LedgeCircle® RF Manual

NB! Please find the manual in other languages on www.defa.com or scan the QR code.

Norsk   Svensk   Suomi

About the product

LedgeCircle® RF is a Radar MinMaxOff fitting with a daylight sensor and built-in radio communication. This combination makes LedgeCircle® RF ideal for applications like stairways and corridors where the light can remain off or at a reduced level when no one is present.
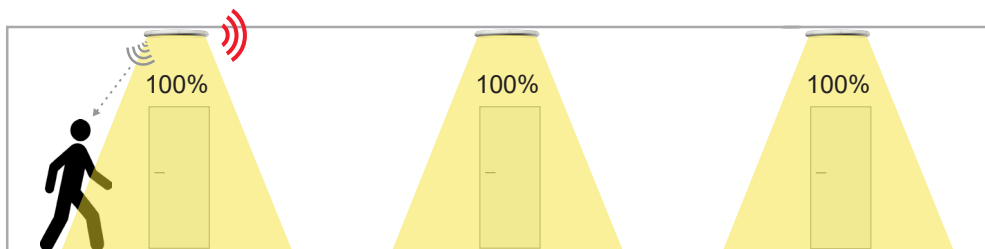
Before your start!

- Read the connection and configuration instructions before you start mounting! This process may be easier to do with the fittings in front of you.
- Note that the Radar sensor may be triggered by motion on the other side of doors and windows. Adjust the sensitivity / range of sensors according to the conditions.
- LedgeCircle® RF fittings communicate at the 868Mhz frequency. Telecom antennas using the 800Mhz and 900Mhz bands may cause fittings to be permanently on. This is most likely to occur at the top floors of buildings with or near such antennas.

How it works

Each LedgeCircle® RF fitting can receive activation signals from up to 30 other fittings and be set to respond either by turning on to the Max level (usually 100%) or to the selected Standby/Min level (10, 20, 30 or 50%). By configuring the sensor and communication settings, a LedgeCircle® RF installation may be set up to behave in a wide variety of ways, depending on your needs. See further instructions on connection and configuration in the following sections.
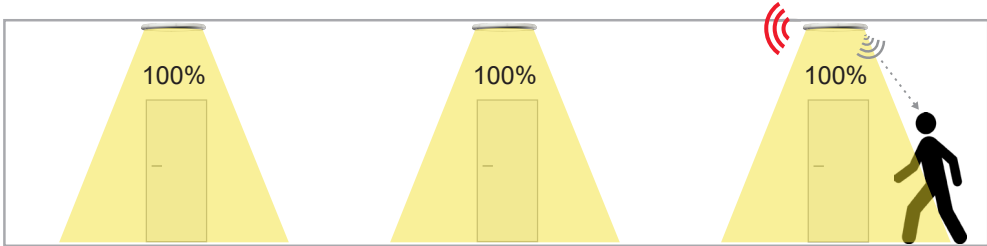
Radar activation - example 1:

All connected fittings react respond to activation signals by turning ON to the Max level (100%). MinMaxOnOff mode.
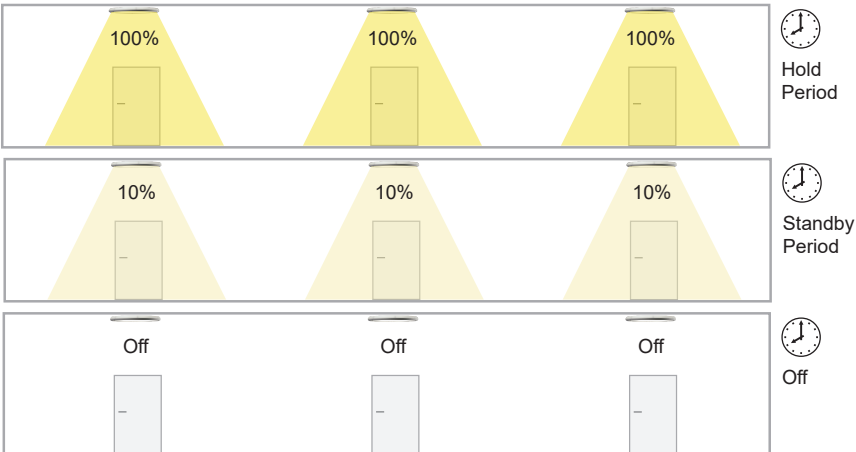

- All fittings are OFF by default.
- The first fitting to detect motion sends an activation signal and turns ON to the Max level.
- All connected fittings respond to the activation signal in the same way.
- This ensures that the light will be on well ahead of the person moving through the building.

- As a person moves through the building, each fitting detects motion and continues to signal the others to stay on.
- The Hold Period and subsequent Standby Period (see Sensor Manual) does not start running until no more activation signals are received.
- The Hold and Standby Periods start running at the same time for all connected fittings. This means that they also turn off at the same time.
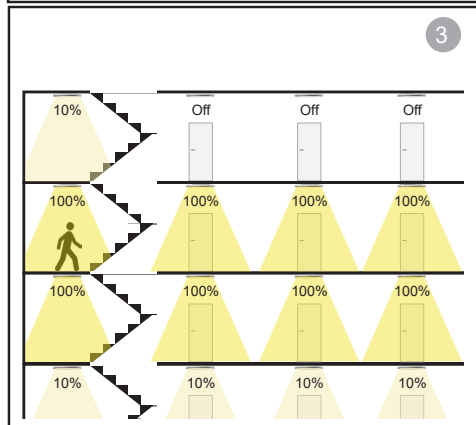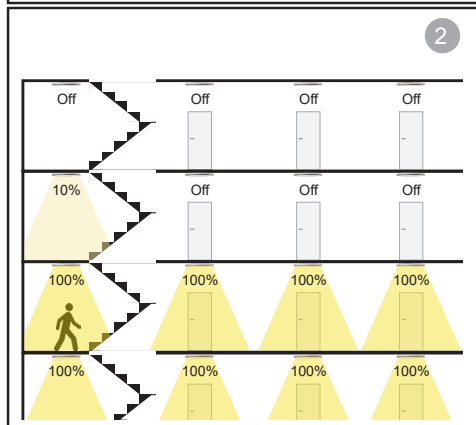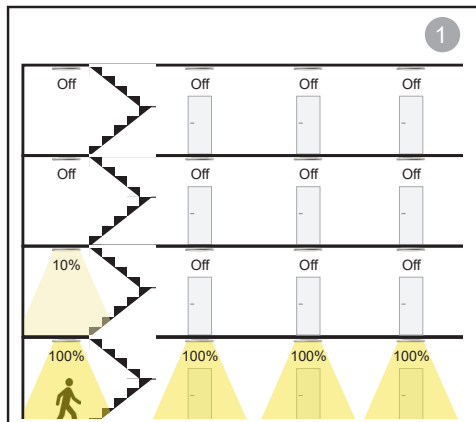

- Since all connected LedgeCircle® RF fittings detect motion forward activation signals to each other, the installation behaves in the same way no matter which fitting first detects motion.
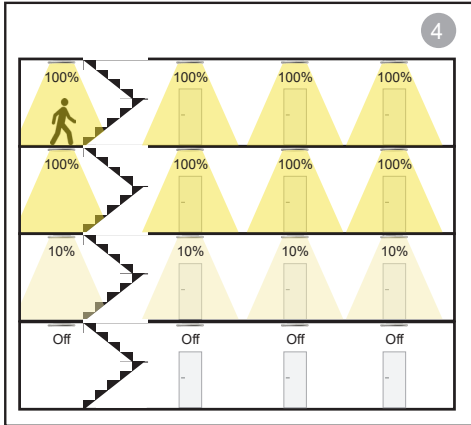

- The Hold Period starts when after the last detection/activation signal has been received. The light remains at the Max level during this period. Once the Hold Period expires the light goes down to the to the selected Min level for the Standby Period.
- Detection range, Hold and Standby Period duration and Standby dimming level can be configured with the remote.
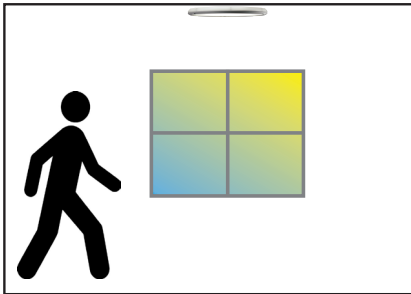
Radar activation - example 2:

Grouped responses. Connected fittings respond either by turning ON to the Max level or by turning ON to the selected Standby/Min level. MinMaxOff mode.

- All fittings in the installation are OFF by default.
- The first connected fitting to detect motion sends an activation signal and turns on to the Max level.
- Fittings on the same floor respond to the activation signal in the same way.
- The first fitting on the floors above and below respond by turning ON to the selected Standby/Min level, and the Standby Period starts running.

- A person moving to the second floor is detected by the first fitting, already at the Standby Min level.
- The fitting goes from the selected Min level to 100% and sends an activation signal.
- Fittings on the second floor respond by also turning ON to the Max level.
- The stairwell fitting in the third floor responds by turning ON to the selected Standby level.
- The fittings in the first floor remain at the Max level for the duration of the Hold Period.
- Note that when the fittings in the first floor are not already on (e.g. the person is leaving from the second floor), the stairwell fitting on the first floor will also respond by turning ON to the selected Min level.

- As the person continues to move up the stairs, the fittings on those floors behave in the same way.
- When the Hold Period expires for the fittings on the first floor, they turn down to the selected Min level for the duration of the Standby Period.
- Since all connected LedgeCircle® RF fittings detect motion and forward activation signals to each other, the installation behaves in the same way no matter which fitting first detects motion.
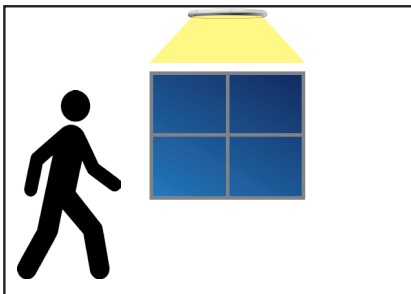
- All fittings in the first floor turn off at the same time when the Standby Period expires, except when the Standby Period is set to indefinite (MinMax mode / Eternity sign).
- The fittings in the second floor go to the selected Standby/Min level for the duration of the Standby Period.
- Detection range, Hold and Standby period duration and Standby dimming level can be configured with the remote.

Daylight threshold
The fitting remains off when the amount of natural light exceeds your selected lux threshold.
An activation signal is still sent to connected fittings when presence is detected.

Daylight threshold
When the amount of natural light drops below your selected lux threshold, the fitting reverts to its default settings, turning ON when precence is detected.

Daylight threshold / Daylight sensor

- LedgeCircle® RF fittings can be set to remain OFF when the amount of ambient/natural light is above a certain level.
- This makes it possible to reduce energy consumption when no additional light is needed.
- When the amount of ambient/natural light falls below the threshold level, the fitting will revert to its normal settings.
- Set your desired threshold by using the buttons under Daylight threshold on the remote. Press "Shift" first for values in red.
- The Daylight threshold must be set individually for each fitting.
- Fittings with a Daylight threshold will still send and activation signal to other fittings, even when remaining off.

How to set up your installation

To set up your LedgeCircle® RF installation, first consider where fittings will be installed, which fittings that should obey each other and how you want each fitting to respond to an activation signal. You should also consider what durations the Hold and Standby periods should have, what you want the Standby dimming/Min light level to be and whether you should adjust the Sensor Sensitivity in certain fittings to prevent them from being triggered by motion behind doors or windows.

Connect fittings, select responses and set lux threshold

To make the setup and connection procedure as efficient as possible, place the fittings you wish to connect in front of you. Using the remote, follow the procedure described below.

Connection

- Set one fitting aside. This will be the first fitting that the others learn to obey (Fitting 1).
- In turn, point the remote to each of the other fittings and press and hold the "Learn/Erase" button on the remote.
- When the fittings enter Learn-mode, they will start to beep once per second.
- Repeat this for all fittings you want to receive activation signals from Fitting 1.
- Each fitting will remain in learn mode for 3 minutes, unless manually cancelled.
- Now, point the remote to the Fitting 1 and press "Transmit".
- The fittings in Learn-mode will confirm that the pairing has been established by beeping rapidly 3 times. They will now all respond to activation signals from Fitting 1.
- To interconnect all fittings, now point the remote to Fitting 1 and press and hold the "Learn/Erase" button until it enters Learn-mode.
- Place fittings that have completed the "Transmit" to one side, apart from those who have not.
- Now select another fitting (Fitting 2) and take it out of Learn-mode by pointing the remote to it and pressing the "Learn/Erase" button.
- Point the remote to Fitting 2 again and press "Transmit".
- As before, all fittings in learn mode will beep rapidly 3 times to confirm that the pairing is successful.
- Repeat the above steps until all fittings have learnt to respond to activation signals from all other fittings.

Selecting responses

- Responses are selected with the RX 100% and RX STBY% buttons on the remote.
- By selecting RX STBY% the fitting will go to your selected Standby dimming/Min level when activated.
- This also means that the fitting will go straight to the Standby Period. Once your selected Standby Period duration expires, the fitting will turn OFF.
- Point the remote to each fitting and press the button corresponding with your preferred response.
- The factory setting for LedgeCircle® RF fittings is RX STBY%.

Daylight threshold

- To have the fitting turn ON regardless of the amount of ambient light, press "Disable" under Daylight threshold settings on the remote.
- To have the fitting remain OFF when the amount of ambient/natural light is above a certain level, press the button corresponding with your desired Daylight threshold.
- To use the current level of light as your threshold, first press "Shift" and then "Ambient".

Mounting

- NOTE! Please read the sensor and configuration instructions before mounting.
- Be aware that each fitting as a maximum indoor communication range of 30 meters.
- For instructions, see the separate mounting manual provided with each fitting.

Description
The HRC-11 provides a fast and easy way to customize LedgeCircle® RF fittings. Alter the settings using the functions as described below. The fixture will emit a beep when a new setting has been received.

Permanent On/Off function
Press "ON/OFF" to select permanent ON or permanent OFF mode. Press "AUTO", "RESET" to quit this mode.

Reset function
Press "RESET", to restore default settings.

Shift
Press "shift" to use secondary button values marked in red. "Shift-mode" is active for 20 seconds.

Auto Mode
Press "AUTO" to initiate automatic mode. In this mode the sensor and fitting behave according to your selected settings.

Shift +
This feature is not available with LedgeCircle® RF fittings.

Power output
Press "Power 80%" to reduce power input to 80%. This can be done during the first year or the first 10,000 hours of use, when the light output is usually above the required amount. Note that fittings must be returned to 100% manually (with the remote).

Brightness +/-
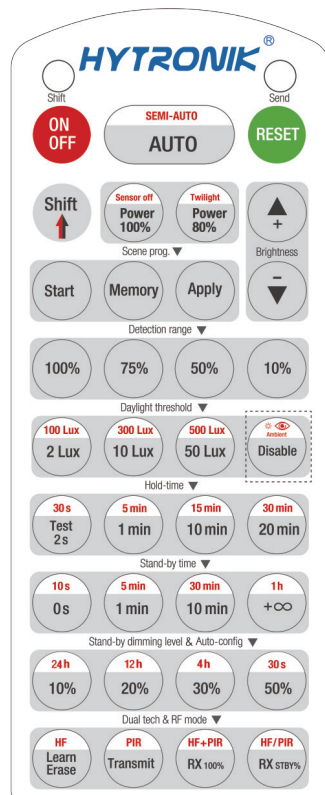Use these buttons to adjust the light Output during the Hold Period.

Scene programming
1. Press "Start" to begin programming.
2. Choose your settings for the scene with the appropriate buttons.
3. Press "Memory" to save the created scene in the remote control.
4. Press "Apply" to use the scene in each fitting.

Detection range
Press these buttons to set detection range to 100% / 75% / 50% / 10%.

Daylight threshold
Press these buttons to set the Lux level to 2Lux/10Lux/50Lux/Disable. The fitting will not activate if the ambient light is above the selected level. If set to Disable, the fitting will always activate when detecting motion.

Shift + Daylight threshold
Press these buttons to set the Lux Level to 100Lux/300Lux/500Lux. The fitting will not activate if the ambient light is above the selected level. Press Shift and then Ambient to sett the current light level as the threshold for activation.

Hold Period (Hold Time)
Use these buttons to set the Hold Time to 2s / 30s / 1min / 5min / 10min / 15min / 20min / 30min. To set Hold Time to 30s / 5min / 15min / 30min, press the "Shift" button first.

Standby Period (Standby Time)
Use these buttons (+ Shift for red values) to set the Standby Period to 0s / 10s / 1min / 5min / 10min / 30min / 1h / +∞Use "0s" to set the fittings to On/Off mode (no Standby Period). Use ("+   ") to set the fittings to MinMax mode. The fitting will remain at the selected Min level indefinitely.

Standby dimming level
Set the Standby dimming / Min level to 10% / 20% / 30% / 50%.

Dual Tech & RF mode
Use the Learn/Erase and Transmit buttons set up connections between fittings, see "How to set up your installation" on page 6. Use RX 100% And RX STBY% to select whether the fitting should go to 100% or to the selected Standby light level via radio communication.