User Manual

Alarm E

LSCONTROL

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Alarm E Highlights

Alarm E is a universal alarm with light and sound signal which can be used in many different applications, where an alarm is required when a value is exceeded. Eg. temperature, humidity or CO_2 .

Alarm E can also be used as <u>a pressure guard when connecting an external pressure switch.</u>

The alarm is equipped with a green operating LED which is lit when the alarm is supplied with supply voltage. It is also equipped with red Alarm LEDs which flashes in alarm mode and a sounding body which beeps at 85dBA @ 10cm. Also the alarm is equipped with a mute button to turn of the sound and silence the alarm.

Alarm E is also equipped with battery back-up, in the event of supply voltage failure. The battery lasts up to 80 hours in continuous operation depending on the age of the battery. It is recommended to change the battery every 12 months to ensure optimal battery back-up, e.g. replace battery during annual service check of the ventilation system. Furthermore the battery should always be replaced after a period of battery operation.

Table of Content

This user manual is primarily for technical personnel who is going to set up and use Alarm E in an installation.

It is required that the person setting up and installing the product have the necesary practical experience and education within the area where the product is use and also possesses any necessary authorization to set up installation equipment.

Safety Regulations

Read the entire manual before installation and use of Alarm E.
If the regulations in this user manual are not followed, it may cause damage to the product and lapse of warranty.

Be careful not to damage the product during unpacking.

Make sure to follow rules for tools when mounting.

Do not touch product with wet hands.

Do not store or use product outside recommended temperature area, and do not expose to UV-light.

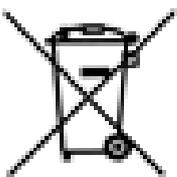Do not wash product with water or any other liquids.

Product is only to be used in non-condensing environment.

Product must not be exposed to direct sunlight.

Make sure to be ESD-discharged before installing the product.

Product must not be disposed of in refuse collection.

Product must be disposed of according to local regulations regarding disposal of small electronic products.

Manufacturer Information

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Standards and Directives

Alarm E complies with the standards and directions below.

- DS/EN 60730-1:2016 - Automatic electrical controls - Part 1: General requirements

- EN 61000-6-1:2007 - Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

- EN 61000-6-3:2007 - Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

- EN 61000-6-3/A1:2011 - Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

- EN 61000-6-3/A1/AC:2012 - Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

This product complies with the RoHS directive, Directive 2011/65/EU

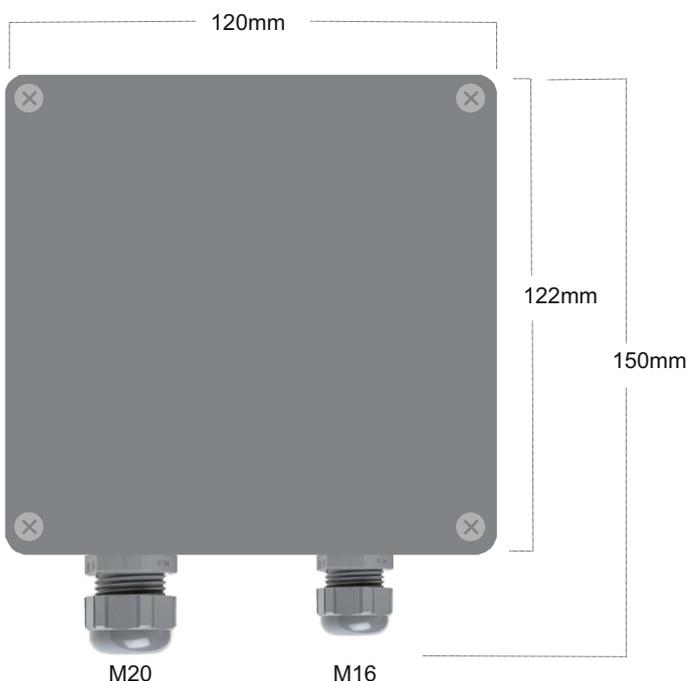The manufacturer of this product is registered with the statutory return system under the WEEE directive.

$C\epsilon$

LSCONTROL

Technical Specifications

Supply Voltage:	100 - 240V AC
Alternative Supply Voltage:	24V AC
Frequency 50-60 Hz:	50-60Hz
Alternative Supply Voltage:	15 - 40V DC
Enclosure:	IP53
Weight:	300 g
Storage Temperature:	0ºC to +50ºC non-condensing
Humidity:	0-97%RH non-condensing
Operating Temperature:	-10ºC to +55ºC non-condensing
Battery Backup:	9V 6LR61 (up to 80 hours operation)
Sound Level:	85dBA @ 10cm

Size and Measurements

From the front:

120mm

122mm

150mm

M20   M16

From the side:

55mm

122mm

15mm   40mm

Mute
button

Alarm light signal

Green LED
is lit when supply
voltage is OK.

Alarm E

Supply Voltage
Relay Output

Operating Signal and
Alarm Signal Input
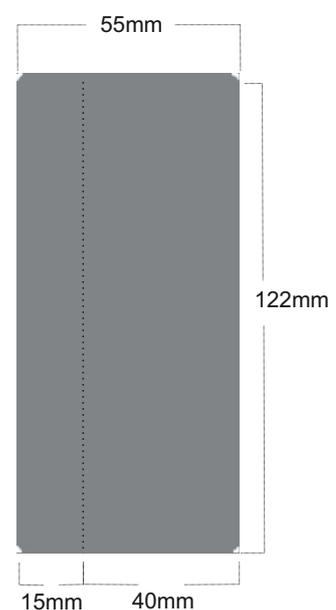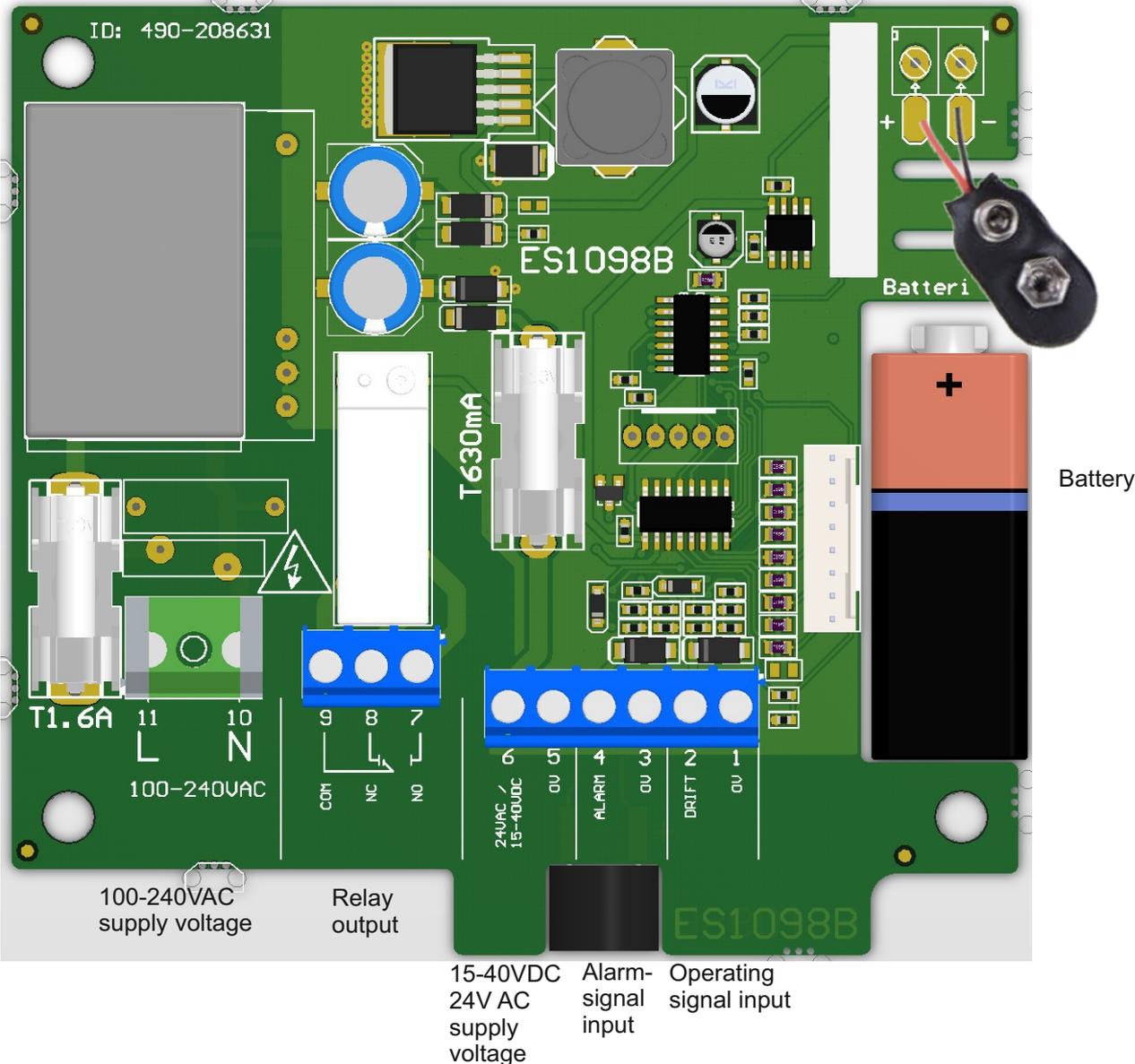
Mounting

Alarm E must be mounted on a fixed non-vibrating surface using screws through the deep screw holes in the back plate.

Please also pay attention to the section on safety regulations and prerequisites for installing and using the product..

Connection Diagram

100-240VAC supply voltage

Relay output

15-40VDC 24V AC supply voltage
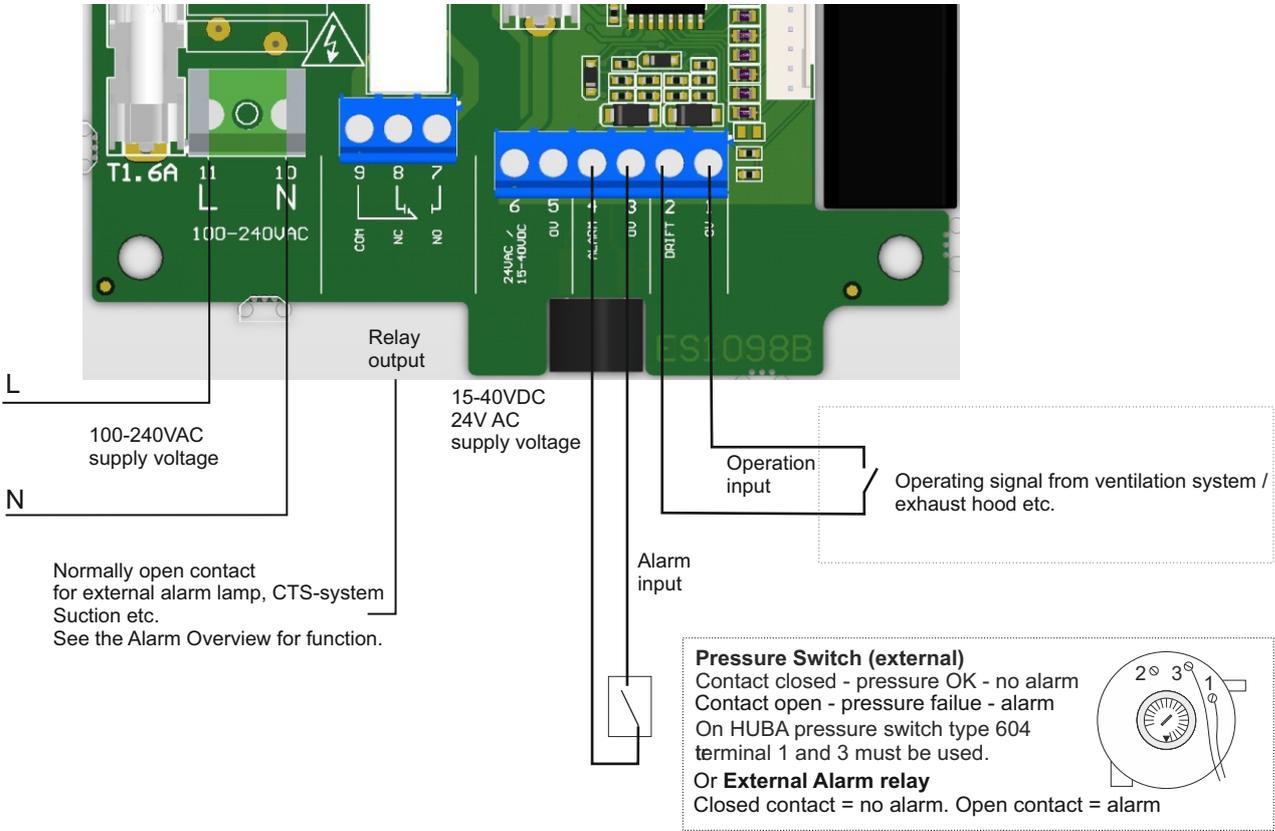
Alarm-signal input

Operating signal input

Battery

Supply voltage is selected by either connecting 100-240V AC to terminals 10 and 11 *or* 15/40VDC / 24V AC to terminal 5 and 6.
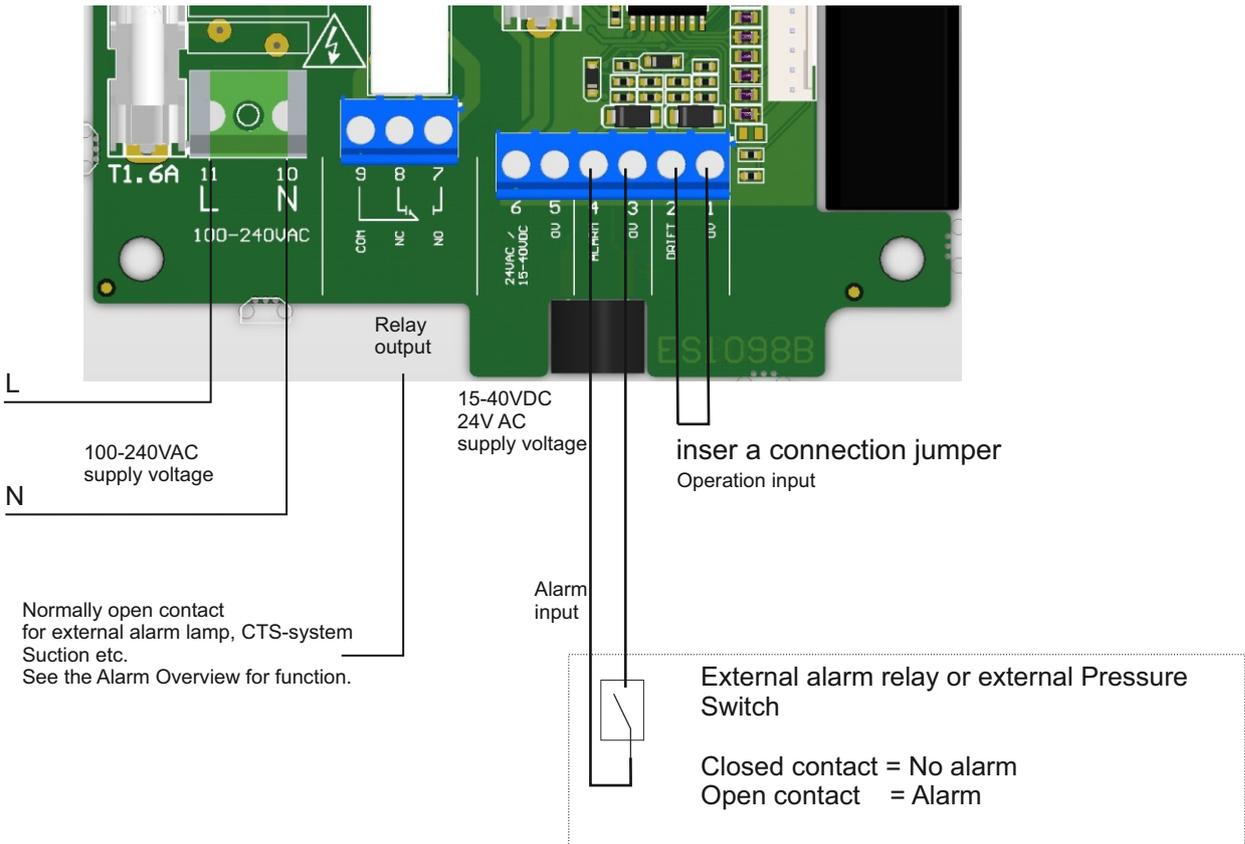
Battery connection is exclusively as backup supply in the event of failure of the supply voltage.

Refer to next page for connecting the alarm function.

www.lscontrol.dk

Connecting Alarm E to External Pressure Switch or Alarm Box with Operational Support

T1.6A   11   10
L   N
100-240VAC

COM   NC   NO

6   5   4   3   2   1
24VAC / 15-40VDC   0V   ALARM   B   DRIFT   B

Relay output

L

100-240VAC
supply voltage

N

Normally open contact
for external alarm lamp, CTS-system
Suction etc.
See the Alarm Overview for function.

15-40VDC
24V AC
supply voltage

Operation
input

Operating signal from ventilation system /
exhaust hood etc.

Alarm
input

Pressure Switch (external)
Contact closed - pressure OK - no alarm
Contact open - pressure failue - alarm
On HUBA pressure switch type 604
terminal 1 and 3 must be used.
Or **External Alarm relay**
Closed contact = no alarm. Open contact = alarm

2   3   1

Connecting Alarm E to External Pressure Switch or Alarm Box without Operational Support

T1.6A   11   10
L   N
100-240VAC

COM   NC   NO

6   5   4   3   2   1
24VAC / 15-40VDC   0V   ALARM   B   DRIFT   B

Relay output

L

100-240VAC
supply voltage

N

Normally open contact
for external alarm lamp, CTS-system
Suction etc.
See the Alarm Overview for function.

15-40VDC
24V AC
supply voltage

inser a connection jumper
Operation input

Alarm
input

External alarm relay or external Pressure
Switch

Closed contact = No alarm
Open contact   = Alarm

Alarm Overview

Supply	Operation Input	Alarm Input	Green LED	Alarm	Relay Output	Battery Operation
OK	Open	-	Flashes	None	Connection between COM and NC	No
OK	Closed	Closed	Lit	None	Connection between COM and NC	No
OK	Closed	Open	Lit	Sound: 100ms on / 200ms off LED: Flashes through all red LEDs in1,4 sec.	Connection between COM and NO	No
None	-	-	Off (Not lit)	Sound: 0,5sec every 5. sec for 30 min. Then once per minute. LED: Middle LEDs flashes for 0,5sec . for 30min. Then once per minute.	Connection between COM and NO	Yes

Alarm Signals

When Alarm E turns to alarm mode due to signal from external pressure switch or Alarm box the below light signal will be shown. Light signal has a cycle of 1,4 second which continues as long as the alarm input contact is open.
Warning sound is high biips lasting 100ms with 200ms pause. Warning sound can as opposed to light signal be muted.
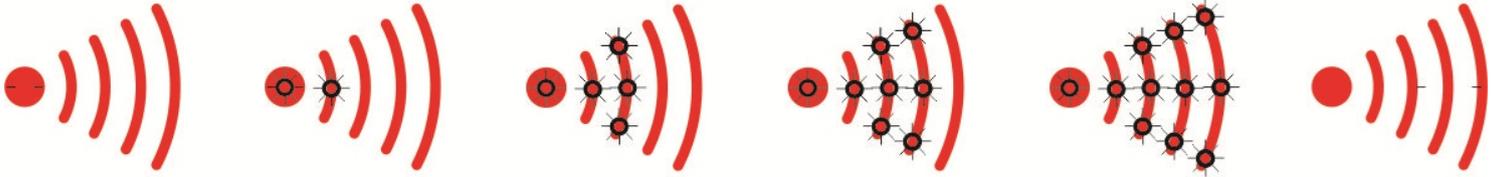
= LED lit

When Alarm E turns to alarm mode due to lack of supply voltage only the middle LEDs are lit and will be flashing in intervals of 0,5sec. for 30 min - thereafter only once every minute.
Warning sound is one high biip every 5 sec. for 30min - thereafter only once every minute. Warning sound can as opposed to light signal be muted.

= LED lit