

The PCE logo consists of the letters 'PCE' in a bold, white, sans-serif font, centered within a solid red square.

PCE

Connection
to the future

A vertical, grey and red PCE PRCD-S+ circuit breaker is shown on the left side of the page. It features a red handle with a yellow glow and a black terminal block at the top. The text 'PCE PRCD-S+' is printed vertically on the handle.

PRCD-S+

Betriebsanleitung

Operating manual



Introduction:

This operating instruction is valid for the product PRCD-S⁺ 30mA and PRCD-S⁺ 10mA from the production date 2019 01.

Safety instructions:



Installation, commissioning and function testing must be carried out by a qualified electrician!

5 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!**



Type label (example):

Manufacturer		
	PC Electric GmbH Diesseltals 145 AT-4973 St. Martin im Innkreis	
Technical details	Type 967011355 U _n 230V~ / f _n 50Hz I _n 16A / I _{Δn} 30mA	Article number
ÖVE-mark	IP55	CE-mark
VDE-mark		GS-mark
	REG.-Nr. F069	
	YYYY MM	Production date

Field of application:

The PRCD-S⁺ is an all-pole switching portable RCD circuit breaker with electronic fault evaluation for use on socket outlets with unknown protection measures, enabling persons and electrical equipment to safely draw current from a feed point.

The PRCD-S⁺ can be used as a portable residual current circuit breaker with a rated differential current of $I_{\Delta n} \leq 30 \text{ mA}$ or $I_{\Delta n} \leq 10 \text{ mA}$ for alternating currents, overlaying DC differential current up to 6mA, pulsating DC differential currents and half-wave differential currents.



Der PRCD-S⁺ must not be used for:

- Cooling appliances or similar applications, e.g. refrigerators (no automatic restarting after a power failure)
 - Machines with high starting currents
 - IT current networks (isolating transformers, power generators, etc...).
- The presence of a PE conductor / PEN is mandatory for the function of the PRCD-S⁺.
(for IT networks please use PRCD-K⁺ Art.Nr. 968011355 !)



Connection cable types have to be carried out according to the national legal standards and regulations of the user country. The PRCD-S⁺ must be subjected to regularly recurring inspections in accordance with the national statutory regulations and the regulations in the country of use, e.g. DIN VDE 0701-0702. Inspection recommendations can be found at **www.prcd-s.info**.

Montage:



- When connecting the device, pay attention to the designation **"IN"** (input or mains side) and **"OUT"** (output or consumer side) as well as on the arrow direction inside the electronics cover.



- Codes/Standards DIN VDE 0661 and DGUV Information 203-006 (former BGI/GUV-I 608)

Connection cable		H05BQ-F	H07BQ-F	H07RN-F
Connection cross-section	3G1,0 mm ²	✓		✓
	3G1,5 mm ²		✓	✓
	3G2,5 mm ²		✓	✓
Stripping length		35 mm		
Wire stripping length		7 mm		
cable diameter		Ø 7,3 - 14 mm		
Length connection cable		1,5m +10% before protective device min. 1,5m after protective device		

- Only use household plugs and connectors (VDE 0620) or industrial plugs and connectors 16A 3p 6h (IEC/EN 60309-2)!
- Strain relief: Install clamp in the correct position depending of the cable diameter!

Clamp position with cable 3G1mm²



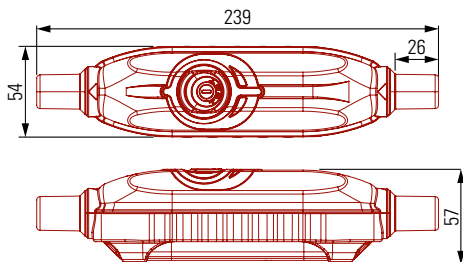
Clamp position with cable 3G1,5-2,5 mm²



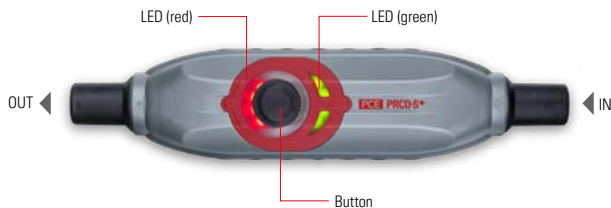
Tightening torque:	Housing screw	Strain relief	Contact screw
Ncm	180	80	80

Technical data:

Nominal voltage:	$U_n = 230V\sim$
Rated frequency:	$f_n = 50Hz$
Rated current:	$I_n = 16A$
Nominal differential current:	$I_{\Delta n} = 10mA$ (Cat.No. 967011155) $I_{\Delta n} = 30mA$ (Cat.No. 967011355)
Ambient temperature:	$-25^{\circ}C$ to $+45^{\circ}C$
Protection class:	IP55



Overview LED control unit:



Function:

- The PRCD-S⁺ switches all poles when tripped: In the event of a fault, the power supply via L and N is interrupted and the signal unit on the device lights up or blinks red. For additional safety, the PE conductor contact nevertheless remains closed until the fault has been cancelled. When the fault has been remedied, the PRCD-S⁺ can be activated again by pressing the button.
- Every time the device is plugged in, a routine check is performed to test the safe condition of the socket outlet (mains).
- The PE conductor circuit is switched on in advance (leading) and switched off with a delay
- In case of undervoltage (e.g. ≤ 180 V) or voltage interruption (≥ 20 ms) the internal undervoltage protection switches the device off and prevents it from restarting automatically after voltage recovery.
- The integral surge voltage protection detects increased voltages and the PRCD-S⁺ cannot be switched on or is being switched off (e.g. ≥ 285 V).
- The PRCD-S⁺ cannot be switched on or switches itself off, if a conductor is interrupted, and/or a fault voltage is measured on the PE conductor..
- In the event of a fault voltage on the PE conductor, the protection device switches off the L and N conductor but maintains the connection to the PE conductor circuit.

The PRCD-S⁺ detects and protects in the case of the following faults:

- L-conductor interrupted
- N-conductor interrupted
- PE conductor interrupted
- External voltage on the PE conductor
- Undervoltage or voltage failure
- Surge voltage (overvoltage)
- DC voltage
- Wiring errors (L and PE conductor reversed)
- Fault currents with rated values of 30mA or 10mA

Operation:

green



>Push

Switch ON

- Insert the mains plug of the PRCD-S⁺ into a socket outlet. If the mains power supply is OK, the signal unit **flashes GREEN** after approx. 2 sec. testing time of the unit.

green



- Press and hold the button of the PRCD-S⁺. A routine check is performed within <2 sec. (connection, mains supply,...). The PRCD-S⁺ switches ON, the signal unit illuminates **continuously GREEN**.
- The PRCD-S⁺ is now ready for operation. The button can now be released.

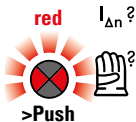
green



Switch OFF

- Press the button on the PRCD-S⁺ briefly.
- The signal unit **flashes GREEN**. All poles of the PRCD-S⁺ are now switched off.

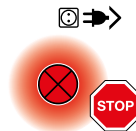
Error indicators:



Differential current faults are indicated by the signal unit **flashing RED**. In this case, the PRCD-S⁺ from PCE gives a visual warning and switches off immediately. The PE conductor circuit remains closed until the fault is cancelled!



Measuring errors caused, for example, by the wearing a glove when switching on are indicated by the signal unit **flashing RED**. In this case, the PRCD-S⁺ from PCE gives a visual warning and does not switch on. After acknowledging the fault, repeat the starting procedure without a glove or after changing your location.



If, when switching on, the signal unit **illuminates RED or remains neutral** within approx. 2 sec., there is a **fault**. The PRCD-S⁺ does not switch ON. Consult a qualified electrician (👷).

If there is already an **under voltage** when plugging in the PRCD-S⁺ unit, the LED unit **flashes fast RED** (if there is enough voltage available) and the unit does not switch on.

If during operation **under voltage** occurs, the unit switches off and the LED illuminates **RED**.

If there is **over voltage** when plugging in the unit, the LEDs start flashing **4x RED** and **1x GREEN** alternating and the unit will not turn on.

If during operation **over voltage** occurs, the unit switches off and the LED illuminates **RED**.



Maximum possible personal protection is assured.

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Kontaktdaten des Herstellers / contact details manufacturer

PC Electric GmbH

Diesseits 145 | A-4973 St. Martin/Innkreis

☎ +43 (0) 77 51/61 220

📠 +43 (0) 77 51/69 69

✉ office@pcelectric.at

🌐 www.pcelectric.com

www.manufacturer-safety.info

