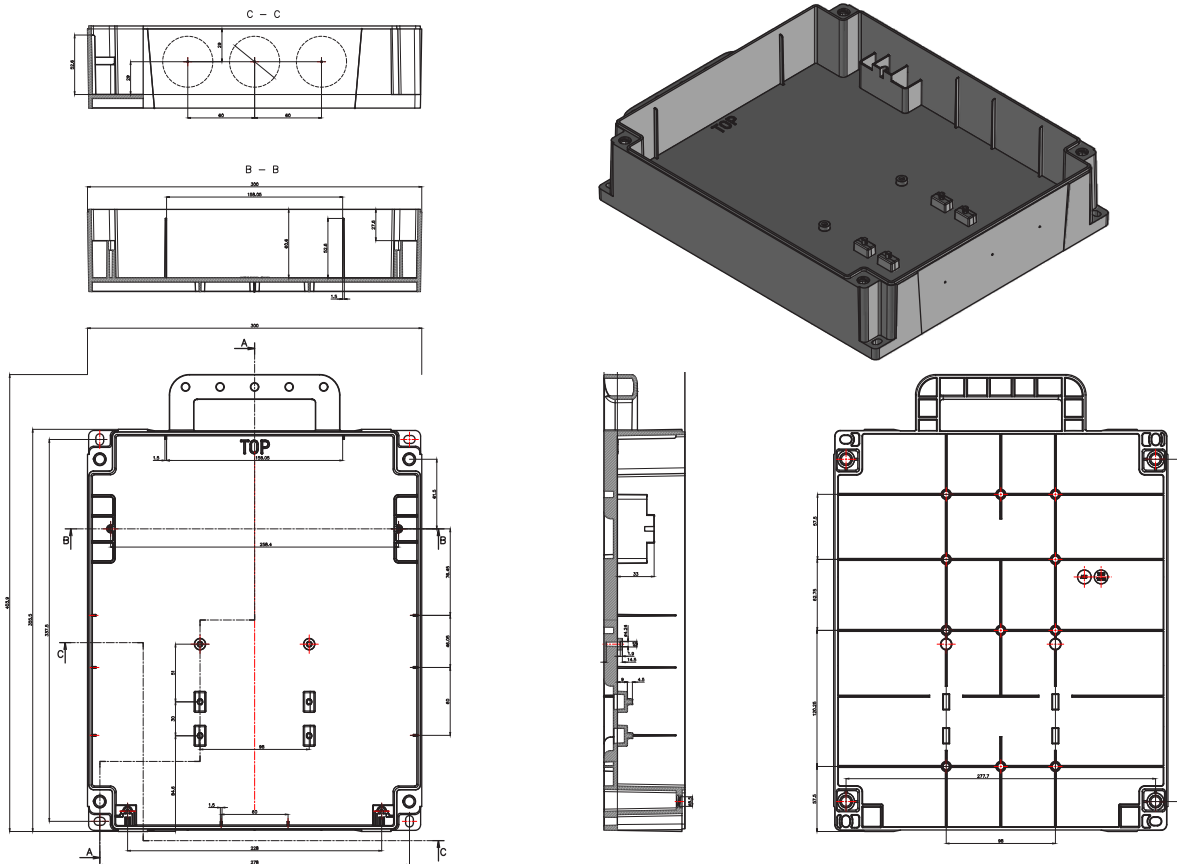
- When closing the fuse window, the snap lock must engage completely (clicking sound).



Protection degree of OPOLE empty distribution box is maintained only if the fuse window is properly locked.

## 8.3 Additional mounting options

The bottom enclosure part features fasteners for accessories fitting.



### ○ Threaded internal hole

Screw holes  $\varnothing$  4mm  
Hole depth  $\varnothing$  14mm

### ○ Plug-in pin

For the Vario Connector- variable connector block (see chapter Accessories)



## 9. Disassembly and disposal



### WARNING

**Risk of injury due to improper decommissioning and disassembly! Risk of electric shock due to live equipment!!!**

Take the following safety steps before beginning any work:

- Fully disconnect voltage.
- Mark disconnection location of the shut-down.
- Use appropriate protection against accidental voltage switching.
- Make sure that voltage is not present on disconnected electrical equipment and installations.
- Ground disconnected electrical equipment and installations.
- Cover or isolate adjacent live parts.

At the end of its service life, OPOLE empty distribution box must be either disposed of or recycled.

Observe the applicable national regulations.

To simplify the recycling process, plastic parts of OPOLE empty distribution box are marked with corresponding material identifier (such as >ABS<).



Enclosure screws are made of the same material as the top and bottom of the distribution box.

## 10. Accessories

### IP44/54 CEE flanged sockets sloping

with screw terminals, brass contacts, 80x97mm flange

		psc.	Cat.No.			psc.	Cat.No.
230V~	16A 3-p 6h	10	413-6f8	230V~	32A 3-p 6h	10	423-6
400V~	16A 4-p 6h	10	414-6f8	400V~	32A 4-p 6h	10	424-6
400V~	16A 5-p 6h	10	415-6	400V~	32A 5-p 6h	10	425-6



### CEE flanged sockets sloping IP67

with screw terminals, brass contacts, 80x97mm flange

		psc.	Cat.No.			psc.	Cat.No.
230V~	16A 3-p 6h	10	4132-6f8	230V~	32A 3-p 6h	10	4232-6f78
400V~	16A 4-p 6h	10	4142-6f8	400V~	32A 4-p 6h	10	4242-6f78
400V~	16A 5-p 6h	10	4152-6f78	400V~	32A 5-p 6h	10	4252-6f78



### Flanged sockets IP54

50x50mm flange

rear connection	psc.	Cat.No.	side connection	psc.	Cat.No.
F- schuko type	100	1050-0b	F- schuko type	100	1050-0bs
E- type with pin	100	1040-0b	E- type with pin	100	1040-0bs

P-NOVA  
PLUS+



### Flanged sockets IP54

50x50mm flange

rear connection	psc.	Cat.No.	side connection	psc.	Cat.No.
F- schuko type	100	105-0b	F- schuko type	100	105-0bs
E- type with pin	100	104-0b	E- type with pin	100	104-0bs

S-NOVA®



### Data socket with CAT 6A RJ45 module IP54

50x50mm flange

	psc.	Cat.No.
Data socket with hinged lid (2x opening) incl. 2xCAT 6A RJ45 module	1	12k452-0e
Data socket with hinged lid (1x opening) empty (without module)	1	110m-0e
Module CAT 6A RJ45	1	093617
Module USB 2.0 A / USB 2.0 A	1	086317



12k452-0e



Refer to PCE product catalogue for more details on accessories and technical specifications:  
[www.pce.pl](http://www.pce.pl)

## Vario Connector - module connection

### variable connector block

can be used as connection and intermediate terminal

		pcs.
1	<b>Vario Connector 2x9p</b> Cat.No. 667119-2/9	200
2	<b>Vario Connector 5x3p</b> Cat.No. 667119-5/3	200



**IP66/68 cable glands** Plastic, light grey (RAL7035)

Size:	Length (mm)	Cable-Ø (mm)	Width (mm)	pcs. (MOQ)	Cat.No.
M20x1.5	9	6-12	24	100	<b>M-20</b>
M25x1.5	10	13-18	33	50	<b>M-25</b>
M32x1.5	11	16-21	42	25	<b>M-32</b>



**IP54 end caps** Plastic, light grey (RAL7035)

Size:	Length	pcs. (MOQ)	Cat.No.
M25x1.5	9	100	<b>M-20 ZAŚL.</b>
M32x1.5	10,5	100	<b>M-25 ZAŚL.</b>
M40x1,5	10,5	100	<b>M-32 ZAŚL.</b>



**Metric nut** grey

Size:	Thickness	pcs. (MOQ)	Cat.No.
M20x1.5	6	100	<b>M-20 NAKR.</b>
M25x1.5	6,5	100	<b>M-25 NAKR.</b>
M32x1.5	8	100	<b>M-32 NAKR.</b>

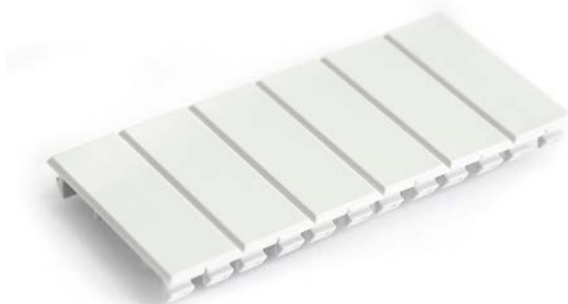


**Gland seal** Black rubber

Size:	Thickness	Outer Ø (mm)	pcs. (MOQ)	Cat.No.
M20	5,5	27	100	<b>M-20 USZCZ.</b>
M25	5,5	33	50	<b>M-25 USZCZ.</b>
M32	8	42	25	<b>M-32 USZCZ.</b>

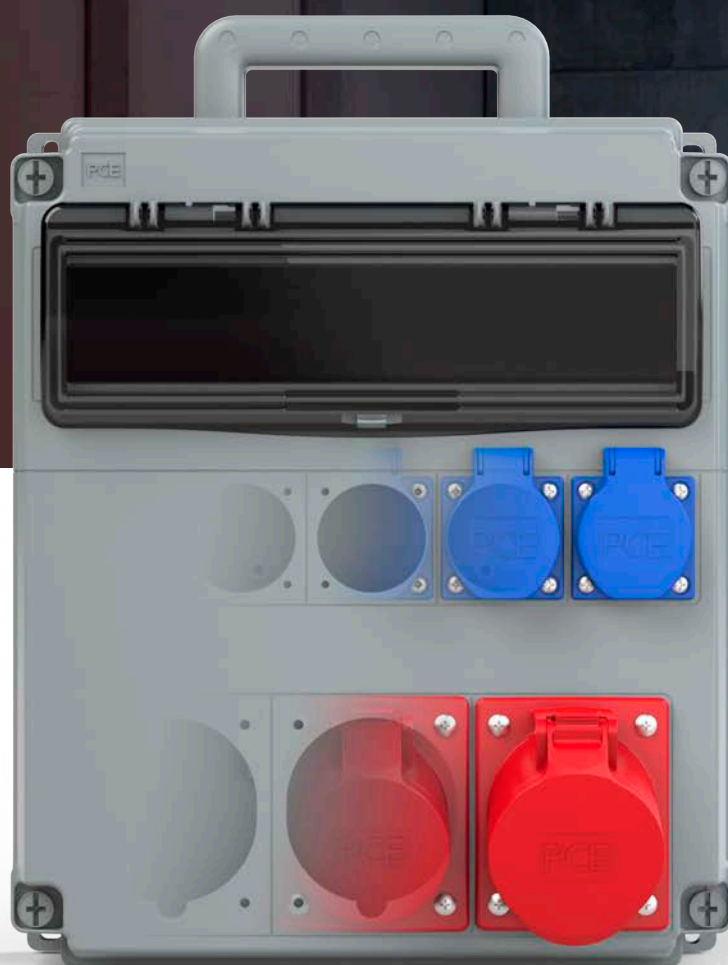


**Cover rail blind 6\*1 units** Cat.No. 2119100



# PCE

Connection  
to the future



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Technical changes and printing errors possible!