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**Lightning technology.**  
Seeing and being seen.



**P145L and P145LED  
colour-light signal lamps**

# P145L and P145LED colour-light signal lamps

## Applications

Trackside signals (ÜS) and Trackside repeater signals (ÜSW) signalise a protected or unprotected level-crossing to the driver of the train (signal indications Bü1/Bü0). The most important elements of these signals for the protection of level-crossings are our **Type P145L** and **P145LED** (PINTSCH-type with **145** mm optics) colour-light signal lamps, which have replaced the P145 colour-light signal lamp (with an incandescent illuminant) used for many years. Signal lamps showing red, green and blue have in addition been developed for the international market on the basis of the white/yellow signal lamps approved for use in Germany.



## Structure

Both variants, the P145L and the P145LED, consist of a plastic housing containing an optics system in addition to the LED illuminant. This optics system includes a collimating lens and a diffuser. This is protected against moisture, fouling and damage by means of a thick front glass element. The sloping angle of the diffuser also significantly reduces phantoming under low-sun conditions.

The P145L and P145LED colour-light signal lamps differ only in the fact that the housing of the P145L contains a voltage transformer, whereas that of the P145LED does not.

The P145L can be retrofitted to older ATC systems, which are customarily used in old-technology level-crossing control systems, and can thus replace a defective P145 (with incandescent illuminant).

The P145LED with the new ATC-PB system, on the other hand, can be used with all level-crossing control system technologies.

### Features:

- Excellent optical properties
- High service-life (min. 10 years)
- Therefore no maintenance needs
- High luminous intensity with extremely low power consumption
- Thus smaller equipment-building batteries
- Interface between level-crossing control system and crossing-protection signal unchanged
- Fast, easy retrofitting



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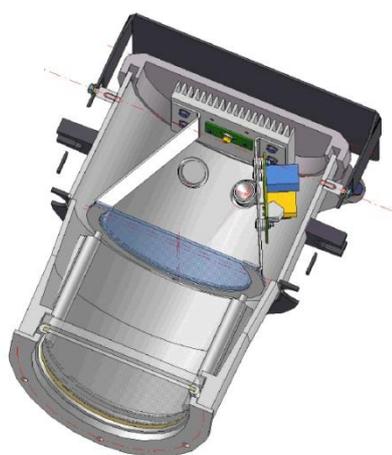
# P145L and P145LED colour-light signal lamps

In both variants, electrical connection is effected from below using the cable gland fitted to the housing. Activation is accomplished using two cores. The housing can be opened using the door at the rear. This door features a seal and a snap-action latch.

All optical and photometric properties, such as phantoming, colour co-ordinates and luminance, have been further improved compared to the P145 (incandescent illuminant) colour-light signal lamp, while power consumption has been simultaneously reduced. The signal lamp has been designed for a service-life of not less than 10 years under normal boundary conditions.



Signal indication BÜ1  
on a repeater signal



P145L  
(with voltage transformer)

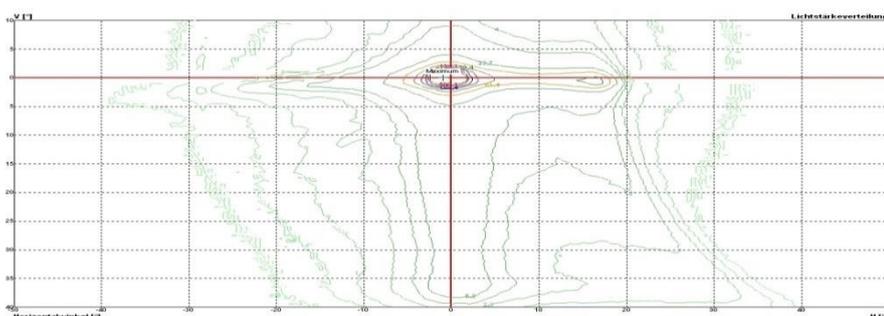


P145LED  
(without voltage transformer)

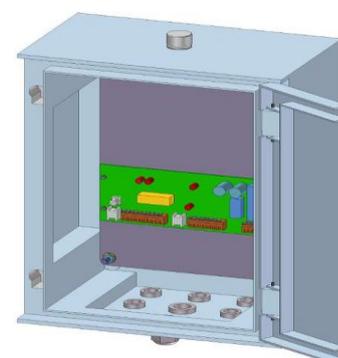


Crossing-protection signal with  
active marker lights and plinth

PINTSCH BAMAG has its own light laboratory accredited with the German DAkkS accreditation body. Our photometric test results are acknowledged and do not require confirmation by an external laboratory. This is, of course, of great assistance to us in the (further) development of new and existing products, and in the testing of our signal generators.



Luminous intensity distribution



Retrofitting of a new PB ATC unit  
in the "Einheit" ATC cabinet

Subject to technical changes



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