“Impossible!”. How, four years ago, we gained an important customer on the day we tested the first prototype (MVP) of our long-range motion sensor

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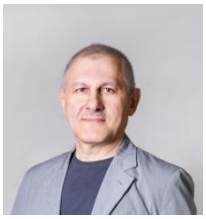


Victor Verbovsky

CEO – Intelar LLC / Energy-saving technology

The testing took place in the Moscow region, in a warehouse complex of about 100,000 square meters belonging to the Protek company, which controls 30% of the wholesale pharmaceutical market in the Russian Federation. Protek’s commitment to innovation has won it considerable renown among Russian engineers and designers: the company’s chief engineering specialists are always ready to trial new equipment if they believe it can optimize their internal processes.

Our K2150 presence detector was installed in one of the aisles between the racks of the warehouse at a height of about 18m to provide presence-controlled smart lighting. The length of the aisle being monitored by the sensor was 84m.

At this point, any expert representatives of the world’s leading motion-sensor manufacturers who are reading this post will no doubt be shaking their heads and muttering “Impossible!”.

We heard the same thing from the Protek engineers before the trial. They had considerable experience in operating similar products from Europe, which had clearly left much to be desired.

And so the testing began. One of the specialists took a step into the aisle, and the lights there came on! He took a few steps back and, after pausing a moment to let the lights turn back off, entered the aisle once again. Again, the lights came on. “Impossible! Perhaps you’ve got at employee hidden away behind the shelves somewhere and turning the lights on remotely?,” he said. The test was repeated four times and each time the lighting promptly switched on.

As a result, a month later, a tender was announced for lighting control in 30 aisles of the complex, all 84m long. Our competitors offered to install 120 European-built sensors and lay 17km of cable. Our installation partner offered to do the job with just 30 K2150 sensors and 3km of cable.

It should also be mentioned here that the products of other companies can function properly only when installed at heights of 12m or less, and the installation height in this warehouse was 18m. As such, our competitor's tender offered to set up new scaffolding structures to lower the sensors – though they would still stand at least 14m from the ground. This made their proposal even less competitive, as these structures could be damaged by workers during warehouse operations.

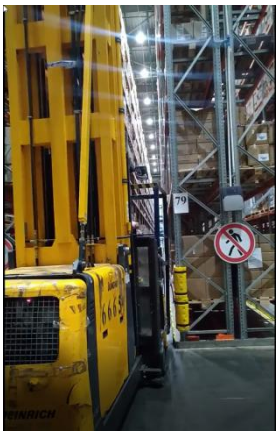
Naturally, we won this tender, and the **K2150** is the only motion-sensor currently being purchased by Protek.

What are the main differences between our sensors and those of our competitors? I think that's a matter worthy of a post in its own right.

Video 1:

Detection of humans - K2150 motion sensor test in the warehouse (360 degree video)

Video 2:



Detection of vehicles - K2150 motion sensor test in the warehouse

K2150 Promo Video:

- Engl https://youtu.be/7PzT4uAKI_c
- RU https://youtu.be/grYkQbty9sY

Intelar company profile on the web portal inboundlogistics.com - the information leader in supply chain and logistics management (USA):

inbound logistics A THOMAS company

2022 LOGISTICS PLANNER

Intelar LLC Light by Motion

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Victor Verbovsky
CEO

Intelar LLC develops and produces motion/occupancy sensors for lighting control and automation in warehouses. Our team has expertise in microwave radar motion detection technology (presence, movement, direction of movement, speed of movement).

Our mission is to make your building, street, city and country as energy efficient as possible.

The Challenge: Inefficient use of lighting for industrial facilities, primarily warehouses

In 90% of cases, lighting operates at full capacity without taking into account the need for it. Such warehouses consume 3 times more energy than warehouses with automation.

Before our sensor appeared on the market, the lighting system could not be automated in some types of warehouses. These were warehouses with a height of more than 12 meters, freezing warehouses and high-humidity warehouses. We have solved all these problems and successfully compete with other manufacturers in all types of warehouses now.

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What?

K2150 long-range motion sensor is unique in many technical parameters. In warehouse lighting systems, each sensor controls an inter-rack aisle up to 85 m long (detection of humans) and up to 115 m long (detection of vehicles) without dead zones.

Each sensor replaces 3-5 high-bay motion sensors made by the world's best manufacturers, saves up to 10,000 kWh electric power and decreases CO2 emissions by 4 tons per year.

The K2150 sensor is the only sensor that can operate:

- in warehouses where the ceiling height exceeds 12 m (from 3 m to 30 m and above)
- in freezing and high-humidity warehouses.

Why?

- You can reduce electricity consumption in warehouses by 3-4 times
- Even if you have energy-efficient LED-light sources installed, we can reduce your energy costs several times more.
- The sensor will extend the service life of LED lights by 2-3 times due to reduction of the LED's degradation.
- Our sensors can not only turn on and off the lighting, but also smoothly adjust its power within 2-100%.

How?

We use the more advanced microwave-radar technology instead of passive infrared systems.

A special mathematical signal processing mechanism inside the sensor's microprocessor increases operation range from 25 m up to 85 m and even more.

You only need to install one sensor in the center of each inter-rack aisle up to 85 m long and connect it to the existing lighting system.

Result

- In three years, our customers have saved 20.1 million kWh of electricity and reduced CO2 emissions by 8,040 tons.
- The payback period is approximately 1 year. Best result: 6.5 months
- Our sensors can reliably operate in warehouses located in regions with a warm and hot climate. In these areas the infrared motion sensors of competitors do not work three summer months a year.
- Sensors can be used in popular VNA warehouses with a height of 22 m.
- The sensors are very reliable. Not a single return for repairing in 3 years of selling.

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Our article

"Presence sensors for warehouse lighting control – Radar vs PIR" in the largest European magazine of lighting engineering LED Professional #90

To read the article, please open this file and **go to page 58**. In the article, we compared two solutions for warehouse lighting control - Infrared presence sensors and our radar sensor K2150.
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