Level crossing occupation detector

PINTSCH BAMAG FSP-BUEBM

Module for occupation detection of level crossings (line-type switch-off)

Use

When a train stops on a level crossing the switching off of the level crossing protection system has to be suppressed until the train has cleared the level crossing. Especially in older level crossing protection systems this safety-increasing feature is not yet realised. Based on the well proven vehicle detection sensor FSP PINTSCH BAMAG developed the FSP-BUEBM to upgrade existing level crossings cost-effectively. This module is an additional component and does not replace the existing trackside switch-off components.

Function

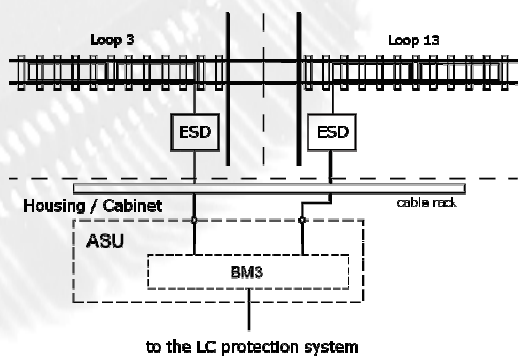
A vehicle occupying the level crossing is detected by the first detection sensor. The module ESD receives the signal from the loop and transmits an OCCUPIED or FREE signal to the interface module BM3. The module BM3 receives the occupation signals from each connected loop and generates the summarised OCCUPIED or FREE signal to the level crossing protection system. The component FSP-BUEBM can be configured depending from the technical design of the different types of level crossing protection systems. The module BM3 provides potential-free relay contacts.

rack ASU

module BM3

The OCCUPIED information is transmitted when a vehicle is detected by one sensor. The FREE information is transmitted if both sensors are cleared after the occupation of the sensors was detected.

An optional feature is the local automatic switch-on function. A rail vehicle occupying one of the loops activates the level crossing protection system. After passing the level crossing and clearing the second loop the level crossing switches off automatically. This feature replaces an manual auxiliary switch-on button.



example for loop layout

Technical design

Each induction loop extends across 2 x 5 sleeper intervals in shape of an “8”. It is protected by massive plastic tubing. Due to its arrangement it is protected against damaging by track laying work (resistant to tamping machines). The module BM3 is mounted in the ASU rack in the housing or cabinet.

The supply voltage is 30 to 36 V DC.

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