



## 1. Safety information

- 1.1 Read this document before initial operation of PCE products carefully and completely.
- 1.2 The present safety information apply to the life cycle of all PCE products
- 1.3 All PCE products meet at the time of delivery
  - 1.3.1 the state of technology,
  - 1.3.2 the valid relevant standards and
  - 1.3.3 with the applicable harmonization legislation.
- 1.4 Rules for any work on electrical equipment:
  - 1.4.1 Work can only be executed by qualified electricians 
  - 1.4.2 The national regulations and provisions of the user country must be respected
  - 1.4.3 The following five safety rules are always observed:

**FIVE SAFETY RULES:**

Before starting work:

    - **Disconnect mains!**
    - **Prevent reconnection!**
    - **Test for absence of harmful voltages!**
    - **Ground and short circuit!**
    - **Cover or close of nearby live parts!**
  - 1.4.4 The PCE manufacturers information according to the website ([www.pceelectric.at](http://www.pceelectric.at)) respectively catalogue must be respected
  - 1.4.5 Suitable tools must be used.
  - 1.4.6 Personal protective equipment must be used.
- 1.5 Clean and maintain your product at regular intervals.
- 1.6 To exclude persons and / or property damage, following must be ensured :
  - 1.6.1 Perform installations properly
  - 1.6.2 Use electrical equipment correctly and according to the manufacturer's instructions
  - 1.6.3 Prevent mishandling (e.g. inserting foreign objects),
  - 1.6.4 Use of electrical equipment only under specified ambient temperature range
  - 1.6.5 Exclude manipulated electrical equipment from its use
  - 1.6.6 Exclude defective or damaged electrical equipment from its use
- 1.7 Failure to comply with the safety information and operating instructions with the result that all guarantees , warranties performance and / or liability claims expire.

## 2. Contact details of the manufacturer




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## 3. Storage and transport

- 3.1 To ensure subsequent trouble-free operation of the electrical equipment , the electrical equipment must be stored in its original packaging or in a suitable box in a dry, dust-free room.
- 3.2 The transport of the electrical equipment must be identically to the delivery status in their original packaging or in a suitable carton. The electrical equipment must be secured during transport against shock and / or falling down.
- 3.3 Unless different than in the product specific documentation defined, the storage and transport temperatures count as minimum of -30°C and maximum of +50°C.

## 4. Installation and start-up

- 4.1 Installation and start-up of non ready to use equipment can only be executed by qualified electricians . The information according to chapter 1 "Safety information" must be observed!
- 4.2 Before first installation and start-up the electrical equipment needs to be checked for damage (e.g. transport damage, corrosion), dirt and completeness! It is not allowed to operate damaged, dirty or incomplete electrical equipment. This also refers to inside components (e.g. connection terminals).
- 4.3 Make sure of the correct disposal of the packaging material.
- 4.4 With heavy electrical equipment (e.g. large wall-mounted distribution boxes) have suitable tools for transportation, lifting aids or supports for assembly to be used under certain circumstances.
- 4.5 If there is specific safety information and / or specific documentation for the product, these must be applied.
- 4.6 The electrical equipment may only be installed in the prescribed position of use. Before start-up make sure the protection degree applies for its correct use. Direct sunlight should be avoided because this could eventually lead to excessive heating of the electrical equipment or to condensation .

- 4.7 Electrical equipment for use up and / or flush as well as surface- and / or flange mounted must be fitted with suitable fasteners (e.g. screws and dowels). The electrical equipment may only be fixed at the points provided. The introduction of additional, not intended for this purpose attachment points (e.g. drilling) is not permitted.
- 4.8 Before installation or connecting PCE products the type of the supply network (TN-system, IT-system, TT-system) must be checked, and the technical connection conditions (classic earthing, true earth, proper and correct dimensioned pre fuse, RCD specification, necessary additional methods, etc.) must be fulfilled.
- 4.9 To ensure protection degree and / or strain relief the electrical equipment is only allowed with the enclosed cable gland and / or blind cap and the according electric cables.
- If other cable glands or blind caps are used, the correct protection degree and strain relief has to be ensured.
- 4.10 If the PCE product is not specific designed for aluminium conductors, only copper conductors can be used. The cross section of the conductors has to be dimensioned according to the correct power consumption and conductor length. The type of the conductor (flexible or solid) has to be selected according to the added specification and/or according to PCE specification which can be found on the website ([www.pceelectric.at](http://www.pceelectric.at)) respectively catalogue. The design criteria of PCE products have to be observed. In Table 1 excerpts of the cross terminal section for PCE products are indicated:

Rated current	Terminal cross section (mm <sup>2</sup> )	
	wire flexible	wire solid
16A - CEE	1 – 2,5	1 – 4
32A - CEE	2,5 – 6	2,5 – 10
63A - CEE	6 – 16	6 – 25
125A - CEE	16 – 50	16 – 70
16/32A - extra low voltage <50V	1 – 10	1,5 – 10
P-Nova, S-Nova, P-Nova plus	1 <sup>*)</sup> – 2x2,5	1 – 2x2,5
Taurus and Top Taurus plug	0,75 – 2,5	---
Taurus and Top Taurus connector	1 – 2,5	---
Taurus and Top Taurus 3-way connector	1 – 2,5	---
Nautilus plug and connector	1 – 2,5	---
Nautilus flanged socket	1 – 2x2,5	1 – 2x2,5

Table 1: terminal cross section

<sup>\*)</sup> End sleeves must be used!

- 4.11 For PCE products following dismantling and stripping lengths according Table 2 (excerpt) apply. The stripped area of the conductor has to be inserted fully into the terminals. If necessary the correct end sleeves have to be mounted according to the standards.

Rated current	Dismantling length (mm)	Stripping length (mm)
16A - CEE	50	10 – 12
32A - CEE	50	12 – 14
63A - CEE	100	15 – 18
125A - CEE	100	24 – 27
16/32A - extra low voltage <50V	70	14 – 16
P-Nova, S-Nova, P-Nova plus	---	8 – 10
P-Nova, S-Nova (screwless terminals)	---	8 – 14
Taurus and Top Taurus plug	30	7
Taurus and Top Taurus connector	30	7
Taurus and Top Taurus 3-way connector	30	7
Nautilus plug and connector	30	7
Nautilus flanged socket	---	7

Table 2: Dismantling- and stripping length


- 4.12 For the correct use of PCE products the rated torques for screws or screwable components according to the added documentation and/or according to PCE specification, which can be found on the website ([www.pceelectric.at](http://www.pceelectric.at)) respectively catalogue, have to be used.
- In Table 3 excerpts of the rated torques for different products are indicated:

CEE plugs and sockets 16A – 125A	Torques in Ncm			
	16 A	32 A	63 A	125 A
Type				
Contact screws (terminal)	100	110	200	450
Pilot contact	---	---	100	100
Connecting screws	---	---	200	200
Housing screws	110	110	200	200
Binding screws	110	110	200	200
Cable gland	500	600	1500	1500

Safety plugs and sockets	Torques in Ncm				
	Safety socket P-Nova / S-Nova / P-Nova+	Nautilus	Taurus	Top Taurus	3-way connector with hinged lid
Contact screws	80	---	80	80	80
Cable gland	---	400	110	400	80
Connecting screws	80	---	110	110	80
Flanged socket	---	80	---	---	---
Contact screws	---	80	---	---	---
Plug/connector	---	100	---	---	---
Contact screws	---	100	---	---	---

CEE extra low voltage plugs & sockets 16A – 32A	(Ncm)
<b>Extra low voltage plug/connector</b>	
16A/32A Contact screws extra low voltage	160
16A/32A Cable gland extra low voltage	600
<b>Wall- and flanged plugs and sockets</b>	
16A/32A Contact screws extra low voltage	110

Table 3: Torques

- 4.13 For CEE industrial-connectors and -sockets with pilot contact a correct installation of the electric interlock for the complete system must be applied.
- 4.14 Markings, labels, nameplates must not be changed, removed or made illegible.
- 4.15 After installation and before first operation qualified electricians  have to check the correct function of the electrical equipment.
- 4.16 For not correct installed or operated PCE products all guarantees, warranties performance and / or liability claims expire.


**5. Operation and maintenance**

- 5.1 The user must ensure the appropriate conditions for PCE products on site (e.g. type of network, IP protection, user location, climatic conditions, etc. ).
- 5.2 For areas for which special requirements (e.g. containers, port, explosion-protected areas, etc.) apply, the user must ensure that the PCE products meet all region specific criteria necessary.
- 5.3 All PCE products must be used in a predetermined position of use.
- 5.4 PCE products are designed for the particular application and the resulting mechanical stresses. However, they may not be improperly used (for example, by using them as a step, carrying other items, etc.). It is not allowed to use violence or high force for electrical systems with mechanical interlock e.g. switching on by force without a plugged in corresponding plug, or pulling the plug by force when switched on. This can cause serious damage.
- 5.5 PCE products are designed for following ambient temperatures and are not allowed to be exposed to direct sources of heat (e.g. heaters). To prevent overheating of the electrical equipment they are not allowed to be covered by foreign objects.

Product group	Use	Minimum ambient temperature	Maximum ambient temperature	max. over 24h
Industrial plugs and sockets		-25°C	+40°C	---
Household plugs and sockets		0°C	+40°C (+35°C)	---
Low voltage switch gear combinations	Indoor Outdoor	see added product documentation		
Extension cords and cable reels	Industry Household	-25°C -5°C	+40°C +40°C	--- +35°C

Table 4: Ambient temperatures, excerpt standards

- 5.6 Further information (e.g. chemical resistance or UV resistance of PCE products) according to the manufacturer can be found on the website ([www.pcelectric.at](http://www.pcelectric.at)) respectively catalogue. PCE components can only be used at their specified environmental conditions.
- 5.7 It is not allowed to operate defective or damaged electrical equipment. In particular, cables may not be or damaged.

- 5.8 Improper operation ( e.g. pulling the plug on the cable, falling from great height, throwing, etc. ) is not permitted.
- 5.9 To ensure proper operation of the PCE product, the product must be cleaned regularly. Before cleaning electrical equipment it must be disconnected from the mains. PCE recommends cleaning with a clean, dry cloth. If cleaning agents are used, the user must advance the compatibility of the cleaning agents used with the PCE products guarantee (see chapter 5.6.)
- 5.10 PCE products must be maintained in accordance with the national legal regulations and provisions of the country of use and depending on the specific use checked on a regular basis for damage. Among other things, the torques of all screw connections have to be checked.
- 5.11 To keep the wear on electrical outlets or plugs as low as possible, we recommend the plugging in the switched off position.
- 5.12 If the PCE product is equipped with a PCE-RCD protection (e.g. distribution boxes) the RCD has to be released at least every half year with its test button. Depending on the manufacturer and use of the RCD shorter test intervals can be necessary (e.g. daily for construction sites).
- 5.13 If the PCE product is equipped with fuses and a blown fuse occurs, a possible failure or defect in the consuming appliance can be the cause. For troubleshooting a qualified electrician  has to be instructed.
- 5.14 If the PCE product is equipped with window flaps to protect the switchgear (RCD, MCB,...) the window has to be closed completely after use. The rated protection degree according to the type plate can only be assured with properly and correct closed window flaps.
- 5.15 There are existing units, where the protection rating can only be achieved with the lid being closed or the correct plug is being used. E.g. if there is a flat Euro-plug plugged into a safety socket with a protection rating of IP44 the complete rating is not existing anymore. In order to achieve the correct protection rating, a correct plug of IP44 must be used.

**6. Decommissioning and disposal**

- 6.1 Before decommissioning and disposal of electrical equipment it must be completely removed from its mains. When disassembling the 5 safety rules must be followed (see chapter 1.4)
- 6.2 When disposing the valid national statutory rules and regulations of the country of use must be respected.

No guarantee for technical changes or printing errors!