



User manual

UHT 180 EEx e High Voltage Unit

SAMES KREMLIN SAS - 13, Chemin de Malacher - 38240 MEYLAN - FRANCE
Tel. 33 (0)4 76 41 60 60 - www.sames-kremlin.com

Any communication or copying of this document, in any form whatsoever, and any use or divulging of its contents is forbidden without express written permission from SAMES KREMLIN.

The descriptions and characteristics contained in this document may be changed without prior warning and are in no way binding on SAMES KREMLIN.

© SAMES KREMLIN 2008



WARNING : SAMES KREMLIN SAS is registered as a "Training Center" approved by the "Ministry of Employment".
Trainings with the aim of getting the necessary know-how to use and for the maintenance of your equipment can be organised all along the year.
A catalog is available upon request. Among the different training programmes proposed, you will be able to find the training which corresponds the best to your needs and production purposes. These trainings can be organised in your premises or in our training center based in our headquarters in Meylan.

Training Department :

Tel.: 33 (0)4 76 41 60 04

E-mail : formation-client@sames-kremlin.com

SAMES KREMLIN operating manuals are written in French and translated into English, German, Spanish, Italian and Portuguese.

The French version is deemed the official text and SAMES KREMLIN will not be liable for the translations into other languages.

UHT 180 EEx e

High Voltage Unit

1. Warnings - - - - -	4
1.1. Marking	4
2. Introduction - - - - -	4
3. Description - - - - -	4
4. Characteristics - - - - -	5
4.1. Electrical characteristics	5
4.2. Mechanical characteristics	5
5. Safety precautions - - - - -	6
5.1. Installation rules	6
6. Maintenance - - - - -	7
6.1. Electrical connections	7
6.2. Replacing the low voltage cable	8
6.3. Replacing the high voltage cable	8
7. Spare parts list - - - - -	9
7.1. High voltage unit "UHT 180 EEx e "	9
7.2. Cables	10
7.3. Preparing the high voltage cable	11

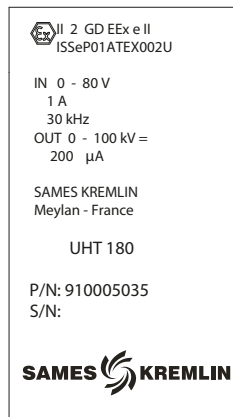
1. Warnings



WARNING : This equipment may become a safety hazard if it is not operated, disassembled and reassembled in accordance with the instructions given in this manual.

See the equipment manual.

1.1. Marking



2. Introduction

The high voltage unit **UHT 180 EEx e** is a high voltage unit of general using and can be equipped with one or two high voltage cables.

3. Description

The **UHT 180 EEx e** comprises a moulded part with:

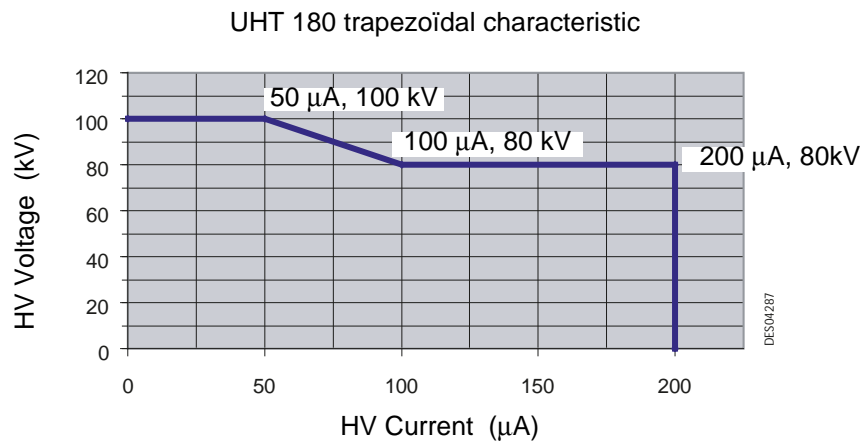
- High voltage elements (transformer, cascade, measuring resistance and priming resistance),
- Low voltage elements (recognition chip and protection elements),
- Two high voltage connectors, one of which is equipped to receive the high voltage cables.
- A low voltage connector

4. Characteristics

4.1. Electrical characteristics

The characteristics below are given for the UHT 180 alone.

	UHT 180 EEx e
Max input voltage	80 V max. 30 KHz
Outlet voltage	100 kV
Outlet current	200 μ A
Polarity	Negative
UHT 180 capacity	300 pF max.



4.2. Mechanical characteristics

The UHT 180 EEx e high voltage unit is delivered without high and low voltage cables.

	UHT 180 EEx e
Overall Dimensions	260 x 125 x 55
Weight	3 Kg
Packing	Box : 300 x 270 x 75

5. Safety precautions

- Clean and grease with dielectric grease the one or the two wells before fitting the one (or the two) high voltage cables.
- Follow the preparing of the high voltage cable ([see § 7.3 page 11](#)).
- Never assemble or disassemble with voltage on.
- Do not put the low voltage cable into contact with solvent.
- The length of the low voltage cable between the high voltage unit and the control module GNM is 30 m max.
- The distances authorized from application, specified in the user manual of the atomizer, are a function overall length of cables HV (electric capacities). HV connection of the atomizer to the well of the HVU is authorized only by the use of a HV cable only one length, no adapter is not authorized.



WARNING : The control module **GNM** must be placed in a anti-fire area at least 1,5 m (4.9 feet) from the opening of the nearest booth.

5.1. Installation rules

It is dangerous not to comply with the rules of installation stipulated in the user manual of the atomizer supplied with the unit high voltage UHT 180 EEx e.

The use of a UHT 180 EEx e imposes a connection to a control module **GNM 200** whose version of program must be higher or equal to **V5.63**.



WARNING : The high voltage supply must be turned OFF before rinsing cycles, bell cup and injector are engaged.

6. Maintenance

6.1. Electrical connections

Cable diameter: = CEE 0,34 mm²

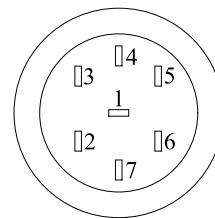
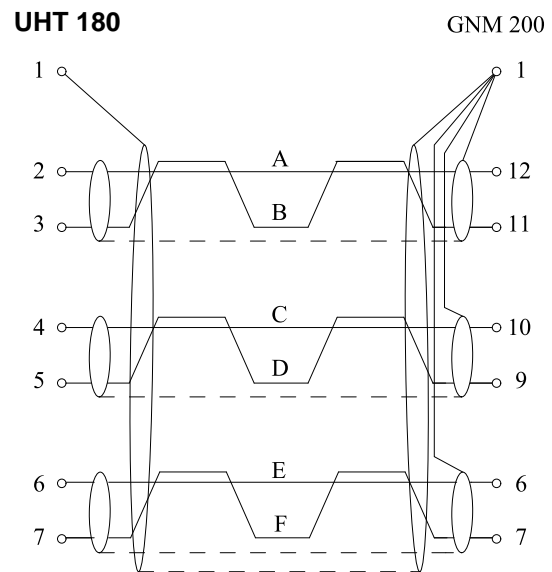
Cable diameter: US = Gauge AWG 22

Item	Color	Section
A	Yellow	0.34 mm ²
B	Green	0.34 mm ²
C	White	0.34 mm ²
D	Brown	0.34 mm ²
E	Pink	0.34 mm ²
F	Grey	0.34 mm ²

The cable used for the connections must respect:

- wire diameter comprised between 0.3 mm² and 0.8 mm².
- diameter mini. 4 mm and maxi. 8 mm.
- a complete shielding and a second shielding protecting each pair of wires.

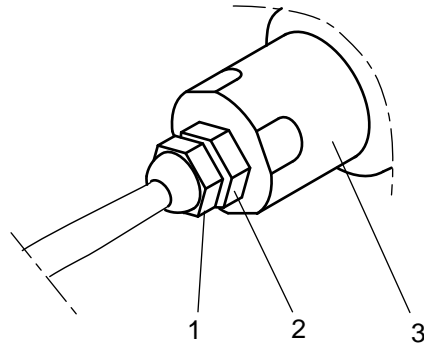
Note : Should some wires are not used, they should be connected to the ground.



DES03405

6.2. Replacing the low voltage cable

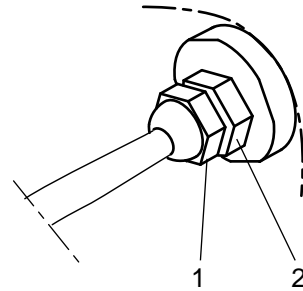
- 1 Maintaining the body of the stuffing box (Item 2) loosen the stuffing box nut (Item 1) to unlock the cable.
- 2 Unscrew the union of the stuffing box (Item 3) in order to access to the connection.
- 3 Unplug each wire.
- 4 Replace the cable.
- 5 Replace the seal washer if necessary ([see § 7.1 page 9](#) item1).
- 6 For the reassembly, proceed in reverse order.



DES01555

6.3. Replacing the high voltage cable

- 1 Maintaining the body of the stuffing box (Item 2) loosen the stuffing box nut (Item 1) to unlock the cable.
- 2 Remove the cable.
- 3 Replace the cable. For the preparing of the high voltage cable ([see § 7.3 page 11](#)).
- 4 For the reassembly, proceed in reverse order.



DES03407

7. Spare parts list

7.1. High voltage unit "UHT 180 EEx e "



Item	Part number	Description	Qty	Sale unit	Maintenance level for spare part (*)
	910005035	High voltage cascade UHT 180 EEx e	1	1	3
1	1408523	Seal washer	1	1	2
2	1310068	Stuffing box union	1	1	2

(*)

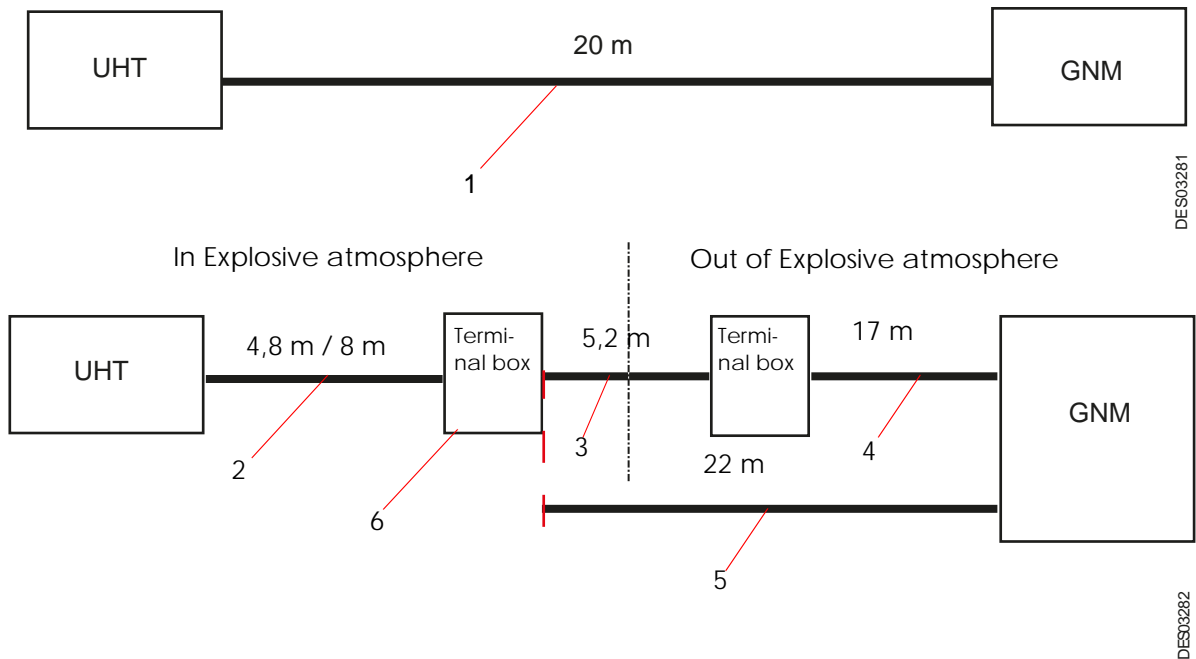
Level 1: Standard maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

7.2. Cables

Note: Each cable has a defined length, for other lengths, please, contact SAMES KREMLIN.



Item	Part number	Description	Qty	Sale unit
1	1514591	Equipped low voltage cable, Length: 20 m	1	1
2	1527252	Low voltage cable, Length: 4.8 m (HVU to terminal box)	1	1
	910001236	Low voltage cable, Length: 8 m (HVU to terminal box)	option	1
3	910000086	Low voltage cable, Length: 5.2 m	1	1
4	910000070	Low voltage cable, Length: 17 m (Connection terminal box to GNM)	1	1
5	1520516	Low voltage cable, Length: 22 m (Connection terminal box to GNM)	1	1
6	1303899AT	Terminal box	1	1



WARNING : Cable length between the high voltage unit and the control module GNM should not exceed 30m.

7.3. Preparing the high voltage cable



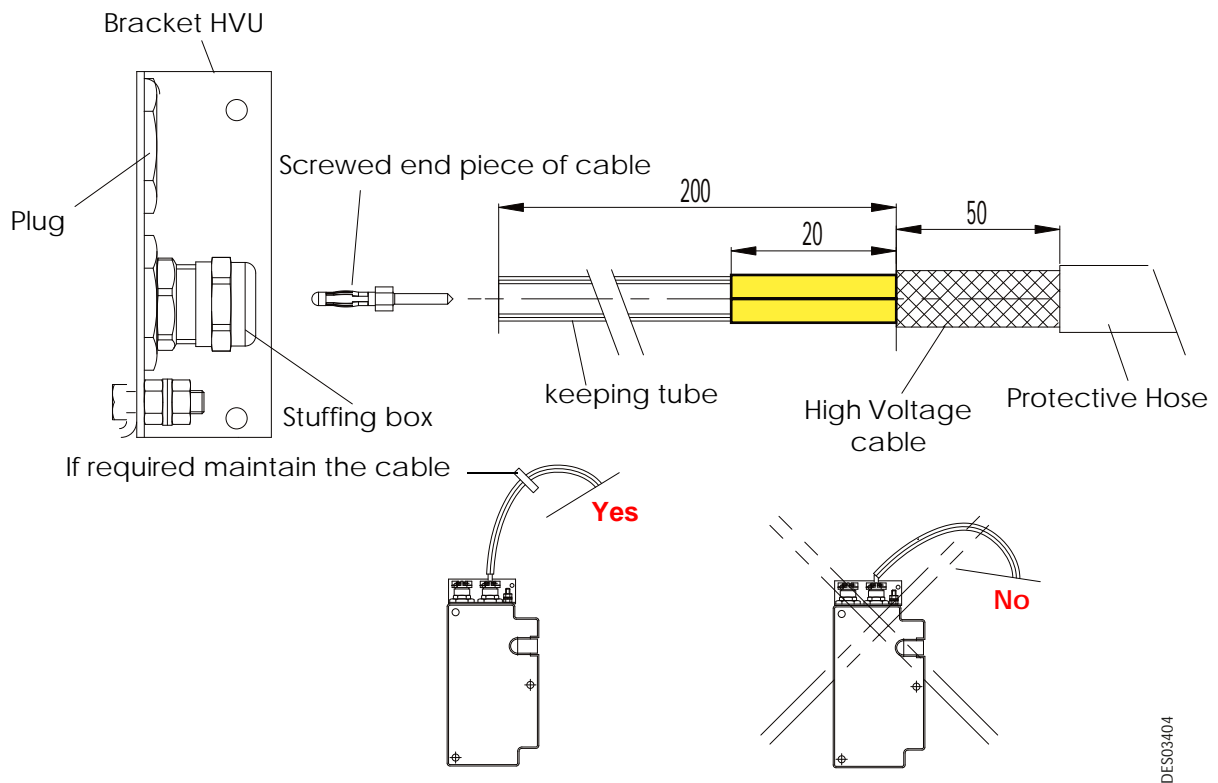
WARNING : Ensure not to damage the insulating jacket. The smallest nick or mark in the insulating jacket will cause the cable to breakdown.

Preparing:

- Strip the external sheath side HVU with a tool of the type strip-cable (rice grain). It is imperative not to use a standard tool slicing "cutter".
- Strip the semiconductor sheath by peeling it and cut it using cutting pliers.
- Install the protective hose then place the keeping tube on the cable, then screw the screwed end piece in the core of the cable.



WARNING : At the time of the installation of the HV cable in the high voltage unit, coat with dielectric grease the screwed end piece and take care not to tear the semiconductor sheath with the stuffing box and to maintain the cable with a sufficient radius of curvature to avoid tearing the sheath.



Part Number	Description	Qty	Sale Unit
910001986	Kit for second output	1	1



WARNING : If only one well of the high voltage unit is used, the well not used must be sealed by a plug (P/N: 110000129AT) provided with the HVU.