CLEARSY

Safety Solutions Designer

DNH
SIL4 NEGATIVE HYPERFREQUENCY SENSOR

TECHNICAL DATA CLEARSY

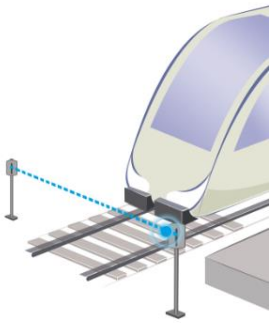
DNH
SIL4 Negative Hyperfrequency Sensor

Safety system for track vacancy detection

FRANCE

DNH

THE DNH ALLOWS DETECTING THE PASSING OR THE PRESENCE OF ELEMENT CROSSING THE RADAR BEAM. ELEMENTS ARE DETECTD WITH THE HIGHEST LEVEL OF RAILWAY SAFETY: SIL 4.



Composition :

- 1 transmitter antenna
- 1 receiver antenna
- 1 processing unit
- Wall brackets or poles as required

Features:

- Detection of all types of vehicles:
  - ✓ train, tram, metro, ...
  - ✓ spacing between transmitter and receiver : 4.3m maximum ±10%
- Autonomous device: only requires a 230VAC power supply
- Electrical interfacing to the user device made easy through relay contacts:
  - ✓ two relay working contacts (safety guided) to denote the track occupancy state
  - ✓ one relay contact to denote the system status
- Waterproof connectors for reliable interconnection (junction box not required)
- Storage of all the activities occurring within the system:
  - ✓ date and time of each crossing, system errors
  - ✓ storage capacity of 250 000 crossings
- Detection of high-speed trains
- No additional mechanical or electrical adjustment required after installation
- Easy installation thanks to the maintenance and installation tool (easy to pair and align the two antennas)
- Possible use in harsh environmental conditions (rain, snow, wind, -20 ° C + 85 ° C)

Mechanical:

- The transmitter and receiver can be positioned on all types of rigid support (wall mounting in a tunnel, on poles for installation on track or using existing poles)
- Dimensions of compact casings:
  - ✓ Transmitter and receiver antennas:
    height = 140mm (5,5”) width = 110mm (4,3”) depth = 60mm (2,3”)
  - ✓ Processing unit:
    height = 280mm (11”) width = 170mm (6,7”) depth = 90mm (3,5”)
- Waterproof housings and connectors; IP67
- The transmitter can be placed between two tracks

DNH

TECHNICAL FEATURES

FEATURE	PERFORMANCE	UNIT
Power supply	230	VAC
Maximum consumption	20	W
temperature range	-20 to +85 (-4 to 185)	°C (°F)
Maximum humidity	100	%
Protection index to immersion and	IP 67	-
solid objects	Class 2	⧈
Electrical insulation	1 double cut output SIL4	-
Number of output	1 system status output	-
"	250V/2A (AC15)	-
Output load	24V/4A (DC13)	-
"	4 x10^6	actuation
Maximum number of actuation	0,5	hour
MTTR		

STANDARD COMPLIANCE	
Railroad applications – Signaling system, telecommunications and processing - electronic safety systems for the signaling	EN 50129
Railroad applications – Signaling system, telecommunications and processing - Software for systems of command and railroad protection	EN 50128
Railroad applications - Conditions of environment for the material - Part 3: equipment for the signaling and the telecommunications	EN 50125-3
Railroad applications - electromagnetic Compatibility - Part 4: emission and immunity of the devices of signaling and telecommunication	EN 50121-4

ADVANTAGES

Safe: SIL 4
Autonomous, waterproof and compact
Requires no maintenance
Low consumption
Easy to install*
Open radar frequency band dedicated to detection

* The fixation on existing support must comply with the technical and technological constraints of the system.

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