



Voltage Detectors

One of the most important operations when working on electrical switchgear is to check that voltage is absent, and this requires voltage detectors that meet the highest quality and reliability requirements. PFISTERER voltage detectors meet these requirements without exception.

The **KP-Test 5** Series voltage detectors provide an exceptional combination of user comfort and safety in one device. The optimum LED layout, integrated audible signals and innovative self-test features form the basic elements on all equipment types. Thanks to our long years of experience, we are able to develop and supply voltage detectors that work reliably even in critical situations in the field.

KP-Test 5 Series voltage detectors can be supplied as capacitive single-pole voltage detectors for a.c. voltages from 1 to 420 kV, or resistive double pole voltage detectors from 500 to 4,000 V, in various types.

Equipment types:

The possible operating conditions should be taken into consideration when selecting a suitable voltage detector. Voltage detectors with a contact electrode extension have universal application, as they allow reliable indications even in difficult electrical field conditions.

KP-Test 5:

- For medium voltage applications with contact electrode extension
- Nominal voltages from 1 to 36 kV, Type S

KP-Test 5 dual:

- For medium voltage applications with contact electrode extension and nominal voltage range selector
- Nominal voltages from 3 to 36 kV, Type S

KP-Test 5L:

- Mainly for use on medium voltage overhead lines
- Nominal voltages from 3 to 36 kV, Type L

KP-Test 5L dual:

- Mainly for use on medium voltage overhead lines with nominal voltage range selector
- Nominal voltages from 3 to 36 kV, Type L

KP-Test 5H:

- For high voltage applications with contact electrode extension
- Nominal voltages from 30 to 420 kV, Type S

KP-Test 5HL:

- For use on high voltage overhead lines
- Nominal voltages from 30 to 420 kV, Type L

KP-Test 5R DC:

- For use on the catenary systems of d.c. voltage railways
- Nominal voltages from 500 to 4,000 V d.c.

KP-Test 5R DC dual:

- For use on the catenary systems of d.c. voltage railways, with nominal voltage range selector
- Nominal voltages from 500 to 4,000 V d.c.

KP-Test 5 DC:

- For use on the catenary systems of d.c. voltage systems and railways with a third rail
- Nominal voltages from 500 to 4,000 V d.c.

KP-Test II:

- For use on the catenary systems of a.c. voltage railways
- Nominal voltages 15 kV 16.7 Hz and 25 kV 50 Hz

Voltage Detectors KP-Test 5

The **KP-Test 5** capacitive voltage detector can be used for indoor and outdoor medium voltage applications. It indicates the presence of operating voltage when the conductor is contacted. The **KP-Test 5** voltage detector is distinguished by its high level of user-friendliness and user safety.

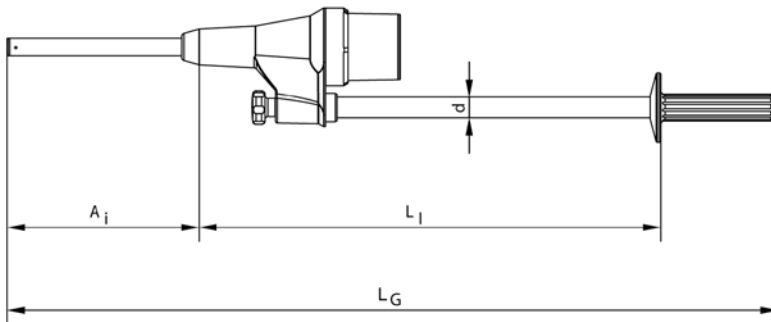
Technical description:

- Integrated audible signal for reliable voltage tests, even in noisy ambient conditions
- Can be used during precipitation
- Extremely bright LEDs in clear layout to prevent confusion
- Maximum interference field protection through use of a high-quality contact electrode extension
- Extensive self-test at switch-on, which even checks the contact electrode extension
- Removable contact electrode top piece included as forked electrode
- Rated frequency 50 Hz
- Length of insulating element when assembled 520 mm
- Diameter of insulating element when assembled 24 mm



The **KP-Test 5** is designed and type-tested to Standard IEC 61243-1:2003.

Other types with different nominal voltages, nominal voltage ranges and frequencies are available on request.



| No. | Nominal voltage U_n (kV) | Total length L_G (mm) | Insertion depth A_i (mm) | Length of handle L_H (mm) |
|-------------|-------------------------------|----------------------------|-------------------------------|--------------------------------|
| 930 100 003 | 3 | 887 | 220 | 135 |
| 930 100 005 | 5 | 887 | 220 | 135 |
| 930 100 010 | 10 | 887 | 220 | 135 |
| 930 110 005 | 5 - 6 | 1060 | 393 | 135 |
| 930 110 010 | 10 - 12 | 1060 | 393 | 135 |
| 930 110 013 | 13 | 1060 | 393 | 135 |
| 930 110 020 | 20 | 1060 | 393 | 135 |
| 930 120 003 | 3 - 10 | 1270 | 603 | 135 |
| 930 120 005 | 5 - 10 | 1270 | 603 | 135 |
| 930 120 010 | 10 - 20 | 1270 | 603 | 135 |
| 930 140 010 | 10 - 30 | 1730 | 910 | 288 |
| 930 140 020 | 20 - 36 | 1730 | 910 | 288 |



Voltage Detectors KP-Test 5 dual

The **KP-Test 5 dual** capacitive voltage detector is similar in design to the **KP-Test 5**. This voltage detector can also be switched between two nominal voltage ranges. This allows a larger system range to be covered with the same interference field resistance.

Technical description:

- Integrated audible signal for reliable voltage tests even in noisy ambient conditions
- Can be used during precipitation
- Extremely strong LEDs in clear layout to prevent confusion
- Maximum interference field resistance through the use of a high-quality contact electrode extension
- Extensive self-test functions at switch-on, which even check the contact electrode extension
- Removable contact electrode headpiece included as forked electrode
- Switching between two voltage ranges by means of a switch
- 50 Hz rated frequency

The **KP-Test 5 dual** meets Standard IEC 61243-1:2003.

Other types with different nominal voltages and ranges of nominal voltages and frequencies are available on request.

| No. | Version | Nominal voltage level I | Nominal voltage level II | Total length | Insertion depth |
|-------------|---------|-------------------------|--------------------------|--------------|-----------------|
| | | U_n (kV) | U_n (kV) | L_G (mm) | A_i (mm) |
| 930 190 501 | 0008 | 3 | 10 - 13 | 1060 | 393 |
| 930 190 501 | 0005 | 5 - 12 | 20 - 36 | 1730 | 910 |

Voltage Detectors KP-Test 5L

The **KP-Test 5L** capacitive voltage detector is intended mainly for use on medium voltage overhead lines. It indicates the presence of operating voltage when the conductor is contacted. The **KP-Test 5L** voltage detector is distinguished by its compact design and maximum user safety.

Technical description:

- Class L as defined in IEC 61243-1
- Can be used during precipitation
- Integrated audible signal for reliable voltage tests even in noisy ambient conditions
- Extremely strong LEDs in clear layout to prevent confusion
- Extensive self-test functions at switch-on
- Available separately for use with existing insulating poles
- Available complete with suitable insulating poles in any overall length or carrying length
- Nominal frequency 50 Hz
- Overall device length without insulating poles 345 mm

The **KP-Test 5L** is designed and type-tested to Standard IEC 61243-1:2003.

Suitable insulating poles:

- 973 501 001 with $L_o = 725$ mm
- 624 760 001 with $L_o = 1485$ mm

Other types with different nominal voltages, ranges of nominal voltages and frequencies are available on request.

| No. | Version | Nominal voltage |
|-------------|---------|-----------------|
| | | U_n (kV) |
| 930 210 001 | 0005 | 11 - 33 |
| 930 210 001 | 0006 | 12 - 24 |





Voltage Detectors KP-Test 5L dual

The **KP-Test 5L dual** capacitive voltage detector is similar in design to the **KP-Test 5L**. This voltage detector can also be switched between two nominal voltage ranges. This allows a larger system range to be covered with the same interference field resistance.

Technical description:

- Class L as defined in IEC 61243-1
- Can be used during precipitation
- Switching between two voltage ranges using a switch
- Integrated audible signal for reliable voltage tests even in noisy ambient conditions
- Extremely strong LEDs in clear layout to prevent confusion
- Extensive self-test functions at switch-on
- Available separately for use with existing insulating poles
- Available complete with suitable insulating poles in any overall length or carrying length
- Nominal frequency 50 Hz
- Overall device length without insulating poles 345 mm

The **KP-Test 5L dual** meets Standard IEC 61243-1:2003.

Suitable insulating poles:

- 973 501 001 with $L_o = 725$ mm
- 624 760 001 with $L_o = 1485$ mm

Other types with different nominal voltages, ranges of nominal voltages and frequencies are available on request.

| No. | Version | Nominal voltage level I | Nominal voltage level II |
|-------------|---------|----------------------------|-----------------------------|
| | | U_n (kV) | U_n (kV) |
| 930 210 501 | 0005 | 3 - 10 | 11 - 36 |

Voltage Detectors KP-Test 5H

The **KP-Test 5H** capacitive voltage detector has universal high voltage application for nominal voltages from 30 to 420 kV. It indicates the presence of operating voltage when the conductor is contacted. The **KP-Test 5H** voltage detector is distinguished by its high level of user-friendliness and user safety.

Technical description:

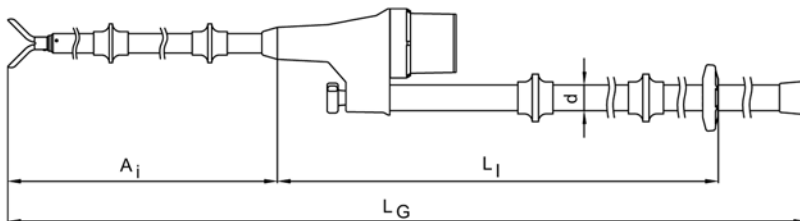
- Available for different ranges of nominal voltages from 30 to 420 kV
- Can be used during precipitation
- Particularly loud, integrated audible signal for reliable voltage tests even in noisy ambient conditions
- Extremely strong LEDs in clear layout to prevent confusion
- Maximum interference field resistance through the use of a high-quality contact electrode extension
- Extensive self-test functions at switch-on
- Available separately for use with existing insulating poles
- Available complete with suitable insulating poles in any overall length or carrying length
- Insertion depth $A_i = 898$ mm



The **KP-Test 5H** is constructed and type-tested to Standard IEC 61243-1:2003.

The KP-Test 5H Series voltage detector is also available with a carrying case on request.

Other types with different nominal voltages, ranges of nominal voltages and frequencies are available on request.



| No. | Version | Nominal voltage | Insulating length | Total length | Transporting length | Number of insulating poles |
|-------------|---------|----------------------|-------------------|--------------|---------------------|----------------------------|
| | | U_n (kV) | L_i (mm) | L_G (mm) | L_t (mm) | |
| 930 250 001 | 0028 | 30 - 60 kV / 50 Hz | 975 | 2478 | 1485 | 1 |
| 930 250 001 | 0003 | 50 - 110 kV / 50 Hz | 1802 | 3700 | 1855 | 2 |
| 930 250 001 | 0089 | 60 - 110 kV / 50 Hz | 2875 | 4773 | 2050 | 2 |
| 930 250 001 | 0115 | 110 kV / 50 Hz | 1802 | 3700 | 1855 | 2 |
| 930 250 001 | 0002 | 110 - 220 kV / 50 Hz | 3220 | 5118 | 2050 | 3 |
| 930 250 001 | 0023 | 220 - 380 kV / 50 Hz | 3850 | 5748 | 2050 | 3 |
| 930 250 001 | 0024 | 220 - 420 kV / 50 Hz | 3850 | 5748 | 2050 | 3 |
| 930 250 001 | 0026 | 400 kV / 50 Hz | 3850 | 5748 | 2050 | 3 |



Voltage Detectors KP-Test 5HL

The **KP-Test 5HL** capacitive voltage detector can be used on high-voltage overhead lines with nominal voltages from 30 to 420 kV. It indicates the presence of operating voltage when the conductor is contacted. The **KP-Test 5HL** voltage detector provides particularly easy handling, while ensuring maximum user safety.

Technical description:

- Class L as defined in IEC 61243-1
- Available for various ranges of nominal voltages from 30 to 420 kV
- Can be used during precipitation
- Particularly loud, integrated audible signal for reliable voltage tests even in noisy ambient conditions
- Extremely strong LEDs in clear layout to prevent confusion
- Extensive self-test functions at switch-on
- Connection for insulating poles with universal adapter
- Eye ring for attaching the voltage detector, for example to a spring safety hook
- Available separately for use with existing insulating poles
- Available complete with suitable insulating poles in any overall length or carrying length

The **KP-Test 5HL** is constructed and type-tested to Standard IEC 61243-1:2003.

Suitable adapter:

- C2B, 935 101 002
- C2C, 935 101 003
- C2D, 935 101 004
- C2F, 935 101 005

Other types with different nominal voltages, ranges of nominal voltages and frequencies are available on request.

| No. | Version | Nominal voltage | Nominal frequency | Diameter of hook electrode |
|-------------|---------|-----------------|-------------------|----------------------------|
| | | U_n (kV) | f_n (Hz) | d (mm) |
| 930 200 001 | 0010 | 30 - 60 | 50 | 20 |
| 930 200 002 | 0010 | 110 - 220 | 50 | 70 |
| 930 200 002 | 0011 | 220 - 420 | 50 | 70 |

Voltage Detectors for Railway Systems

The electric railway systems around the world are operated with different voltage systems. PFISTERER can supply voltage detectors for all common voltage systems.

- 15 kV at 16.7 Hz
- 25 kV at 50 Hz
- 1,500 V d.c.
- 3,000 V d.c.
- Voltage supply for trolley lines
- Voltage supply for urban track systems with third rail

Depending on type, our voltage detectors are suitable for use on railway catenaries and power lines, and also on switchgears.

Voltage Detectors KP-Test 5R DC

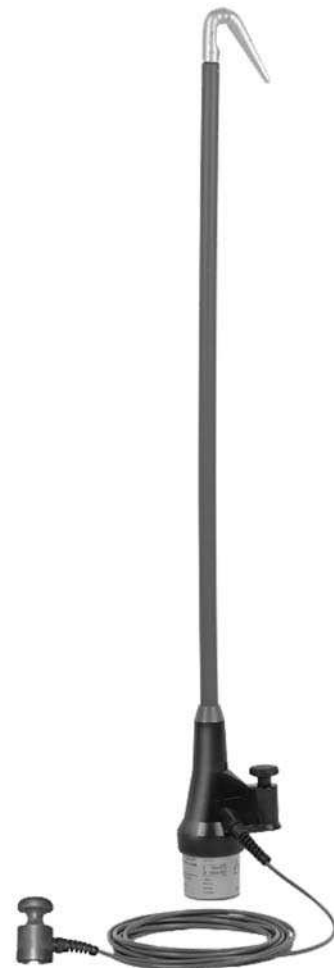
The **KP-Test 5R DC** double-pole voltage detector is designed for use on the catenary systems of d.c. voltage railways. It indicates the presence of operating voltage when the conductor is contacted. With its extensive, integrated self-tests, the **KP-Test 5R DC** voltage detector ensures maximum user safety.

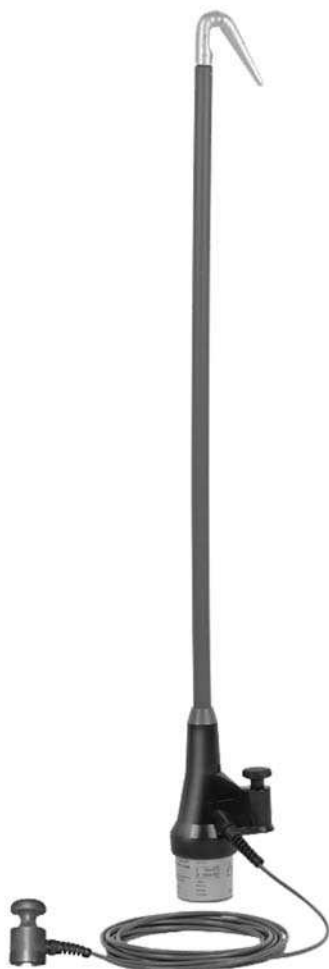
Technical description:

- Double-pole type for the catenary systems of d.c. voltage railways with nominal voltages from 500 to 4,000 V DC
- Second pole designed for handy magnetic connection to rail
- Hook-type contact electrode with high-quality contact pin for optimum contact
- Self-test at switch-on also checks the connecting cable
- Can be used during precipitation
- Integrated audible signal for reliable voltage tests even in noisy ambient conditions
- Extremely strong LEDs in clear layout to prevent confusion
- Induced a.c. voltage signal detection
- Voltage testing possible even with a high proportion of leakage current on disconnected contact wires
- Available separately without insulating pole
- Available separately without insulating pole, but with additional adapter
- Available complete with three-piece insulating pole (poles **RP1** and **UP**; total length about 5,000 mm), or five-piece insulating pole (poles **RP2**, **RP3**, **RP4** and **UP**; total length about 4,880 mm)
- Available with convenient carrying case

Other types with different nominal voltages and ranges of nominal voltages are available on request.

| No. | Version | Nominal Voltage DC U_n (V) |
|-------------|---------|---------------------------------|
| 930 350 001 | 0022 | 650 - 750 |
| 930 350 001 | 0023 | 750 |
| 930 350 001 | 0024 | 1,500 |
| 930 350 001 | 0025 | 3,000 |





Voltage Detectors KP-Test 5R DC dual

The **KP-Test 5R DC dual** double-pole voltage detector is similar in design to the **KP-Test 5R DC**. This voltage detector can also be switched between two nominal voltage ranges in two steps. This allows a larger system range to be covered even when there is a high proportion of leakage current.

The KP-Test 5R DC dual has two selectable voltage steps.

Step 1:

- Voltage 750 V DC
- Selected by briefly pressing the On button
- LED indicator: 1 x green

Step 2:

- Voltage 1,500 V DC
- Selected by pressing and holding the On button
- LED indicator: 2 x green

Sensible voltage level selection at switch-on and the related self-test ensure that the **KP-Test 5R DC dual** displays safe, clear indications.

Technical description:

- Double-pole type for the catenary systems of d.c. voltage railways with nominal voltages from 500 to 4,000 V DC
- Second pole designed for handy magnetic connection to rail
- Voltage range selection
- Hook-type contact electrode with high-quality contact pin for optimum contact
- Self-test at switch-on also checks the connecting cable
- Can be used during precipitation
- Integrated audible signal for reliable voltage tests even in noisy ambient conditions
- Extremely strong LEDs in clear layout to prevent confusion
- Induced a.c. voltage signal detection
- Voltage testing possible even with a high proportion of leakage current on disconnected contact wires
- Available separately without insulating pole
- Available separately without insulating pole, but with additional adapter
- Available complete with three-piece insulating pole (poles **RP1** and **UP**; total length about 5,000 mm), or five-piece insulating pole (poles **RP2**, **RP3**, **RP4** and **UP**; total length about 4,880 mm)
- Available with convenient carrying case

Other types with different nominal voltages and ranges of nominal voltages are available on request.

| No. | Version | Nominal voltage DC Level I | Nominal voltage DC Level II |
|-------------|---------|-------------------------------|--------------------------------|
| | | U_n (V) | U_n (V) |
| 930 350 501 | 0005 | 750 | 1,500 |

Voltage Detectors KP-Test 5H for Railway Systems

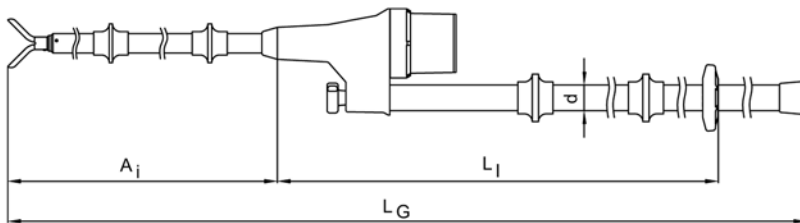
The **KP-Test 5 H for railway** capacitive voltage detector is similar in design to the **KP-Test 5 H**. This voltage detector is designed specially for application on supply line for railway systems. It indicates the presence of operating voltage when the conductor is contacted. The **KP-Test 5H for railway** voltage detector is distinguished by its high level of user-friendliness and user safety.

Technical description:

- Can be used during precipitation
- Particularly loud, integrated audible signal for reliable voltage tests even in noisy ambient conditions
- Extremely strong LEDs in clear layout to prevent confusion
- Maximum interference field resistance through the use of a high-quality contact electrode extension
- Extensive self-test functions at switch-on
- Available with convenient carrying case

The **KP-Test 5H for railway** is constructed and type-tested to Standard IEC 61243-1:2003.

Other types with different nominal voltages, ranges of nominal voltages and frequencies are available on request.



| No. | Version | Nominal voltage | Insulating length | Total length | Transporting length | Number of insulating poles |
|-------------|---------|-----------------------|-------------------|--------------|---------------------|----------------------------|
| | | U_n (kV) | L_i (mm) | L_G (mm) | L_T (mm) | |
| 930 250 001 | 0128 | 110 kV / 16,7 & 50 Hz | 1802 | 3700 | 1855 | 2 |
| 930 250 001 | 0032 | 132 kV / 16,7 & 50 Hz | 1802 | 3700 | 1855 | 2 |



Voltage Detectors KP-Test 5 for Railway Power Lines

The **KP-Test 5 capacitive voltage detector for railway power lines** can be used on 15 kV 16.7 Hz railway power lines. It indicates the presence of operating voltage when the conductor is contacted. This voltage detector is suitable for the particular requirements of railway power lines.

Technical description:

- Integrated audible signal for reliable voltage tests even in noisy ambient conditions
- Can be used during precipitation
- Extremely strong LEDs in clear layout to prevent confusion
- Maximum interference field resistance through the use of a high-quality contact electrode extension
- Extensive self-test functions at switch-on, which even check the contact electrode extension
- Removable contact electrode headpiece as hook electrode
- Handle length 288 mm
- Length of insulating element 520 mm

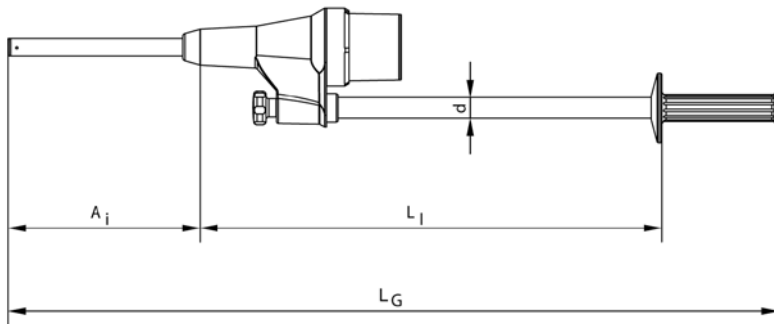
| No. | Version | Nominal voltage | Nominal frequency | Total length | Insertion depth |
|-------------|---------|-----------------|-------------------|--------------|-----------------|
| | | U_n (kV) | f_N (Hz) | L_G (mm) | A_i (mm) |
| 930 190 001 | 0025 | 15 | 16.7 | 1810 | 910 |

Voltage Detectors KP-Test 5 for Railway Substation

The **KP-Test 5 capacitive voltage detector for railway substation** can be used on 15 kV 16.7 Hz. It indicates the presence of operating voltage when the conductor is contacted. The **KP-Test 5 capacitive voltage detector for railway substation** voltage detector is distinguished by its high level of user-friendliness and user safety.

Technical description:

- Can be used during precipitation
- Particularly loud, integrated audible signal for reliable voltage tests even in noisy ambient conditions
- Extremely strong LEDs in clear layout to prevent confusion
- Maximum interference field resistance through the use of a high-quality contact electrode extension
- Extensive self-test functions at switch-on, which even check the contact electrode extension



| No. | Version | Total length | Insertion depth | Length of insulating element | Length of handle element |
|-------------|---------|--------------|-----------------|------------------------------|--------------------------|
| | | L_G (mm) | A_i (mm) | L_i (mm) | L_H (mm) |
| 930 190 001 | 0122 | 1270 | 603 | 520 | 135 |



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