

## RDF SI-Pro Mini Inverter installed for the new MRI scanner facility at NHS Chorley and South Ribble Hospital.



Lighting-Power-Control



*Image: Chorley and South Ribble District General Hospital*

The NHS Chorley and South Ribble District General Hospital in Chorley Lancashire have recently refurbished their MRI scanner suite which included a complete removal and replacement of all electrical items and lighting.

RDF Lighting Power and Control were contacted by Full Scope Electrical to provide a solution for the emergency and standby lighting requirements within the MRI scanner room.

Care had been taken to use lighting that would not affect or be affected by the strong electromagnetic fields generated by the MRI scanner. This meant that battery backup power for the emergency lighting needed to be provided outside of the MRI room.



*Image: MRI Scanner Room*

The lighting consists of over 300W of specialist 36V dc recessed panel lights with a remote AC to DC driver outside the room. This meant that the perfect solution would include our RDF SI-Pro inverter range.

One of the first challenges was the in-rush current from this bespoke LED lighting solution as RDF Technical Director, Rob McGuire explains. “We identified that the specified lighting was being supplied by a single DC output LED driver, demanding 70A inrush current at 230V AC on switch on in an emergency where the mains supply fails. We knew it would be expensive to provide an inverter capable of delivering this inrush current demand without considering another solution. Since the output of our SI-Pro inverter range is widely configurable, then we were able to switch from the standard 6-way output to a single higher rated output with inrush limiting to provide the answer that meant the client also received the best cost solution.”

The 500VA RDF Si-Pro inverter was successfully installed and commissioned on this bespoke lighting load by the Full Scope Electrical electricians themselves due to the simple battery configuration and electrical connections resulting in further savings for the client. Ian Lumbard from Full Scope commented “the guys at RDF were on hand to answer any questions about the inverter battery build and install which ensured our final solution avoided any issues with the emergency back-up supply for the lighting. Staff and patients can be confident that the lighting will be illuminated when required to allow them to safely shut down all systems and exit the area on loss of power to the building.”



*Image: RDF Si-Pro Mini, Midi, Maxi Inverters*

Our RDF Si-Pro range of inverters are fully compliant to BS EN 50171 and designed to provide cover for emergency and standby lighting for loads up to 3000VA, with the smallest system providing 3 hours of cover for loads up to 400W or 500VA. Everything is contained within a single compact enclosure including 12-year VRSLA batteries, inverter, battery charger, control and alarm interface and a 6-way distribution output. The inverters can be configured to match the load requirements including changes to output distribution, controls and alarms, battery requirements and inrush needs. This configuration flexibility provides cost savings for the client rather than opting for more costly systems that are unnecessarily over-powered for the required application.

RDF have a wide range of inverters and smart addressable central systems for emergency lighting applications as well as a range of UPS systems for other back up power requirements.