

LIGHT MANAGEMENT IS VIVARES



Application guide

MCU SELECT DIM /
MCU SELECT DIM EXC

Trailing edge Phasecut dimmer

Status: June 2026 | LEDVANCE
Subject to change without and notes. Errors and omission excepted.

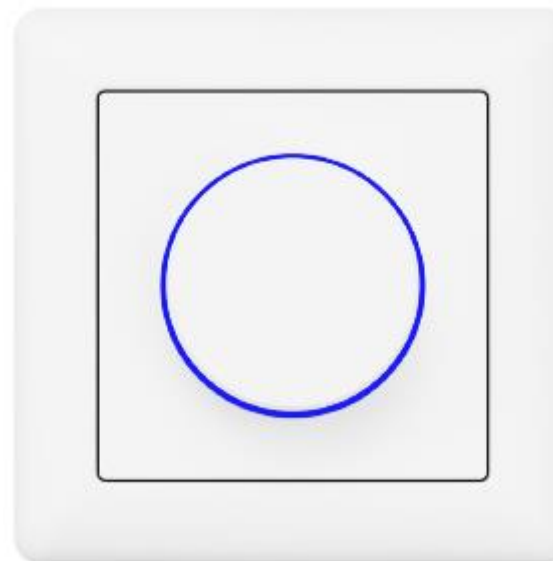
Application guide

MCU SELECT DIM / MCU SELECT DIM EXC



MCU SELECT DIM

EAN: 4099854846724



MCU SELECT DIM EXC

EAN: 4099854846823

Application guide

MCU SELECT DIM / MCU SELECT DIM EXC

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Application guide

MCU SELECT DIM / MCU SELECT DIM EXC – General

Product description

The MCU SELECT DIM (EXC) is a superior trailing edge phase cut dimmer for LED lamps and electronic transformers for a load range of 3-200VA. It is also suitable for incandescent lamps up to 400W.

It fits into standard flush boxes and is compatible with design covers of various leading switch manufacturer brands.

Minimum and Maximum Dimming level / Phase cut angle can be easily adjusted for an optimal fit with the individual lamp.

Automatic rescaling and optimization of the dimming curve according to the chosen Min. / Max. values, allow a precise and comfortable dimming control. A selectable linear or logarithmic dimming behavior enables further customization.

The illuminated central rotary knob with selectable colors for on an of state allows dimming and switching and storage of a memory value.

The behavior after mains interruption can be preset and allows simple automation of the lighting with standard motion detectors.

Integrated electronic and overload, overtemperature and short cut protection is reversible and provides maximal safety in operation.

Application guide

MCU SELECT DIM / MCU SELECT DIM EXC – General

Product Features

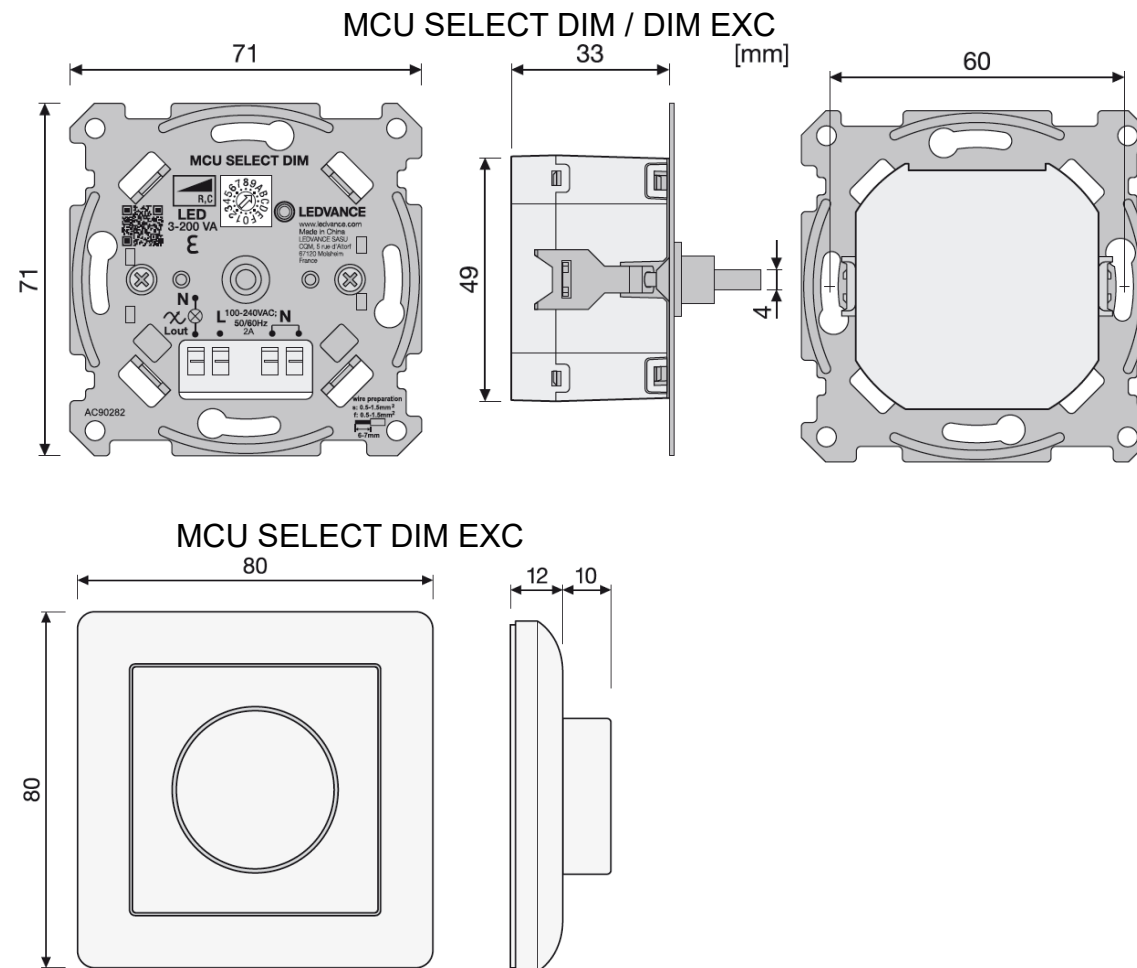
- Dimming and switching of up LED lamps, electronic transformers and classic lamps
- Automatic and fixed memory function for switch on level
- Adjustable backlight
- Selectable power up behavior

Product Benefits

- **Wide load range:**
3 - 200VA for LED lamps / electronic transformers
3 - 400W for classic incandescent lamps
- **Easy setting of Min. and Max.** Phasecut angle / dimming level
- **Automatic optimization of dimming curve** for precise and convenient dimming
- **Integrated overload-, overtemperature- and short cut protection**
- Possibility of **combination with standard motion detectors**
- **Fits into standard flush device boxes** with > 40mm depth
- **Compatible with design covers** of leading switch manufacturer brands
- Supports **linear and logarithmic dimming curve** (selectable)

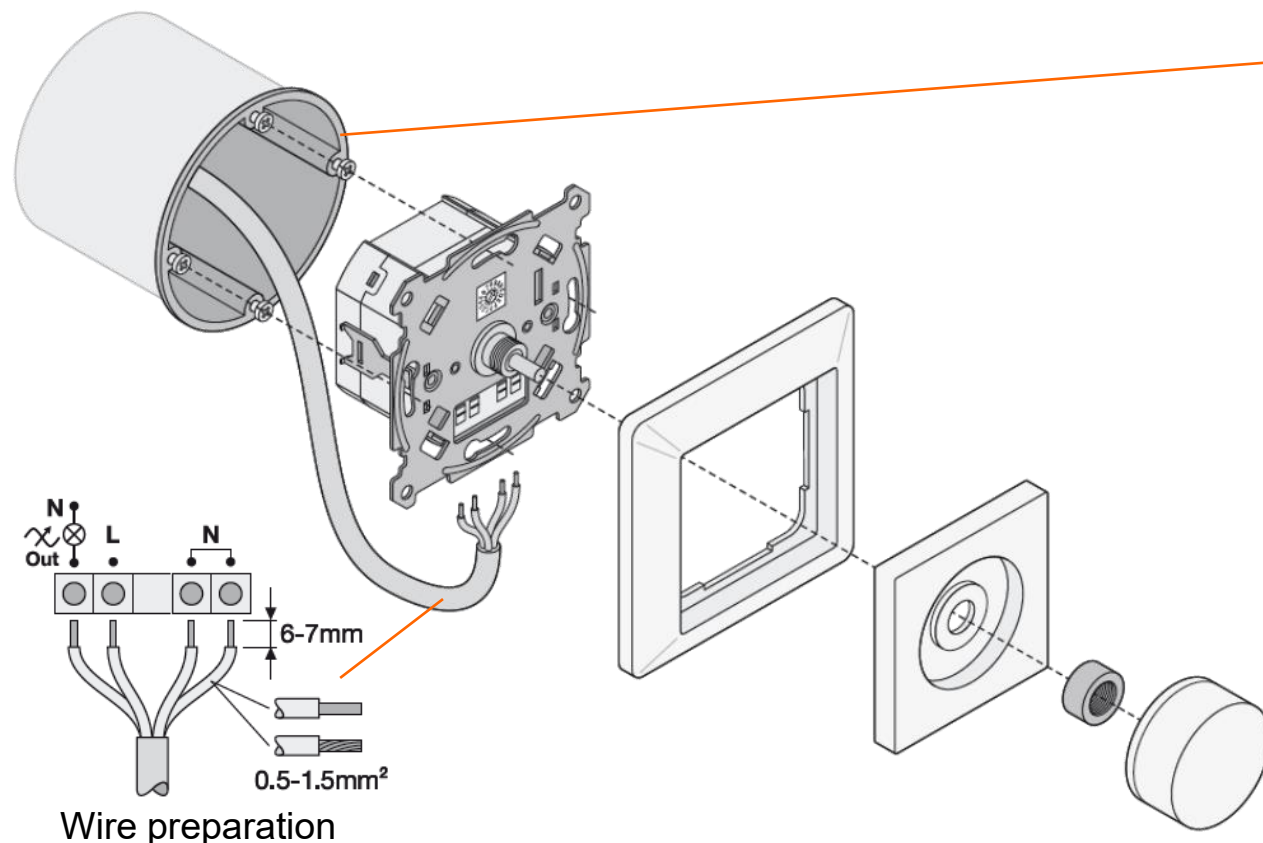
Application areas

- **Residential / Shop/ Hospitality areas / hotel rooms**



Application guide

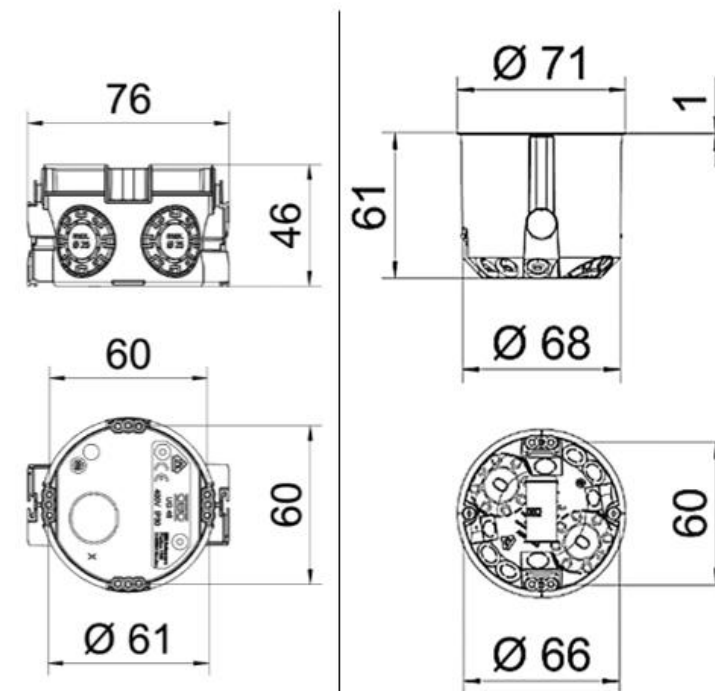
MCU SELECT DIM / MCU SELECT DIM EXC – Flush mounting



Suitable flush boxes

For concrete walls

/ for hollow walls



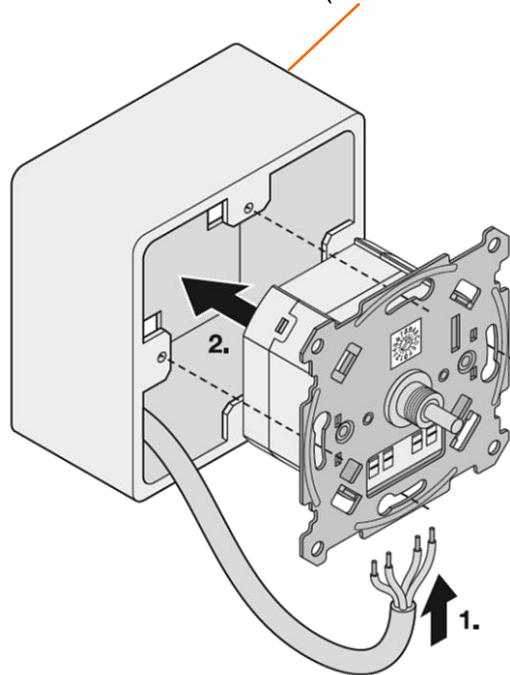
Switch off mains supply during installation !

Application guide

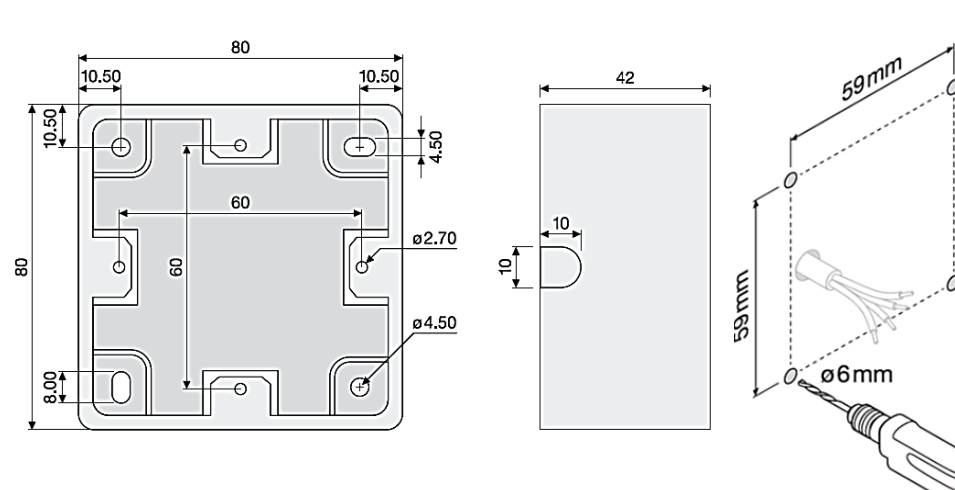
MCU SELECT DIM / MCU SELECT DIM EXC – Surface mounting

Mounting principle

SURFACE MOUNT FRAME
(4058075843561)

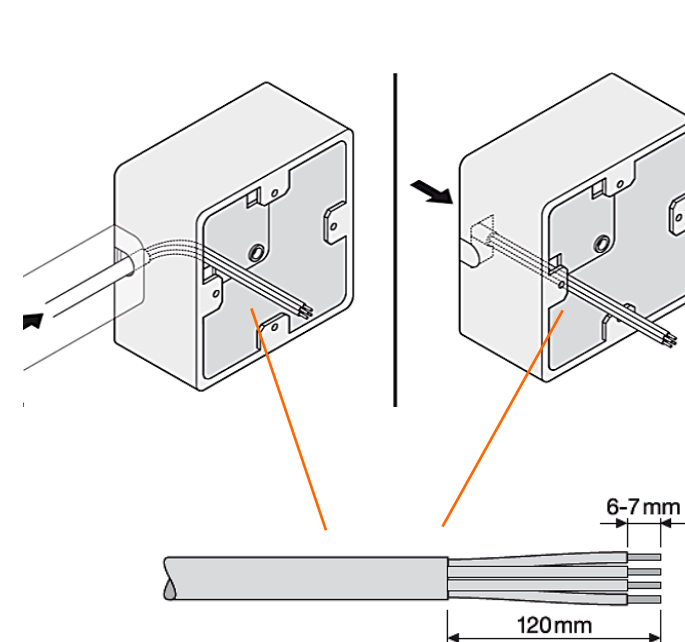


Dimensions and fixation hole pattern



Side cable entry

Rear cable entry



Cable / wire preparation

Hint:

Remove fixing claws for flush boxes when using a surface mount frame



Switch off mains supply during installation !

Application guide

MCU SELECT DIM / MCU SELECT DIM EXC – Compatible design covers

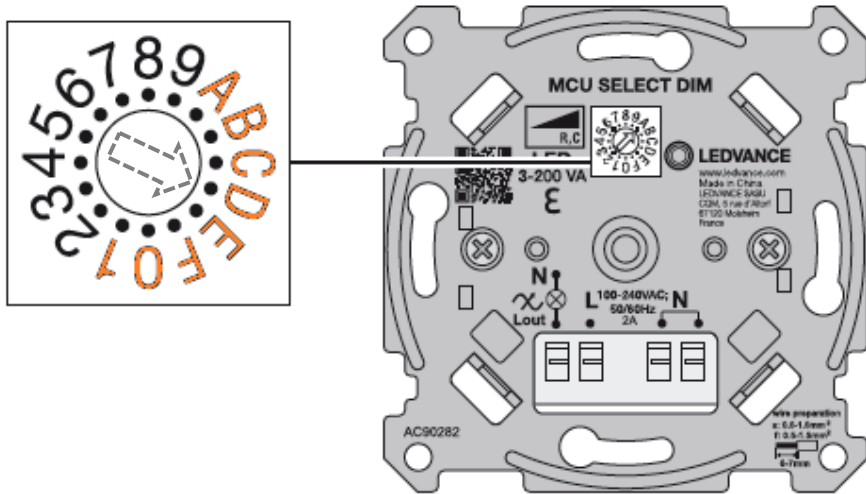
Supplier	Design Line
Busch-Jaeger (apply enclosed axle adapter)	Reflex SI, Reflex SI Linear, Reflex SI / SI Linear, Busch-Duro 2000® SI, Busch-Duro 2000® SI Linear
SIEMENS	Delta i-system, Delta vita, Delta profil, Delta Stil
SCHNEIDER	Exxact Design, Exxact Primo, Exxact Basis, Exxact Fest
BERKER	Q1, Arsys
GIRA	S Farbe, System55
JUNG	LS Plus, LS Design, Ein Plus, Ein 500, AS500

(subject to change without notice)

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MCU SELECT DIM / MCU SELECT DIM EXC– Configuration: Behaviour after mains interruption

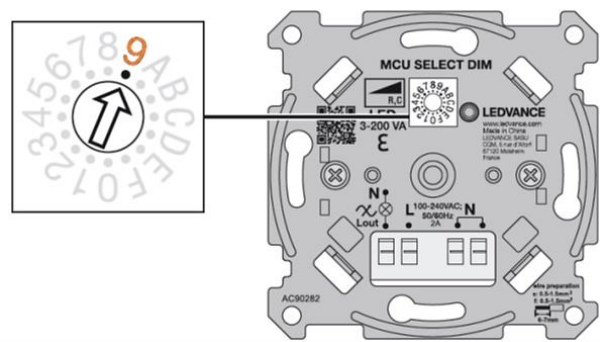
State of the lighting after mains interruption can be set by the rotary switch of the MCU



Setting	Meaning
A	Last dimming level and switching state before mains interruption will be re-established
B	Memory value
C	10% brightness
D	20% brightness
E	30% brightness
F	50% brightness
0	80% brightness
1	100% brightness
2	OFF (Light level 0%)
3-9	Reserved (<u>do not use</u>)

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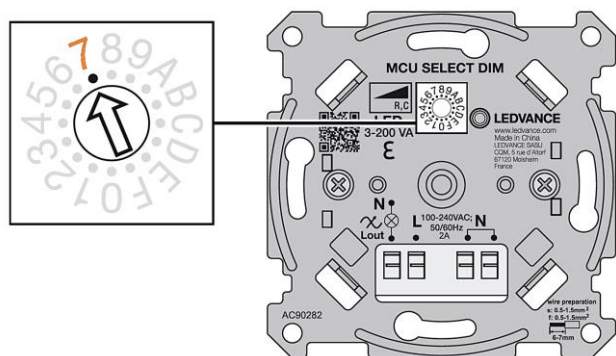
MCU SELECT DIM / MCU SELECT DIM EXC – Configuration: *RESET*



RESET MCU		Remark
Step 1:	Remove knob and frame, note actual position of rotary then set rotary to position 9	Note down original position of rotary
Step 2:	Refit frame and knob	
Step 3:	Press the MCU knob for >5s until light flashes	After RESET Min / Max level and backlight are set to factory default. Dimming curve is set to linear.
Step 4:	Remove knob and glass plate, set rotary back to original position	
Step 5:	Refit frame and knob	

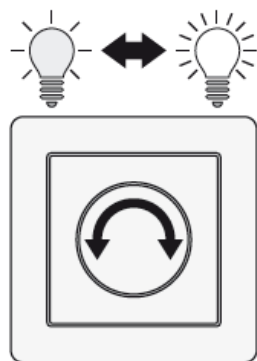
Application guide

MCU SELECT DIM / MCU SELECT DIM EXC – Configuration: Set Minimum dimming level



Step 1:

1. Remove knob and plastic frame
2. Note actual position of rotary
3. Set rotary to position 7

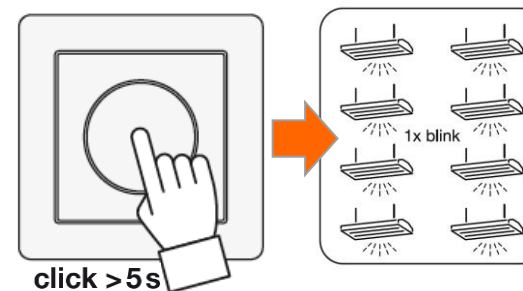


Step 2:

1. Refit frame and knob
2. Dim lights to the desired minimum level

Tip: Optimal Minimum

When using LED lamps, ensure that Min level is high enough. An optimal Minimum should allow a reliable switch ON also in Min state.



Step 3:

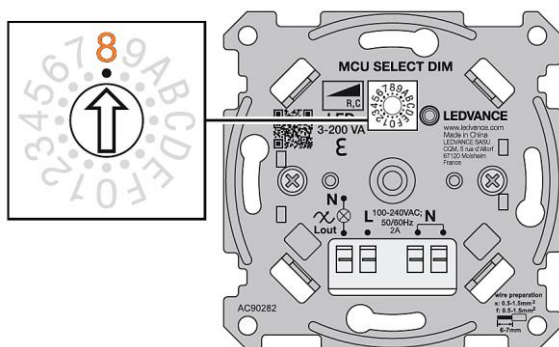
1. Store level as new minimum by pushing the knob >5s
2. Lights will blink to confirm storage

Step 4:

1. Remove knob and frame
2. Set back rotary to original position
3. Refit frame and knob

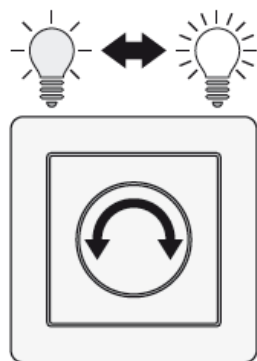
Application guide

MCU SELECT DIM / MCU SELECT DIM EXC – Configuration: Set Maximum dimming level



Step 1:

1. Remove knob and plastic frame
2. Note actual position of rotary
3. Set rotary to position 8

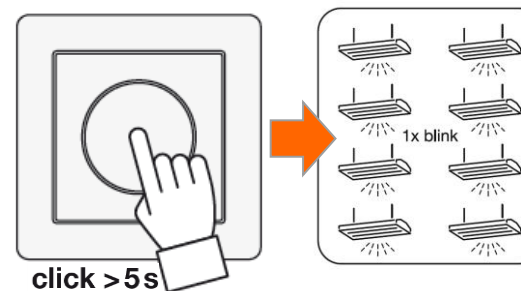


Step 2:

1. Refit frame and knob
2. Dim lights to the desired Maximum level

Tip: Optimal Maximum

Increase level slowly by clockwise rotation until brightness of the lamp does not change anymore, then go back. one tick counter-clockwise



Step 3:

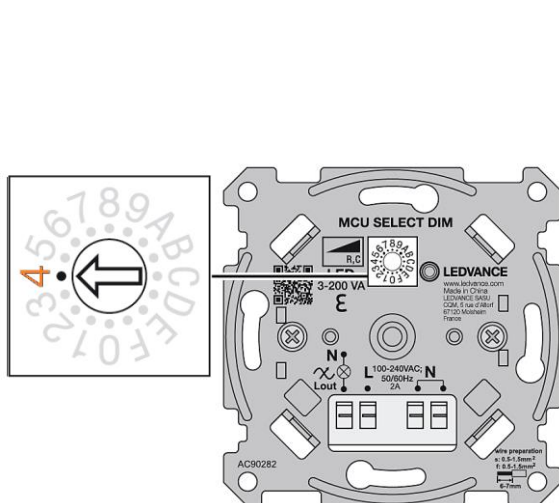
1. Store level as new maximum by pushing the knob >5s
2. Lights will blink to confirm storage

Step 4:

1. Remove knob and frame
2. Set back rotary to original position
3. Refit frame and knob

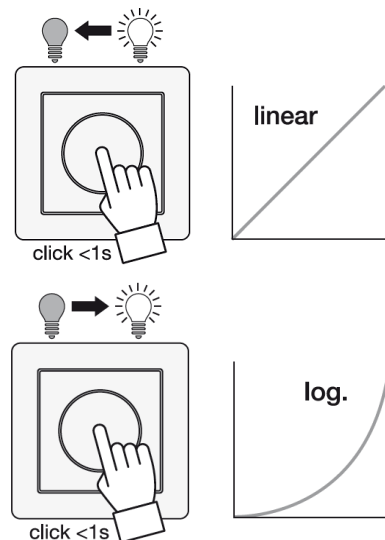
Application guide

MCU SELECT DIM / MCU SELECT DIM EXC – Configuration: Select dimming curve



Step 1:

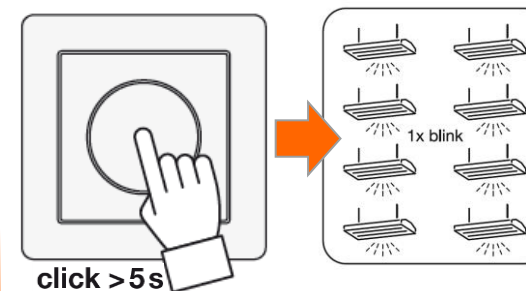
1. Remove knob and plastic frame
2. Note actual position of rotary
3. Set rotary to position 4



Step 2:

1. Refit frame and knob
2. To select the linear curve (ex-factory setting) switch off the light by a short push to the knob.
To select the logarithmic curve switch on the light by a short push to the knob

Tip: selection / change of dimming curve does not affect the set Min or Max levels and can be done / undone at any time



Step 3:

1. Store selected dimming curve by pushing the knob >5s
2. Lights will blink to confirm storage

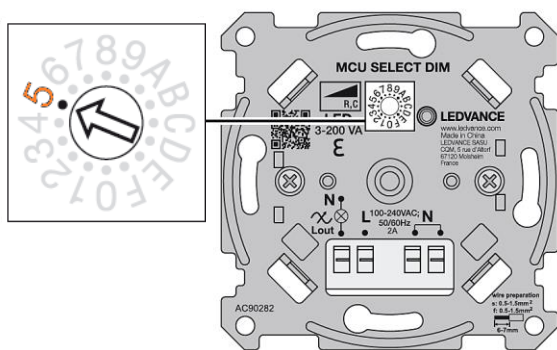
Step 4:

1. Remove knob and frame
2. Set back rotary to original position
3. Refit frame and knob

Application guide

MCU SELECT DIM / MCU SELECT DIM EXC – Configuration: Orientation light setting

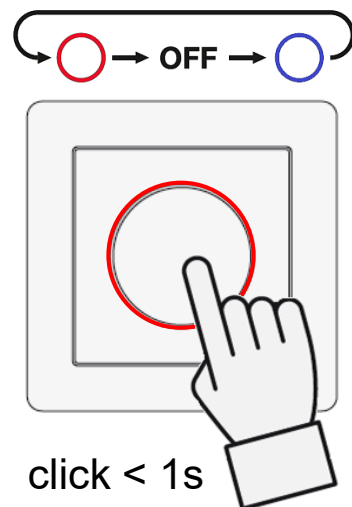
The orientation backlight of the knob is switched on if the output is switched off, by that the MCU knob stays visible in the dark



Step 1:

1. Remove knob and frame
2. Note actual position of the rotary
3. Set rotary to position **5**

→ actual orientation light setting is displayed



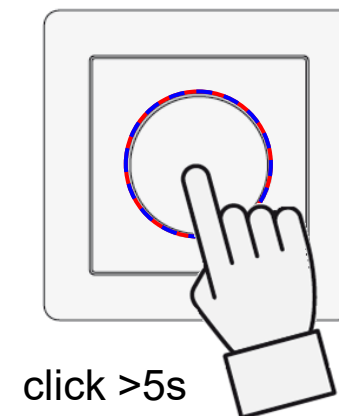
Step 2:

1. Refit frame and knob
2. Select orientation backlight colour red / blue or orientation light off by short pushes to the knob



Step 3:

1. If red or blue is selected, adjust brightness by knob rotation
2. If "off" is selected continue with step 4



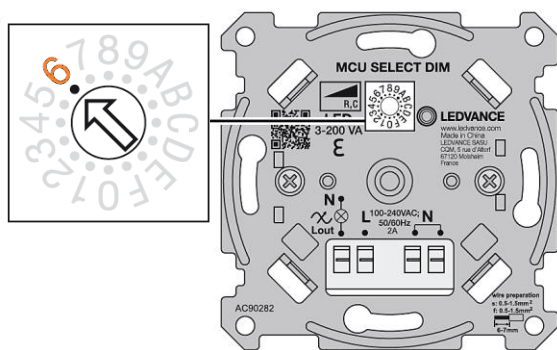
Step 4:

1. Store actual setting by pressing the knob > 5s
→ LED Backlight will blink
2. Remove knob and frame
3. Set back rotary to original position
4. Refit frame and knob

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MCU SELECT DIM / MCU SELECT DIM EXC – Configuration: Operation light setting

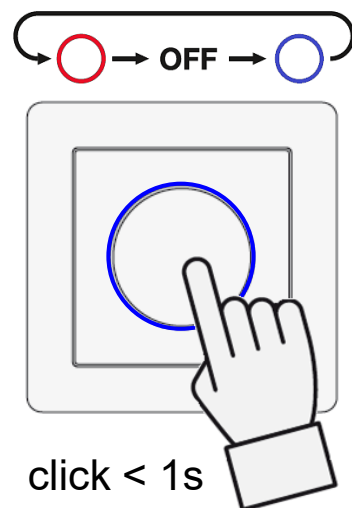
The operation backlight of the knob is switched on if output is switched on, by that the MCU indicates that light is still on



Step 1:

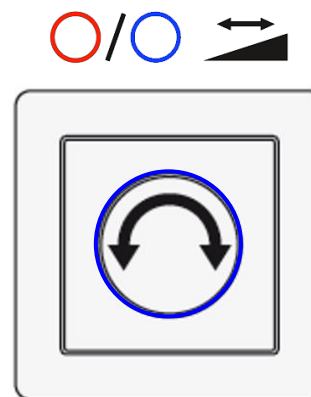
1. Remove knob and frame
2. Note actual position of the rotary
3. Set rotary to position **6**

→ actual operation light setting is displayed



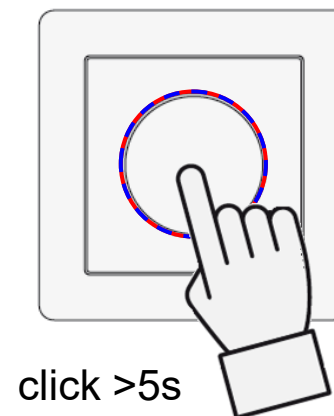
Step 2:

1. Refit frame and knob
2. Select orientation backlight colour red / blue or orientation light off by short pushes to the knob



Step 3:

1. If red or blue is selected, adjust brightness by knob rotation
2. If "off" is selected continue with step 4



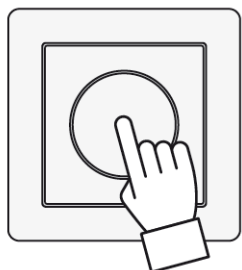
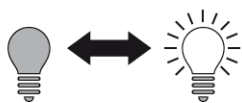
Step 4:

1. Store actual setting by pressing the knob > 5s
→ LED Backlight will blink
2. Remove knob and frame
3. Set back rotary to original position
4. Refit frame and knob

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MCU SELECT DIM / MCU SELECT DIM EXC – User operation

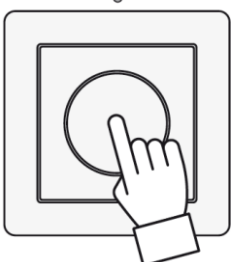
Switch ON / OFF



click <1s

- To switch on / off briefly press the rotary knob of the MCU.
- Switching direction toggles with each press.
(Note: If light is switched on the backlight will be illuminated according to the “operation” light setting when switched off the illumination will be set to “orientation” light as described in the chapter “Configuration” of this guide)

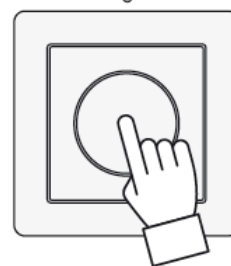
Define manual Switch ON behaviour



2x click < 1s

Store memory value

- To save a specific brightness for Switch ON, set the desired brightness, then store it by double-clicking the knob.
- Confirmation of storage is shown by the lights blinking twice.



2x click < 1s

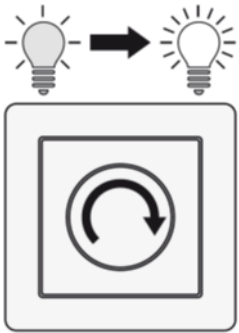
Delete memory value

- To remove a fixed brightness setting for Switch ON, turn off the light and double-click the knob. Successful deletion is confirmed when the lights turn ON to 100% brightness. After deleting fixed levels, the Switch ON will revert to the last values used before manual OFF.

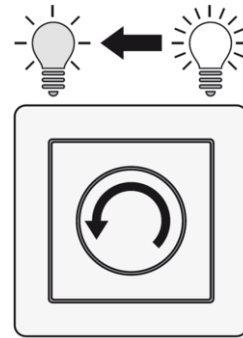
Application guide

MCU SELECT DIM / MCU SELECT DIM EXC – User operation

Dimming



- If light is switched off, switch on via short push to the knob
- Turn knob clockwise to increase the brightness

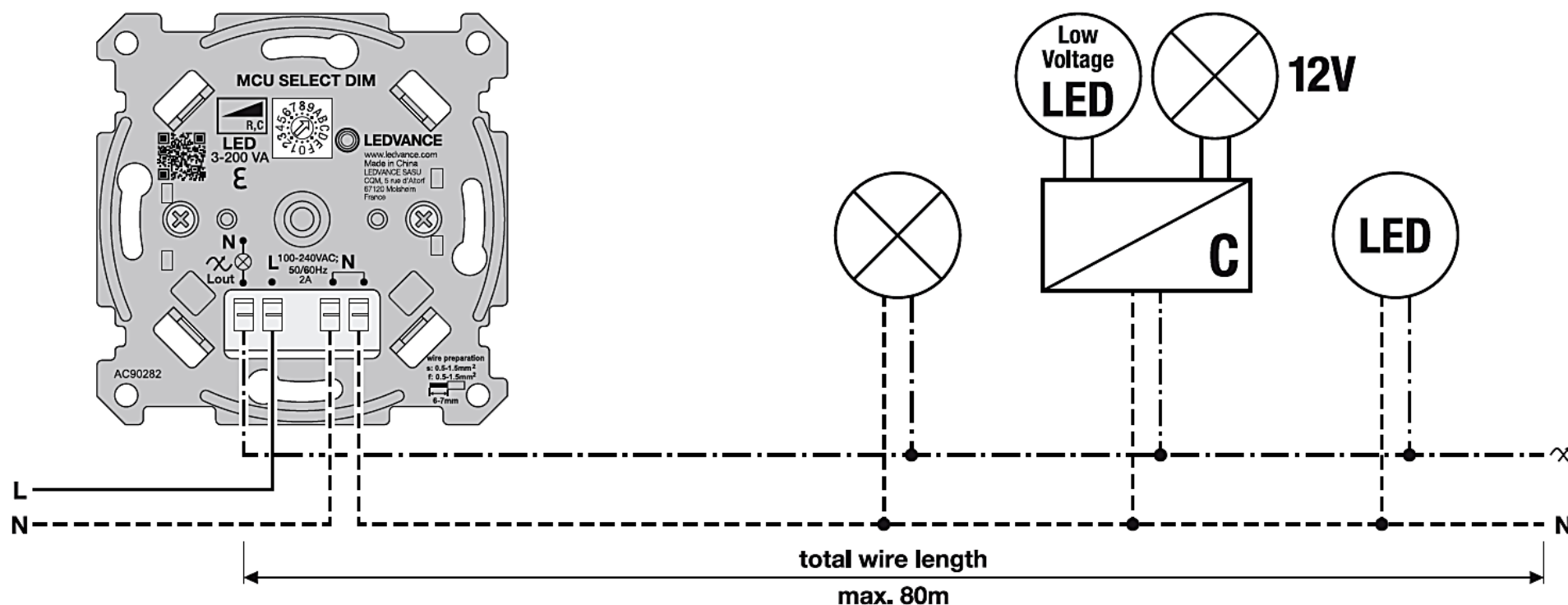


- Turn knob counterclockwise to decrease the brightness

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MCU SELECT DIM / MCU SELECT DIM EXC – Wiring example 1

Standard application

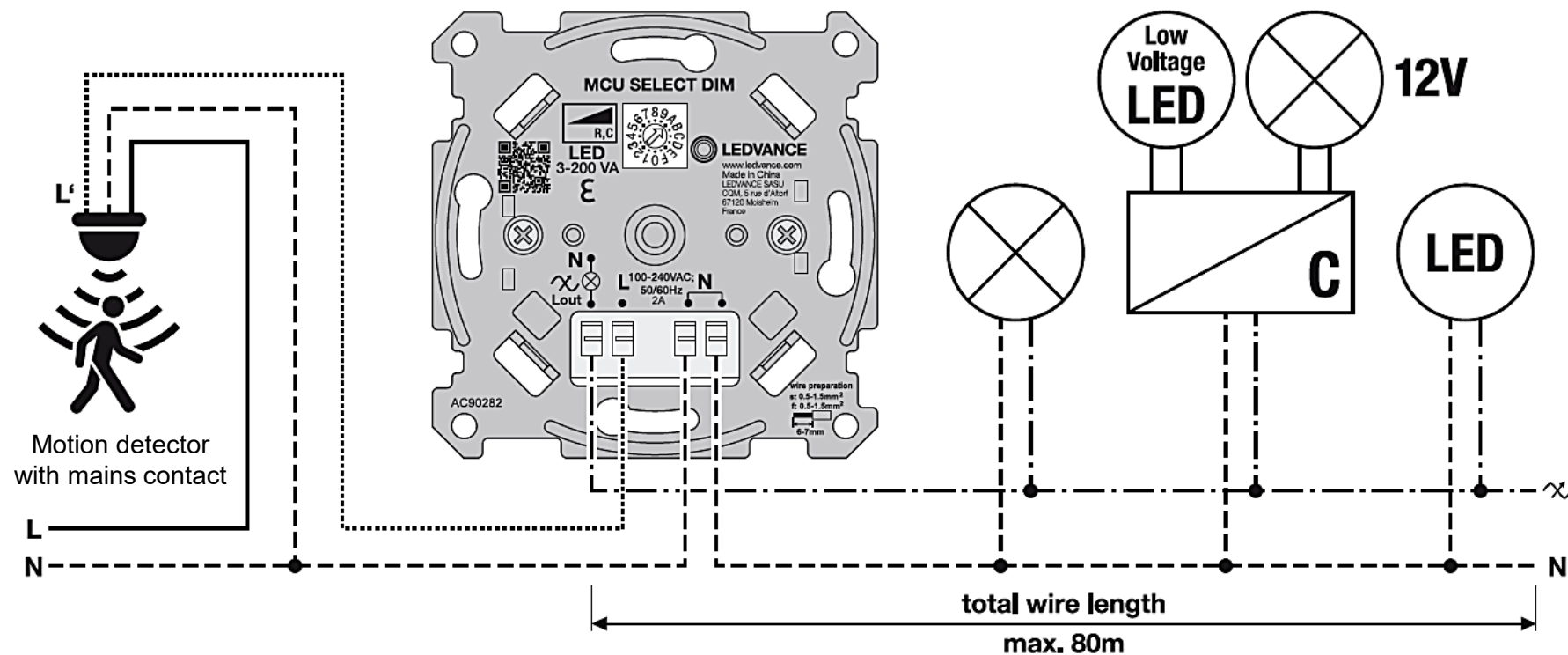


Note: Choose behaviour after mains interruption via the turnkey as described on page 7

Application guide

MCU SELECT DIM / MCU SELECT DIM EXC – Wiring example 2

Application with motion detectors



Fully automatic mode

Select level for switch on by motion via rotary switch	
B	Memory value / Memory-Wert
C	10%
D	20%
E	30%
F	50%
0	80%
1	100%

Semi automatic mode

(= Manual On / automatic off)

Select "OFF" for switch on by motion via rotary switch	
2	OFF

Application guide

MCU SELECT DIM / MCU SELECT DIM EXC

Questions and Answers

Q1: If I use the DIM MCU in combination with motion detectors, how many detectors are allowed?

A1: The number of motion detectors is unlimited, the L' output of all detectors must be interconnected.

Q2: Can I use also daylight dependent control?

A2: If the selected motion detectors have an integrated light sensor, it is possible to set a brightness threshold directly at the sensors. That avoids an unnecessary switch on if sufficient daylight is available. A closed loop / daylight harvesting control is not possible

Q3: Can I use DALI sensors instead of the standard motion detectors?

A3: No, the MCU does not support devices such as DALI Sensors or DALI Push button couplers.

Q4: Can I use a light switch in between the dimmer and the connected lamps?

A4: A switch on the secondary side of the dimmer is not allowed as it may trigger the short cut protection, please use a switch on the primary side instead and set the rotary switch of the dimmer to position "A"

Q5: I have a room with multiple entry doors; Can I connect DIM MCU in parallel to build up multiple points of control?

A5: No, a parallel connection of DIM MCU is not allowed and will damage the devices. Instead of multiple MCU use standard light switches at each entry door and one DIM MCU at a central point to control the dimming level. Set the rotary switch of the MCU to a suitable position see table "Fully automatic mode" on page 17

Q6: I do not need the knob backlight; Can I switch it off completely?

A6: Yes, the orientation- as well as the operation-light can be switched between red, blue and off as described on pages 12/13

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MCU SELECT DIM / MCU SELECT DIM EXC

Troubleshooting

QT1: The connected lamps switch off when I dim down and do not switch on in low dimming state what is root cause?

AT1: LED lamps need more power to switch ON than classic lamps, please increase the Minimum level as described on page 9

QT2: If I dim down from maximum and rotate the knob in the beginning nothing happens?

AT2: Different to classic lamps, LED lamps do not need the full sine wave to achieve full brightness. Please reduce the maximum (phase cut-) level as described on page 10

QT3: Lights can be switched ON /OFF but are not dimmable and stay at fixed level when switched ON the possible root cause?

AT3: The Min/Max settings may not fit with the connected lamp, please RESET the dimmer as described on page 8 and retry.

If the problem persists most probably the connected lamps are not phase cut dimmable.

QT4: Some lamps have a different light output than the rest although they are connected to the same DIM MCU ?

AT4: With LED lamps this can happen easily if connected lamps belong to different type/brand or different generation. Please ensure that the lamps connected are identical in type, brand and generation.

QT5: The DIM MCU does not react and the backlight blinks red?

AT5: A red blinking backlight indicates an overload and/or an overtemperature.

Please reduce load and in case of a possible overtemperature please wait > 15min, then retry and power cycle if necessary

Application guide

MCU SELECT DIM / MCU SELECT DIM EXC

Technical data

	MCU SELECT DIM / MCU SELECT DIM EXC
Input voltage range (AC)	100-240V (50/60Hz)
Load range (resistive / capacitive)	400W / 200VA
Allowed wire diameter	0.5-1.5mm ²
Protection class	II
Protection type	IP 20
Ambient temperature range	-25...+50°C
Humidity range	10-95%
Max. total wire length phase cut output	80m
Dimming range* (incandescent / LED*)	0.1-100% / 1-100%
Dimensions (l x w x h)	71x71x53mm / 80x80x55mm
Net weight	85g / 124g
Lifetime	> 50.000h

*typical (lighting/lamp dependent)

THANK YOU