

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 The integral surge voltage protection detects 400 VAC and 220 VDC and does not allow these to pass (a weak point occurs).
- 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
- ✓ DC voltage
- ✓ 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 250V~ 30mA
- mounted rubber safety plug and rubber safety connector 16A 250V~

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

- 3m H07RN-F 3G1,5
- with mobile personal protection device **PRCD-S+** 16A 250V~ 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

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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

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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)



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 conductor interrupted
 - Surge voltage
 - Wiring errors
 - Undervoltage or voltage failure
 - DC voltage
 - Fault currents with rated values of 30mA

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



NM5p Network monitor device

- **The processor-controlled network monitor device NM5p is used to monitor phases, neutral and grounding of 5-pin 400V plug-in devices in TN power supply networks.**
- **PRCD-S protection device:**
The NM5p, in conjunction with a tested circuit arrangement by RCD and contactors, provides reliable protection against electrical accidents in the case of power supply-side faults.
(Example: incorrectly connected 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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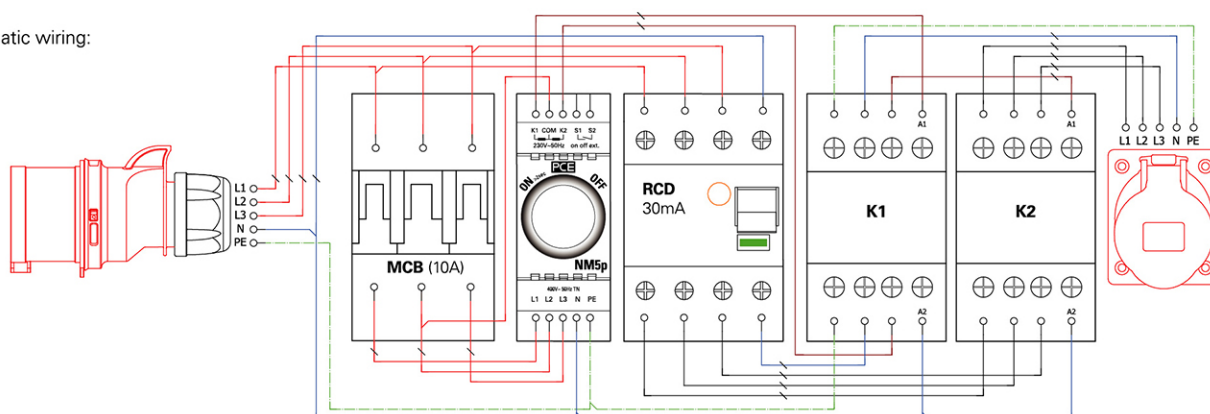


Error detection:

The NM5p monitoring device will not turn on or switches off if:

- **Phase error:**
Drop of one or more phase voltages towards star point, device can not be switched on or switches off.
- **Neutral is missing or carries voltage against earth:**
Increase of the neutral conductor voltage > 20V_{eff} against earth, device can not be switched on or switches off.
- **Ground is missing or carries voltage against measured reference:**
Increase of the voltage at the earthing line > 20V_{eff}, device can not be switched on or switches off.
- **Protection against automatic restart:**
In the event of power failures, protection against automatic re-switching on, prevents uncontrolled starting of electrical appliances.

Schematic wiring:



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

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symbolic picture

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

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symbolic picture

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
1x RCD 63A/4/0.03A (TYP A 40AT) 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 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 all outlets
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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