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**Lightning technology.**  
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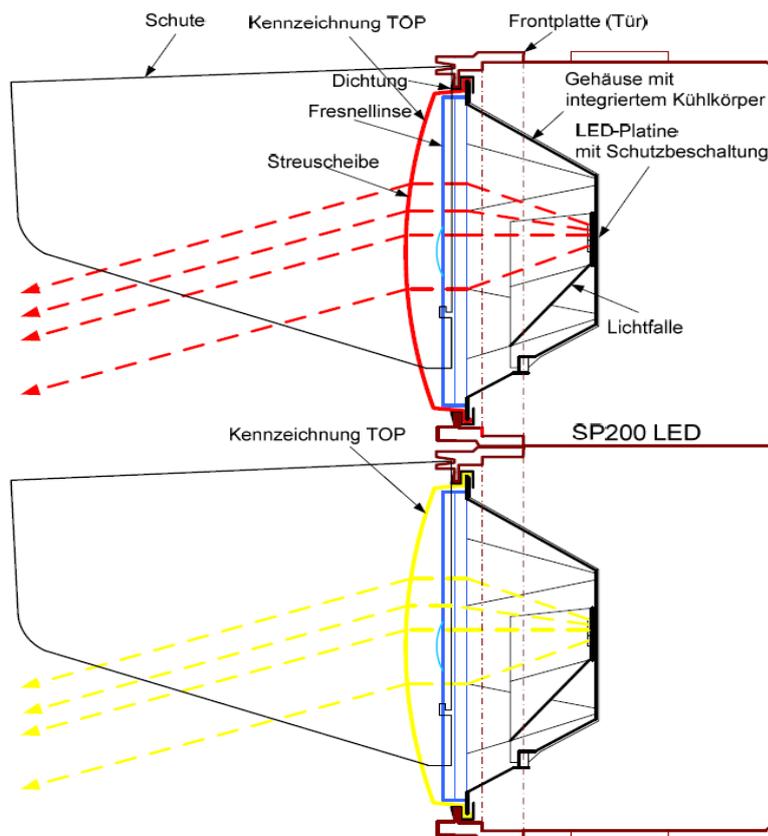
**SP200 LED**  
**road-side signal lamp for level-crossings**

# SP200 LED

## road-side signal lamp for level-crossings

### Applications

Rail level-crossings must be designed even at the planning stage in such a way that the priority of rail traffic over road traffic is clearly apparent. All new level-crossings in Germany must nowadays be fitted with road-side signal lamps with red/yellow aspects, but red flashing lights alone are predominantly used internationally. Our Type **SP200 LED** (PINTSCH road-side signal lamp with **200** mm optics) with red *or* yellow signal-generator unit thus logically provide two state-of-the-art solutions.



### Features:

- Excellent optical properties
- High service-life (min. 10 years)
- Therefore lower maintenance needs
- Extremely low power consumption (approx. 6W per light spot)
- Batteries can thus be smaller
- Retention of interface between level-crossing control system and signal lamp
- Fast, easy retrofitting

### Structure

The red and/or yellow light spots consist of a signal-generator unit which is mounted in the housing-chamber door. The optical system of a light spot consists of a diffuser, a Fresnel lens and a housing with an integrated heat sink (see above). Two channels, each consisting of four LEDs on a metal core board, are used as the light source and assure redundant installation of the light spot, similarly to a two-filament signal lamp. There is a marking indicating "TOP" which denotes the correct installation position on the diffuser.



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# SP200 LED road-side signal lamp for level-crossings

We improved all optical properties, such as phantoming resistance, colour coordinates and illuminance significantly compared to the familiar signal lamp during the development of our LED signal generator, while nonetheless reducing consumption of electrical energy.

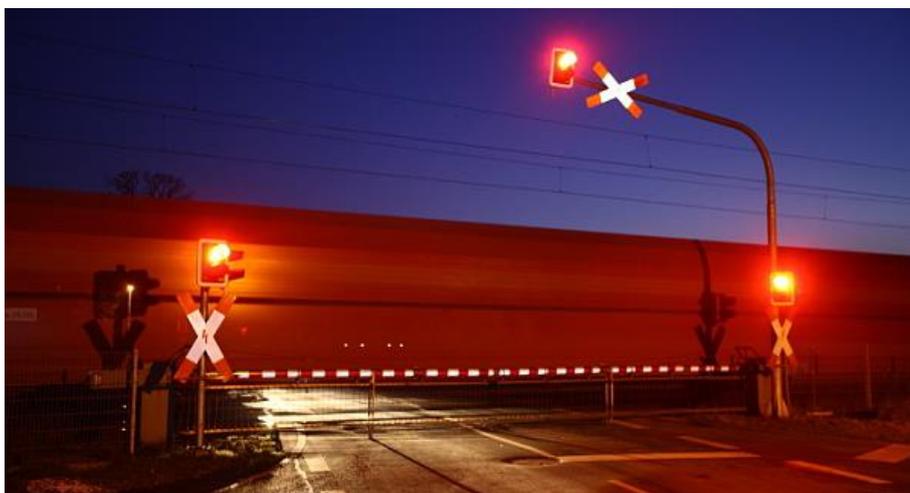
The interface between the level-crossing control system and the flashing light system has, on the other hand, not been modified; the familiar three-wire interface is used here for each light spot. The existing wiring can therefore continue in use if LED signal generators are retrofitted to existing RBÜT systems or if an old-technology level-crossing control system is replaced completely.

The separation of the electronic actuation system in the equipment building and the signal generator on the mast also provides a further important benefit: only the signal generator, and not the complete unit, needs replacement if the signal generator is vandalised.

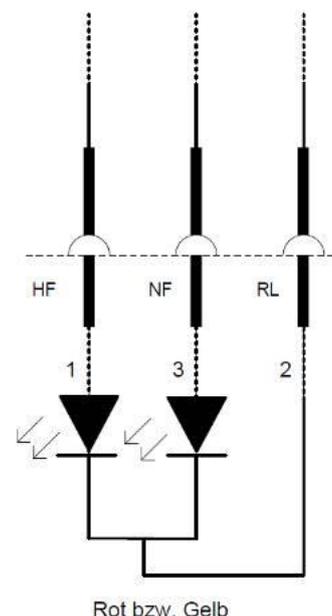
We have filed patents for this two-channel system extending into the optical system.



A comparison:  
left – incandescent  
right - LED



The SP200 LED's excellent visibility



Three-wire interface for the LED  
signal generator

Subject to technical changes

# SP200 LED

## road-side signal lamp for level-crossings

### Savings potentials

LEDs have a significantly longer service-life than incandescent illuminants. We guarantee a minimum service-life of 10 years for our LED signal generator. A service-life of up to 20 years actually becomes possible in the case of alternating use of the two LED channels, as occurs in the RBUEP level-crossing control system. Preventative maintenance (replacement of illuminants) as in the case of dual-filament signal lamps is therefore not necessary.

The energy requirement of an LED signal generator is approx. 6W, significantly lower than that of incandescent illuminants, with their 30W. The number of flashing lights (with their energy requirement) also affects the dimensioning of the equipment-building battery, with the result that smaller battery types can now be used, another important cost and environmental aspect.

Subject to technical changes



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