



HPG XX-AC / HPG XX-H / HPG XX-D

High Voltage Test Sets

(Controlled by High Voltage Control Set HSW 3-2)

OPERATION MANUAL

Issue: A (11/2019) –EN
Article number: 128312070



Consultation with Megger

The present system manual has been designed as an operating guide and for reference. It is meant to answer your questions and solve your problems in as fast and easy a way as possible. Please start with referring to this manual should any trouble occur.

In doing so, make use of the table of contents and read the relevant paragraph with great attention. Furthermore, check all terminals and connections of the instruments involved.

Should any question remain unanswered, please contact:

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1 Description

1.1 General

The control unit HSW 3-2 is part of a complete high voltage test system and is used to trigger the HV devices and to display current and voltage.

The instrument disposes of some control elements and indicator lamps for operation status indication.

The HSW 3-2 is either delivered as a stand-alone version for portable operation or as table version for test van assembly.

The two versions differ in the position of the connection panel which is either placed at the right side (stand-alone version) or at the bottom of the device (test van version). A conversion from one version to the other can be performed without any difficult.


1.2 Functions

- a. Power supply unit
- b. Variac with Zero limit switch
- c. Meters for current and voltage measurement
- d. Programmable timer with indication of the residual time
- e. Operating elements with indicating lamps
- f. Limiting resistance with fan
- g. Safety circuit and indicating lamps acc. to VDE 0104

1.3 High Voltage Test Configurations

The HSW 3-2 can be used as control unit for the following high voltage test sets:

HPG 35-AC	0 – 35 kV _{RMS} AC
HPG 58-AC	0 – 58 kV _{RMS} AC
HPG 78-AC	0 – 78 kV _{RMS} AC
HPG 50-H	0 – 50 kV DC (0 – 35 kV _{RMS} AC)
HPG 80-H	0 – 80 kV DC (0 – 58 kV _{RMS} AC)
HPG 110-H	0 – 110 kV DC (0 – 78 kV _{RMS} AC)
HPG 50-D	0 – 100 kV DC (0 – 35 kV _{RMS} AC)
HPG 80-D	0 – 150 kV DC (0 – 58 kV _{RMS} AC)

	<p>CAUTION</p> <p>Depending on the input voltage it is in some cases possible to generate a higher output voltage as the unit has been designed for. This area is marked on the scalar. NEVER exceed the maximum design output voltage (as stated above) as this could potentially damage the system.</p>
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1.4 Technical Data

a.	Mains voltage:	230 V + 6 / - 10 %
b.	Mains frequency:	45 – 60 Hz
c.	Operating current:	16 A (max.)
d.	Power rating:	3.5 kVA
e.	Circuit breaker:	10 A
f.	Output voltage:	0 – 250 V
g.	Meter U:	kV-Meter 0 ... 60 kV or 0 ... 80 kV or 0 ... 110 kV
h.	Meter I:	mA-Meter 0.5 / 50 mA
i.	Timer:	1 – 99 min
l.	Operating temperature:	- 20 bis + 55 ⁰ C
k.	Storage temperature:	- 40 bis + 85 ⁰ C
l.	Protection class:	IP 22
m.	Weight HSW 3-2:	26 kg
n.	Dimensions (L x B x T):	520 x 255 x 320 mm
p.	Versions:	stand-alone and table version

1.5 Scope of Delivery

1. Control unit	HSW 3-2
2. Cable set: consists of:	VL 70
2.1. NSP – lead (5 m)	VSK 5
2.2. Mains cable (2.5 m)	NKG S
2.3. Earth connection lead 5 m with clamp	EK 1
2.4. Earth connection lead for transformer	EK 1
2.5. Connection lead for system earth	WK 1
3. Discharge rod	depending on system type
4. HV transformer with accessories	depending on system type
5. Manual	

The HV test lead is not contained in the scope of delivery and has to be ordered, if required (see below)!

Optional Accessories:

Emergency off switch NAG 1 (with 5 m connection lead) NAG 1	810399
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Shielded HV test lead for DC tests:

5 m length	810003736
10 m length	820023906

Unshielded HV test lead for AC tests:

3 m length	2005029
5 m length	2004993
10 m length	2005030

2 Operating Panel and Connection Panel

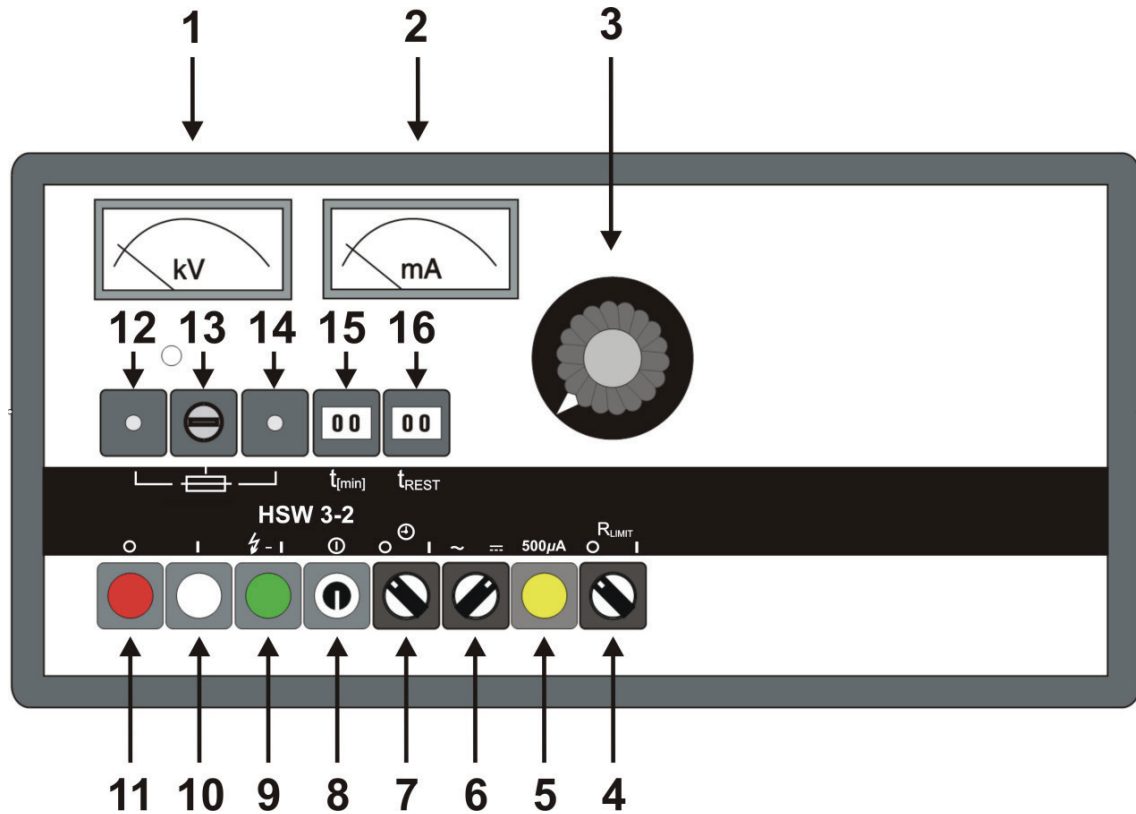


Figure 1 : Operating panel

1. Analog volt meter
2. Analog ampere meter
3. Rotary knob for variac adjustment
4. Rotary switch for limiting resistance
5. Pushbutton for test range selection
6. Rotary switch for selection of AC/DC operation
7. Rotary switch for timer
8. Key switch
9. Lighted pushbutton, green - HV ON
10. Lighted pushbutton, white – system ON
11. Lighted pushbutton, red – system OFF
12. Circuit breaker 10 A (therm./magnetic)
13. Control fuse M 0.8/250C
14. Circuit breaker 10 A (therm./magnetic)
15. Time programming keys
16. Digital indication of the residual test time

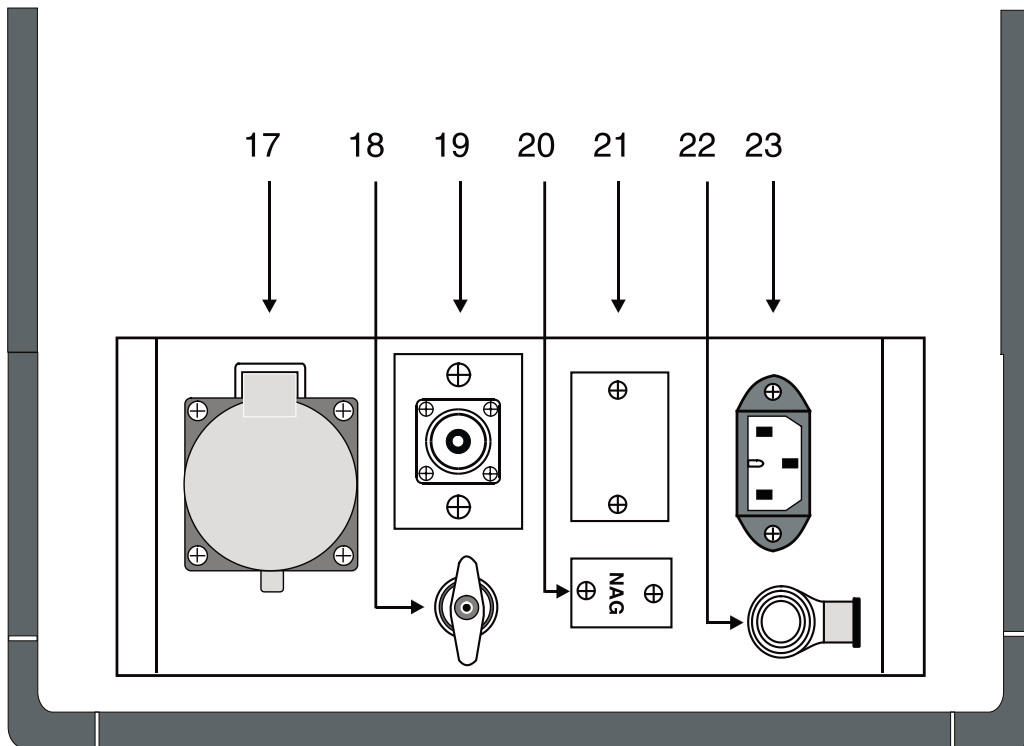


Figure 2 : Connection panel

- 17. Socket for connection lead to the high voltage transformer
- 18. Socket for earthing lead
- 19. Socket for direct HV measurement
(optional for test van installations)
- 20. Label
- 21. Identification plate
- 22. Socket for connecting the emergency off switch
- 23. Mains connection 230 V AC

3 Test System Installations

Since the HSW 3-2 control unit can be operated with several test systems, the specific test system installations are described in the following section.

3.1 HPG XX-AC

The 50 Hz alternating current is directly tapped on the output of the cast resin-insulated transformer.

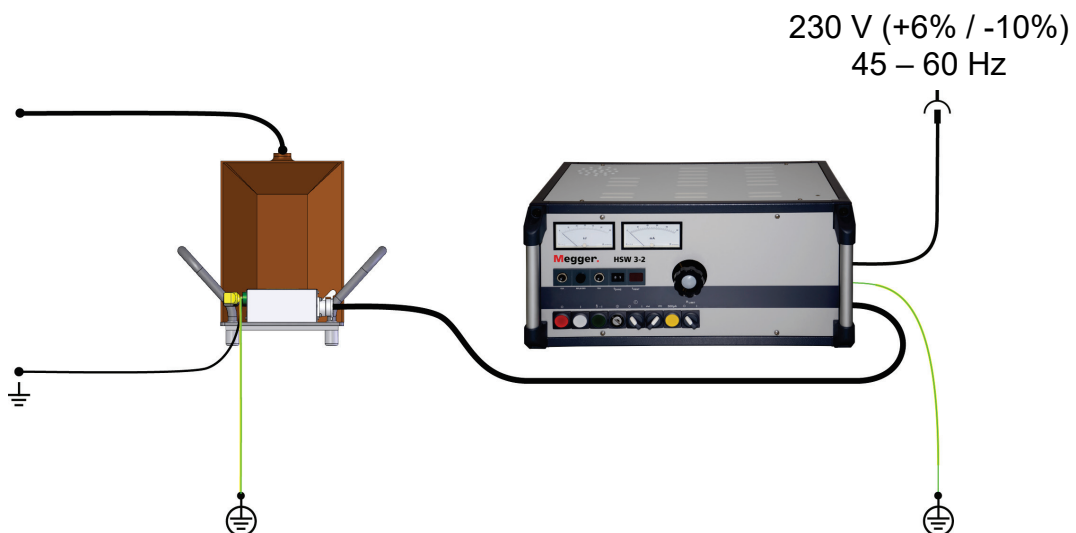


Figure 3 : HPG 35-AC, HPG 58-AC or HPG 78-AC installation

The test performance is only suitable for test objects with low capacity and is limited as follows:

HPG 35-AC: 1.2 kVA (long-term operation)
3 kVA (short-term operation)

HPG 58-AC: 1.2 kVA (long-term operation)
2.5 kVA (short-term operation)

HPG 78-AC: 1.2 kVA (long-term operation)
2.5 kVA (short-term operation)

The HV transformer should be connected with the test object using a direct connection (wire or bus bar). It is also possible to connect them with a short cable connection (6 to 10 m). Longer cable connections do not make sense, since the remaining test performance would be too low.

3.1.1 HPG 35-AC

This test system consists of the following components:

- | | |
|-------------------|----------|
| 1. Control unit | HSW 3-2 |
| 2. HV transformer | HTR 35-1 |
| 3. Cable set | VL 70 |
| 4. Discharge rod | EST 50 |

3.1.2 HPG 58-AC

This test system consists of the following components:

- | | |
|-------------------|----------|
| 1. Control unit | HSW 3-2 |
| 2. HV transformer | HTR 58-1 |
| 3. Cable set | VL 70 |
| 4. Discharge rod | EST 100 |

3.1.3 HPG 78-AC

This test system consists of the following components:

- | | |
|-------------------|----------|
| 1. Control unit | HSW 3-2 |
| 2. HV transformer | HTR 78-1 |
| 3. Cable set | VL 70 |
| 4. Discharge rod | EST 100 |

3.2 HPG XX-H

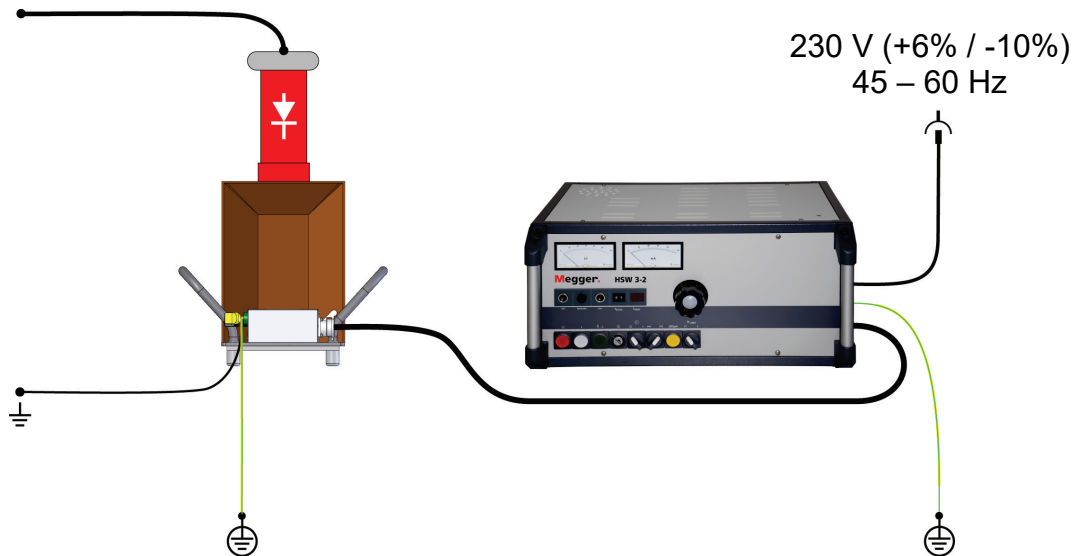


Figure 4 : HPG 50-H, HPG 80-H or HPG 110-H installation

3.2.1 HPG 50-H

This test system consists of the following components:

- | | |
|-------------------|----------|
| 1. Control unit | HSW 3-2 |
| 2. HV transformer | HTR 35-1 |
| 3. HV rectifier | HGL 80 |
| 4. Cable set | VL 70 |
| 5. Discharge rod | EST 50 |

3.2.2 HPG 80-H

This test system consists of the following components:

- | | |
|-------------------|----------|
| 1. Control unit | HSW 3-2 |
| 2. HV transformer | HTR 58-1 |
| 3. HV rectifier | HGL 80 |
| 4. Cable set | VL 70 |
| 5. Discharge rod | EST 100 |

3.2.3 HPG 110-H

This test system consists of the following components:

- | | |
|-------------------|----------|
| 1. Control unit | HSW 3-2 |
| 2. HV transformer | HTR 78-1 |
| 3. HV rectifier | HGL 120 |
| 4. Cable set | VL 70 |
| 5. Discharge rod | EST 150 |

3.3 HPG XX-D

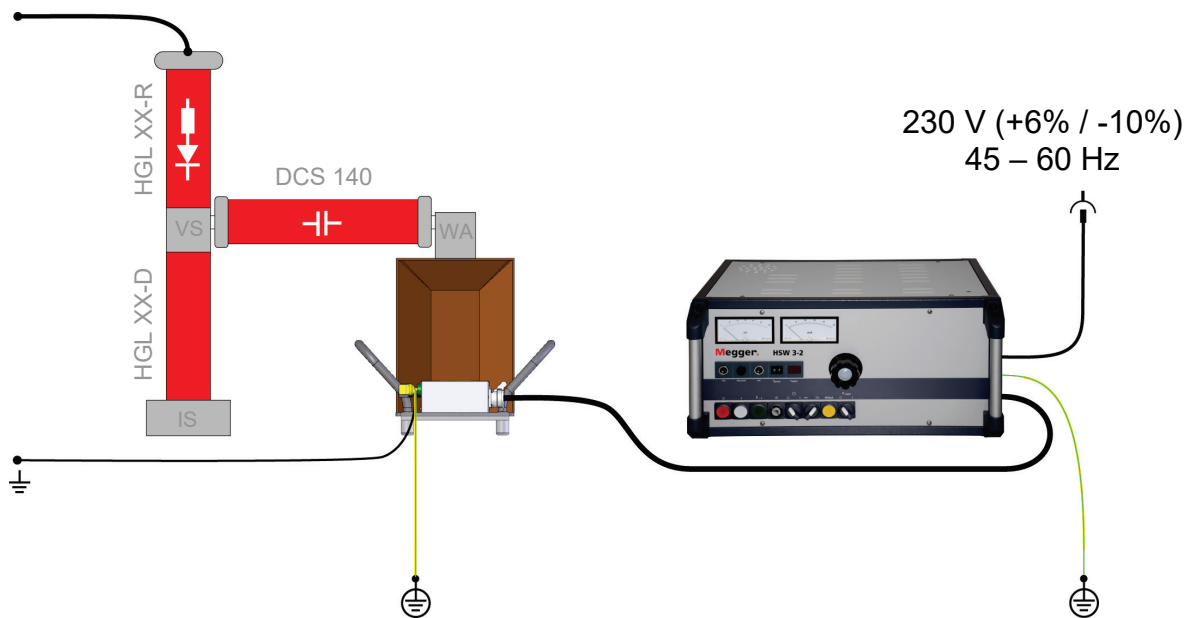


Figure 5 : HPG 50-D or HPG 80-D installation

3.3.1 HPG 50-D

This test system consists of the following components:

1. Control unit	HSW 3-2
2. HV transformer	HTR 35-1
3. HV rectifier	HGL 70-R
4. HV rectifier	HGL 70-D
5. Voltage doubler capacitor	DCS 140
6. AC voltage connection	WA
7. Insulated support	IS
8. Cable set	VL 70
9. Connecting piece	VS
10. Discharge rod	EST 100

3.3.2 HPG 80-D

This test system consists of the following components:

1. Control unit	HSW 3-2
2. HV transformer	HTR 55-1
3. HV rectifier	HGL 80-R
4. HV rectifier	HGL 80-D
5. Voltage doubler capacitor	DCS 140
6. AC voltage connection	WA
7. Connecting piece	VS
8. Insulated support	IS
9. Cable set	VL 70
10. Discharge rod	EST 150

4 Safety



Figure 6 : Safety advices (USA and Germany)

All HPG high voltage test sets generate dangerous contact voltages > 1 kV. Hence, the Instrument must be operated by specialists or personnel who have been trained or instructed in the use of the instrument. The following safety precautions should be adhered to:

4.1 Key Switch

On the basis of european product legal liability requirements and according to VDE 104-10-89 Pos. 3.9.4., unauthorized switching on of the instrument must not be possible. This is accomplished by the provision of a key switch [8] located on the front panel. The key has to be kept safe by the person responsible for the device.

4.2 Safety Terms According to VDE 0104

The term in parentheses describes the position number within the VDE 0104 (*italic*).

4.2.1 READY FOR MAINS CONNECTION

The white pilot lamp (10) indicates the presence of mains supply. The pilot lamp (10) is permanently lit and cannot be switched off.

4.2.2 READY FOR OPERATION

(Pos. 3.15.2)

Indicated by the green pilot lamp (9). Instrument is On. No high voltage can be generated. If the discharge module is used, the HV output is earthed.

4.2.3 READY FOR SWITCHING ON

(Pos. 3.15.3)

Indicated by the red pilot lamp (11). Instrument is on. The green luminous pushbutton is off. This state can only take place if the variac (3) is in null position. Thus, no HV can be generated.

Note: If the green push-button (9) is switched off and the red pilot lamp (11) does not light up, the instrument is also ready for switching on. Caution!

4.2.4 In Operation

(Pos. 3.15.4)

Indicated by the red pilot lamp (11). By rotating the rotary switch (3), HV can be generated.

4.2.5 Portable Test Equipment

(Pos. 4.5)

According to VDE 0104 the complete test set up comprising the HSW 3-2, its connections including the termination of the cable under test constitutes a Portable Test Unit being used at a test site without secure contact protection. The same goes for the termination(s) of the cable to be tested.

4.2.6 Forbidden Area

(Pos.3.6)

Forbidden areas without secure contact protection must be made safe, fenced off and have the statutory notices posted to indicate that it is a forbidden area with several danger zones.

4.2.7 Emergency Switching Off

(Pos.4.1.3)

Test sites are normally provided with an emergency off switch. For the HSW 3-2 an optional emergency off switch (NAG 1) is provided. It has to be connected to socket (22) on the connection panel. In order to allow operation with different emergency switch off units, a dummy connector is connected to the socket.

5 Placing the Device

Preferably, the HSW 3-2 should be placed outside of the forbidden area. In a portable installation, the high voltage source should preferably be placed within the station and the door should be closed. This creates a test site with secure contact protection.

A HSW 3-2 operated in a test van is already placed in a safe position and no further arrangements have to be made.

6 Connecting the Device

Prior to connecting the HV equipment to the cable under test, the five safety rules must always be followed:

- De-energise
- Protect against re-energising
- Confirm absence of voltage
- Ground and short-circuit
- Cover up or bar-off neighbouring energised parts

6.1 Earthing

- a. The control unit HSW 3-2 has to be earthed. For this purpose, the earthing terminal (18) is connected to a reliable protective earth by means of the earthing lead EK 1.

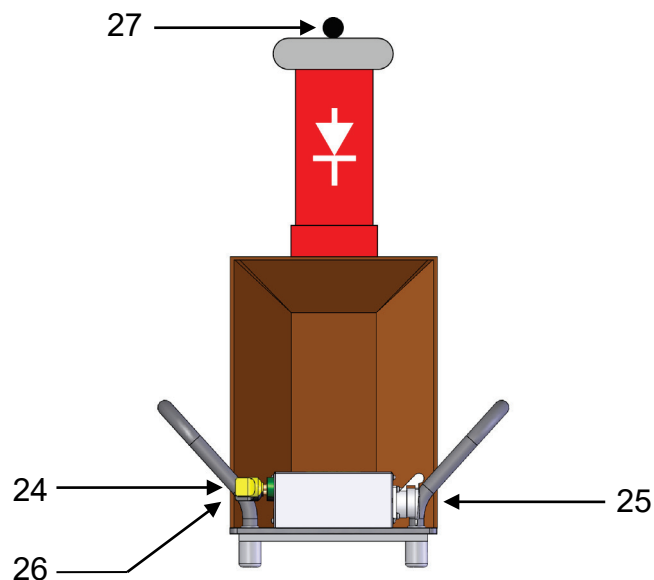


Figure 7 : Connection panel of the HTR

- b. The yellow-green earthing terminal (24) of the high voltage transformer has to be connected to protective earth using the second EK 1 earthing lead.

Note:

The protective earthing provided through the earthing contact of the mains supply lead is not sufficient and, thus, no adequate substitution for a proper protective earth connection.

If the HSW 3-2 is operated in a test van, the earthing connections are already installed.

6.2 Connecting the Control Unit to the HV Transformer

With the VSK 5 lead the appropriate socket of the control unit (17) is connected to the socket (25) of the HV transformer.

If the HSW 3-2 is operated in a test van, the HV connection is already installed.

6.3 Connecting the System Earth to the Cable Under Test

The black WK 1 lead is connected to the socket (26) of the HV transformer and with system earth (screen of the cable under test).

6.4 Connecting the HV Output to the Cable Under Test

The HV output (27) of the HV transformer is connected to the core of the cable under test using a preferably short connection lead (not contained in the scope of delivery).

Only now, the earthing and short circuit device has to be removed from the core of the cable under test.

6.4.1 Isolation of Open Cable Ends

Since the high voltage applied to the cable under test is extremely dangerous, cable ends (terminations) and, if necessary, also ends of branched cables have to be isolated in order to avoid physical contact (acc. to VDE 0104). In addition, each cable end has to be marked with a caution label.

6.5 Mains Connection

The mains socket (23) of the control unit has to be connected to a power outlet with 230 V AC using the supplied mains connection lead NKG S.

7 Startup

After all connections are installed and verified, the device can be switched on.

7.1 Switching On (Ready for Operation)

In order to switch the device on, the key switch (8) has to be turned in ON position and the rotary switch (3) has to be turned in null position (fully to the left).

Afterwards, the white pushbutton (10) is pressed. The device is now in operating state which is indicated by the green pilot lamp (9). In this state, no HV is applied to the cable under test. If the green pilot lamp (9) is not lit, this might be caused by one of the following problems:

- a. No connection (neither emergency off switch nor dummy plug) to the socket (22) has been established.
- b. The rotary switch (3) is not in null position. A switch from white to green but no switch from green to red can be performed.
- c. The rotary switch (7) is in ON position and the timer is set to 00.

After all possible causes have been verified and, if necessary, fixed, the device can be switched on.

The green pilot lamp should now indicate the operating state.

7.2 Switching On (Ready for HV)

The device must be in operating state (see 7.1).

The green pushbutton (9) has to be pressed. The red pilot lamp (11) indicates that the device is now ready for HV.

7.3 Selecting the Test Voltage

The device must be ready for HV (see 7.2).

The voltage can be increased by turning the rotary switch (3) slowly to the right. The selected test voltage in kV is instantly displayed at the volt meter (1). A suitable test voltage can now be selected.

7.4 Voltage Measurement

Depending on the installation, the HSW 3-2 is operated in, two different voltage measurement methods are used:

- a. Measurement in portable installation
- b. Measurement in test van installation

7.4.1 Voltage Measurement in Portable Installation

Since no measuring resistance can be used in portable operation, the voltage is measured at a tertiary winding of the HV transformer. Figure 7 shows the appropriate simplified diagram. According to this diagram, the voltage of the tertiary winding is displayed as output voltage. 230 V then correspond to 35 / 58 / 78 kV_{RMS} AC or 50 / 80 / 110 kV DC (after rectification). In doubler operation (HPG 50-D und HPG 70/80-D), the meter indicates half the voltage. The actual voltage value is obtained by multiplying the indicated value with 2.

Caution: The values indicated by the volt meter do not represent the actual HV. Residual voltage remaining in the cable under test is not indicated.

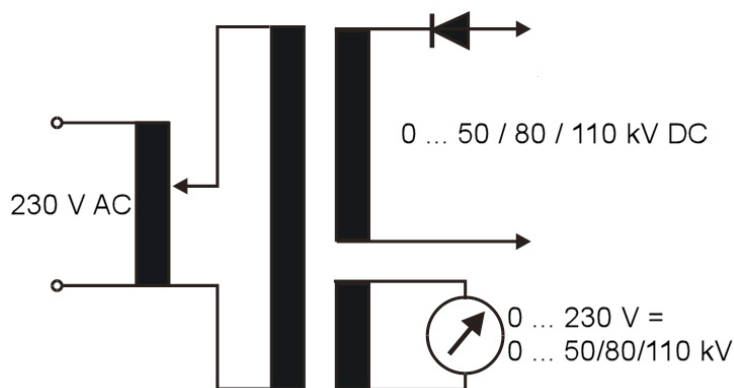


Figure 8 : Voltage measurement in portable installation

The operation mode has to be selected using the rotary switch (6). In AC operation, the volt meter indicates the AC test voltage. In DC operation, the voltage is multiplied with 1.4 and, thus, indicated as 50 kV DC, 70 kV or 110 kV DC respectively.

7.4.2 Voltage Measurement in Test Van Installation

If the HSW 3-2 is operated in a test van, the generated HV can be directly measured.

Figure 8 shows the appropriate simplified diagram.

Thereby, the low end of the resistor is connected to the appropriate socket (19) of the control unit (see figure 2).

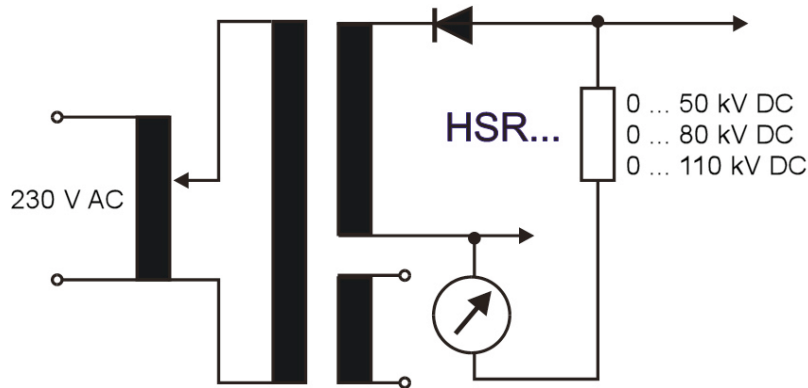


Figure 9 : Direct voltage measurement

7.5 Using the Timer

If a measurement using the timer function with automatic switch-off should be started, the timer has to be set to the appropriate value first.

The time value can be changed using the programming keys (16). The rotary switch (7) has to be turned in OFF position.

After the selected test voltage is reached, the timer has to be started by turning the rotary switch (7) in ON position.

The timer starts and the remaining time is indicated in the display (16).

After the timer is expired, the device performs an automatic switch-off.

7.6 Leakage Current Measurement

The leakage current is indicated at the ampere meter (2). The rotary switch (6) can be used to toggle between AC and DC operation. The basic measurement range is 50 mA. By pressing the yellow pushbutton (5), the measurement range can be temporary (as long as the button is pressed) set to 500 μ A. In order to avoid damage to the instrument due to an abrupt short circuit, the measurement range should only be toggled, if only very low values are indicated in the 50 mA range.

Note:

Leakage current can only be measured in DC operation. In AC operation, the ampere meter indicates the capacitive charging current instead.

7.7 Limiting Resistance

By means of rotary switch (4) a current limiting resistance can be connected into the main circuit of the instrument.

This is necessary if, e.g., several repetitive flashovers have to be force at the cable fault.

If no limiting resistance were available, the circuit breaker would respond and put the device out of operation.

In addition, the following advices have to be observed:

7.7.1 AC Testing

- ! During AC voltage testing, the limiting resistor is to be switched off due to the required low short circuit impedance.

7.7.2 DC Testing

- ! During DC voltage testing, the limiting resistance has to be switched on in order to keep the circuit breaker from responding in the case of an abrupt voltage breakdown. The test voltage is reached even with activated limiting resistance.

7.7.3 Note

The heat generated at the limiting resistor is eliminated by a fan. Hence, the air outlets must be kept unobstructed. The fan is directly connected to the mains input. A cut-off has not been provided because even after switching off the instrument, the residual heat of the limiting resistance has to be dissipated.

7.7.4 Overtemperature

The temperature of the limiting resistance is monitored by a temperature sensor. If the temperature exceeds a critical value, the main circuit of the device is automatically broken.

This state is indicated by a flashing red pilot lamp (11). After a cool down, the flashing pilot lamp goes out and the device can be switched on again.

7.8 Switching Off

The control unit is switched off either by the built-in timer, or manually. For this purpose, the rotary switch (3) has to be turned in null position and the red luminous pushbutton (11) has to be pressed. After switching off, the red pilot lamp goes off and only the white pilot lamp (10) is on. By turning the key switch, the device can be protected against unauthorized switch-on.

8 Disconnecting the Cable Under Test

Important Safety Advice:

After switching off the control unit, voltage might still be present, although the voltmeter indicates no residual voltage.

Thus, the disconnection has to be performed very cautiously!

The device must be switched off and the key switch must be in OFF position.

It is imperative to carry out a damped discharge and a reliable earthing of the cable under test. This is done by means of a discharge rod type EST (50, 75, 100 or 150) which must be suitable for the highest voltage of the test equipment used.

The earthing lead has to be connected to the station earth.

First, the cable under test is touched with the tip of the discharge rod in order to ensure a damped and reliable discharge of the cable load. This may take approximately 20 s and may be go along with a fizzling sound. Subsequently, the test object is touched directly with the earthing hook of the discharge rod. This connection should be kept established until the earthing and short-circuit device is reinstalled. Only after that, the connection leads between test set and test object can be removed, whereby the earthing lead should be the last item to be disconnected.



Tento symbol indikuje, že výrobek nesoucí takovéto označení nelze likvidovat společně s běžným domovním odpadem. Jelikož se jedná o produkt obchodovaný mezi podnikatelskými subjekty (B2B), nelze jej likvidovat ani ve veřejných sběrných dvorech. Pokud se potřebujete tohoto výrobku zbavit, obraťte se na organizaci specializující se na likvidaci starých elektrických spotřebičů v blízkosti svého působení.



Dit symbool duidt aan dat het product met dit symbool niet verwijderd mag worden als gewoon huishoudelijk afval. Dit is een product voor industrieel gebruik, wat betekent dat het ook niet afgeleverd mag worden aan afvalcentra voor huishoudelijk afval. Als u dit product wilt verwijderen, gelieve dit op de juiste manier te doen en het naar een nabij gelegen organisatie te brengen gespecialiseerd in de verwijdering van oud elektrisch materiaal.



This symbol indicates that the product which is marked in this way should not be disposed of as normal household waste. As it is a B2B product, it may also not be disposed of at civic disposal centres. If you wish to dispose of this product, please do so properly by taking it to an organisation specialising in the disposal of old electrical equipment near you.



Този знак означава, че продуктът, обозначен по този начин, не трябва да се изхвърля като битов отпадък. Тъй като е B2B продукт, не бива да се изхвърля и в градски пунктове за отпадъци. Ако желаете да изхвърлите продукта, го занесете в пункт, специализиран в изхвърлянето на старо електрическо оборудване.



Dette symbol viser, at det produkt, der er markeret på denne måde, ikke må kasseres som almindeligt husholdningsaffald. Eftersom det er et B2B produkt, må det heller ikke bortskaffes på offentlige genbrugsstationer. Skal dette produkt kasseres, skal det gøres ordentligt ved at bringe det til en nærliggende organisation, der er specialiseret i at bortskaffe gammelt el-udstyr.



Sellise sümboliga tähistatud toodet ei tohi käidelda tavalise olmejäätmena. Kuna tegemist on B2B-klassi kuuluva tootega, siis ei tohi seda viia kohaliku jäätmekäitluspunkti. Kui soovite selle toote ära visata, siis viige see lähimasse vanade elektriseadmete käitlemisele spetsialiseerunud ettevõttesse.



Tällä merkinnällä ilmoitetaan, että kyseisellä merkinnällä varustettua tuotetta ei saa hävittää tavallisen kotitalousjätteen seassa. Koska kyseessä on yritysten välisen kaupan tuote, sitä ei saa myöskään viedä kuluttajien käyttöön tarkoitettuihin keräyspisteisiin. Jos haluatte hävittää tämän tuotteen, ottakaa yhteys lähimpään vanhojen sähkölaitteiden hävittämiseen erikoistuneeseen organisaatioon.



Ce symbole indique que le produit sur lequel il figure ne peut pas être éliminé comme un déchet ménager ordinaire. Comme il s'agit d'un produit B2B, il ne peut pas non plus être déposé dans une déchetterie municipale. Pour éliminer ce produit, amenez-le à l'organisation spécialisée dans l'élimination d'anciens équipements électriques la plus proche de chez vous.



Cuireann an siombail seo in iúl nár cheart an táirgeadh atá marcáilte sa tsíle seo a dhíúscairt sa chóras fuíoll teaghlaigh. Os rud é gur táirgeadh ghnó le gnó (B2B) é, ní féidir é a dhíúscairt ach oiread in ionaid dhíúscartha phobail. Más mian leat an táirgeadh seo a dhíúscairt, déan é a thógáil ag eagraíocht gar duit a sainfheidhmíonn i ndíúscairt sean-fhearas leictirigh.



Dieses Symbol zeigt an, dass das damit gekennzeichnete Produkt nicht als normaler Haushaltsabfall entsorgt werden soll. Da es sich um ein B2B-Gerät handelt, darf es auch nicht bei kommunalen Wertstoffhöfen abgegeben werden. Wenn Sie dieses Gerät entsorgen möchten, bringen Sie es bitte sachgemäß zu einem Entsorger für Elektroaltgeräte in Ihrer Nähe.



Αυτό το σύμβολο υποδεικνύει ότι το προϊόν που φέρει τη σήμανση αυτή δεν πρέπει να απορρίπτεται μαζί με τα οικιακά απορρίματα. Καθώς πρόκειται για προϊόν B2B, δεν πρέπει να απορρίπτεται σε δημοτικά σημεία απόρριψης. Εάν θέλετε να απορρίψετε το προϊόν αυτό, παρακαλούμε όπως να το παραδώσετε σε μία υπηρεσία συλλογής ηλεκτρικού εξοπλισμού της περιοχής σας.



Ez a jelzés azt jelenti, hogy az ilyen jelzéssel ellátott termék tilos a háztartási hulladékokkal együtt kidobni. Mivel ez vállalati felhasználású termék, tilos a lakosság számára fenntartott hulladékgyűjtőbe dobni. Ha a terméket ki szeretné dobni, akkor vigye azt el a lakóhelyéhez közel működő, elhasznált elektromos berendezések begyűjtésével foglalkozó hulladékkezelő központhoz.



Questo simbolo indica che il prodotto non deve essere smaltito come un normale rifiuto domestico. In quanto prodotto B2B, può anche non essere smaltito in centri di smaltimento cittadino. Se si desidera smaltire il prodotto, consegnarlo a un organismo specializzato in smaltimento di apparecchiature elettriche vecchie.



Št zíme noráda, ka izstrādājumu, uz kura tā atrodas, nedrīkst izmest kopā ar parastiem mājsaimniecības atkritumiem. Tā kā tas ir izstrādājums, ko cits citam pārdod un lieto tikai uzņēmumi, tad to nedrīkst arī izmest atkritumos tādās izgāztuvēs un atkritumu savāktuvēs, kas paredzētas vietējiem iedzīvotājiem. Ja būs vajadzīgs šo izstrādājumu izmest atkritumos, tad rīkojieties pēc noteikumiem un nogādājiet to tuvākajā vietā, kur īpaši nodarbojas ar vecu elektrisku ierīču savākšanu.



Šis simbols rodo, kad juo paženklinto gaminio negalima išmesti kaip paprastų buitinių atliekų. Kadangi tai B2B (verslas verslui) produktas, jo negalima atiduoti ir buitinių atliekų tvarkymo įmonėms. Jei norite išmesti šį gaminį, atlikite tai tinkamai, atiduodami jį arti jūsų esančiai specializuotai senos elektrinės įrangos utilizavimo organizacijai.



Dan is-simbolu jindika li l-prodott li huwa mmarkat b'dan il-mod m'ghandux jintrema bhal skart normali tad-djar. Minhabba li huwa prodott B2B , ma jstax jintrema wkoll f'centri civici ghar-rimi ta' liskart. Jekk tkun tixtieq tarmi dan il-prodott, jekk jogh'gboq ghamel dan kif suppost billi tiehdu ghand organizzazzjoni fil-qrib li tispejalizza fir-rimi ta' taghmir qadim ta' l-eletriku.



Dette symbolet indikerer at produktet som er merket på denne måten ikke skal kastes som vanlig husholdningsavfall. Siden dette er et bedriftsprodukt, kan det heller ikke kastes ved en vanlig miljøstasjon. Hvis du ønsker å kaste dette produktet, er den riktige måten å gi det til en organisasjon i nærheten som spesialiserer seg på kassering av gammelt elektrisk utstyr.



Ten symbol oznacza, że produktu nim opatrzonego nie należy usuwać z typowymi odpadami z gospodarstwa domowego. Jest to produkt typu B2B, nie należy go więc przekazywać na komunalne składowiska odpadów. Aby we właściwy sposób usunąć ten produkt, należy przekazać go do najbliższej placówki specjalizującej się w usuwaniu starych urządzeń elektrycznych.



Este símbolo indica que o produto com esta marcação não deve ser deixado fora juntamente com o lixo doméstico normal. Como se trata de um produto B2B, também não pode ser deixado fora em centros cívicos de recolha de lixo. Se quiser desfazer-se deste produto, faça-o correctamente entregando-o a uma organização especializada na eliminação de equipamento eléctrico antigo, próxima de si.



Acest simbol indică faptul că produsul marcat în acest fel nu trebuie aruncat ca și un gunoi menajer obișnuit. Deoarece acesta este un produs B2B, el nu trebuie aruncat nici la centrele de colectare urbane. Dacă vreți să aruncați acest produs, vă rugăm s-o faceți într-un mod adecvat, ducând-ul la cea mai apropiată firmă specializată în colectarea echipamentelor electrice uzate.



Tento symbol znamená, že takto označený výrobek sa nesmie likvidovať ako bežný komunálny odpad. Keďže sa jedná o výrobek triedy B2B, nesmie sa likvidovať ani na mestských skládkach odpadu. Ak chcete tento výrobek likvidovať, odneste ho do najbližšej organizácie, ktorá sa špecializuje na likvidáciu starých elektrických zariadení.



Ta simbol pomeni, da izdelka, ki je z njim označen, ne smete zavreči kot običajne gospodinjiske odpadke. Ker je to izdelek, namenjen za druge proizvajalce, ga ni dovoljeno odlagati v centrih za civilno odlaganje odpadkov. Če želite izdelek zavreči, prosimo, da to storite v skladu s predpisi, tako da ga odpeljete v bližnjo organizacijo, ki je specializirana za odlaganje stare električne opreme.



Este símbolo indica que el producto así señalizado no debe desecharse como los residuos domésticos normales. Dado que es un producto de consumo profesional, tampoco debe llevarse a centros de recogida selectiva municipales. Si desea desechar este producto, hágallo debidamente acudiendo a una organización de su zona que esté especializada en el tratamiento de residuos de aparatos eléctricos usados.



Den här symbolen indikerar att produkten inte får blandas med normalt hushållsavfall då den är förbrukad. Eftersom produkten är en så kallad B2B-produkt är den inte avsedd för privata konsumenter, den får således inte avfallshanteras på allmänna miljö- eller återvinningsstationer då den är förbrukad. Om ni vill avfallshandera den här produkten på rätt sätt, ska ni lämna den till myndighet eller företag, specialiserad på avfallshandtering av förbrukad elektrisk utrustning i ert närområde.