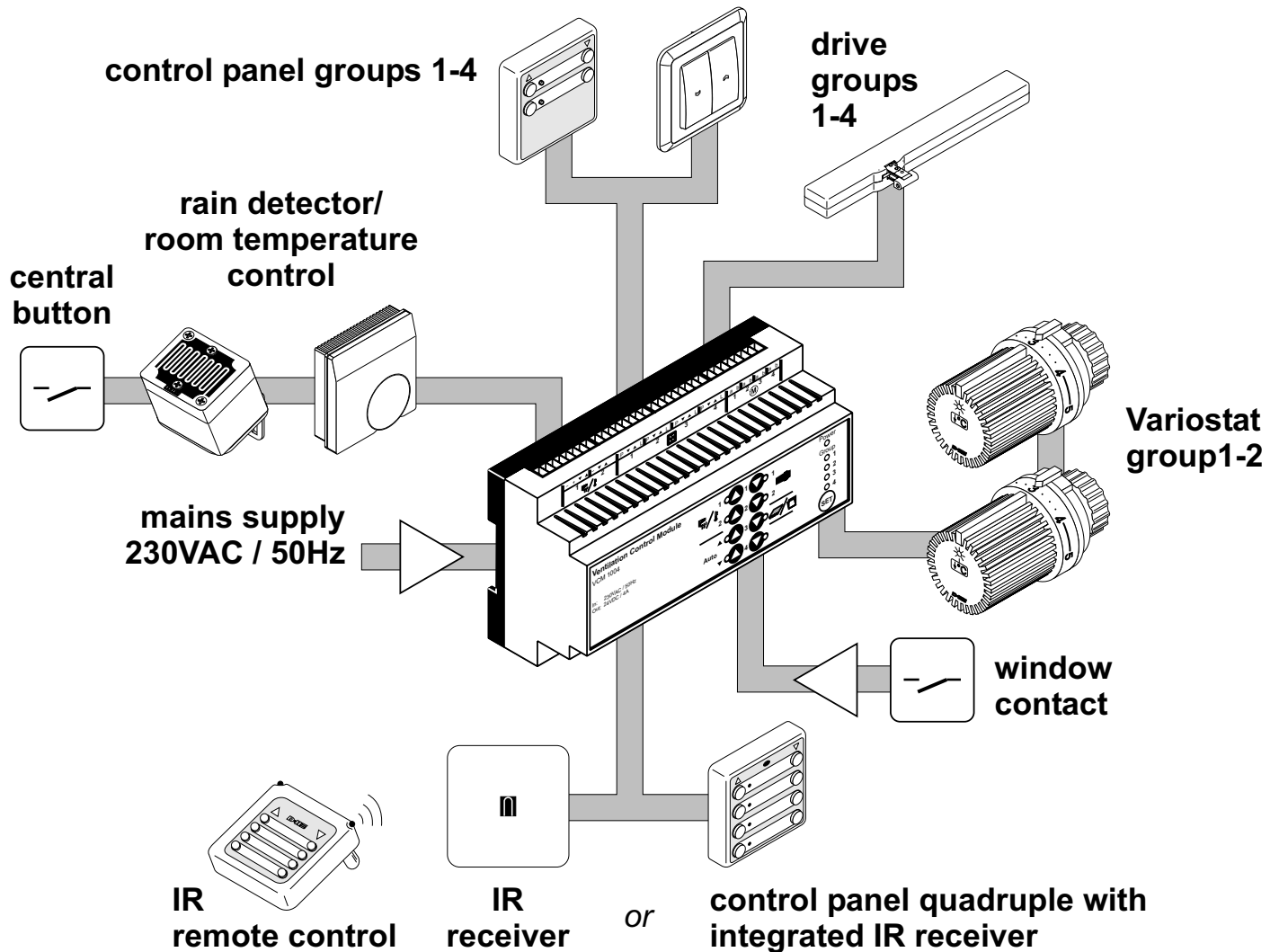




# Ventilation Control VCM 1004



## Application

The ventilation control module VCM 1004 is suitable for daily ventilation and can simultaneously trigger up to 4 groups. The ventilation control is universally applicable due to its latest state of the art and very small dimensions. Window drives, louver drives or electric jalousies can be alternatively connected on every individual group. Special functions per group output can be allocated via a programming mode. The ventilation control module can be directly integrated in the house distributing box, or surface/ or flush mounted using housings, optional available.

Different detectors can be allocated to every group (wind/ or rain detectors, thermostat switches, timer, actuator of the Building Management System). Programming is effected direct on the control. The groups are operable via remote controls, wall control panels or vent buttons as well as direct on the VCM 1004. Two of the Variostat groups can be additionally connected with dependence on the ventilation groups.

99.821.97 1.2/10/04

## Content

Please observe! / Software state .....	2
Technical Data / Guarantee .....	2
Front view/ Pictograph .....	3
Accessories .....	3-4
Wiring plan, line lengths, cross sections .....	5
Connecting plans .....	6-7
Adjusting of address control panels .....	8
Configuration .....	9
<i>Programming functions:</i>	
group allocation	
central inputs .....	10
group allocation	
vent button inputs .....	11
<i>Example for application:</i>	
with one VCM 1004 .....	12
with two VCM 1004 .....	13
<i>Open/ Close/ Stop via:</i>	
the front panel .....	14
control panels .....	15
Control „10 minutes ventilation“ .....	16
Control Variostat .....	16

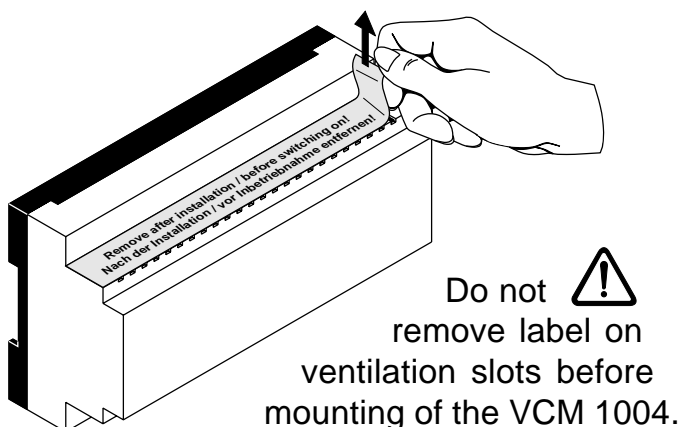
## Technical Data

Rated voltage	: 230VAC / 50Hz
Power consumption	: 120VA
Interfering emission	: DIN EN 55022 DIN EN 50081-1, DIN EN 61000-3-2, DIN EN 61000-3-3, DIN EN 61000-6-2
Resistance to jamming	: DIN EN 61000-4-2 to -6, DIN EN 50130-4
Protective category	: II
Protective system	: IP30
Class of rating	: Short-time
Output voltage	: 24VDC/ Residual ripple < 5%
safe output current	: 4A / ED20
working temperature	: 0-50°C / max. 70% rel. H
Dimensions (wxhxd)	: 160 x 90 x 65 for top hat rail mounting
Outputs are short circuit proof; with that conventional fuses are dropped.	

## Please observe!

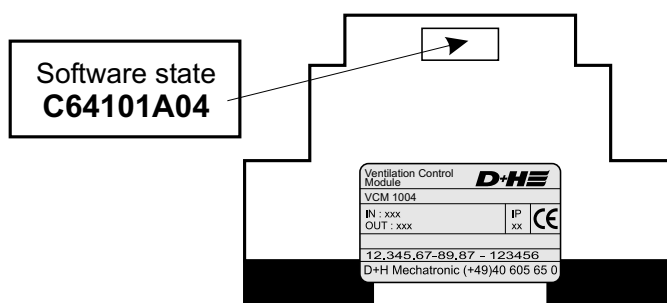
This instruction includes descriptions and connecting plans of components, which are not contained in extent of supply of the control panel. You can get these parts and many other ones separate at your D+H distributor. Further connecting plans are available there as well.

VDE 0100 for electric systems and regulations of EVU for electric mains have to be observed.



## Software revision

These instruction are valid as of software revision **C64101A04!**

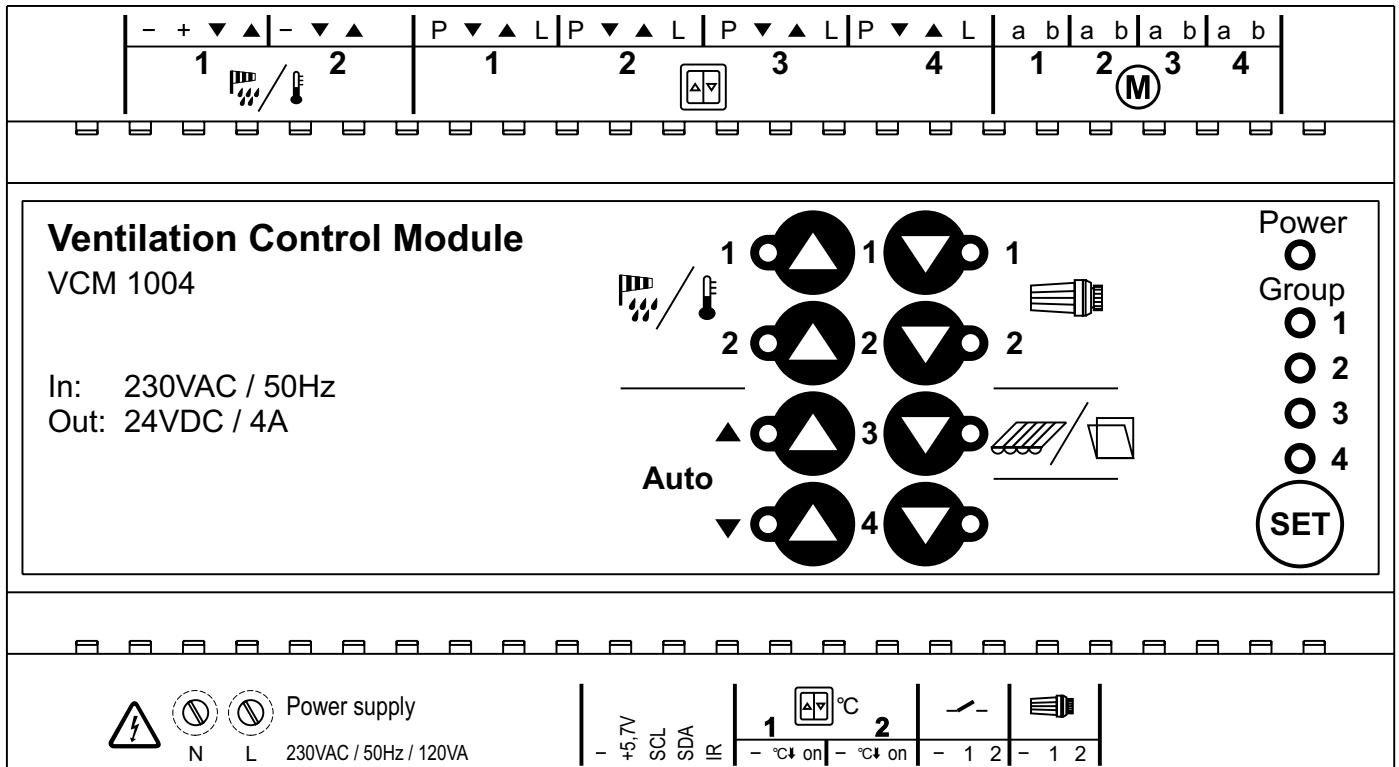


## Guarantee

You will get **2 years** guarantee for all D+H products from date of verified handing over of the system up to maximal 3 years after date of delivery, when mounting and starting has been carried out by a D+H authorized distributor.

D+H guarantee is expired, with connection of D+H components with external systems or with mixing of D+H products with parts of other manufacturers.

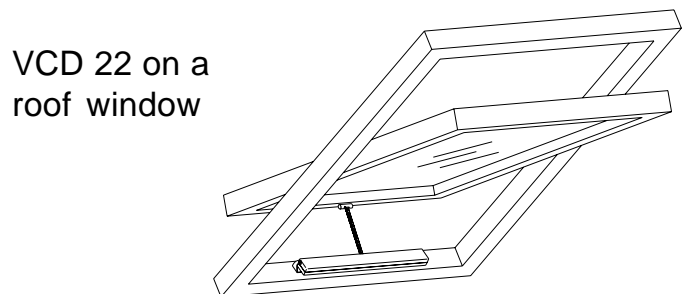
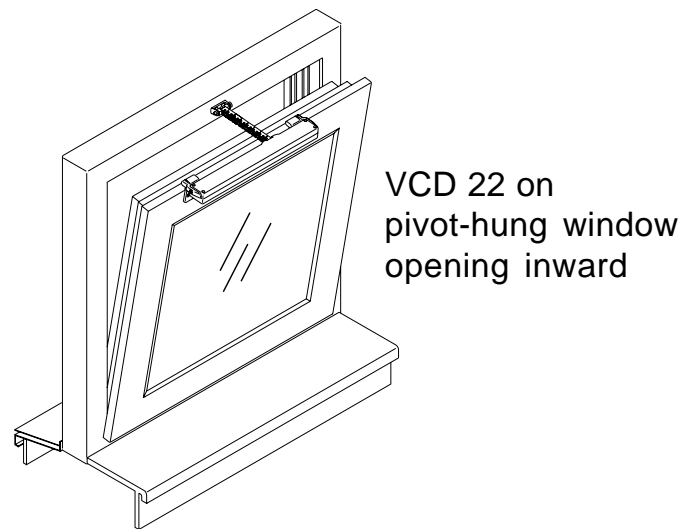
# Front View



## Pictograph Explanation

	Central inputs
	Louver / Jalousie
	Window
<b>SET</b>	Group levels/ Programming mode
<b>Auto ▲</b>	Automatic safety function in direction Open
<b>Auto ▼</b>	Automatic safety function in direction Closed
	Control panel
<b>(M)</b>	Electro motor drive
	Voltage
	Variostat

## Accessories Drives



### Mounting of the drive:

You will find the mounting instructions in the instruction for use of the drive.

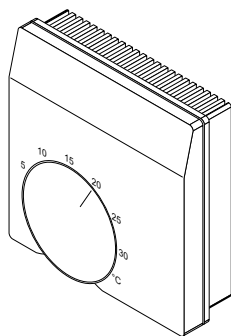
# Accessories

## Room temperature control

### RTR 83

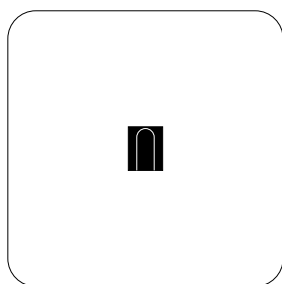
Room temperature control for controlling of ventilation via room-temperature.

Switching range adjustable from 5 - 30°C.



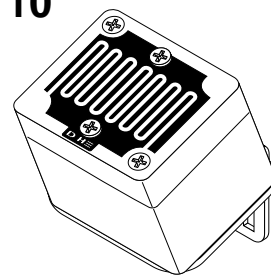
### IR-receiver IE 10-3B

External receiver for IR-remote control. Mounting on 55mm flush box or in suspended ceiling.



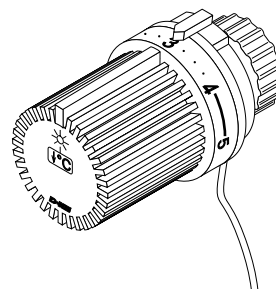
## Rain detector VRS 10

Rain detector for automatic closing of windows in case of rain.

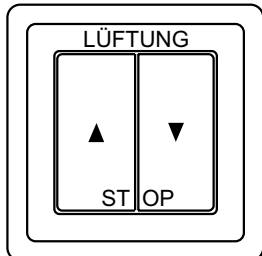


## Variostat VST 20

The heat valve will be automatically closed during every ventilation process through electronic triggering via window contacts, window drives, wall/ or IR-remote controls. Consequently, energy costs will be saved.

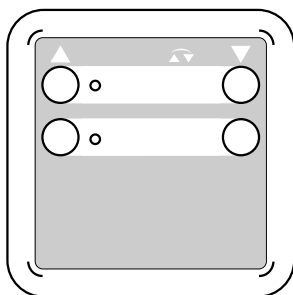


# Vent Buttons and Control Panels



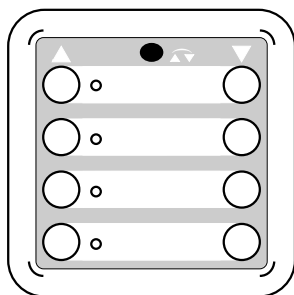
### LT 43 U

Vent buttons for controlling of individual drive groups. Several vent buttons can be connected in parallel per group. Mounting in 55 mm flush box (not included). Surface frame available as accessories.



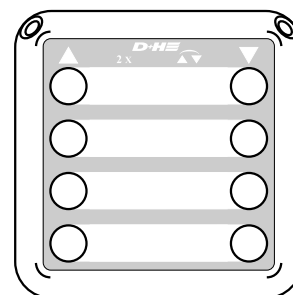
### LF 10-2A

Control panel (mounting on 55mm flush box) for window drives, heating radiator (Variostat) and shading systems



### LF 10-4B

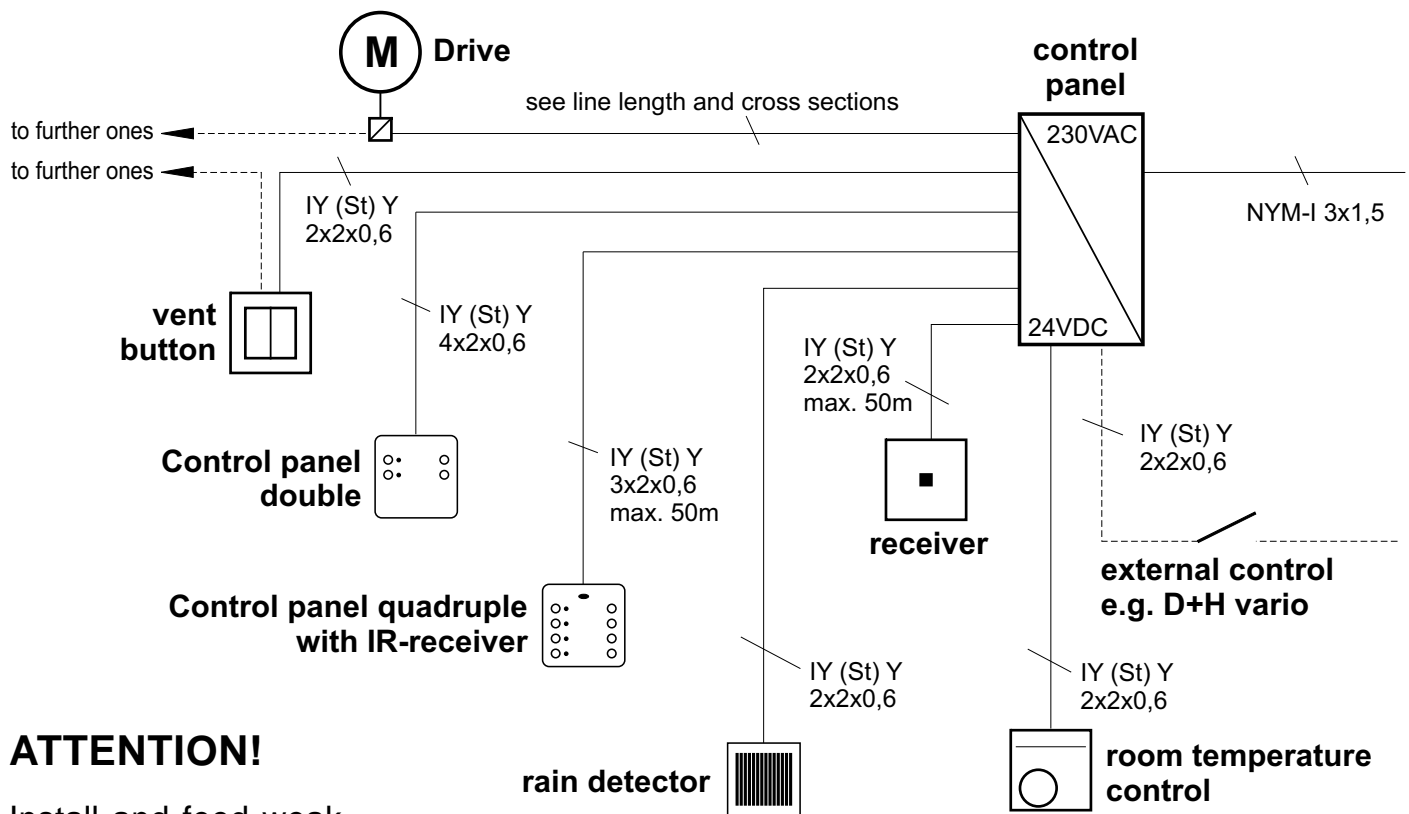
Control panel (mounting on 55mm flush box) for window drives, heating radiators (Variostat) and shading systems with integrated infrared receiver



### IS 10-4

Remote control for window drives, heating radiators (Variostat) and shading systems

# Wiring Plan (Paragon)



## ATTENTION!

Install and feed weak current lines separately from supply mains.

## Line lengths and Cross sections:

**Earthed conductor must not be wired!**

Antriebe / drives	0,35A	1	2	3	4	5	6
	0,5A		1	2		3	4
	1A			1			2
2 x 0,5mm <sup>2</sup>		120	60	40	30	24	20
2 x 0,75mm <sup>2</sup>		180	90	60	45	36	30
2 x 1mm <sup>2</sup>		240	120	80	60	48	40
2 x 1,5mm <sup>2</sup>		360	180	120	90	72	60

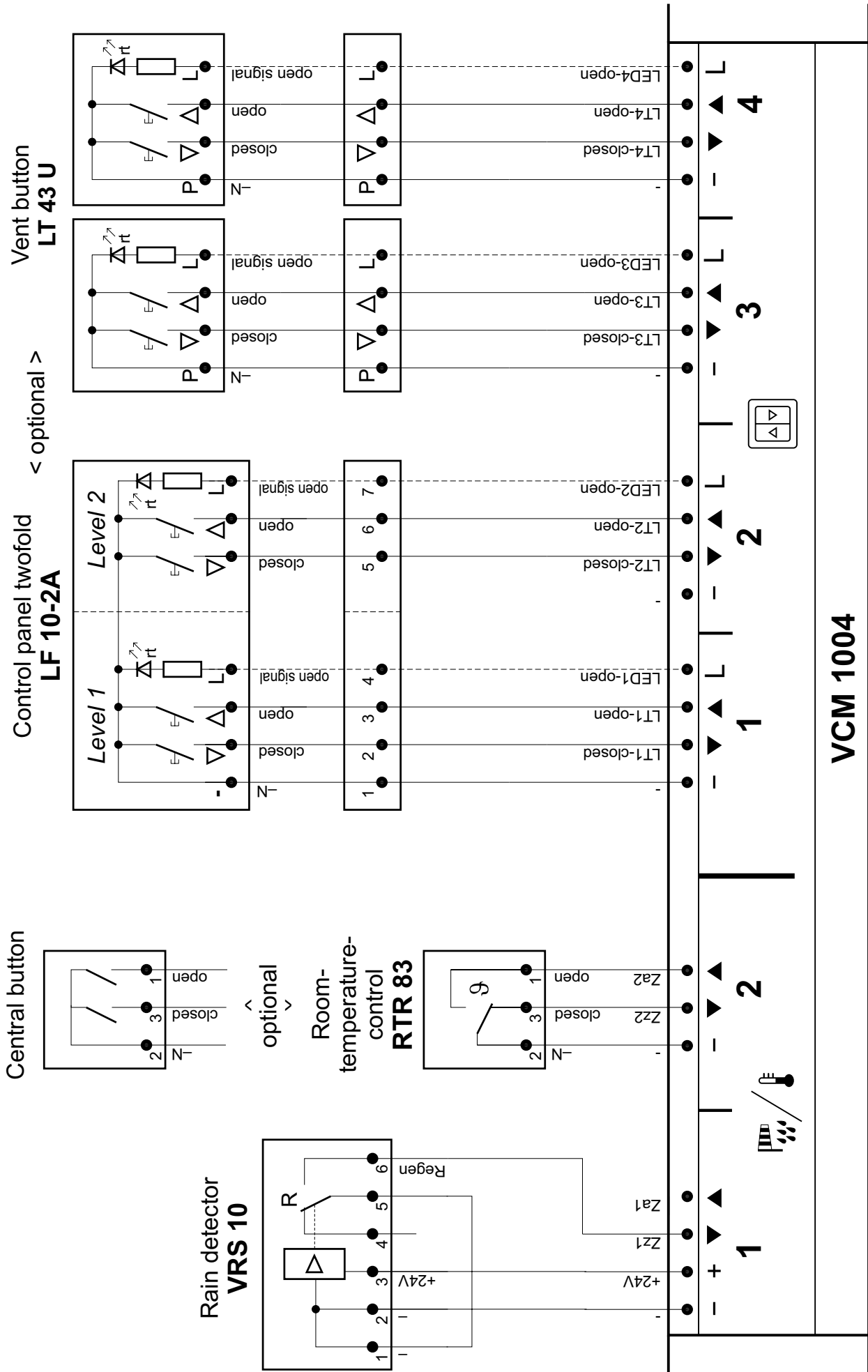
$$\text{cross section (mm}^2\text{)} = \frac{\text{simple cable length (m)} \times \text{number of drives}}{80^{***}}$$

\*\*\* Applies only for drives with 1A drive current.

Use drive current „160“ for drives with 0,5A and drive current „230“ for drives with 0,35A.

**See also page 7 to this!**

# Connection Vent Buttons, Detectors



# Connection Drives

## Running direction of drives:

Change poles of lines („Mot.a“ and „Mot.b“) of drive supply if running direction is wrong.

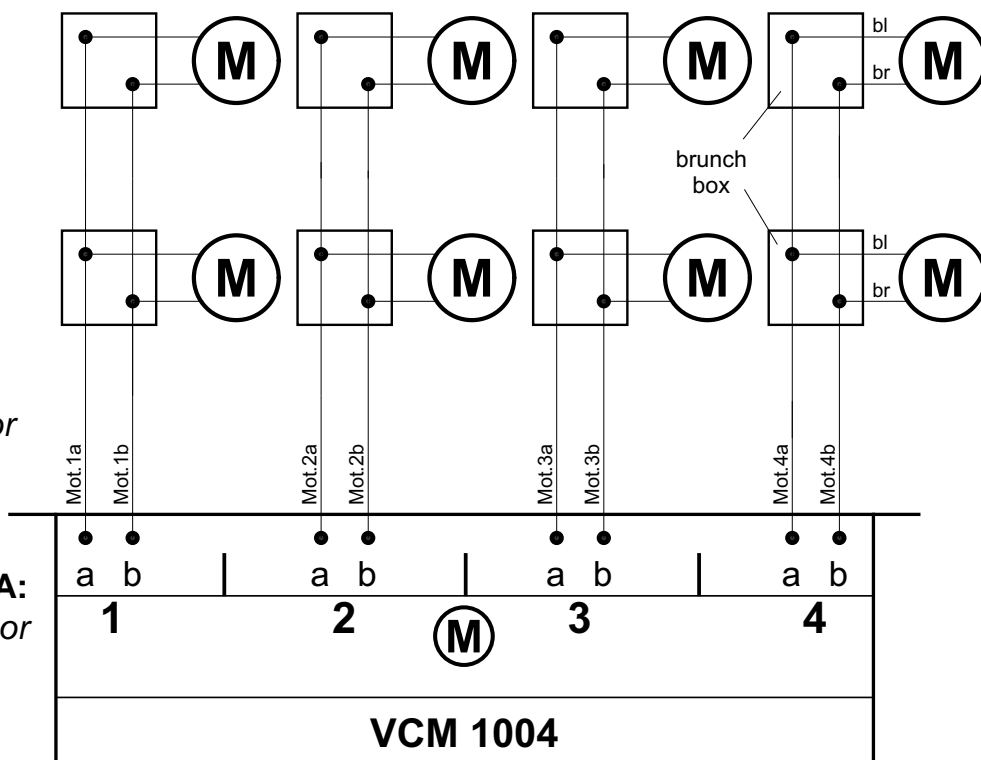
## Maximum number of drives:

per group max. 2A:

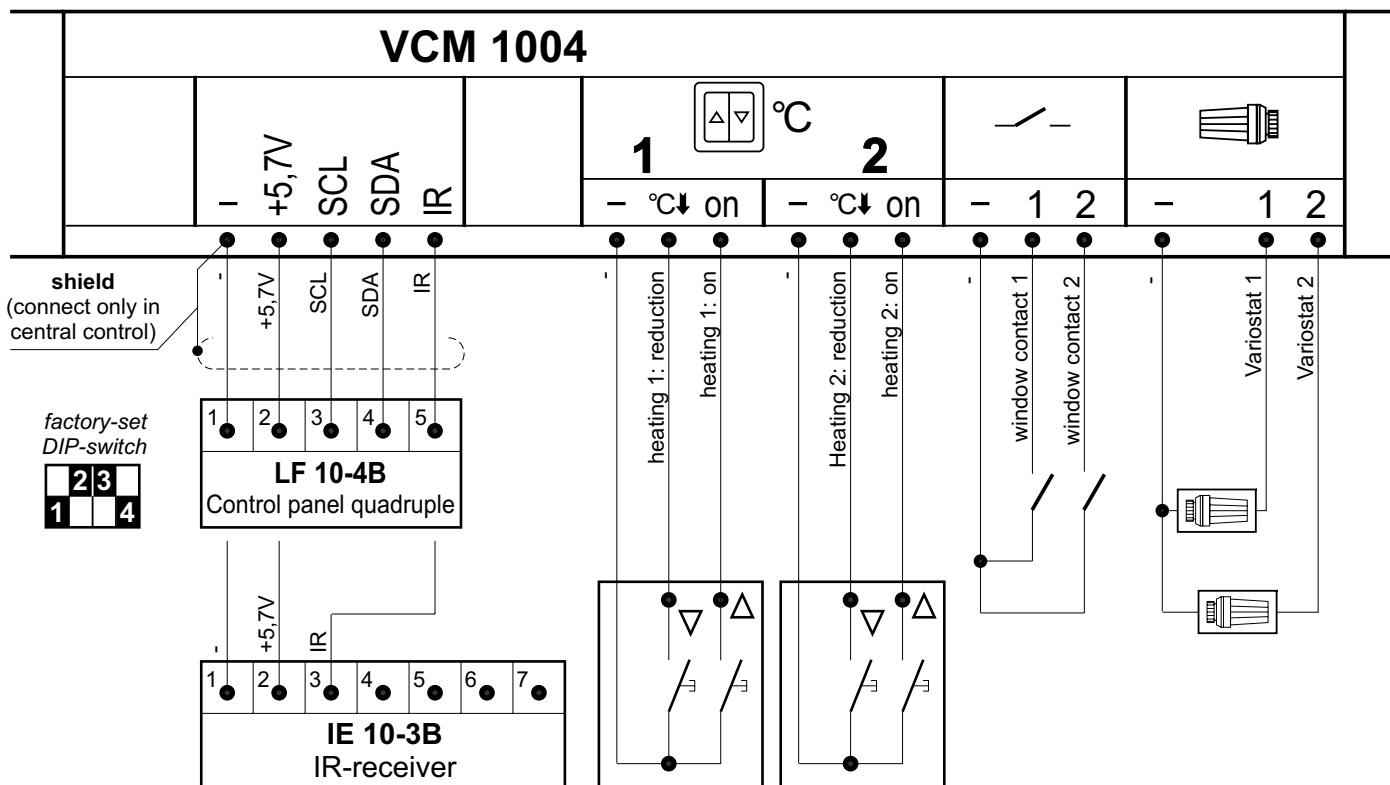
6 drives with 0,35A each, or  
4 drives with 0,5A each, or  
2 drives with 1A each

all groups together max. 4A:

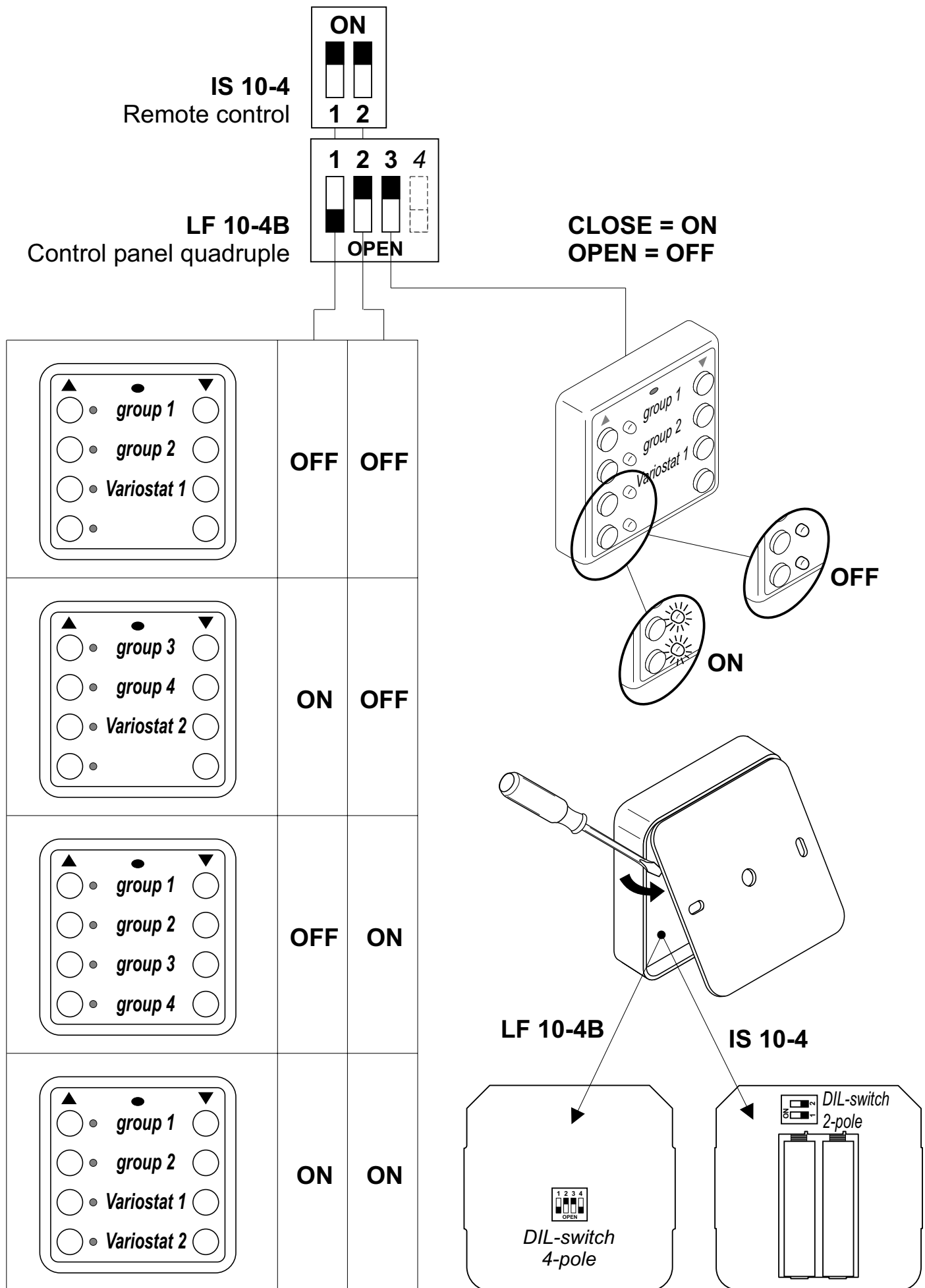
11 drives with 0,35A each, or  
8 drives with 0,5A each, or  
4 drives with 1A each



# Connection Variostat, Window Contact, BUS, IR



# Adjusting of Address Control Panels



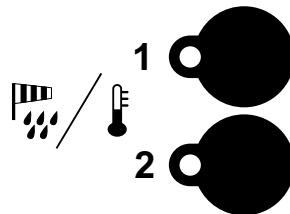


# Configuration

**Activation Central open/ closed /**  
LED lightens

**Deactivation Central open/ closed /**  
LED is extinguished

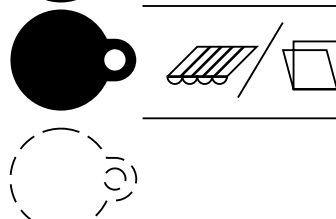
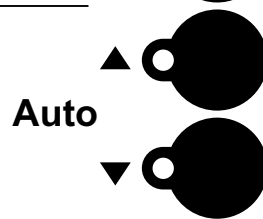
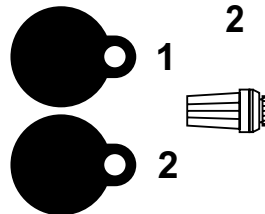
- 1 Central open/ closed 1
- 2 Central open/ closed 2



**Activation Variostat/**  
LED lightens

**Deactivation Variostat/**  
LED is extinguished

- 1 Variostat 1
- 2 Variostat 2



**Safety function switched off \* /**  
LED lightens

- ▲ through briefly pressing of the running direction button the window / the louver
- ▼ will automatically open or close up to the stop position

**Safety function switched on \* /**  
LED is extinguished

- ▲ when opening the window / the louver, keep running direction button pressed until the desired opening width is reached;
- ▼ when closing the window / the louver, keep running direction button pressed

Windows/ louvers do not close automatically, (in case of wind/ rain, temperature not either)

 **Activation louver/ jalousie**  
LED lightens

*“10 minutes ventilation” not possible!*

 **Activation windows/**  
LED is extinguished

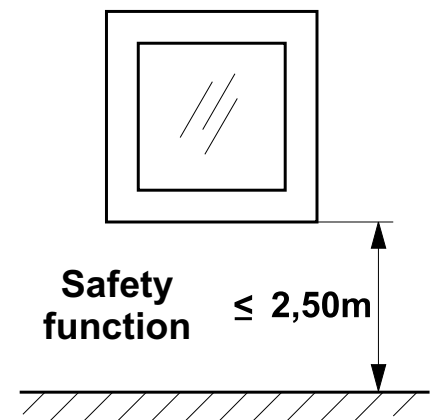
**\* Auto / safety function:**

windows, which are within arm's reach, can only be opened or closed when the vent button is kept pressed.



**If the safety function is activated (LED is extinguished), the remaining functions (10 minutes ventilation, central open/closed) are not activated.**

Several functions are programmable per group.  
"Central open / closed" has uppermost function priority.



# Programming Function

The VCM 1004 has two central inputs for the function Open and Closed. Central input 1 and/or central input 2 can be allocated to every single group.

You can optionally connect to central inputs 1+2 a rain detector, thermostat switch, central button, timer, wind detector or an actuator of the Building Management System (e.g. EIB-BUS). The central inputs are wired via floating contacts.

## Example for application:

central input 1 / rain detector  
 motor groups 1+2 / window opener  
 motor groups 3+4 / louver drives.

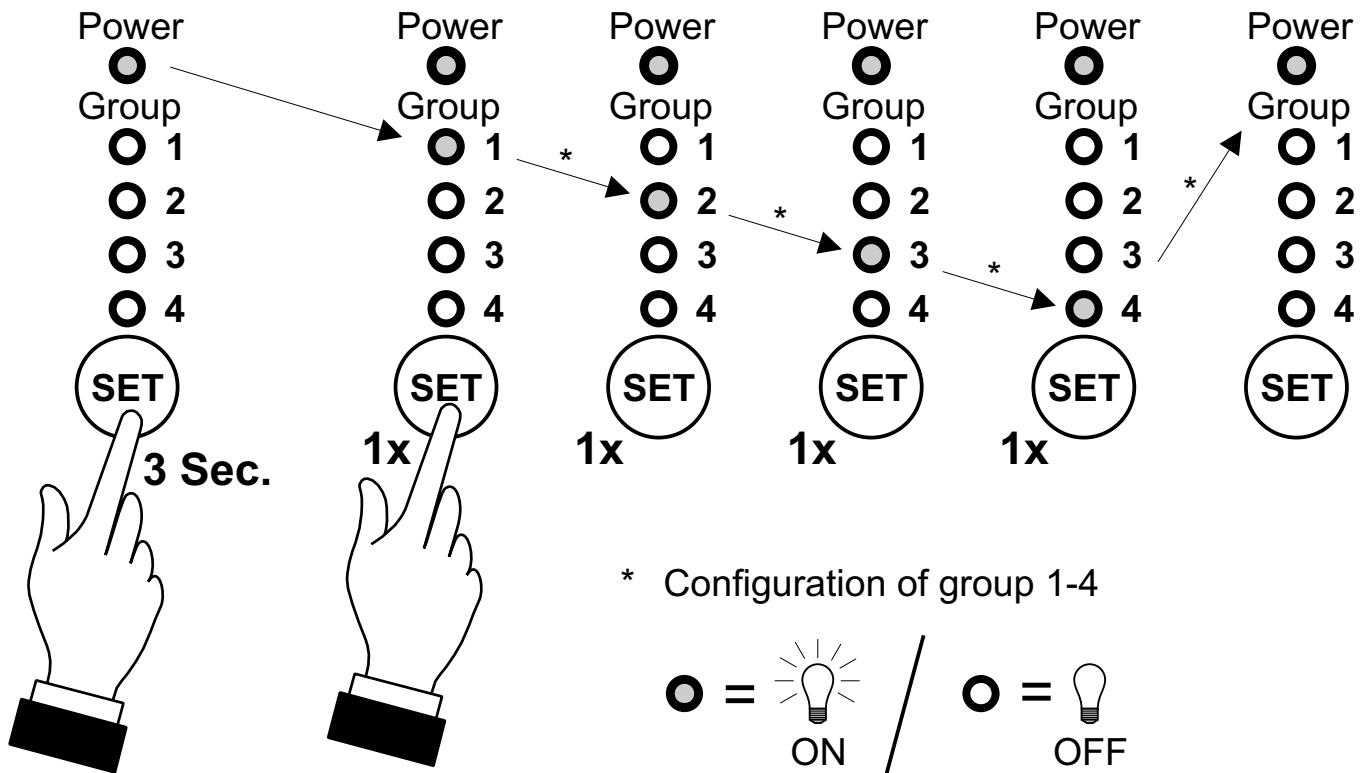
The central input 1 will be programmed on group 1+2 (LED lightens).

The louver will be activated on group 3+4 (LED lightens).

If it starts raining now, the window drives will automatically close.

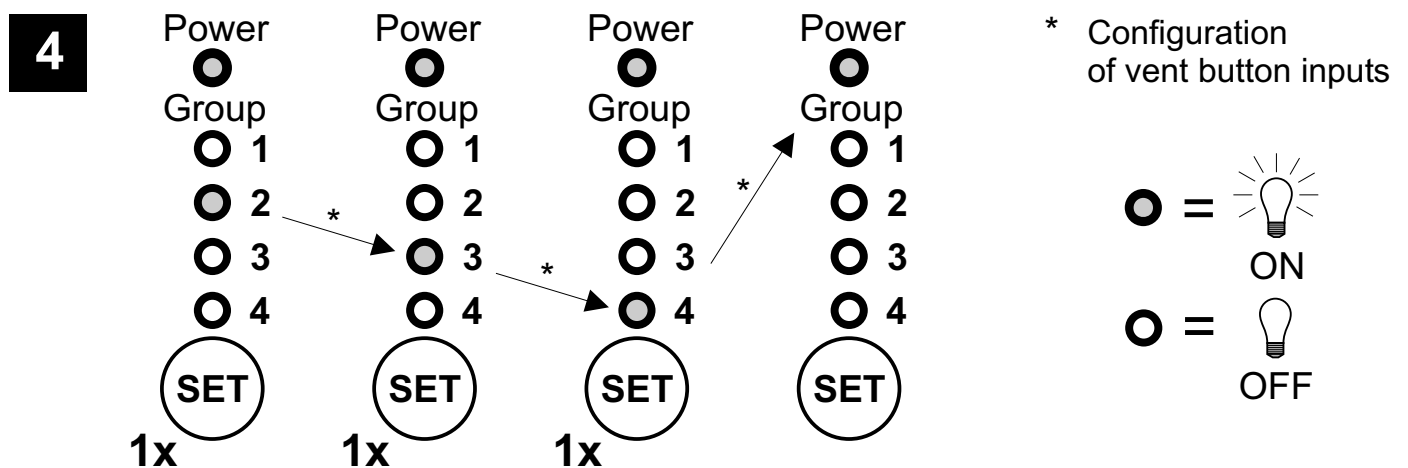
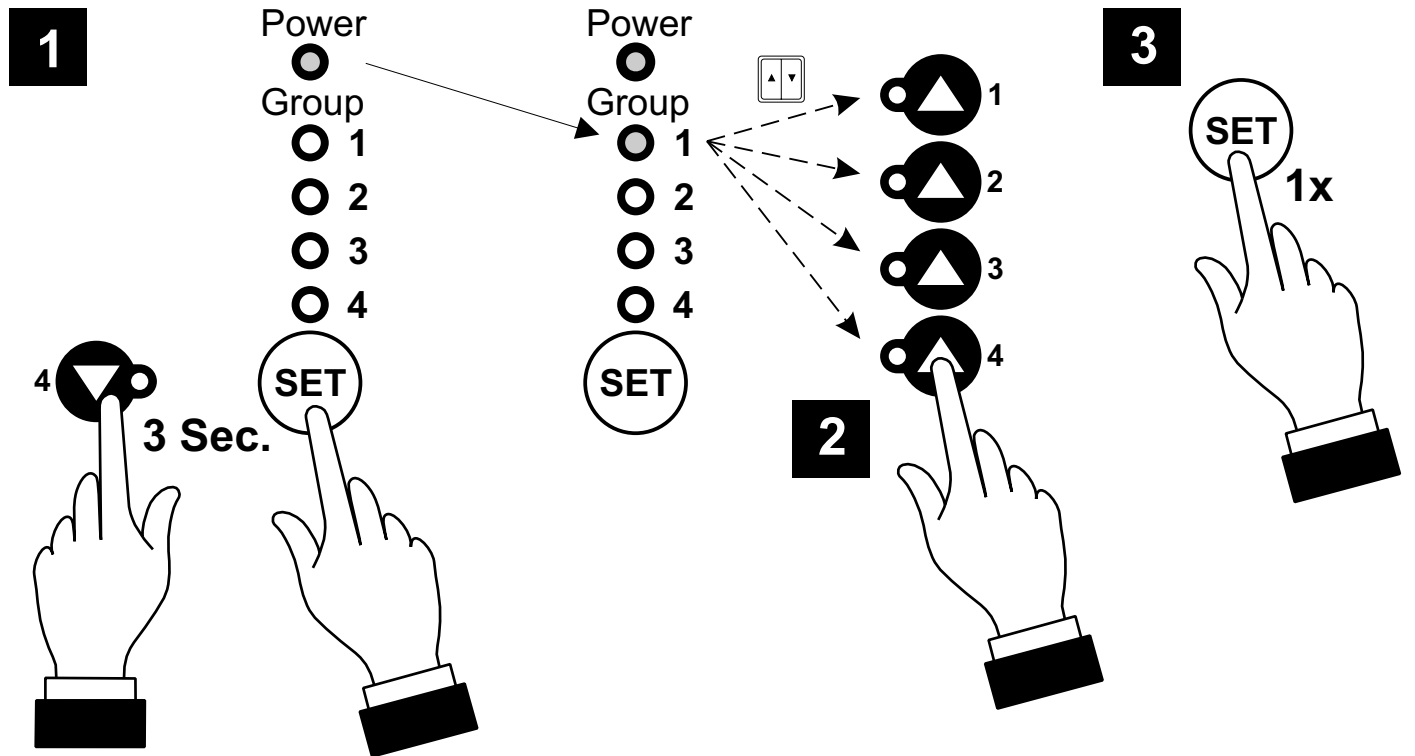
If you connect e.g. an external timer to central input 2, you will have activated central input 2 for group 3+4 with this, and can only open and/or close the louvers via the timer.

## Adjusting of Groups

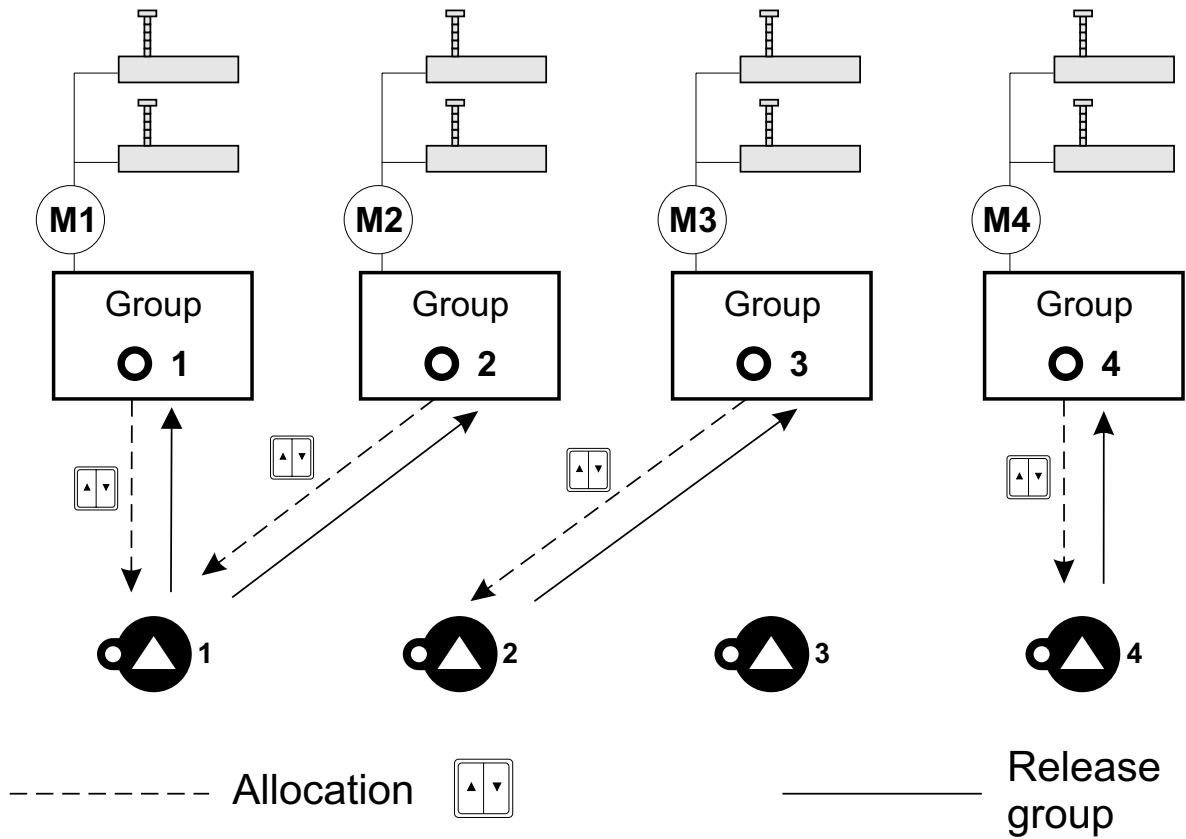


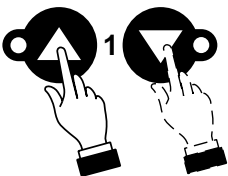

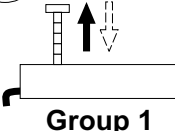

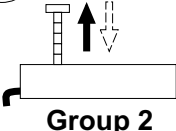
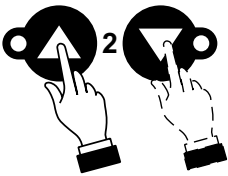

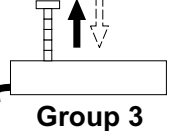
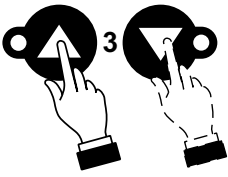
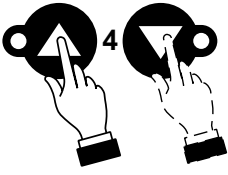

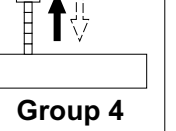
# Programming Function: group allocation vent button inputs

Vent button inputs as well as IR-remote controls (VIS 10) and D+H bus fields (LF 10-4B) can be freely allocated to the groups. Possibility of combining groups or of controlling two VCM 1004 with a remote control.

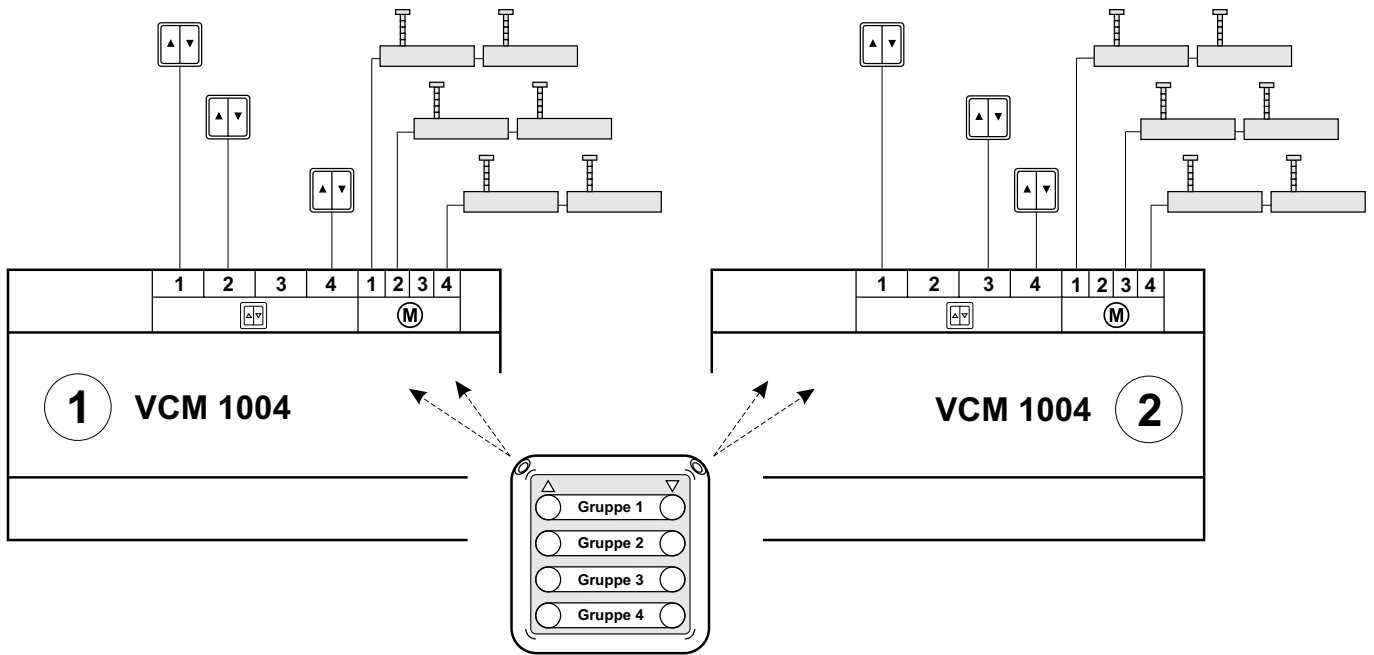


# Example for Application with one VCM 1004



<b>Vent button</b>	<b>Group x will be released</b>			
	  <b>Group 1</b>	  <b>Group 2</b>	<i>not connected</i>	<i>not connected</i>
	<i>not connected</i>	<i>not connected</i>	  <b>Group 3</b>	<i>not connected</i>
	<i>not connected</i>	<i>not connected</i>	<i>not connected</i>	<i>not connected</i>
	<i>not connected</i>	<i>not connected</i>	<i>not connected</i>	  <b>Group 4</b>

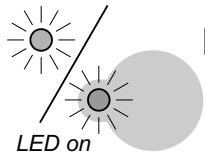
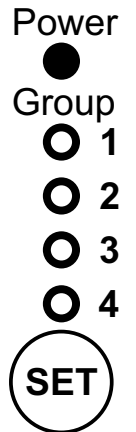
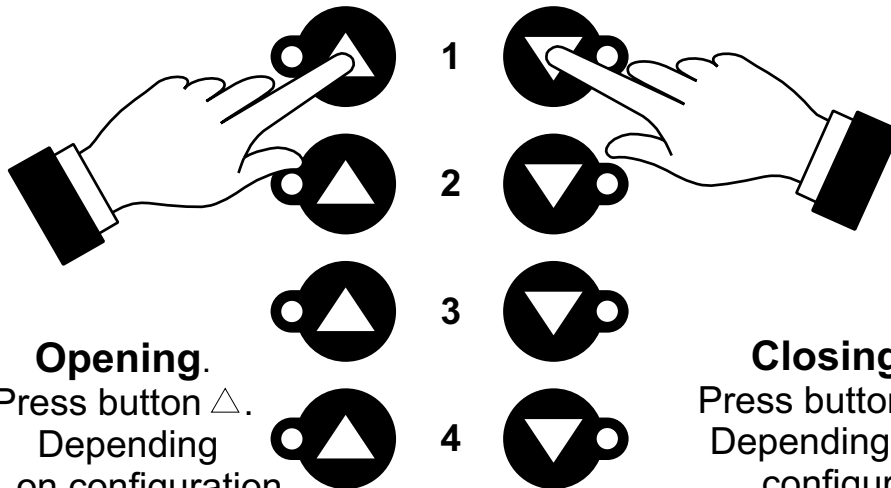
# Example for Application with two VCM 1004



Control level	Group x will be released							
	VCM 1004 ①				VCM 1004 ②			
	Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4
 Group 1	 M1	not connected	not connected	not connected	 M1	not connected	not connected	not connected
 VCM 1004 ①	 M1	/	/	/	/	/	/	/
 Group 2	not connected	 M2	not connected	not connected	not connected	not connected	not connected	not connected
 VCM 1004 ①	/	 M2	/	/	/	/	/	/
 Group 3	not connected	not connected	not connected	not connected	not connected	not connected	 M3	not connected
 VCM 1004 ②	/	/	/	/	/	/	 M3	/
 Group 4	not connected	not connected	not connected	 M4	not connected	not connected	not connected	 M4
 VCM 1004 ②	/	/	/	/	/	/	/	 M4

# Open/ Close/ Stop via Frontfield

VCM 1004



**Opening.**  
Press button  $\triangle$ .  
Depending on configuration of the group, the electric drive will automatically **open** up to its stop position after a single pressing of the button or only as long as the button is pressed.

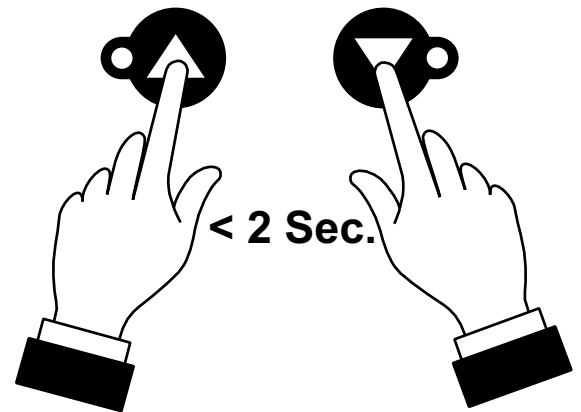
**Closing**  
Press button  $\nabla$ .  
Depending on configuration of the group, the electric drive will automatically **close** up to its stop position after a single pressing of the button or only as long as the button is pressed.

## Stoppen

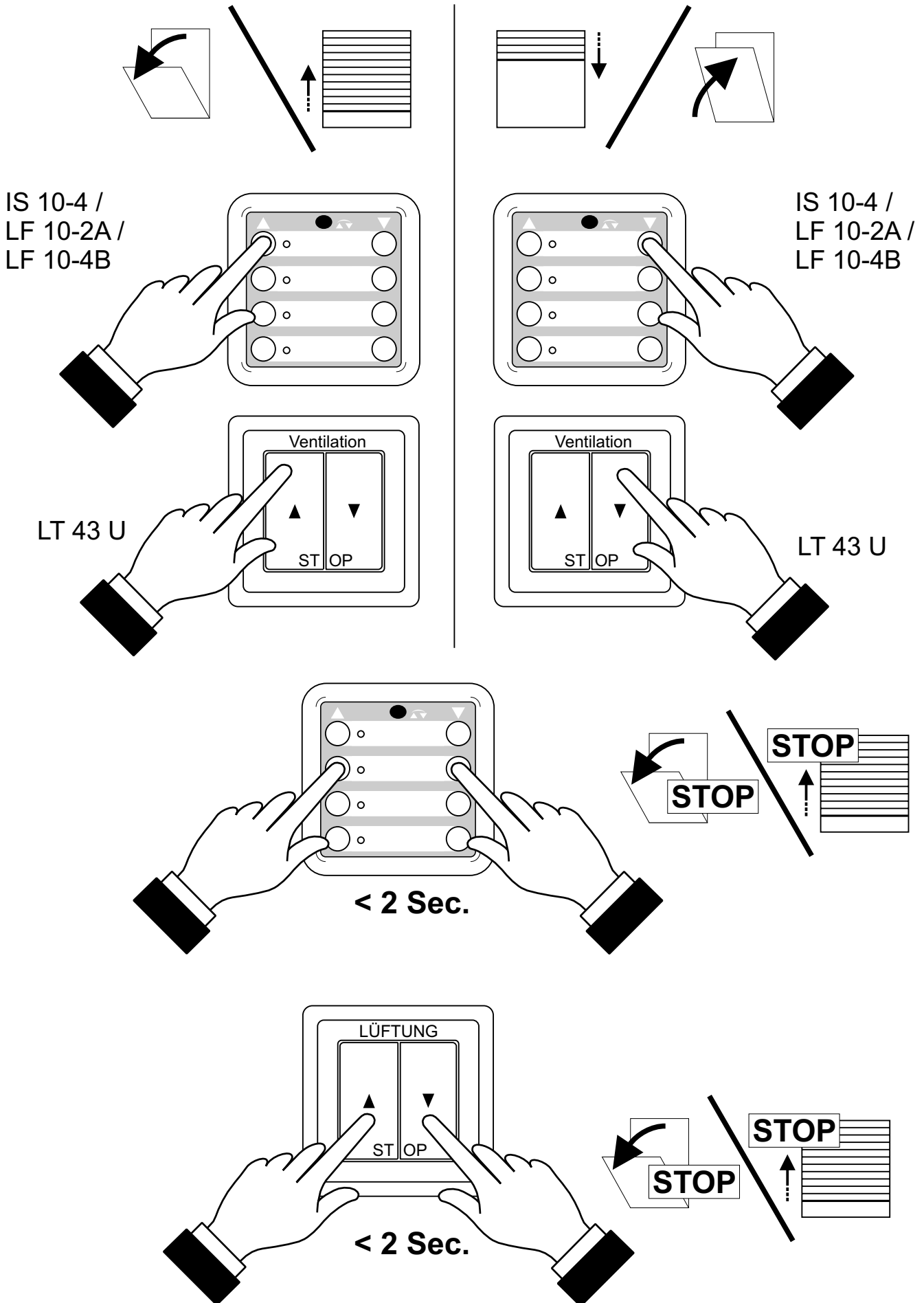
For stopping of the drive in any intermediate position press *either*

- ▶ once again the same running direction button *or*
- ▶ simultaneously the buttons Open and Closed

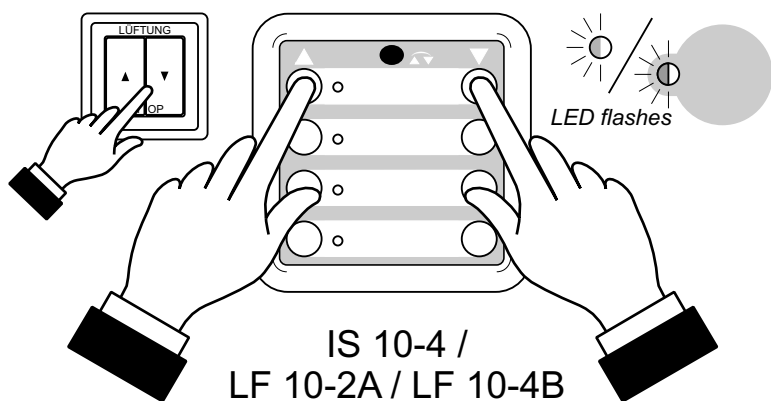
0 - 2 s. groups are stopped  
2 - ...s. groups run in Closed-direction



# Opening/ Closing of Groups on VCM 1004



## Control „10 Minutes Ventilation“



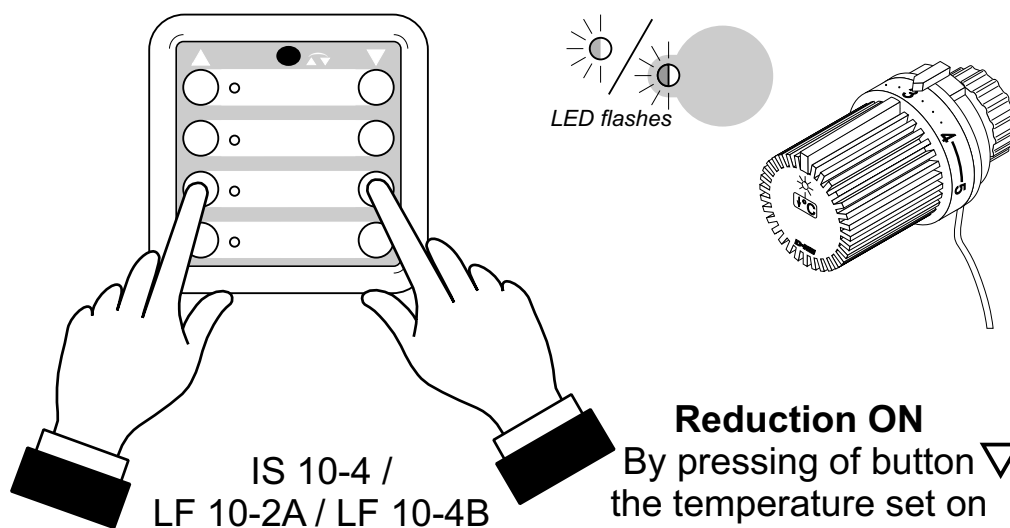
When pressing simultaneously both the buttons ( $\triangle + \nabla$ ) on control panel/ vent button, automatic ventilation will be carried out, which will be limited to 10 minutes.

*(Only if the “safety function” is deactivated).*

If a Variostat-heating control is connected as well, the radiator valve will additionally close complete for 10 minutes. The yellow LED in the Variostat will lighten.

Possibility of closing from this position any time with button  $\nabla$ .

## Control Variostat



### Reduction OFF

By pressing of button  $\triangle$  the reduction of heating temperature will be undone again.

### Reduction ON

By pressing of button  $\nabla$  the temperature set on heating radiator will be reduced by about 6°C.