

PRCD-S+

The crucial **PLUS** in safety!

Mobile personal protection device to prevent electrical injury especially on construction sites.

Advantages and functions:

- 1 Before every switch-on procedure and during operation a **fully automatic** verification is performed in order to check the correct supply conditions. **The classic "test button" is eliminated.**
- 2 Measuring errors caused, for example, by the wearing of 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.**
- 3 The **LED signal unit** (red/green) visualizes error situations and offers a permanent status indication.
- 4 The PE conductor circuit is switched on in advance and switched off with a delay.
- 5 Failure situations like external voltage on the PE conductor or fault current above rated values cause an **interruption of L and N.** **The PE conductor stays closed** and keeps being monitored!
- 6 Overvoltage will be detected- the **PRCD-S+** switches off or cannot be switched on.
- 7 Undervoltage will be recognized and the **PRCD-S+** switches off.
- 8 The **PRCD-S+** recognises conductor interruptions or wiring errors from the source system.
- 9 The **PRCD-S+** from PCE is very handy and light weight, much simpler in comparison to an isolation transformer and cheaper in acquisition and usage.

PCE's **PRCD-S+** protects the user against incorrect electrical installations.

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

www.prcd-s.info



PRCD-S+ safety protection devices with comprehensive personal protection

PRCD-S+ Mobile personal protection device

- for direct use inline with connection cords
- Cable inline version **PRCD-S+** 16A 30mA IP55
- Cable inline version **PRCD-S+** 16A 10mA IP55

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PRCD-S+ Safety extension cord IP44

- 3m H07RN-F 3G1,5
- with mobile personal protection device **PRCD-S+** 16A 230V~ 30mA
- mounted rubber safety plug and rubber safety connector 16A 250V~

4670001



PRCD-S+ Safety extension cord with 3-way connector IP44

- 3m H07RN-F 3G1,5
- with mobile personal protection device **PRCD-S+** 16A 230V~ 30mA
- mounted rubber safety plug and rubber 3-way connector 16A 250V~

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PRCD-S+ Safety cable reel XREEL®250

- 25m H07RN-F 3G1,5
- 3x safety sockets (individually replaceable) with sealing bulge and self closing hinged lid 16A 250V, thermo protection switch and rubber safety plug (dual earthing system)
- Including mobile personal protection device **PRCD-S+** 16A 250V~ 30mA, IP44

9250027-p



PRCD-S+ Safety cable reel XREEL®310

- 40m H07RN-F 3G2,5
- 4x safety sockets (individually replaceable) with sealing bulge and self closing hinged lid 16A 250V, thermo protection switch, power indicator light and rubber safety plug (dual earthing system).
- Including mobile personal protection device **PRCD-S+** 16A 250V~ 30mA, IP44

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PRCD-S+ Carrying case

Robust, stackable carrying case made of polypropylen for perfect storage and carrying of your **PRCD-S+** safety device or any other equipment.
 outside dimensions: 388x388x110mm (WxHxD)
 inside dimensions: 370x295x100mm (WxHxD)

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PRCD-K+ safety protection devices for IT power grids with comprehensive personal protection



PRCD-K+ personal protection device for IT power grids for direct use inline

- **PRCD-K+ safety personal protection device (green button):**
The PRCD-K+ is an all-pole switching mobile personal safety device with electronic fault evaluation for use between any socket of the power generator and the consuming device, if possible directly behind each socket.
 - Unlike the PRCD-S+, the PRCD-K+ has no PE monitoring, as it has been developed exclusively for use in IT power grids (isolating transformers, power generators, etc...).
 - **The PRCD-K+ recognizes and protects in the following cases:**
 - N or L conductor interrupted
 - Undervoltage or voltage failure
 - Surge voltage
 - DC voltage
 - Wiring errors
 - Rated differential current $\geq 30\text{mA}$
- To protect against surge voltage in the PE conductor varistors are built-in, which shut off all poles of the PRCD-K+. Therefore, the highest possible personal protection is given!*

- Cable inline version **PRCD-K+** 16A 30mA IP55

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PRCD-K+ Safety extension cord IP54

- 3m H07RN-F 3G1,5
- with mobile personal protection device **PRCD-K+** 16A 230V~ 30mA IP55
- mounted rubber safety plug and rubber safety connector 16A 250V~

4680001

PRCD-S protective switching device 3-phase with comprehensive personal protection



NM5p Network monitor device

- **The microprocessor-controlled network monitor device NM5p is used to monitor phases, neutral and grounding of 5-pin 400V plug-in devices in TT & TN power supply networks.**
- **PRCD-S protection device:**
The NM5p mains monitoring device provides reliable protection against electrical accidents in the event of faults on the power supply side when installed in accordance with the regulations for RCDs and contactors (example: faultily wired plug-in devices).
- **NM5p monitoring device** for DIN rail mounting (2TE) with push button
Input: L1 / L2 / L3 / N / PE and connection for external button
Output: control for 2x contactor (K1 and K2)

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Fault detection:

NM5p cannot be switched on or switches off in the event of:

- **Phase fault:**
Drop of one or more phase voltages against star point below $183V_{rms}$ = main circuit cannot be switched on or switches off.
- **Neutral conductor missing or carrying voltage against protective conductor:**
Rise of neutral voltage $>20V_{rms}$ against protective conductor = main circuit cannot be switched on or switches off.
- **Protective conductor interrupted or carries voltage against measuring reference:**
Rise in voltage at protective conductor $>20V_{rms}$ = main circuit cannot be switched on or switches off.
- **Protection against automatic restart:**
After voltage interruption, protection against automatic restart prevents uncontrolled starting of electrical devices.

PRCD-S Safety distribution box 3-phase with comprehensive personal protection

PRCD-S Safety distribution box 400V 16A with NM5P

- Mobile thermoplastic distribution box type ISCHL IP44 200x300x200
 - Entry: 2m cable H07RN-F 5G2,5mm² with plug 16A 5p 400V
 - Outlet: 1x CEE-socket 16A 5p 400V fused by pre-fuse in entry
3x safety socket 16A 250V IP54 fused by pre-fuse in entry
 - Protection: 1x RCD 40A/4/0.03A (TYP A 25AT) over all outlets
1x NM5p safety control 5-phase system PCE-control unit to monitor the 5-pole power supply entry side
2x power contactor 12,5kW AC3 to switch off the outlets

9130100



PRCD-S Safety distribution box 400V 16A with NM5P

- Mobile rubber distribution box type RIED IP54 285x235x281
 - Entry: 2m cable H07RN-F 5G2,5mm² with plug 16A 5p 400V
 - Outlet: 1x CEE-socket 16A 5p 400V fused by pre-fuse in entry
3x safety socket 16A 250V IP54 fused by pre-fuse in entry
 - Protection: 1x RCD 40A/4/0.03A (TYP A 25AT) over all outlets
1x NM5p safety control 5-phase system PCE-control unit to monitor the 5-pole power supply entry side
2x power contactor 12,5kW AC3 to switch off the outlets

9473300



PRCD-S Safety distribution box 400V 32A with NM5P

- Mobile rubber distribution box type SPITZ IP54 320x320x320
 - Entry: 2m cable H07RN-F 5G6mm² with plug 32A 5p 400V
 - Outlet: 1x CEE-socket 16A 5p 400V fused by pre-fuse in entry
Protection: 1x RCD 63A/4/0.03A (TYP A 40AT) over 32A 5p outlet
1x NM5p safety control 5-phase system PCE-control unit to monitor the 5-pole power supply entry side
2x power contactor 15kW AC3 to switch off the outlets
1x MCB 10A 3p B for control fuse

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PRCD-S Safety distribution box 400V 32A with NM5P

- Mobile rubber distribution box type SCHREMS IP54 255x400x300
 - Entry: 2m cable H07RN-F 5G6mm² with plug 32A 5p 400V
 - Ausgang: 1x CEE-socket 32A 5p 400V fused by pre-fuse in entry
1x CEE-socket 16A 5p 400V fused with 1xMCB 16A 3p C
3x safety socket 16A 250V IP54 fused with 3xMCB 16A 1p C
 - Protection: 1x RCD 63A/4/0.03A (TYP A 40AT) over 32A 5p outlet
1x NM5p safety control 5-phase system PCE-control unit to monitor the 5-pole power supply entry side
2x power contactor 15kW AC3 to switch off the outlets
1x MCB 10A 3p B for control fuse

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Schematic wiring:

