case.study

A powerful answer to the SPAD puzzle

For over 25 years, **on365** has been driving down costs, improving power and cooling efficiencies and managing risk as a specialist in the design, planning, installation, maintenance and optimisation of critical physical IT infrastructure and utility services. Whether it's a small server room or a complete datacentre build we have the necessary expertise to meet the IT power and cooling challenge, delivering support at the very foundation of your IT technology.

Recognised as the UK's most successful provider of the implementation and operation of the complete Network Critical Physical Infrastructure (NCPI) for major business, **on365** has the highest levels of of knowledge and competence, understanding both the technical and practical issues involved for your business, your people and your IT infrastructure requirements. With the need to deliver on the promise of investment made in IT now even more critical, **on365** is totally focussed on enabling organisations to get the best out of their IT environment.

on365 has an extensive and comprehensive product and service portfolio.

- APC Elite Partner
- SGI Trusted Advisor
- Kelway Premier Partner
- Uniflair Approved Partner
- Chatsworth Products European Certified Installer Partner

Our support capabilities encompass installation, system testing, network integration, on-site maintenance and audit/review services. Most importantly though, we understand the real needs of IT Managers and provide sound, practical advice to help proactively and efficiently manage across the datacentre physical infrastructure through to chosen IT hardware.

Category 'B' SPADs (Signals Passed At Danger) are the result of drivers passing signals when no aspect is showing. A national 650V UPS project was started to ensure that signal lamps and points remain operational should the power supply be interrupted.

Thirteen sites situated were identified across the country where there have been problems maintaining a continuous power supply to signals or where a SPAD could cause major problems. Each signal installation has a 650V supply provided from the local electricity company through a step up transformer with a standby generator, which starts should the power fail for longer than a few seconds.

During normal operation, the UPS was designed to protect the signalling system from transient power disturbances such as spikes, surges, sags and other mains supply problems. It also would deliver uninterruptible power should the supply fail, supporting the signalling supply for a minimum of ten minutes at full load, to bridge the gap between mains failure and generator changeover. One of the sites chosen was Dorchester South on Southern Zone where there are two traction power supplies, one electricity company supply, a standby generator and solid state interlocking – an ideal location for extensive testing.

on365 has developed a unique solution that includes not only the UPS but also all the other necessary equipment needed to ensure the integrity and reliability of SSPs (Signal Supply Points). The installation at Dorchester South consisted of a complete REB (relocatable equipment building) housing a 40kVA/40kW 650VAC UPS, battery, switchgear, transformers, air conditioning and remote monitoring. Individually, all are based on standard, proven technology and are considered 'best of breed' in their class. This philosophy was very important in achieving the goal of a low risk, fully functional "Plug & Play" solution up to 160kW, single phase.

The trial at Dorchester South proved to be very successful with total power failures being successfully handled and potential negative effects from over seventy voltage fluctuations eliminated. Overall there was a 50% reduction in the number of Category 'B' SPADs and Railtrack is confident that, with a UPS installed at each of the identified sites, they will not occur in future as a result of power supply interruptions.

According to Keith Watson, Principal Asset Manager for Railtrack HQ Asset Management Group: "We have not lost any power to signalling at Dorchester South despite the fact that the incoming supply has been variable due to difficult operating conditions caused by the weather."

on**365**™
SUPPORTING TECHNOLOGY