

Railway and underground security with the REDSCAN Pro



For railway and underground operators, it is vital that every part of their infrastructure is considered and assessed when it comes to selecting and implementing an effective security solution. Whether it's the station hall, the platforms, or even the tracks, each of these elements has its own individual challenges to consider and overcome.

The challenge

Every year in Europe alone, hundreds of lives are lost by people being accidentally hit by a train. Protecting tunnels against unauthorised access is especially difficult and an area that presents arguably the most significant threat to human life. Accurately detecting a person entering such a dark and challenging environment is a difficult task, but to do it while trains are coming in and out of the tunnel at the same time, makes it even more complex.

The solution

LiDAR sensors provide a highly effective solution as are not affected by a humid climate or poor lighting conditions which are often found in metro tunnels. Additionally, OPTEX Lasers feature environmental analytics enabling the area of detection to be adjusted, to auto-learn changes to the environment, and to indicate to the security control system if its ability to detect is affected by, for instance, a soiled lens; such 'health monitoring analytics' provide the security operator with peace of mind.

OPTEX LiDARs analyse the speed, size and distance of the objects detected, meaning they track the objects within the detection area and understand the ratio size/distance of the object. This provides the ability to accurately detect a specific size of object at distance and close up. In a tunnel, it would differentiate, for example, between a person and a train.

Bespoke algorithm

For a successful 'tunnel intrusion detection', the solution is required to ignore the trains but detect people, and this is achieved by developing a bespoke detection algorithm. If a moving object the size of a train enters the tunnel no alarm is generated, but if an object the size of a human enters the tunnel, even if a train was entering at the same time, then the person is detected and an alarm triggered.

REDSCAN Pro 50100V

The RLS-50100V is the longest range LiDAR sensor available, providing accurate detection of intruders and moving objects within a range of 50x100m along 190degrees.



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