# Application examples for installers and planners

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#### Nr. 1: with LUXOMAT<sup>®</sup> Indoor 180 and PD2



#### Typical example 1: Corridor with LUXOMAT<sup>®</sup> Indoor180 and PD2

#### Application description:

An automatic lighting control with wall switches is to be implemented as a occupancy detector in an office-floor corridor. 4-lighting groups are to be formed and each is to be individually switched:

The lobby to the staff elevators (yellow), a reception area (green), and 2 separate corridor sectors (red and blue). **Note:** 

Pay special attention to the access areas. To ensure "dead zones" are prevented in the corridor, increase the switch-off delay time if necessary. When the detectors are being directly (radially) approached, it is critical that the range specifications specially indicated in the catalogue for "frontal approach (radial approach)" be taken into consideration. Corridors can be ideally kept under surveillance with both the PD4 corridor detector as well as with the Indoor 180 wall switch.

#### Building information:

Type: Corridor without daylight Dimensions: L 40 x W 15 m Room height: 2.70 m (in light)

#### Illumination:

*4* separate lighting groups with electronic ballasts

#### Products shown:

4 each Indoor 180 SLAVE 2 each Indoor 180 MASTER 1 each PD2 SLAVE 2 each PD2 MASTER

#### Master settings PD2 / Indoor180:

Switch-off delay time R1: >5 min Brightness switching value R1: 500 Lux or individual using remote control Switch-off delay value R2: optional

#### **Connected circuit:**

-Master operation in the reception area and in the lift antechamber

-Master/Slave switching in transit area.

-The master unit must always be mounted at the point with the least proportion of daylight.

#### Nr. 2: with LUXOMAT® PD3



PD3 AP/FP/EN

#### Typical example 2: Corridor with LUXOMAT® PD3

#### Application description:

Corridor in sports facilities with 3 lighting groups: staffelevator lobby (yellow), corridor area (red), stairwell area (green)

#### Note:

Pay special attention to the access areas. To ensure "dead zones" are prevented in the corridor, increase the switch-off delay time if necessary. When being directly (radially) approached, it is critical to take the detector range specifications specially indicated in the catalogue into consideration for "frontal approach (radial approach)"

#### Building information:

Type: Corridor without daylight Dimensions: L 40 x W 15 m Room height: 2.70 m (clear opening)

Illumination: 3 separate lighting groups with electronic ballasts

#### Products shown:

7 each PD3 AP/FP/EN

#### PD3 device settings:

Switch-off delay time: > 5 min. Brightness: Day/Night ("Sun" symbol)

#### Connected circuit:

- Parallel operation in corridor area
- Standard operation in lift room and stairwell area

#### Nr. 3: with LUXOMAT<sup>®</sup> PD4-RC/C and PD4/M



#### Typical example 3: with LUXOMAT® PD4-RC/C and PD4/M

#### Application description:

Corridor in an office level with 3 lighting groups: lobby to the passenger lifts (red), corridor area (yellow) Stairwell area (green)

#### Note:

Pay special attention to the access areas to ensure "Dead zones" are prevented in the corridor. Increase the switch-off delay time if necessary. When being directly (radially) approached, it is critical to take the detector range specifications specially indicated in the catalogue into consideration for "frontal approach (radial approach), 10 m radius for the corridor presence detector. The large sensitivity is available in the corridor axis only. Across applies the sensitivity of the standard PD4. /See also range diagramm page 22 )

#### Building information:

Type: Corridor without daylight. Room height: 2.70 m

#### 3 separate lighting groups with electronic ballasts

#### Products shown:

1 each PD4-RC/C Master (Corridor presence detector) 2 each PD4-RC/C Slave (Corridor presence detector) 4 each PD4 Master

#### PD4 device settings:

Switch-off delay time: appr. 5 min. Brightness: Day/Night ("Sun" symbol)

#### Connected circuit:

Master-/slave operation in corridor area Standard operation in lift room and stairwell area

■ **Please note:** We would be glad to help you in your product selection and positioning. Simply send us your layouts via fax or email, and we will provide you with a suggested plan – at no charge, of course.

Illumination:

#### Nr. 4: with LUXOMAT® PD2



PD2 Master/Slave

#### Typical example 4: Open-plan office with LUXOMAT® PD2

#### Application description:

Automatic lighting control with occupancy detectors is to be implemented in an open-plan office. The multiple and single workstations, the reception area, and the lobby to the passenger lifts are each switched individually. The transit area is to be entirely surveillanced.

#### Building information:

Type: Open-plan office with daylight Dimensions: L 34 x W 16 m Room height: 2.70 m (headroom)

#### Illumination:

11 separate lighting groups with electronic ballasts

#### Products shown:

4 each PD2 SLAVE 11 each PD2 MASTER

#### PD2 Master device settings:

Switch-off delay time R1: 5 min Brightness switching value R1: 300 lux or individual using remote control Switch-off delay time R2: optional

#### Connected circuit:

Master operation at workstations and in the reception area, master/slave switching in transit area. The master unit must always be mounted at the point with the least proportion of daylight.

Nr. 5: with LUXOMAT® PD3



### Typical example 5: With LUXOMAT<sup>®</sup> PD3

#### Application description:

The lighting in the stairwell of a multi-family dwelling is to be automatically controlled with occupancy detectors. The presence detector is to be mounted on the ceiling.

#### Building information:

Type: Stairwell with 3 residential floors and a basement level without daylight. Dimensions: L 7.0 x W 2.5 m Floor height: 2.70 m (headroom)

#### Illumination:

1 lighting group with electronic ballast

#### Products shown:

4 each PD3

#### Device settings:

Switch-off delay time: 5 min Brightness switching value: approx. 300 Lux

#### Connected circuit:

Parallel operation

#### Alternatives:

Typical example no. 6: Stairwell with PD2 occupancy detectors

Typical example no. 7: With Indoor 180/R occupancy detectors using 3-conductor engineering Typical example no. 8: Stairwell with Indoor 180/SC occupancy detectors using 2-conductor impulse engineering Typical example no. 9, : Stairwell with RC-plus Nr. 6: with LUXOMAT® PD2



#### Typical example 6: With LUXOMAT<sup>®</sup> PD2

#### Application description:

In the stairwell of a multi-family dwelling, two lighting groups (residential floors/basement level) are to be automatically controlled with occupancy detectors. The occupancy detectors are to be mounted on the ceiling.

#### Building information:

Type: Stairwell with 3 residential floors and a basement floor without daylight. Dimensions: L 7.0 x W 2.5 m Floor height: 2.70 m (headroom)

#### Illumination:

2 Lighting groups with electronic ballast (basement level without proportion of daylight, residential floors)

#### Products shown:

2 each PD2 SLAVE 2 each PD2 MASTER

#### PD2 Master device settings:

Switch-off delay time R1: 5 min Brightness switching value R1: 300 Lux Switch-off delay time R2: optional

#### Connected circuit:

Master/slave switching with optional push button operation on the residential floors. The master unit must always be mounted at the point with the least proportion of daylight. Master operation with optional push-button control at the basement level.

#### Alternatives:

Typical example no. 5: Stairwell with PD3 presence detector Typical example no. 7: With Indoor 180/R presence detector using 3-conductor engineering Typical example no. 8: With Indoor180/SC occupancy detectors using 2-conductor impulse engineering Typical example no. 9, : Stairwell with RC-plus





#### Typical example 7: Stairwell with LUXOMAT<sup>®</sup> Indoor180/R with 3-conductor engineering

#### Application description:

The lighting in the stairwell of a multi-family dwelling is to be automatically controlled with occupancy detectors, floor by floor. The occupancy detectors are to be formed as wall switches.

#### Building information:

Type: Stairwell with 3 residential floors and a basement level without daylight. Dimensions: L 7.0 x W 2.5 m Floor height: 2.70 m (headroom)

Illumination:

4 separate lighting groups

#### Products shown:

4 each Indoor 180/R

#### Device settings:

Switch-off delay time: 5 min Brightness switching value: Day/Night ("Sun" symbol)

#### **Connected circuit:**

Standard operation (floor by floor, optional push-button operation with opener button)

#### Alternatives:

Typical example no. 5: Stairwell with PD3 presence detector Typical example no. 6: Stairwell with PD2 occupancy detectors

Typical example no. 8: Stairwell with Indoor180/SC occupancy detectors using 2-conductor impulse engineering Typical example no. 9, : Stairwell with RC-plus

# Nr. 8: with LUXOMAT<sup>®</sup> Indoor180/SC using 2-conductor engineering with direct triggering of the stairwell lighting timer



# Typical example 8: With LUXOMAT<sup>®</sup> Indoor 180/SC using 2-conductor engineering with direct triggering of the stairwell lighting timer

#### Application description:

The lighting in the stairwell of a multi-family dwelling is to be automatically controlled with occupancy detectors, floor by floor. The occupancy detectors are to be formed as wall switches.

#### Building information:

Type: Stairwell with 3 residential floors and a basement level without daylight. Dimensions: L 7.0 x W 2.5 m Floor height: 2.70 m (headroom)

#### Illumination:

1 lighting group with staircase switch

#### Products shown:

4 each Indoor180-SC

#### Device settings:

Switch-off delay time: as close as possible to the stairwell lighting-timer switch-off delay time Brightness switching value: Day/Night ("Sun" symbol)

## Connected circuit: Parallel operation

#### Alternatives:

Typical example no. 5: Stairwell with PD3 presence detector Typical example no. 6: Stairwell with PD2 occupancy detectors

Typical example no. 7: Stairwell with Indoor180/R occupancy detectors using 3-conductor engineering Typical example no. 9, : Stairwell with RC-plus

#### Nr. 9: with LUXOMAT® RC-plus



#### Typical example 19: Stairwell with LUXOMAT® RC-plus

#### Application description:

In the stairwell of a multi-family dwelling, the lighting is (residential floors/basement level) to be automatically controlled with motion detectors. The motion detectors are to be mounted on the ceiling.

#### **Building information:**

Type: Stairwell with 3 residential floors and a basement floor without daylight. Dimensions: L 7.0 x W 2.5 m Floor height: 2.70 m (headroom)

#### Illumination:

4 Lighting separate groups

#### Products shown:

4 each RC-plus 130

#### RC-plus device settings:

Switch-off delay time R1: 4 min Brightness switching value R1: day/night (symbol sun)

#### Connected circuit:

Standard operation in each floor, optional control by a push button, NC )

#### Alternatives:

Typical examples no. 5, no.6, no. 7, no. 8,



#### Nr. 10: Conference room A with LUXOMAT<sup>®</sup> PD2



#### Typical example 10: Conference room A with LUXOMAT<sup>®</sup> PD2

#### Application description:

In a conference room, the lighting is to be controlled dependent on presence and daylight. Despite the automatic control, it should be possible to influence the current switching Switch-off delay time R2: optional status via a button or remote control. The occupancy detectors are to be mounted on the ceiling.

#### Building information:

Type: Conference room with daylight. Dimensions: L 7.8 x W 5.8 m Floor height: 2.70 m (headroom)

#### Illumination:

1 light group with electronic ballast

#### Products shown:

1 each PD2 SLAVE 1 each PD2 MASTER

### Device settings:

Switch-off delay time R1: at least 5 min Brightness switching value R1 300 Lux

#### Connected circuit:

Master/slave switching with optional push button operation. The master unit must always be mounted at the point with the least proportion of daylight.

#### Alternatives:

Typical example no. 11,12: Conference room B,C

REG. Conference room example

#### Nr. 11: Conference room B with LUXOMAT<sup>®</sup> Indoor180



#### Typical example 11: Conference room B with LUXOMAT<sup>®</sup> Indoor180

#### Application description:

In a conference room, the lighting is to be controlled dependent on presence and daylight. Despite the automatic control, it should be possible to manually influence the current switching status via a button or remote control. The presence detector is to be mounted on the ceiling or the wall.

#### Building information:

Type: Conference room with daylight. Dimensions: L 7.8 x W 5.8 m Floor height: 2.70 m (headroom)

#### Illumination:

1 lighting group with electronic ballast

#### Products shown:

1 each PD2 SLAVE 1 each Indoor 180 MASTER

#### Indoor180 Master device settings:

Switch-off delay time R1: at least 5 min Brightness switching value R1 300 Lux Switch-off delay time R2: optional

#### Connected circuit:

Master/slave switching with optional push button operation. The master unit must always be mounted at the point that has the least amount of daylight.

#### Alternatives:

Typical example no. 10,12: Conference room A,C



#### Nr. 12: with LUXOMAT<sup>®</sup> PD1 and Indoor180



#### Typical example 12: Conference room C with LUXOMAT® PD1 and Indoor180

#### Application description:

In a conference room, the lighting is to be controlled dependent on presence and daylight. Despite the

automatic control, it should be possible to manually influence the current switching status via a button or remote control. The presence detector is to be mounted

or remote control. The presence detector is to be mounted on the ceiling andon the the wall.

#### Building information:

Type: Conference room with daylight. Dimensions: L 7.8 x W 5.8 m Floor height: 2.70 m (headroom)

#### Illumination:

1 lighting group with electronic ballast

#### Products shown:

- 1 each PD1 SLAVE
- 1 each Indoor180 MASTER

#### Indoor180 Master device settings:

Switch-off delay time R1: at least 5 min Brightness switching value R1 300 Lux Switch-off delay time R2: optional

#### **Connected circuit:**

Master/slave switching with optional push button operation. The master unit must always be mounted at the point that has the least amount of daylight.

#### Alternatives:

Typical example no. 10,11: Conference room A/B

#### Nr. 13: with LUXOMAT® PD4



### Typical example 13: Underground car park with LUXOMAT® PD4

#### Application description:

In the underground car park, the best possible surveillance of the entrance area to the garage and the main transit area should be achieved with as few occupancy detectors as possible. Blind spots in certain partial areas of the garage are to be bridged with adapted switch-off delay timing. The lighting is to be divided into two separate lighting groups (gate and wall sides).

The occupancy detectors are to be mounted exclusively on the ceiling.

#### Object description:

Type: Underground car park without daylight. Dimensions: L 77 x W 35 m Room height: 3 m

#### Illumination:

2 separate lighting groups with electronic ballasts Variation A) directly switched by the presence detector Variation B) switched via external timer

#### Products shown:

6 each PD4

#### Device settings:

Variation A) switch-off delay time: 8 min, brightness switching value: Day/Night ("Sun" symbol) Variation B) switch-off delay time: Impulse, brightness switching value: Day/Night ("Sun" symbol)

#### **Connected circuit:**

Parallel circuit per lighting group

**Please note:** Please ensure that the presence detector installation is always made lateral to the pedestrian and vehicle driving direction. If one walks directly toward the detector, the range is significantly reduced.

#### Nr. 14: with LUXOMAT® RC-plus



### Typical example 14: Underground car park with LUXOMAT® RC-plus

#### Application description:

In the underground car park, the best possible surveillance of the entrance area to the garage and the main transit area should be achieved with as few occupancy detectors as possible. Blind spots in certain partial areas of the garage are to be bridged with adapted switch-off delay timing. The lighting is to be divided into two separate lighting groups (gate and wall sides).

The occupancy detectors are to be mounted exclusively on the ceiling.

#### **Object description:**

Type: Underground car park without daylight. Dimensions: L 77 x W 35 m Room height: 3 m

#### Illumination:

2 separate lighting groups with electronic ballasts Variation A) directly switched by the presence detector Variation B) switched via external timer

#### Products shown:

6 each RC-plus230 + 2 each RC-plus130

#### Device settings:

Variation A) switch-off delay time: 8 min, brightness switching value: Day/Night ("Sun" symbol) Variation B) switch-off delay time: Impulse, brightness switching value: Day/Night ("Sun" symbol)

#### **Connected circuit:**

Parallel circuit per lighting group

**Please note:** Please ensure that the presence detector installation is always made lateral to the pedestrian and vehicle driving direction. If one walks directly toward the detector, the range is significantly reduced.

Nr. 15: with LUXOMAT® PD3



#### Typical example 15: Private garage with LUXOMAT® PD3

#### Application description:

In a private garage, the lighting is to be controlled automatically with occupancy detectors. The presence detectors are to be mounted on the ceiling.

#### Building information:

Type: Private garage without daylight. Dimensions: L 58 x W 8 m Room height: 2.1 m

#### Illumination:

1 lighting group with electronic ballast

#### Products shown:

1 each PD3 AP/FP/EN

#### **Device** settings:

Switch-off delay time: 4 min Brightness switching value: Day/Night ("Sun" symbol)

**Connected circuit:** Standard operation



#### Nr. 16: with LUXOMAT® PD2



#### Typical example 16: Individual office with LUXOMAT® PD2

#### Application description:

In an individual office, the lighting is to be controlled dependent on presence and daylight. Even with the automatic control, it should be possible to manually influence the current switching status via a button or remote control. The occupancy detectors are to be mounted on the ceiling.

Object description: Type: Individual office with daylight Dimensions: 4 x 5 m

#### Illumination:

1 lighting group with electronic ballast

Products shown: 1 each PD2 MASTER

#### **Device** settings:

Switch-off delay time R1: 10 min Brightness switching value R1: 300 lux or individual using remote control Switch-off delay time R2: optional

#### **Connected circuit:**

Master operation with optional button operated control

#### Nr. 17: with LUXOMAT<sup>®</sup> Indoor 180/R

B





<u>Indoor180/R</u>

Blind areas reachable through noise sensitivity

#### Typical example 17: Wash rooms with LUXOMAT<sup>®</sup> Indoor180/R

#### Application description:

Wash rooms with enclosed WC booths, wall installation of the presence/sound detector.

Combined presence/sound sensors are used with which even blind spots, such as toilet booths, can be monitored dependent on noises.

#### Note:

The noise sensitivity should be pointed out to the toilet guests, e.g. using a poster inside the booths.

#### Object description:

Type: public toilet without daylight. Room height: 2.70 m

#### Illumination:

1 lighting group with electronic ballast per room

#### Products shown:

2 each WS 180/R presence/sound detectors

#### Device settings:

Switch-off delay time: 10 min. Brightness: Day/Night ("Sun" symbol) Noise sensitivity: The optimum sensitivity is to be determined through tests

#### **Connected circuit:**

Standard operation with noise sensitivity

#### Alternatives:

Typical example 17: Wash room with PD3 occupancy detectors



#### Nr. 18: with LUXOMAT® PD3



#### Typical example 18: Wash rooms with LUXOMAT® PD3

Application description: Wash rooms with closed WC booths. Ceiling installation of the presence detector.

**Object description:** Type: Public toilet without daylight. Room height: 2.70 m

Illumination:
 1 lighting group with electronic ballast per room

Products shown: 6 each PD3 AP/FP/EN

#### Device settings:

Switch-off delay time: 10 min. Brightness: Day/Night ("Sun" symbol) **Connected circuit:** Parallel operation per room

Alternatives: Typical example 17

#### Nr. 19: Gymnasium with LUXOMAT® PD4-Master



#### Typical example 19: Gymnasium with LUXOMAT<sup>®</sup> PD4-Master

#### Application description:

Automatic lighting control with occupancy detectors is to be implemented in a triple gymnasium. One lighting group per hall area is to be formed and switched individually. Even with the automatic control, it should be possible to manually influence the current switching status via both a button and using a remote control.

#### Building information:

Type: Gymnasium with daylight Dimensions: L 40 x W 18 m Room height: 8 -10 m (headroom)

#### Illumination:

1 lighting group with electronic ballast per hall section

#### Products shown: 3 each PD4-RC MASTER

**Device** settings:

Switch-off delay time R1: >5 min Brightness switching value: 500 lux or individual using remote control Switch-off delay time R2: optional

#### **Connected circuit:**

Master operation for all 3 lighting groups; Master/slave operation is likewise possible. The master unit must always be mounted at the point with the least proportion of daylight.



#### Nr. 20: with LUXOMAT® PD4



#### Typical example 20: Pallet storage warehouse with LUXOMAT<sup>®</sup> PD4

#### Application description:

In a warehouse, the various sectors are to be monitored using occupancy detectors and the lighting automatically switched. The warehouse is divided into the following sectors: 5-corridors, start-of corridor zone, end-of-corridor zone, warehouse entrance, elevator sector, ramps. Each sub-section is to be individually monitored and switched. The occupancy detectors are to be mounted on the ceiling.

#### Building information:

Type: High-bay warehouse with daylight Dimensions: L 40 x W 37 m Room height: 4.2 m

#### Illumination:

10 lighting groups with electronic ballast

### Products shown:

10 each PD4 AP/UP/DE

#### Device settings:

Switch-off delay time R1: >5 min Brightness switching value: 500 lux or individual using remote control Switch-off delay time R2: optional

#### **Connected circuit:**

Master operation for all 3 lighting groups

#### Nr. 21: with LUXOMAT® PD1



#### Typical example 21: Class room with LUXOMAT® PD1

#### Application description:

In a classroom, the lighting is to be separately controlled dependent on presence and daylight. Despite the automatic control, it should be made possible to manually influence the switching condition via buttons or remote control. The presence detector is to be mounted on the wall.

#### Building information:

Type: Classroom with daylight. Dimensions: L 10 x W 6 m Room height: 2.70 m (headroom)

#### Illumination:

1 lighting group with electronic ballast

#### Products shown: 1 each PD1 SLAVE

1 each PD1 MASTER

#### Device settings PD1 Master:

Switch-off delay time R1: min. 5 min Brightness switching value R1 300 lux Switch-off delay time R2: optional

#### **Connected circuit:**

Master/slave switching with optional push button operation. The master unit must always be mounted at the point with the least proportion of daylight.

#### Nr. 22: with LUXOMAT® PD4-DUO or PD4-DUO DIM

#### PD4-DUO /PD4-DUO DIM



#### Typical example 22: with LUXOMAT<sup>®</sup> PD4-DUO or PD4-DUO DIM

#### Application description:

In a classroom, the lighting is to be separately controlled dependent on presence and daylight in a perimeter near win- 1 each PD4 DUO DIM dows and a light perimeter away from the windows. Despite the automatic control, it should be made possible to manually influence the switching condition via buttons or remote control. Switch-off delay time R1: >5 min The presence detector is to be mounted on the ceiling.

#### Building information:

Type: Classroom with daylight. Dimensions: L 10 x W 6 m Room height: 2.70 m (headroom)

#### Illumination:

2 lighting groups with electronic ballast

#### Products shown:

1 each PD4 DUO or

#### **Device settings:**

Brightness switching value R1 300 lux or individual using remote control Switch-off delay time R2: optional

#### **Connected circuit:**

Standard operation.



#### Nr. 23: with LUXOMAT® RC-plus 230



#### Typical example 23: Boutique with LUXOMAT® RC-plus 230

#### Application description:

In a shop the customer presence has to be indicated by a chime. The motiondetector must be fixed above the entrance door

#### Object description:

Type: Shop with daylight. Room height: 2.70 m

Illumination: In this case the chime only will be activated , no light

#### Products shown: 1 each RC-plus 230

#### Device settings:

Impulse mode Brightness: Day/Night ("Sun" symbol)

## **Connected circuit:** Chime

#### Nr. 24: with LUXOMAT® RC-plus

EG



#### Typical example 24: House entrance, people coming in from the side

#### Application description:

House entrance, wall mounting of the LUXOMAT<sup>®</sup>. The persons approach always on the small access way and must be detected as early as possible.

Object description:
 Type: House entrance with daylight
 Mounting height : 2.5-3m

Illumination:
One light group

Products shown: 1 each RC-plus 130

#### Device settings

Switch-off delay time : 4 min Brightness: dusk in progress (symbol "moon", dark)

Connected circuit:

standard operation

Attention must be paid to the mounting of the motion detector. The mounting must always be lateral to the walking and driving of persons or vehicles. When walking towards the motion detector the range is reduced.