PANDROL
Partners in excellence

Balise Protection Device (BPD)

Signalling Equipment

The Pandrol Balise Protection Device (BPD) is a specialist product designed to protect balises (transponders) from damage due to ice impact (ice lumps falling from passing rolling stock). It is easily installed and helps to protect the integrity and reliability of the signalling system.

Balises are an integral part of the European Train Control System and Communications Based Train Control, providing critical safety data about the location of trains through communication with train-borne receivers. By ensuring the beacons are mounted securely, efficiently and accurately on the sleeper, the BPD makes an important contribution to track safety.

TECHNICAL FEATURES

Ice protection

The BPD has been proven to withstand multiple ice impacts at high speed, deflecting ice that detaches from trains and protecting the balise.

High speed

Testing has shown that the BPD is effective at protecting balises on high-speed tracks up to a line speed of 300km/hr.

Installation and maintenance

The BPD is lightweight, portable and is easily mounted on the sleeper (tie) using two screw anchors. For maintenance or replacement, the complete unit and/or lid can be removed using simple hand tools.

Compatibility

Pandrol's BPD is compatible with a range of sleepers. Positioning the balise over the sleeper and maintaining a narrow design means that the product is compatible with automatic track tamping machinery.

Resilience

The device is shock and vibration resistant to EN50125-3 standard. It also has high resistance to chemical and climatic changes and offers compliance to UL94-VO for flammability.

Anti-trip walkway

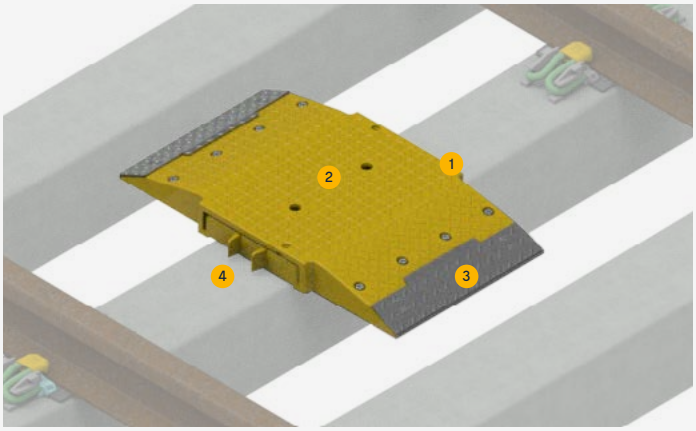
As well as protecting the balise from impact, the BPD offers a non-slip, anti-trip profile for people walking along the track.

Signal interruption cover

An optional signal interruption cover can be installed during pre-commissioning stages.

ADVANTAGES

- By positioning balises accurately and protecting them from ice impact damage, the BPD improves signalling system reliability and track safety.
- Improved signalling system reliability means that there are fewer interruptions to train operations, enhancing passenger service.
- Network operators can achieve significant financial benefits as a result of operational efficiency and increased passenger numbers.
- Ease of installation and maintenance makes the BPD system a cost-effective, time-efficient option.
- Safe to install and providing an anti-trip, non-slip walkway, the BPD contributes to the safety of track workers.
- Resilient and resistant, the BPD is extremely durable and offers a cost-effective long-term solution.



COMPONENTS

1. Base and lid
2. Mount Points
3. Deflector plates
4. Balise

SPECIFICATIONS

Technical data	
Overall dimensions	782mm x 450mm x 85mm (L x W x H)
Weight	18kg
Train speed	High speed: 300km/hr
Eurobalise position	Achieves compliance to FFFIS for Eurobalise, subset 036 ver 3.1.0
Metal-free space	Achieves compliance to FFFIS for Eurobalise, subset 036 ver 3.1.0
Shock and vibration resistance	EN50125-3 'on sleeper' shock and vibration requirements
Operating temperature	-40°C to +55°C, in accordance with EN 60068-2-1, EN 60068-2-2
Humidity	+55°C, 90–100% rF in accordance with EN 60068-2-30 (two cycles, 48 hours)
Fire compliance	Flameproof to UL94-V0
Balise compatibility	Siemens S21 balise (other balises may be incorporated on request)

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