EN

Instruction manual

EN 15 Ex power pack

Ident number: 01.7752.XXX (230 V), 01.7753.XXX (115 V)

Keep for future reference!

Ex Line

Table of contents

1 Scope of delivery

Check completeness of the scope of delivery before first use.

– 1 EN 15 Ex
– 2 screw-in handles
– 1 D-0371-EN instruction manual

If incomplete, contact HAUG GmbH & Co. KG. See back cover for address.

2 User instructions

Read this instruction manual in full before installation and commissioning. Always observe the safety information.
This instruction manual is part of the product and must therefore be kept for later use or for subsequent owners.

Approved for installation and use in zone 1, zone 2, zone 21 and zone 22 potentially explosive areas.

The power pack is maintenance-free and reliable when used as intended.

The term "high-voltage" is abbreviated to HV in this instruction manual (e.g. HV connection).

The figures in this document are simplified. They simply show technical matters and support the text. They may differ from the product. These differences do not reduce either the function or the specifications of the product.

2.1 Symbols in the instruction manual

⚠ WARNUNG

Always observe this safety information. Failure to do so may result in severe physical injury or death.

HINWEIS

Always observe this safety information. Failure to do so may result in property damage.

NOTE:
Important notes and useful additional information.

Never dispose of in household waste.

Caution, warning concerning a hazard point!

3 Safety

Only persons authorised by the operator may carry out work on the power pack.

The installer must be an electrician and must be trained in the installation regulations and country-specific installation regulations for potentially explosive areas. They must read the instruction manual in full.
The operator must read the instruction manual in full.

Turn off the power supply and secure it against accidental switch-on when working on the power pack.

Danger due to a power pack which is tampered with or faulty
Unauthorised modifications, moisture or damage to the power pack result in a risk of electric shocks and/or risk of fire owing to sparking.

- For safety reasons, never open or modify the power pack.
- In the event of visible damage or suspected electrical defects, immediately take the power pack out of operation and secure it against return to service.
- Protect the power pack against moisture.
- Never carry out unauthorised repairs to the power pack.
- Always switch off the power pack when it is not in use.
- Do not store highly flammable materials in the vicinity of the power pack and its components.

Equipment damage and risk of fire
Soiling in the HV connection may cause short circuits. These cause faults in the power pack and can cause a fire.

- The HV connections and HV connectors must be clean, dry, and free from grease.
- Unused HV connections must be secured with blind plugs in order to prevent the penetration of environmental influences. The blind plugs must be clean, dry, and free from grease.

3.1 Use in accordance with the intended use

NOTE:
The power pack may be installed in zone 1, zone 2, zone 21 and zone 22 potentially explosive areas.

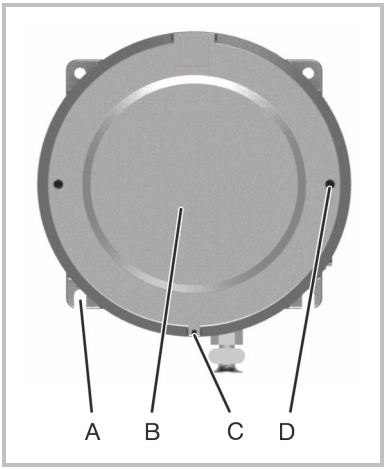
NOTE:
There is an operating licence for the power pack (ATEX). Only HAUG Ex ionizing units which are listed in the declaration of conformity may be connected. Connection of other equipment invalidates the operating licence.

The power pack is used exclusively to supply HAUG Ex ionizing units with an X-2000 Ex connector. In combination with an Ex ionizing unit, electrostatic charge is neutralised in a manufacturing process.

Always observe the installation and operation conditions set out in this instruction manual.
A warranty is only granted for products, accessories, or spare parts from HAUG GmbH & Co. KG.

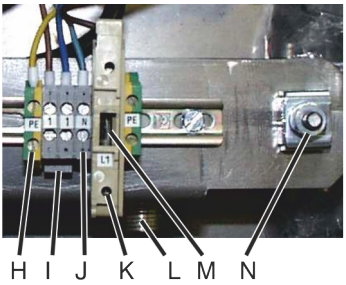
4 Device overview

A 4 x Fixing eyelets for M 10 screws
B Housing cover
C Housing cover clamping screw (M 5)
D 2 x Holes for enclosed screw-in handles



E Input for mains supply line
F 2 x Input for HV connection
G Earth connection (terminal)

H Protective earth (PE)
I Bridge
J Mains connection (N)
J Mains connection (L)
L HV connection
M Fuse holder with fuse
N Earth connection (terminal)



5 Installation

WARNUNG

Risk of electric shock!

Improper connection of the power pack to the power supply results in a risk of electric shock.

- Only an electrician trained in explosion protection may install the power pack.
- Always observe the installation regulations and country-specific installation regulations for potentially explosive areas.
- For safety reasons, connect the power supply via a separate emergency stop switch. This can be omitted if the power supply has an emergency stop safety system.

HINWEIS

Equipment damage!

Constant overloading of the power pack results in a risk of faults.

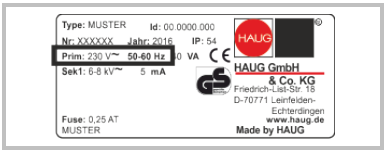
- Never exceed the maximum permissible connection length.
- Never install the power pack on surfaces which generate heat or radiation.
- Never install in a place of installation which is in direct sunlight.

NOTE:
The power pack may be installed in zone 1, zone 2, zone 21 and zone 22 potentially explosive areas.

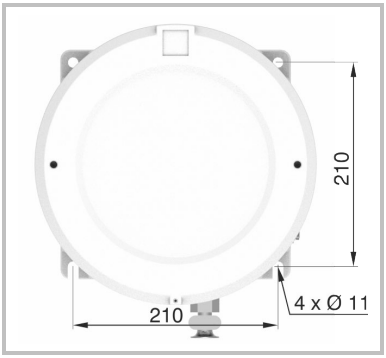
NOTE:
There is an operating licence for the power pack (ATEX). Only HAUG Ex ionizing units which are listed in the declaration of conformity may be connected. Connection of other equipment invalidates the operating licence.

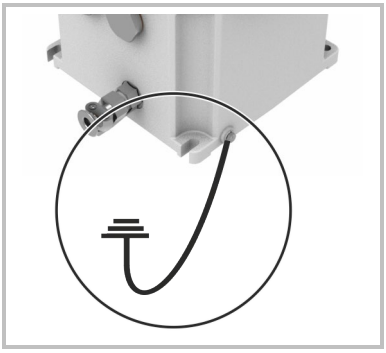
1. Check that the power pack matches the order data. In the event of damage to the power pack, contact HAUG GmbH & Co. KG.

2. Before connection, always check whether the correct supply voltage is available for the power pack.
   - The type plate attached to the housing specifies the voltage.
   - An incorrect supply voltage may damage the power pack.



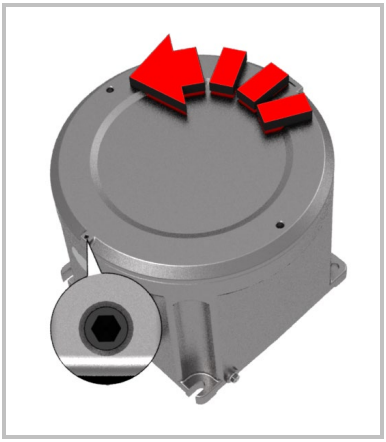
3. Mount the power pack in the desired place of use.
   - The position of the power pack has no effect on its function.

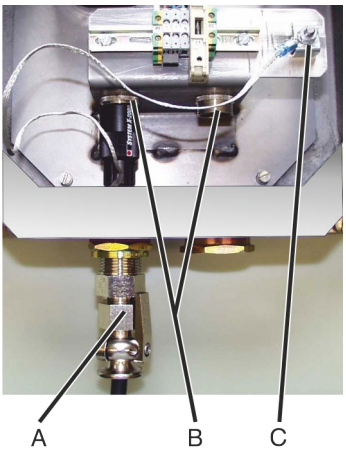




4. Connect the earth connection for the power pack with earth potential in accordance with the standards.
   - Use an earth cable which is at least 1.5 mm^2.

5. The housing cover must be removed in order to connect the mains supply line and/or an ionizing unit.
   - First, loose the clamping screw on the housing cover.
   - Turn the housing cover counter-clockwise using the screw-in handles provided and lift off.
   - Carefully put the housing cover to one side.

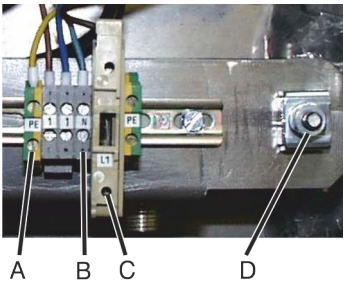




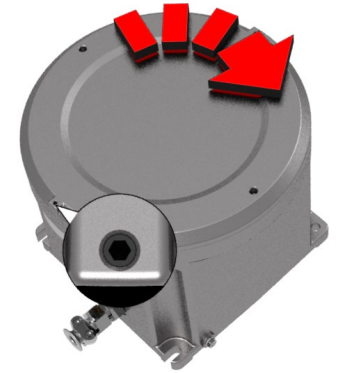
6. Connect the ionizing unit to the HV connection (B) on the power pack.
   - Plug the HS connector on the ionizing unit into the HS connection on the power pack and push in as far as it will go.
   - Screw the union nut onto the HS connection and tighten firmly by hand.
   - Connect the earthing strip on the HS connector to the earth connection (C).
   - Tighten the cable gland (A) with the specified torque. See page 19.

NOTE:
Observe the maximum connection length.
Secure unused HV connections with blind plugs in order to prevent the penetration of environmental influences. The blind plugs must be clean, dry, and free from grease.

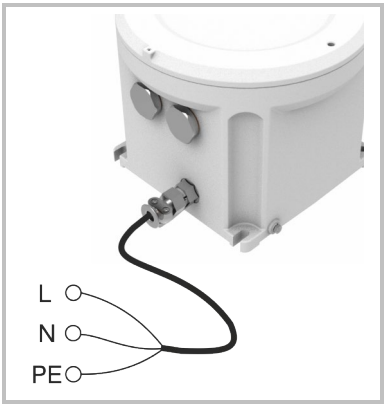
7. Guide the mains supply line through the input and connect it.
   - A PE = Green/yellow braid
   - B N = No. 2 braid
   - C L = No. 1 braid
   - D Mains supply line shielding
   - • Tighten the cable gland with the specified torque. See page 19.



8. Close the housing cover again.
   - Grease the thread with OKS 403 grease.
   - Put the housing cover on and turn clockwise using the screw-in handles until the housing cover sits flush.
   - Turn the housing cover back by approx 45° (max. 90°).
   - Hold the housing cover in place with the clamping screw.



9. Connect the power pack to the supply voltage. Always connect the protective earth (green/yellow) to a functioning mains protective earth.
   - Connection of the protective earth through part of the machine body is not sufficient.
   - L = No. 1 braid
   - N = No. 2 braid
   - PE = Green/yellow braid



10. The power pack is ready for operation and is switched on and off via the power supply.

6 Troubleshooting

WARNUNG

Risk of electric shock!
The power pack is operated with electrical voltage and generates a high electrical voltage. Faults result in a risk of electric shock.
- Troubleshooting may only be carried out by an electrician.
- Always carry out troubleshooting outside the potentially explosive area.

NOTE:
If the fault cannot be remedied through this, send the power pack and the ionizing unit to HAUG GmbH & Co. KG for examination (see back cover for address).

Fault	Cause	Measure for remedying the fault
No ionisation	Power failure	Check the mains fuse
	No HV	Check the fuse in the power pack.
		Check connections to the power pack.
	Power pack is damaged	Immediately take the power pack out of operation and secure it against return to service.
	Ionizing unit is soiled	Clean the ionizing unit

6.1 Replacing the fuse

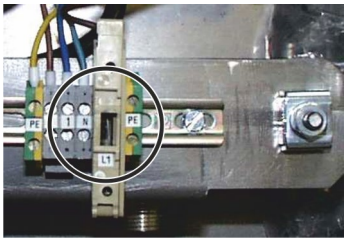
HINWEIS

Equipment damage!

An incorrect fuse in the power pack may result in a fault. This can cause a cable fire.

- Use only fuses of the specified type.
- Never use repaired fuses.
- Never bypass the fuse.

The device type and nominal voltage are specified on the type plate.



1. Disconnect the power pack from the power supply.
2. Determine why the fuse has tripped and remedy the cause.
3. Open the housing cover and open the fuse holder.
4. Replace the fuse and secure the fuse holder again.
5. Close the housing cover again and secure it with the clamping screw.

Use only the following fuses:

- 115 V = 0.50 A time-lag, 5 x 20 mm
- 230 V = 0.25 A time-lag, 5 x 20 mm

7 Technical data

7.1 Characteristics and specifications

Reference temperature 23 °C

HV connections	2
High voltage	6.7 ±1 kV~
Short circuit current	I_k < 5 mA
Maximum connection length	18 m (ionizing bar + HV cable)

7.2 Supply voltage

Device type	**Nominal value**	**Frequency range**	**Power consumption**
01.7752.XXX	230 V~ ±10%	50 – 60 Hz	P_{max} = 80 VA
01.7753.XXX	115 V~ ±10%	50 – 60 Hz	P_{max} = 80 VA

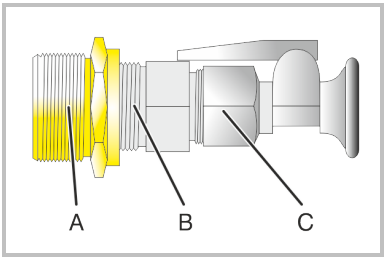
7.3 Labelling

The ionizing units have the following labelling:

Ident number	**Labelling**
01.7752.XXX, 01.7753.XXX	 II 2 G Ex db IIC T6 Gb
	 II 2 D Ex tb IIIC T80°C Db

7.4 Tightening torque

Cable gland
A Thread reducer
B Cable gland
C Cable input



A Thread reducer	50 Nm
B Cable gland	20 Nm
C Cable input	10 Nm
M 32 blind plugs	50 Nm

7.5 Environmental conditions

Use indoors only.	
Temperature:	
Nominal operating range	+5 °C to +45 °C
Limit for storage and transport	-15 °C to +60 °C
Humidity:	
Nominal operating range	20% to 65% RH
Limit for storage and transport	0% to 85% RH
Air pressure:	
Nominal operating range	810 hPa to 1074 hPa
Vibrations:	
Limit for storage and transport	max. 1.5 g (10 to 55 Hz), 1 h
Impact	max. 15 g in every direction

7.6 Housing

Protection type	Ex-d
IP protection type	IP 66
Protection class	I
Mains supply line	Ölflex 140 CY, 3 x 2.5 mm^2
Dimensions:	
Height	295 mm
Width	295 mm
Depth	230 mm
Weight:	15.25 kg

8 Take out of operation

WARNUNG

Risk of electric shock!
The power pack is operated with electrical voltage and generates a high electrical voltage. Improper decommissioning may result in an electric shock.

- Decommissioning may only be carried out by an electrician.

1. Disconnect the power pack from the power supply.
2. Disconnect the mains supply line from the power supply.
3. Disconnect the ionizing unit from the HV connection.
4. Remove the power pack from the manufacturing process.

8.1 Storage

Always store our products in a cool, dry place.

8.2 Disposal

Never dispose of electrical appliances in household waste.
Always collect them separately and send them for environmentally-friendly recycling. Always observe the national and regional waste disposal regulations when disposing of electrical appliances.

If proper disposal of our products is not possible, sending them to us may be an option. We dispose of our products in an environmentally friendly manner. See back cover for address.

Ionisationssysteme

Qualitätsmanagement
ISO 9001:2008
Umweltmanagement
ISO 14001:2004

1957 - 2017 60 Jahre • years HAUG

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EU-Konformitätserklärung

EU-Declaration of Conformity
UE Déclaration de conformité

Die Fima
The company
La société

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Friedrich-List-Str. 18
70771 Leinf.-Echterdingen

erklärt in alleiniger Verantwortung, dass das elektrische Betriebsmittel
declares hereby in sole responsibility, that the electrical product
déclare de sa seule responsabilité, que le produit électrique

EN 15 Ex

in Verbindung mit den Serien der Ionisationsgeräte
with the series of the ionizing devices
avec les séries des appareils d'ionisation

EI Ex T, EI Ex T TPE, EI Ex H, EI PHS Ex
RI Ex O/M/V, RI Ex O/M/V TPE, REF Ex, REF II Ex,
LS Ex, KL Ex, KM Ex, AK Ex, LM Ex, SC Ex

mit den folgenden Richtlinien übereinstimmt:
is in conformity with the following directives:
est conforme aux directives suivants:

Produktnorm nach Niederspannungsrichtlinie Product standards to Low Voltage Directive Normes des produit pour la Directive Basses Tensions		**EN 61439-2:2011**
EMV Richtlinie Electromagnetic compatibility Compatibilité électromagnétique	**2014/30/EU**	**EN 61439-2:2011**
ATEX Richtlinie im Ex-Bereich Norm ATEX explosive atmospheres Normes ATEX atmosphères explosibles	**2014/34/EU**	**EN 60079-0:2012+A11:2013** **EN 60079-1:2014** **EN 60079-31:2014**

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HAUG GmbH & Co. KG
Sitz: Leinfelden-Echterdingen
Amtsgericht Stuttgart HRA 221160
Persönlich haftende Gesellschafterin:
HAUG Gesellschaft mit beschränkter Haftung
Sitz: Leinfelden-Echterdingen
Amtsgericht Stuttgart HRB 220368
Geschäftsführer: Steffen Homolka
Steuer-Nummer: 97117 / 50216
USt.-Id.-Nr.: DE 147 643 237

Ionisationssysteme

Qualitätsmanagement
ISO 9001:2008
Umweltmanagement
ISO 14001:2004

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zertifiziert durch:
certified by:
certifié par:

PTB, Bundesallee 100, 38116 Braunschweig, DE

Kennnummer:
ID-Number:
numero d'identification:

0102

Zertifikatsnummer:
certificate number:
numero de certificat:

PTB 06 ATEX 1077

mit der Kennzeichnung:
with identification marking:
avec le marquage d'identification:

II 2 G Ex db IIC T6 Gb
II 2 D Ex tb IIIC T80°C Db IP66

Leinfelden-Echterdingen, 20.5.2021

i.V.

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