EN

QUICKSTART GUIDE

LoRaWAN™ Radar Peopleflow Sensor bi-directional

PCR2-EU868-IN
PCR2-US915-IN
PCR2-AU915-IN
PCR2-AS923-IN

LoRaWAN Certified℠ is a mark used under license from the LoRa Alliance™.

www.parametric.ch/product/pcr2

PREPARING THE DEVICE

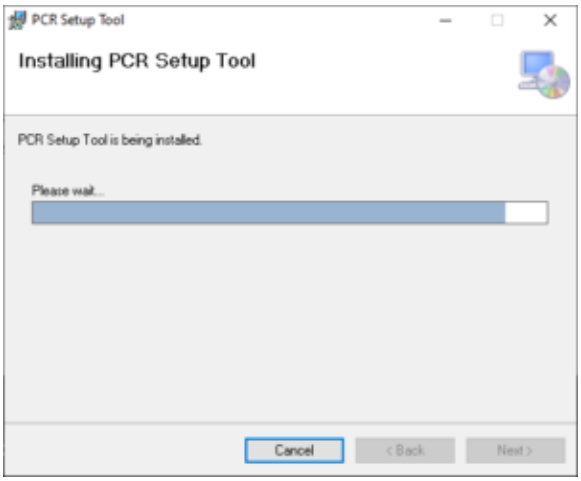
1 Opening the Enclosure

Remove the four screws from the casing to gain access to the device.

2 Connecting the Programming Cable

Connect the sensor to your Computer using a USB Cable.

3 Install PCR Setup Tool

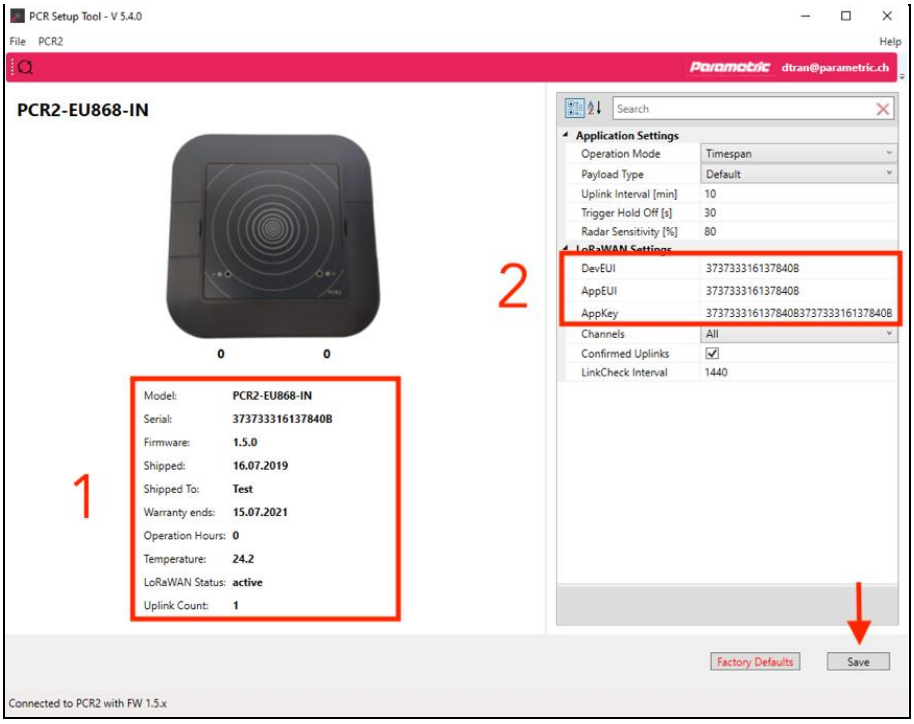


Download the free PCR Setup Tool by opening the following URL:
https://www.parametric.ch/kb/pcr-setup-tool

Follow the instructions of the installer. Ignore all security warnings.

Note: This is a .Net Application. You may need to install additional software from Microsoft.

4 Set LoRaWAN Keys



Start the PCR Setup Tool and click on the “Find”-Button. The Tool is scanning all COM-ports to find a connected PCR device.

You can then set LoRaWAN AppEUI and AppKeyin the settings panel (2).
Note: DevEUI is similar to the Serial Number but can be changed by the user.

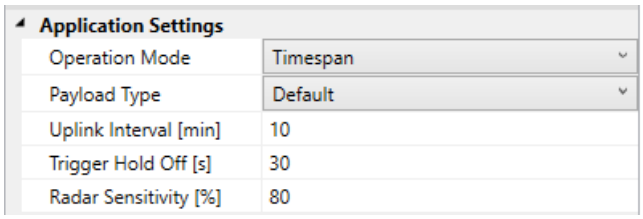
Press “Save” to store changed settings in the device.

In the tool you can also find additional information (1) like warranty, firmware version and status information.

6 Overview of Application Settings

PCR2 can run in one of 3 operation modes.

- **Timespan : Count people and send counter values after the Interval**
- **NotZero : Count poeple and send if counter values are >0**
- **Trigger : Movement detection mode**



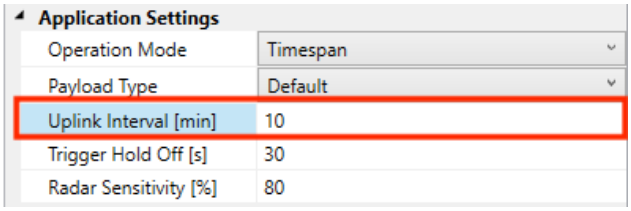
Operation Mode
Timespan - count objects and send sum after interval.
NotZero - Same as Timespan but does not send if counters are 0 (zero)
Trigger - Send on every detection. Use Hold Off Time to prevent sending on every event

Payload Type
Choose between Parametric and Cayenne LPP compatible payload formats

Trigger Hold Off [s]
Time to re-arm trigger
0...600s (0 = no supression

Radar Sensitivity [%]
You can set the radar module from 10% (fairly sensitive) to 100% (very sensitive)

7 Change Uplink Interval



Uplink Interval [min]
Set the sending interval in minutes (1...1440 minutes).
During this time, alle persons will be counted and sums are transfered.
After transfer counters will be reset.

8 Over-the-air configuration

Most of the settings can be changed by sending a LoRaWAN downlink to port 190.

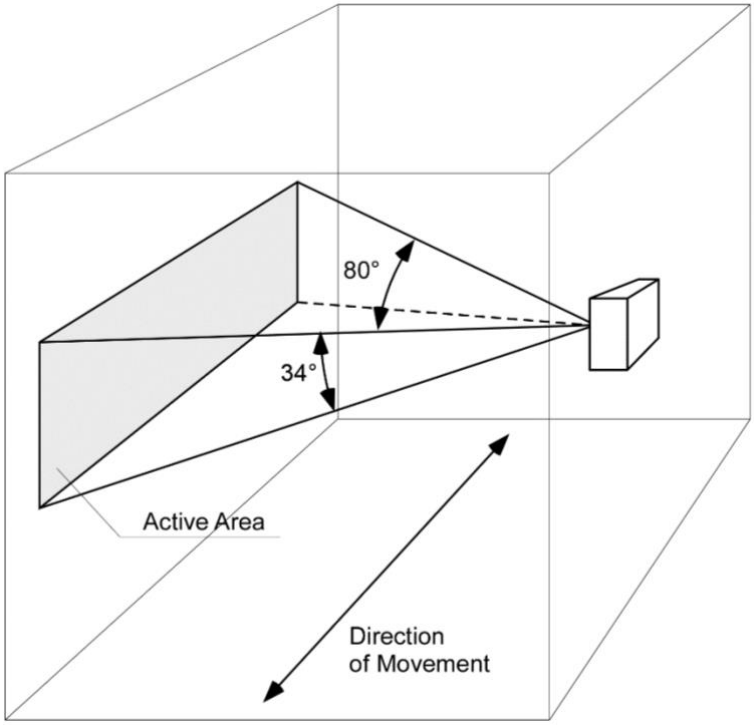
Find more information on this in our Knowledge Base: https://parametric.ch/kb

INSTALLING THE DEVICE

1 Field of view and optimal placement

PCR2 are 1D sensors measuring Peopleflow walking along a virtual line. The device can be mounted on walls, door frames or over-head.

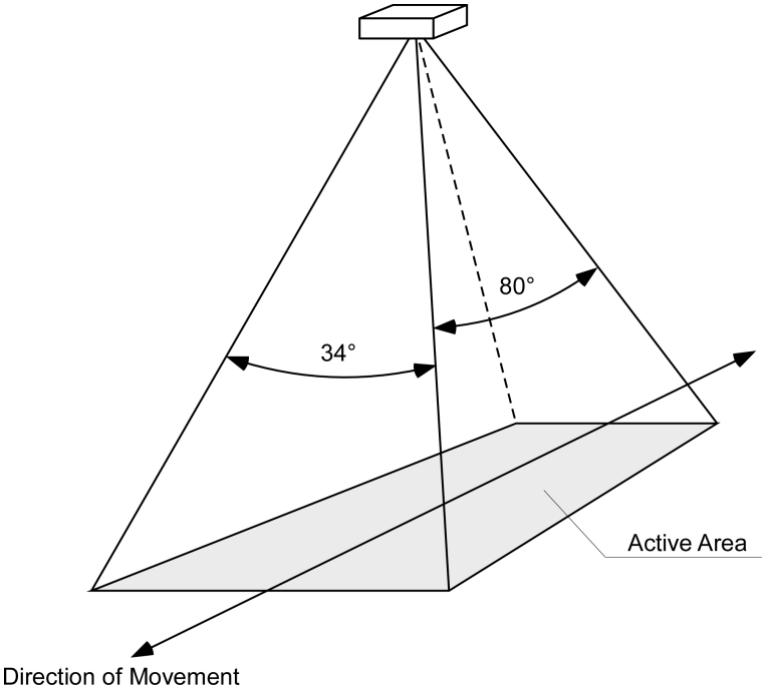
Wall mounting (recommended)



Installation height:	1.2…1.4m (4…5 feet) above floor
Installation direction:	Device surface parallel to peopleflow
Detection range:	6…10m depending on object size
Separation angle:	40° (Distance between persons)
Avoid:	- Side-by-side walking - Groups - Too close to each other

See also Limits of PCR2 in our Knowledgebase:
https://www.parametric.ch/kb/pcr2-limits/

Ceiling mounting



Installation height:	0.5…4m above peoples heads
Installation direction:	Heading down, LEDs in line with direction of movement
Separation angle:	40° (Distance between persons)
Avoid:	- Side-by-side walking - Groups - Too close to each other - Too wide entries (detection angle is 34°)

See also Limits of PCR2 in our Knowledgebase:
https://www.parametric.ch/kb/pcr2-limits/

2 Electrical Installation

The device can by powered by using the USB socket or the DC terminals. Open the enclosure end connect your cable. The cable can be routed through the cable membrane on the backside of the enclosure.

USB powered
Use USB Power Supply with Micro-USB-B plug connected to CONFIG socket.

DC powered
Use a 5…12V DC power supply and connect to the micro push-in terminals.

- Use 22AWG ... 18AWG (0.2 – 0.75mm$_2$) stranded wires
- carefully push the lever with a screwdriver or ballpen
- ferrules are not required with these terminals
- check polarization

OPERATION

PCR2-IN uses 2 LED for signalling movement and device status.

Device Status	LED
Device Start / Hardware Check	Both LED on for 4…6 s
Trying to connect to LoRaWAN	Both LED blinking
Connected to LoRaWAN	Both LED off
Direction indication	Short pulse on either LTR or RTL LED

Please visit https://www.parametric.ch/downloads for the latest documentation.

Find newest hints and FAQ in our knowledge base: https://www.parametric.ch/kb

Disclaimer
In the interest of continuous further development of our equipment, we make changes to the scope of delivery in form, technology and equipment reserved.

We also ask for your understanding that no claim can be derived from data and illustrations of this manual.

Parametric GmbH
Waldeggstrasse 82
3800 Interlaken
Switzerland

www.parametric.ch