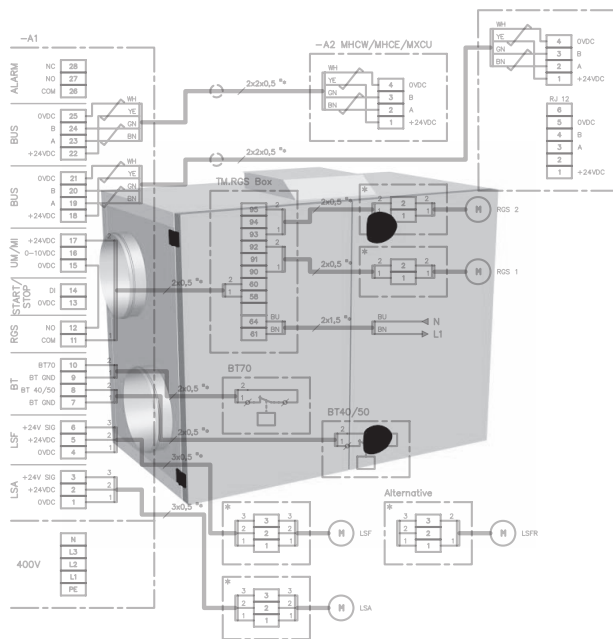




# Electrical installation guide

for VEX240HX/250HX with third-party control system



⚡ Electrical installation.....Chapter 1 + 2

Original instructions



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## Symbols, terms and warnings

### Prohibition symbol



Failure to observe instructions marked with a prohibition symbol may result in serious or fatal injury.

### Danger symbol



Failure to observe instructions marked with a danger symbol may result in personal injury and/or damage to the unit.

### Warnings



The work must be performed by an authorised electrician, in accordance with locally applicable regulations and legislation.

### Isolation switch



In accordance with The Machinery Directive\*, an isolation switch must be permanently installed in the unit.

The isolation switch must:

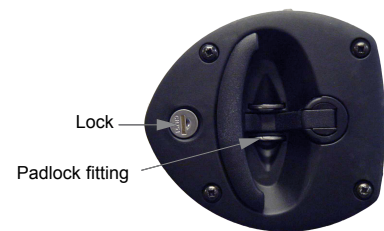
- be lockable or positioned in plain sight in the immediate vicinity of the unit
- disconnect all poles from the supply voltage
- be constructed in accordance with EN 60204-1

The isolation switch is **not** supplied by EXHAUSTO.

### Lock the air handling unit during operation

The VEX unit must always be locked during operation:

- Use the cylinder lock in the handle. **Remember** to remove the key from the lock.
- Or use a padlock. Use the handle's built-in padlock fixture



### Rating plate

The VEX unit rating plate shows:

- VEX unit, type (1)
- production number (2)

<b>EXHAUSTO</b> <small>Odenrøvel 76 · DK-9550 Langeskov · Danmark Telefax +45 6566 1110 · Telefon +45 6566 1234</small>		<b>CE</b>	
Type	V280H2EA2	← Icu = 10kA	1
	No./Year 1234567/2016	←	2
Supply	Voltage: 3x400V+N+PE ~50Hz	Current: 34A	
ECO design	η = 59,0% (A) N62 (2015) N = 65,1 VSD integrated		

### NB

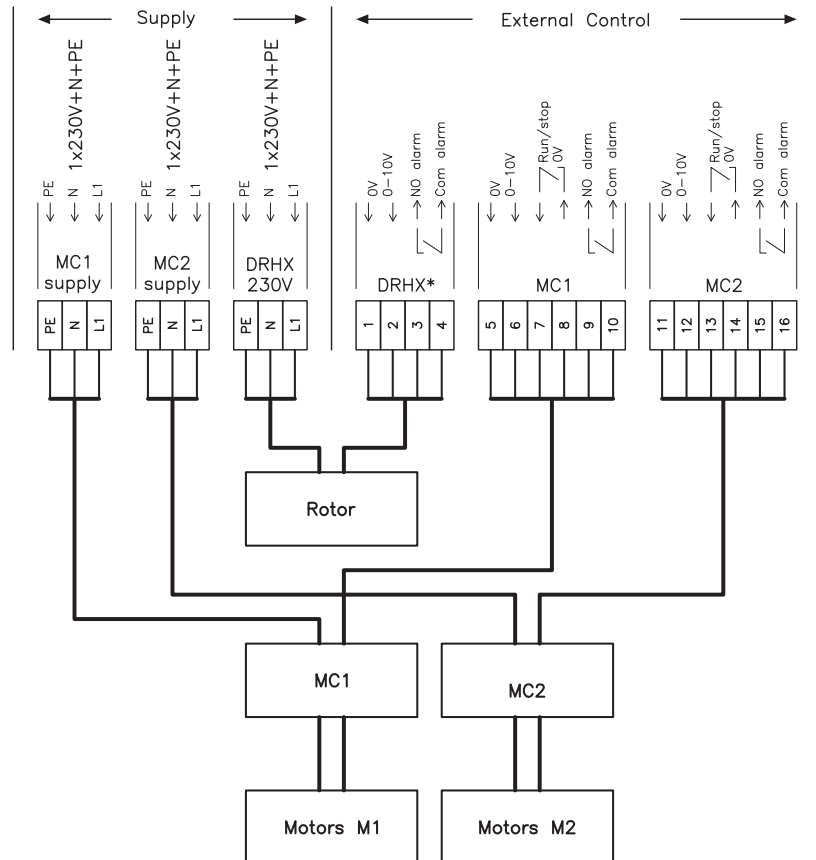
Always have the production number ready when contacting EXHAUSTO A/S.



# 1. Voltage supply diagram

## 1.1 Connection diagram for VEX with motor control (MC)

**VEX240 - 1 x 230 V** The diagram below illustrates connection of the supply voltage to the motor control and rotor.

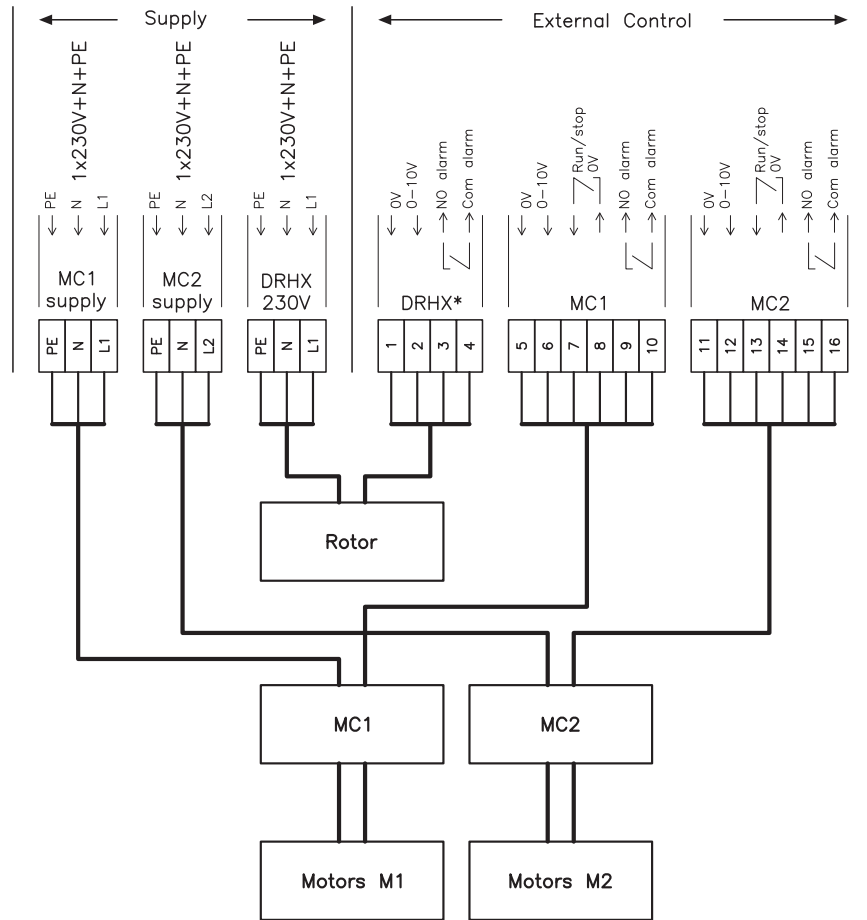


\*) To adjust the rotor speed, see section "Control of step motor".

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**VEX250 - 3 x 400 V**

The diagram below illustrates connection of the supply voltage to the motor control and rotor.



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\*) To adjust the rotor speed, see section "Control of step motor".

**Explanation of diagrams**

Designation	Explanation
MC1 Supply	Power supply for motor control MC1 (located on left of unit)
MC2 Supply	Power supply for motor control MC2 (located on right of unit)
DRHX 230V	Power supply for rotor control
DRHX	Rotor control signals
MC1	Power supply for motor control M1 (located on left of unit)
MC2	Power supply for motor control M2 (located on right of unit)

**Electrical data**

The table below shows max. phase current and max. neutral current

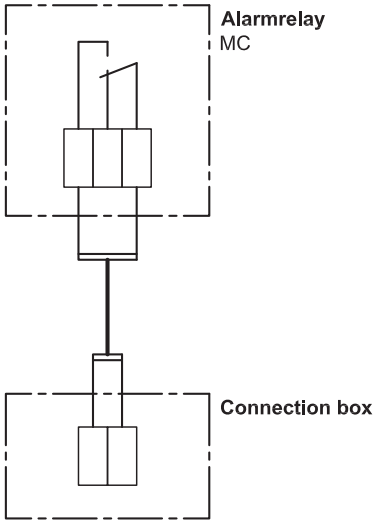
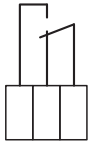
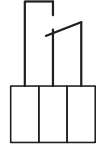
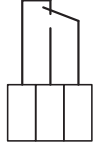
Type	Supply voltage	Max. phase current (total) [A]	Max. neutral current (Rated current) [A]	MC1 phase current [A]	MC2 phase current [A]	DRHX [A]
VEX240	1 x 230V+N+PE	10	-	4.9	4.9	0.2
VEX250	3 x 400V+N+PE	8.7	12.5	8.5	8.5	0.2

**NB:**

Power consumption is taken from two phases and is not sinusoidal. Phase L3 is not used.

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1.1.1 Alarm relay function

Description	Drawing
<p><b>Connection</b></p> <p>The diagram shows which two terminals from MC and RHX2M are connected to the terminal block in the connection box</p>	 <p>Alarmrelay MC</p> <p>Connection box</p> <p>54502556B-01</p> <p>MC: terminal 9-10 and terminal 15-16</p>
<p><b>Function</b></p> <p>The alarm relay position in the case of power failure or similar</p>	 <p>Power off</p>
<p>The alarm relay position in case of alarm</p>	 <p>Alarm</p>
<p>The alarm relay position during operation</p>	 <p>Power on, No alarm</p>



## 2. Installation of the VEX

### 2.1 Scope of installation

#### VEX unit

The electrical installation for the VEX unit comprises the following tasks:

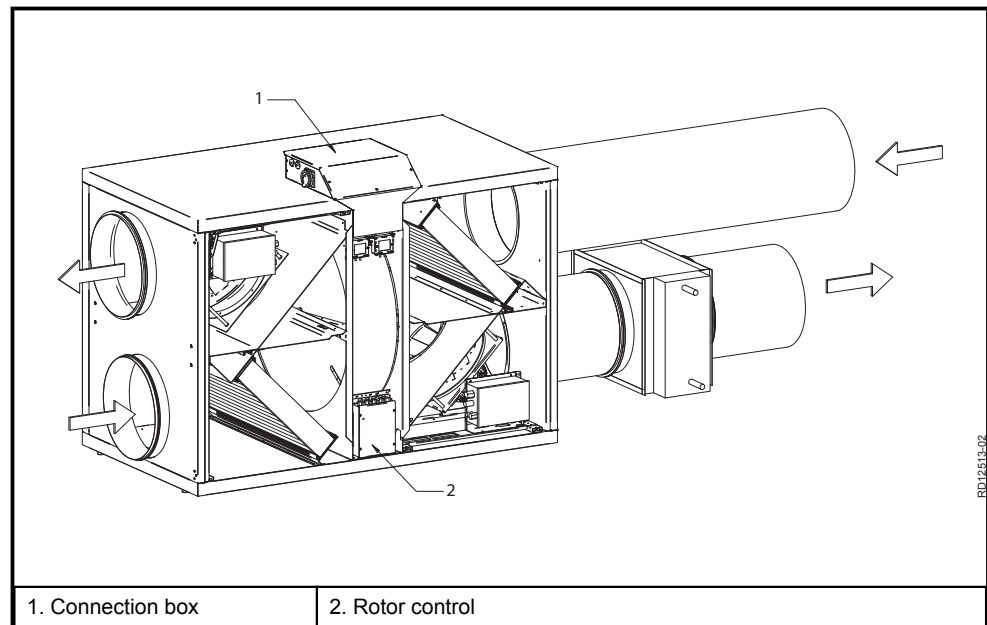
#### Connection box

Wiring configurations for the terminal board in the connection box:

- Supply voltage for motor controls 1 and 2
- Supply voltage for rotor control
- Rotor control signals
- Motor control signal (MC) and alarm relay

For other technical data, see the “Technical data” section in the main instructions of the VEX.

#### Positioning of electrical components



### 2.2 Selection of rotor direction of rotation

#### Left/Right

The term R for Right indicates the supply air is to the right of the cooling unit, as seen from the operating side. Supply air to the left is indicated by L for Left





The table below shows the maximum permitted step motor rotational speed – dependent on the size of the VEX. If the rotational speed exceeds the given value, the motor will become overloaded and shut down.

VEX model	Max. speed step motor	Max. no. of revolutions in step motor per min.	Optimum no. of rotor revolutions per min.*	Voltage 0 - 10V
VEX240	150	70	10	8.7
VEX250	150	79	10	8.88

\*When the rotor operates with this rpm, the highest temperature efficiency is achieved.

**DIP-switch setting**

VEX model	Configuration
VEX240	
VEX250	

The black marking on the above sketch indicates the position of the button on the dip-switch.





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