

3. Verify that the Installation is dead – Voltage Detectors

PHE/G d.c. Voltage Detector



PHE/G II d.c. voltage detector for d.c. links (ICE power car)

Nominal Voltages up to 24 kV d.c.

Safe verification of isolation from supply voltage

- For use in direct voltage systems (electrified rail networks, d.c. links)
- Reliable indication
- Easy to use due to compact design
- User-friendly



The test prod of d.c. voltage detectors is colour-coded according to the polarity of the test prod:

positive pole – red;

negative pole – blue.



Earth clamp with adjustable handle and magnet

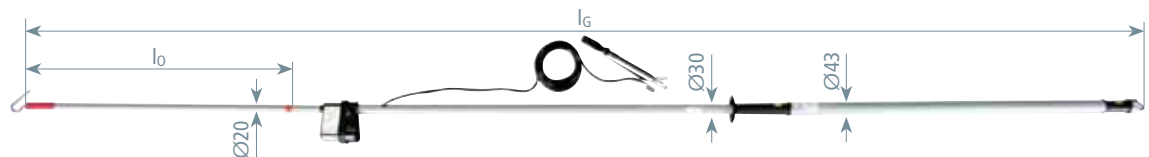
General Information:

Standard	Based on EN/IEC 61243-2 (DIN VDE 0682-412)
Temperature range	-25 °C ... +55 °C, climatic category N
For use in wet weather conditions	
For	Indoor and outdoor installations
Indication	Visual
Self-testing element	Yes
Material (test prod)	Glass-fibre reinforced polyester tube
Material (indicator)	Plastic, fully insulated
Material (insulating stick)	Glass-fibre reinforced polyester tube
Material (earthing / connecting cable)	Copper cable, highly flexible

PHE/G I for Overhead Contact Lines, positive Pole on Indicator with Test Prod

One stick (four elements)

- For direct voltage systems with earthed negative pole
- Positive pole: Indicator with test prod
- Negative pole: Earth clamp



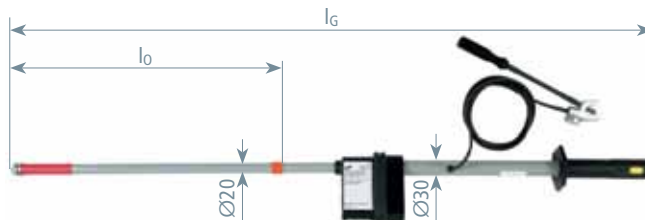
Type	PHEG1.FD P SN7647	PHEG1.FD P SN7544
Part No.	767 656	767 652
Threshold voltage (U _t)	300 V	750 V
Nominal voltage (U _N)	600 ... 750 V	1.5 kV
Length (earthing cable)	6000 mm	6000 mm
Total length (l _G)	4125 mm	4125 mm
Insertion depth (l ₀)	1015 mm	1015 mm

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PHE/G I for Switchgear Installations, positive Pole on Indicator with Test Prod

One stick

- For direct voltage systems with earthed negative pole
- Positive pole: Indicator with test prod
- Negative pole: Earth clamp

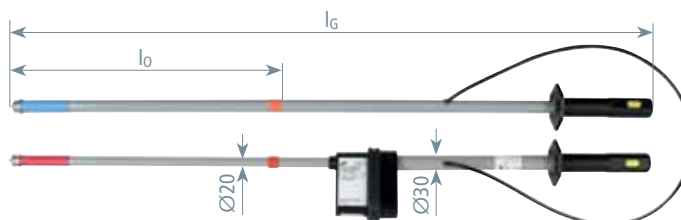


Type	PHEG1.S P SN7401
Part No.	767 666
Threshold voltage (U_t)	120 V
Nominal voltage (U_N)	1 ... 24 kV
Length (earthing cable)	2000 mm
Total length (l_G)	1260 mm
Insertion depth (l_0)	535 mm

PHE/G II for Switchgear Installations

Two sticks

- For unearthed direct voltage installations
- For d.c. links
- Positive pole: Indicator with test prod
- Negative pole: Insulating stick

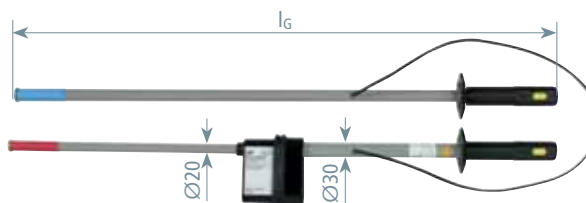


Type	PHEG2.P SN7517
Part No.	767 671
Threshold voltage (U_t)	90 V
Nominal voltage (U_N)	1 ... 24 kV
Length (connecting cable)	1200 mm
Total length (l_G)	1260 mm
Insertion depth (l_0)	545 mm

PHE/G II for Switchgear Installations and d.c. Links

Two sticks

- For unearthed direct voltage installations
- For d.c. links (e.g. electric locomotives; Part No. 767 647)
- Positive pole: Indicator with test prod
- Negative pole: Insulating stick

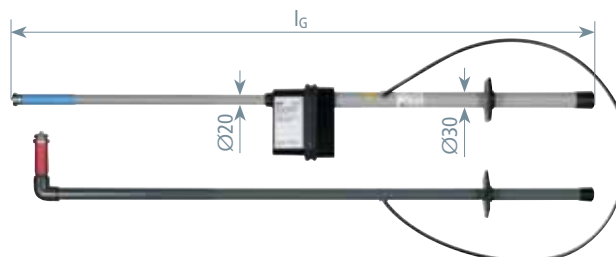


Type	PHEG2 P SN7259	PHEG2 P SN7552	PHEG2 P SN7194
Part No.	767 645	767 647	767 637
Threshold voltage (U_t)	120 V	90 V	750 V
Nominal voltage (U_N)	1 ... 12 kV	1 ... 4.2 kV	1.5 kV
Length (connecting cable)	1200 mm	1200 mm	1200 mm
Total length (l_G)	1085 mm	600 mm	1085 mm

PHE/G II, angled positive Pole

Two sticks

- For unearthed direct voltage installations
- For d.c. links
- Positive pole: Indicator with test prod
- Negative pole: Insulating stick



Type	PHEG2 P SN7346
Part No.	767 639
Threshold voltage (U_t)	150 V
Nominal voltage (U_N)	750 V
Length (connecting cable)	1200 mm
Total length (l_G)	1100 mm

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Two-pole SPN Voltage Detector



Two-pole SPN voltage detector used with extension prods for overhead lines

Nominal Voltages up to 1000 V

- Extremely shock-resistant, waterproof and dust-proof enclosure
- Phase, rotation field and continuity test
- Two versions with different measuring ranges
- For use in overhead line networks by attaching extension prods
- No battery required
- Safe two-hand operation



General Information:

Standard	EN/IEC 61243-3 (DIN VDE 0682-401)
Temperature range	-15 °C ... +45 °C
Degree of protection	IP 65
For use in wet weather conditions	
Material (indicator)	Safety enclosure made of solid rubber
Indication	Moving-iron instrument, LCD and LED
Connecting cable	Rubber-sheathed cable, highly flexible, 1000 mm
Overvoltage category	CAT IV 600 V / CAT III 1000 V in accordance with IEC 60664-1

Nominal Voltage Range up to 1000 V

Basic devices.



Type SPN ...	500PR	1000PR
Part No.	766 544	766 548
Nominal voltage range (U _N)	100 ... 500 V	120 ... 1000 V
Frequency range	0 ... 100 Hz	0 ... 100 Hz
Dimensions (indicator)	274 x 75 x 47 mm	274 x 75 x 47 mm

Accessories for Two-pole SPN Voltage Detector

Extension Prod

For use in overhead line networks, to be screwed onto the basic device.



Type	VS 500 SPN II
Part No.	766 542
Length	500 mm

Artificial Leather Bag, empty

For SPN voltage detectors (basic device with extension prods).



Type	AT SPN II
Part No.	766 543
Dimensions	535 x 160 mm
Colour	Black ●