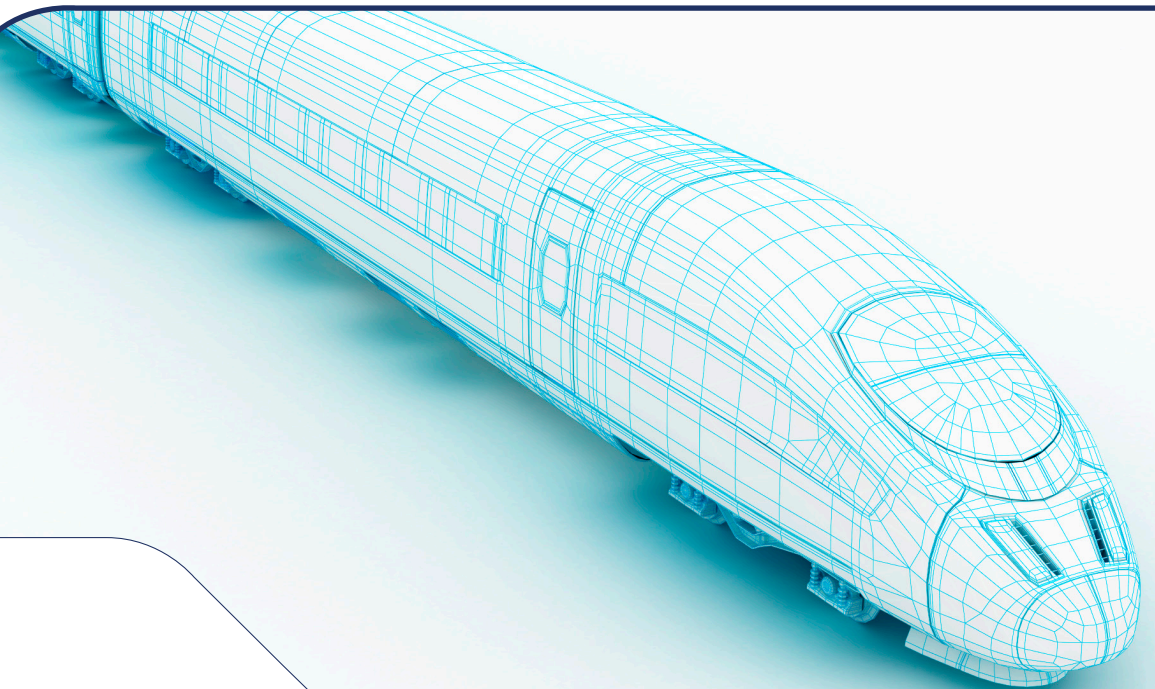


# TPWSfourEVO

by Unipart Rail

Updated and reengineered for a new generation of trains



Enhanced safety and performance  
on your vehicles

Fully SIL1 Compliant

**UNIPART**  
**RAIL**

**SERVING THE WORLD'S RAILWAYS**

## Track & Signalling Interface Technology

### TPWS Aerial



### AWS Receiver (Dual/Twin/Standard/Extra Strength)



## Designed to Comply

The TPWSfour System has been design to comply with GERT8075 Issue 4 and RIS-0775-CCS Issue 3. These updated standards require all new vehicles built or undertaking significant overhaul (after 1st Dec 2012) to be compliant by being fitted with TPWSfour**EVO** with the latest safety systems.

### The TPWSfour**EVO** system incorporates:

- Expanded DMI requirements for separation of brake demand indications.
- Audible indication for the SPAD and OSS interventions
- Brake demand memory to remove the ability to "reset & continue"
- Independent isolation AWS sub-system
- ETCS compatibility

## Designed to Monitor

### The in-built data monitoring and recording systems ensure:

- Aerial functionality is continuously monitored
- Connection to on-train data recorder (OTMR), enabling the status of all DMI functions to be recorded along with system states. Available in discrete connections or via RS485 serial interface
- Internal monitoring system 'remembers' its condition should the system be powered down when a brake demand is active and enables the brake demand to be resumed when power is re-applied
- Additional fault indication via separate TPWS and AWS fault indication

## Supply & Control Technology

**Optional TPWS 19" Rack Design Assembly\***



**TPWSfourEvo Control Unit**



**Power Supply (PSU)**



## Driver Machine Interface Technology

**AWS Audible Indicator & Speech Unit**



**AWS Visual Indicator "Sunflower"**



**AWS Isolation Switch**



**TPWS Temporary Isolation Switch**



**TPWS Full Isolation Switch**



**Acknowledge Push Button**



**Driver Machine Interface "DMI"**



## Designed to Perform

We've designed TPWSfour<sup>evo</sup> to integrate with both driver and machine. The system's enhanced capabilities ensure that brakes are only released after the correct delay and ensure that the likelihood of an inadvertent over-ride (reset and continue) is eliminated and to prompt the driver to contact the signaller.

The factory selected variable audibility approach ensures that the tones and voice systems are 6dBA above ambient (levels required to be confirmed by the customer), in the range of 65dBA to greater than 90dBA, avoiding driver discomfort.

The new spoken warnings are a clear and unambiguous advice to the driver to further eliminate SPAD potential.

The TPWSfour system has a UK Intermediate Statement of Verification (ISV) in accordance with The Railways (Interoperability) Regulations 2011 as amended by the The Railways Regulations 2019 (Regulation 2019/345 and amendments) to modules CB and CD for the entire TPWSfour system.

## Designed to Integrate

TPWSfour<sup>evo</sup> control units are designed to fit in the same space envelope as the existing TPWS system - reducing the headache of finding additional space for system components.

ETCS compatibility is built into TPWSfour<sup>evo</sup> to ensure future developments and upgrades can be accommodated without further system developments or performance impacts.

**Integration, performance, monitoring and compliance come together in TPWSfour<sup>evo</sup> to give you the system you need to enhance safety and performance on your vehicles.**

### Glossary of terms

TPWS	Train Protection & Warning System	PSU	Power Supply Unit
AWS	Automatic Warning System	SPAD	Signal Passed at danger
DMI	Driver Machine Interface	OTMR	On train monitoring recorder
ETCS	European Train Control System		

## About Unipart

The Unipart Group is a leading UK manufacturer, full service logistics provider and consultant in operational excellence. Operating across a range of market sectors, including automotive, manufacturing, mobile telecoms, rail, retail and technology, Unipart offers a breadth of services to a wide range of blue chip clients internationally.

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