

# Principal Supply Point

An Intelligent Asset, Providing Principal Power Supplies for Signalling Systems



# PowerU

by Unipart Rail

**A UNIPART RAIL INTELLIGENT ASSET**

**UNIPART**  
**RAIL**

**SERVING THE WORLD'S RAILWAYS**

# Providing a consistent supply of power to the rail network, through reliable and trusted engineering to ensure trains run to schedule.

With over 2 decades of experience, Samuel James Engineering has been designing, manufacturing and maintaining Principal Supply Points (PSP), either as a containerised systems or brick built building designed to provide power to rail signalling via 400V / 650V feeders.

PSPs take their primary power from the DNO or Traction Power which have 2 back-up power sources, UPS and Generator.

PSP are designed to operate either within a purpose built enclosure such as a container or GRP enclosure, or in a brick building located trackside in one of two variants:

**Type 1** fully integrated switchboard, backup UPS and Generator all in one enclosure

**Type 2** switchboard and UPS backup in one enclosure, with an externally housed Mobile Generator would be housed externally.

We also design and manufacture a smaller compact version known as a mini PSP, which uses individual transformers and can also be supplied in a GRP enclosure/building.

The mini PSP is an ideal product for digital signaling architecture where a reduced quantity of supplies are needed.



## The features

- ARS function allows for Automatic Reconfiguration of Feeder supplies where specified
- Network Rail PADS Approved Equipment, Switchgear including 400V /650V and UPS Auto-Bypass, Signalling Transformers, UPS / Traction Rectifier systems, Diesel Generator and Data Logger
- Flexible Design to accommodate Regional or Project specifications for Network Rail Infrastructure
- Built and Tested to BS EN61439 and BS7671
- Available options, additional internal walls, removable endwalls, bespoke lighting arrangements, forced air ventilation or air conditioning, remote monitoring linked rate of rise detection systems and option for standard or reinforced 3-point locking system
- Types 1,2 & m/PSP in sizes designed to suit the environment
- Standard interlocking functionality, plus optional ARS systems to reduce trackwork manual intervention
- Full PSP laser-engraved labelling ensures traceability of equipment and clear location information
- Adaptable design allows for Incoming and outgoing cables of various sizes and specification to be easily installed
- Adaptable solutions from Loc Case mountable to Twin Containerised and Brick systems
- Multiple Power Sources for backup.
- Bespoke design (size, layout & ratings).
- Insulation & Remote Monitoring
- Auto reconfiguration systems available on each individual feeder
- Factory and site Acceptance testing
- Operation & maintenance manuals
- Network Rail product approval for complete systems

# Why the PowerU Range?

It's because we give you Modular Flexibility, and the full end-to-end power supply solution from Class II FSPs to PSPs. We give you a family of products with a single trusted, reliable architecture.

Our products are designed and manufactured to support decarbonisation, digital signalling, alternative power supplies, and remote condition monitoring and operation.

Our standardised design enables installation of Single or Three Phase systems, to project specifications. We pre-test the panel system to ensure full traceability and fast availability of the component parts to give you confidence when ordering for your project.

## Collaborative Approach

We've collaborated with our industry partners to develop the standardised design solution, complete with standard interlocking functionality for safety assurance.

## Customisation

All Unipart Rail PSPs are designed to accommodate the unique Project Design specification. Document door pockets and ventilation systems are standard.

## Obstacle-Free Cable Management

We've worked hard to create a PSP with rationalised and obstacle-free cable routes. The Cable Protection safety system ensures a tamper-free fit. This all leads to a cleaner 'engineered' finish and means that track-side installation times can be reduced.

Technical Detail	
<b>Class</b>	Class 1 with options for Class 2 feeder connections
<b>Enclosure Material</b>	Stainless Steel or GRP
<b>Sealed to</b>	IP54
<b>Intelligent Asset Monitoring</b>	Compatibility with Network Rail's RADAR (Intelligent Infrastructure) system
<b>UPS</b>	Integrated Systems
<b>Supply to Signalling via Feeders</b>	400V/650V
<b>Design Life</b>	25 years
<b>Labelling</b>	Full PSP laser-engraved labelling ensuring traceability of equipment and clear location information.
<b>ARS &amp; UPS</b>	Deep Sea Net cloud-based systems for ARS and UPS
<b>Built to standards</b>	PSPs are designed and manufactured in accordance with Network Rail specifications. NR/L2/ELP/40068 and NR/PS/ELP/0002 I.

## 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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