



GEOVENT

INSTRUCTION MANUAL



Must only be installed by an authorized installer

POWERSMART II

with built-in 24V transformer for
direct connection of motordamper

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1.0 Introduction

This manual is made and designed in order to facilitate the best and most secure interaction with the product. The manual is relevant for people involved in transportation, stocking, installation, using, maintaining and all other thinkable interaction with the product.

The manual must be read in full and understood before interacting with the product.

When the manual has been read and understood in full, the table of contents can be used to find the relevant information in each case.

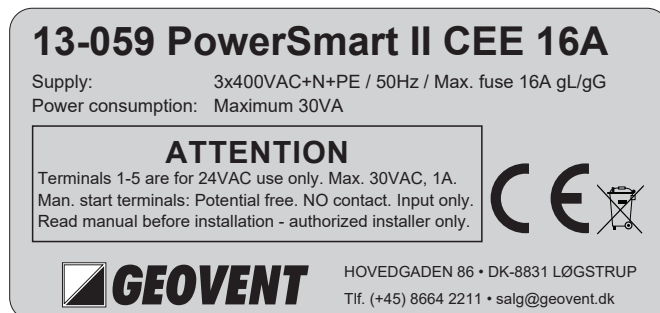
The product is manufactured by:

Geovent A/S
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DK-8861 Løgstrup
DENMARK

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E-mail: salg@geovent.dk
www.geovent.com

This manual is to be used for all interactions with the product including: Transportation, stocking, installation, operation and maintenance.

This product is marked with: (example)



2.0 Safety

2.1 General safety

Carefully read this manual before use and observe the safety instructions in order to avoid injuries! Keep this manual in a safe place!

Secure that all users of the product have read this manual and that they follow the instructions as described. Observe all instructions marked on the product! Observe the indications of the manufacturer. Never use the product if you are in doubt about how it works or what you should do.

When doing maintenance follow the instructions in chapter 7.0.

Do not modify the product or use spare parts from other suppliers than Geovent, as this may hamper the product and the function.

2.2 Danger

Follow the instructions in chapter 7.0 when the product is maintained.

The product is not to be used in areas categorised as ATEX zones, e.g. with dust from aluminium, flour, wood, and other mediums that present an explosion hazard.

If a repair is not possible you should dispose of the product. Please follow the instruction for disposal in chapter 10.0.

3.0 Machine overview

3.1. Description

Geovent PowerSmart II with built-in 24 volt transformer for direct connection to damper motor.

3.2 Intended use

PowerSmart II is a power outlet with built-in automation for automatic start/stop function of e.g. motor damper and/or fan for process extraction. PowerSmart II works is connected to e.g. a welding machine, aregisters a power consumption greater than its idle consumption, both relays are activated, which can then be used to start the motor damper and/or a fan.

By extracting only the amount of air needed during the time of welding, energy for both electricity and heating is saved. The fact that the automation is built into the power outlet makes the installation easy.

PowerSmart II is equipped with two internal trimmers, one for adjusting the sensitivity and one for the run-on time.

The run-on time is the time that the relay output is still activated after the end of the use of the connected machine. Inside the PTO there is a sensing coil which one of the connected phases must go through. This sensor detects when there is a consumption beyond the idle consumption.

The sensitivity can be adjusted for consumption between 0.2 and 10 amps with the connected phase once through the sensor. Passing the connected phase through the sensor twice increases the sensitivity.

The PowerSmart II socket is equipped with a control button in the foil on the front.

3.3 Machine specifications

3.3.1 Design

PowerSmart II is made of hard plastic material.



3.3.2 Technical data

Dimensions

Model/Dimension	A [mm]	B [mm]	C [mm]	Weight [kg]
PowerSmart	85	165	130	0,9

Supply:	3x230 volts or 4x400 volts ac
Run-on time	Adjustable from 2 sec. to 4 minutes in the standard version. Longer times are available on request.
Sensitivity:	From 0.2 to 10 amp.
Triggertime:	0.4 sec.
Output:	24 volts ac. Max. load 1.5 A
Sensor mode:	Flux measurement
Indicator:	Three LEDs in lid for current mode.
Set point:	The set point is automatically adjusted to the idle consumption of the connected machine.
Furthermore:	Connection of external manual switch, for example in suction hood.

Light emitting diode:

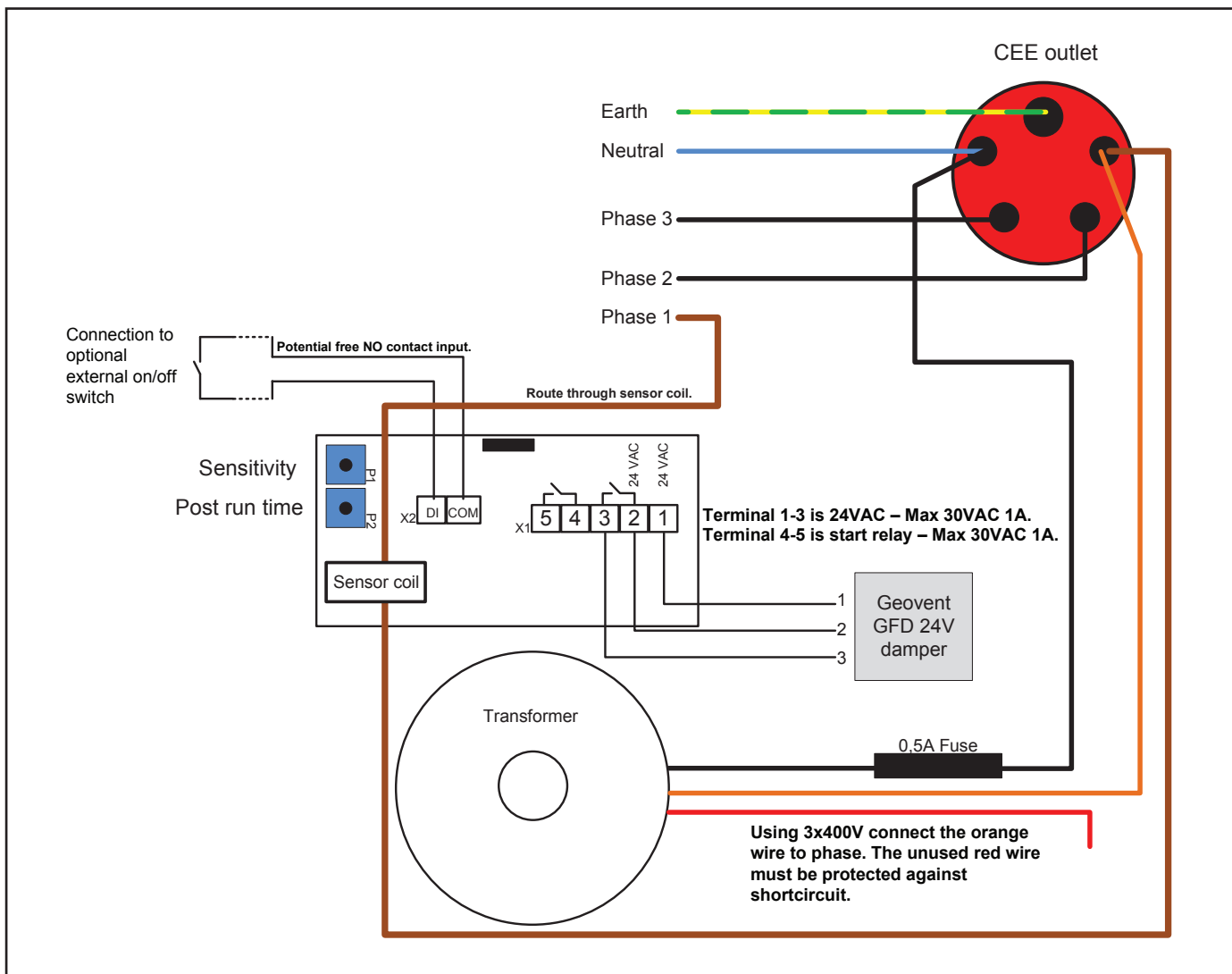
Red:	Off
Yellow:	Auto - on
Yellow/flashing:	Auto - standby
Yellow/flashing rapidly:	Auto - afterrunning
Green:	Automatic- on
Green/flashing:	Automatic afterrunning



NB: When closing the lid, ensure that the flat cable is not damaged.



Terminal 1, 2 og 3:
Connect motor damper.
Terminal 4 og 5: On/off relay for e.g. start/stop of fan
Max. 0,5 VA. 30 V AC/DC.



4.0 Transport, handling and storage

During transport in a truck or in another means of transportation the product must be securely packed in a box or a pallet and covered with a water proof material. The product must be securely stowed in the truck so that it will not shift during transport.

The product must be placed in a dry place and covered securely, in order to secure that moist, metal parts or other substances do not damage the product. It is not allowed to place anything on top of the product.

5.0 Assembly, installation and start of operation

5.1 Location

The PowerSmart II is mounted on a solid base.

5.2 Installation

See the drawing above for installation of the PowerSmart II and page 8 for connection to damper, fan, filter, Multibox etc.

OBS!

Max. 1 cable must be fitted into the PowerSmart II connector (If it needs to be looped further, it must be done in a suitable box.)

Max. cable size:	16A = 2.5 mm ²
	32A = 6 mm ²

It is important that the electronics in the PowerSmart II are not clamped or mashed, as the components can be destroyed / short-circuited. The cable from CEE to GFD damper and the cable to terminals 4+5 must not exceed 30 meters in length.

For power supply

The orange cord is for 3 x 400V
The red wire is for 3 x 230V
The black wire is for N

5.2.1. Installation and setup

Follow the instructions below:

The PowerSmart II outlet is set to OFF mode (red LED lights continuously). Set the connected machine (welder/fan) to standby. It must be in standby mode and not running.

Press the button on the front panel for 5 seconds to set the idle consumption level for the Power Smart II. The red LED will flash rapidly. The calibration will be complete by pressing the button again for 5 seconds. When the calibration is finished, the Power Smart II will enter OFF mode and the red LED will light up continuously. If the calibration was initiated by mistake, the process can be aborted by pressing the button briefly.

Now the Power Smart II can be adjusted with regards to the size of the increase in power consumption is needed before the relay is activated.

Example: Power Smart II is set to a idle setpoint at 3,4 A.

Turning the sensor trimmer all the way counter clockwise the relay will activate the connected machine at an increase of $0.2A = 3.6A$

Turning the sensor trimmer all the way clockwise the relay will activate the connected machine at an increase in power consumption of $10A = 13.4A$

The period of run-on time can be adjusted using the run-off time trimmer. From two seconds with the trimmer turned all the way counter clockwise to up to 4 minutes by turning the trimmer all the way clockwise.

5.2.2 Daily use

In normal daily use, the PowerSmart II is in Auto mode and is flashing with a yellow LED. When the welding machine is plugged in and using power, the diode is yellow. At the end of welding it flashes yellow (fast flash) until the run-on time is over.

When the control button on the front is pressed, the PowerSmart goes into manual mode and the diode lights green (used e.g.

if welding with gas). When pressed again, the manual mode ends manual mode and the LED starts flashing green until the the run-on time is over. The diode then turns yellow again and back to AUTO.

NB. The PowerSmart II remembers the last set point if the supply voltage disappears.

5.3 Control and test of the security system

Press the control button to switch between the following "modes" in a circle as shown on the control panel.

- Select ON and the system starts manually.
- Select AUTO and the system starts up immediately, the system switches off if there is a fault.

6.0 Commissioning

When using, press the button just briefly. Pressing the button for longer time will initiate the calibration process.

By pressing the button the Power Smart II will cycle between different modes of operation as shown on the panel.

After about 2 seconds the actual mode will be saved in the internal memory.

After power outage the Power Smart II will return to the mode it was in prior to the putage.

OFF: The red LED will light continuously and the PowerSmart II is turned off. It will not activate any connected machine. Neither will a manually operated switch connected to it activate e.g. the damper.

AUTO: Yellow LED. PowerSmart II is activated and sensing if there are changes to the power consumption. Dependant of this, the PowerSmart II have three different modes.

AUTO - STD.BY

Yellow LED will flash slowly. The PowerSmart II is on standby and will open the damper if the relay is activated.

AUTO - ON

Yellow LED will light continuously. PowerSmart II have registered an increase in power consumption and activated the machine connected to the PowerSmartII

AUTO - TIMER

Yellow LED will blink rapidly. The power smart have registered a drop in power consumption below the set idle level and is running the attached machine on run out. The damper or fan will stop after the run-on time.

ON: The green LED lights continuously. The PowerSmart II has been manually started by either pressing the button or by using an external switch (optional). The damper/fan is activated and will remain activated.

ON - TIMER: The green LED flashes. PowerSmart II has been stopped by pressing the button or the external switch and is running on run-on time.

6.1 After installation

Check the installation according to chapter 5.3.

7.0 Control, test and maintenance

7.1 Control

Check the installation according to chapter 5.3.

7.2 Maintenance

Once the PowerSmart II is properly set up and operating, there is no maintenance.

8.0 Cleaning

The outside of the product is cleaned with a vacuum cleaner or a cloth.

9.0 Troubleshooting

The fuse (200mA) in the PowerSmart II can blow, e.g. by overloading. Change the fuse.

10.0 Dismantling, disabling and scrapping

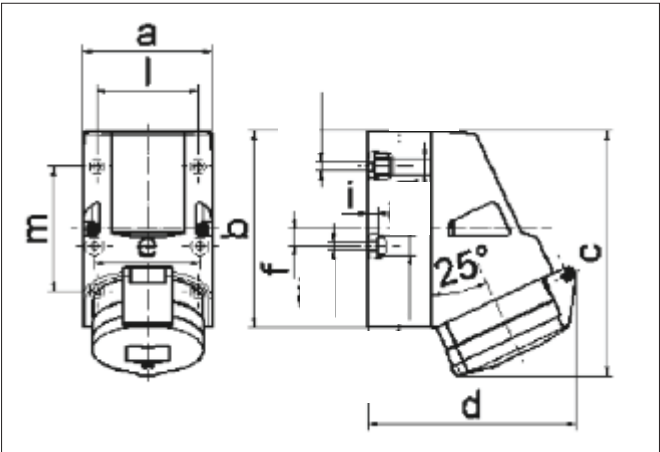
Deactive the product by disconnection the electrical mains and any other wires.

Dismantle the products and divide the components into plastic parts and electronic/electrical parts and dispose of it according to local regulations.

The packing material must be sorted according to local regulations in order to be able to reuse the material.

11.0 Dimensions

PowerSmart II

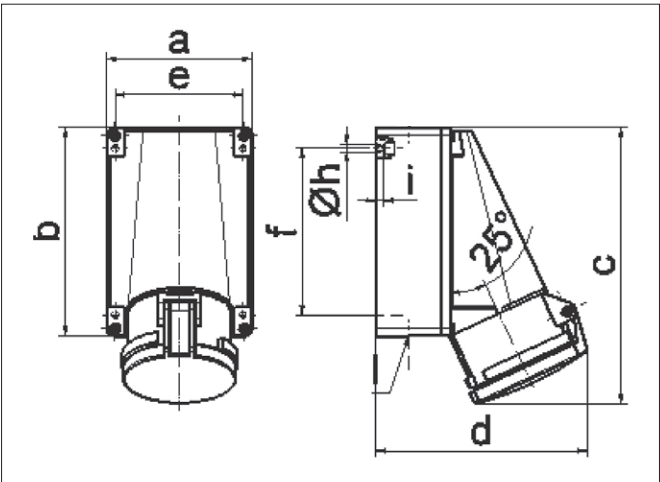


13-059 PowerSmart II CEE 16A

A	B	C	D	E	F	I	L	M
83	126	155	130	68	11	6,5	65	80

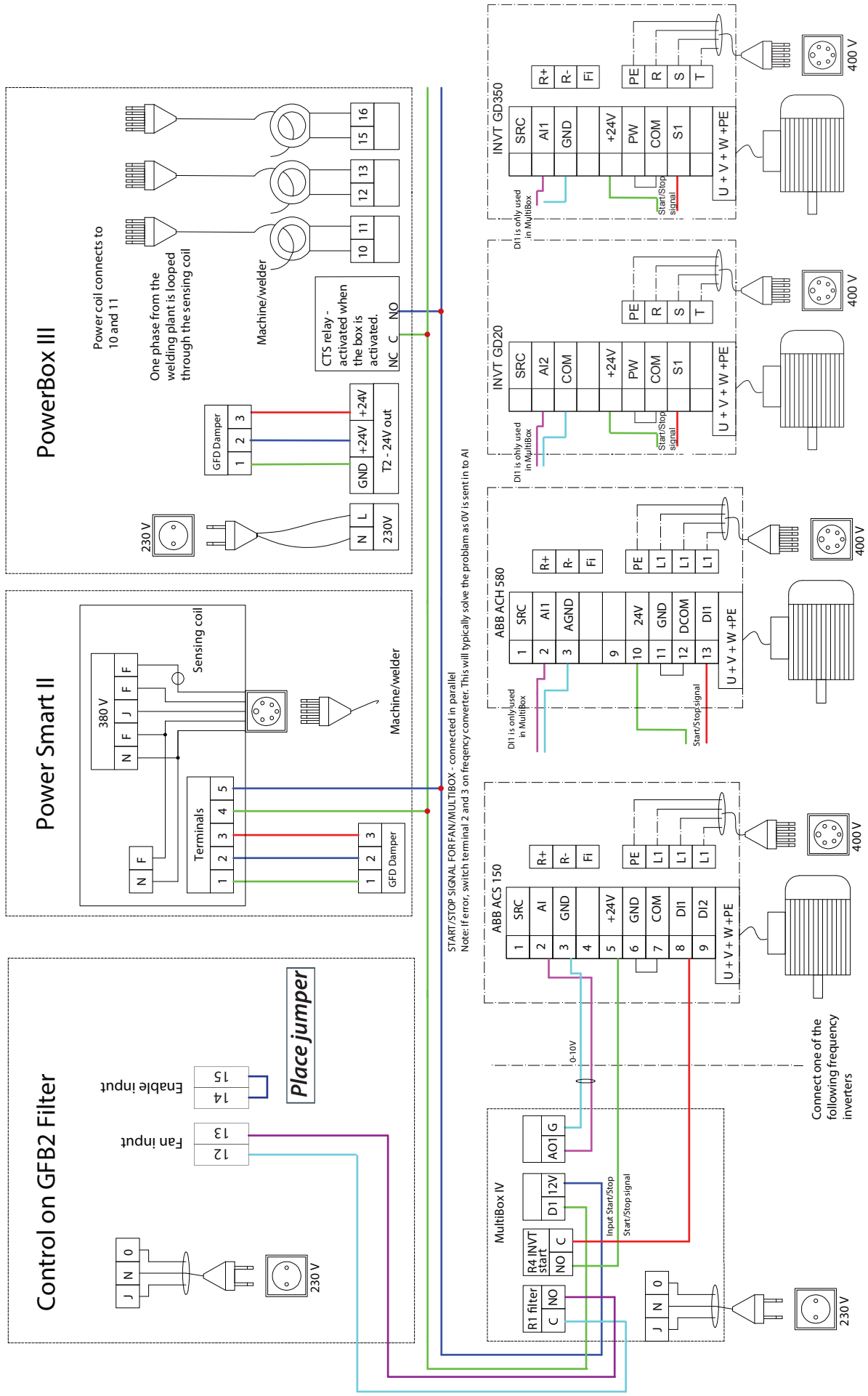
13-058 PowerSmart II CEE 32A

A	B	C	D	E	F	I	L	M
83	126	155	136	68	11	6,5	65	80



13-058A PowerSmart II CEE 63A

A	B	C	D	E	F	I	L
118	170	223	168	104	136	6,0	M32732



12.0 Liability

Warranty

Geovent A/S grants a warranty for products, which are defective, when it can be proved that the defects are due to poor manufacture or materials on the part of Geovent. The warranty comprises remedial action (reparation or exchange) until one year after the date of shipment.

No claims can be made against Geovent A/S in relation to loss of earnings or consequential loss as a result of defects on products from Geovent.

Wear on parts such as filter cartridges and hose is not included in the warranty.

User liability

In order for Geovent to be capable of granting the declared warranty, the user/fitter must follow this instruction manual in all respects.

Under no circumstances may the products be changed in any way, without prior written agreement with Geovent A/S.

Please refer to the current sales and delivery conditions at www.geovent.com

13.0 Declaration of conformity

The manufacturer: GEOVENT A/S
HOVEDGADEN 86
DK-8831 LØGSTRUP

Hereby declares that:

The product: PowerSmart
Model: II

Complies with the relevant parts of the following directives and standards:

Directive 2006/42 / EC of the European Parliament and of the Council of 17 May 2006 on machines and amending directives 95/16 / EC.


This declaration is no more valid if changes are made to the product by others than the manufacturer.

Authorized to collect the technical file:

Lise Cramer

Date: 01.12.2023

Position: Director
Name: Thomas Molsen

Signature: 





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