

POWER CONTROL FOR THE VAST NORTH SEA OFFSHORE WIND FARM





Galloper Windfarm
POWER SUPPLY PROJECT







Client: GE
Country: United Kingdom
Year: 2017
Product: AVR3S800



AVR Exterior
Various Models

The Galloper Offshore Windfarm is the next phase in the evolution of the Greater Gabbard / Galloper site, situated 27km (or 17 miles) off the coast of Suffolk, England.

| | | | |
|--|--|---|---|
|  Invested £1.5 Billion |  Installed 56 Turbines |  Generating 353mw |  Powering 444,000 Homes |
|--|--|---|---|

The Galloper turbines transmit the electricity generated to shore via two submarine cables, each 45km long, leading to an onshore substation near the village of Necton. Here, GE used two Sollatek Automatic Voltage Regulators (Model AVR3S800) to regulate the power to critical equipment at the substation.

Sollatek's AVR3S800 provide sufficient power to control the site and boast a wide stabilisation input range of +/- 20%. Using advanced solid-state digital

processor technology, these systems can efficiently correct voltage fluctuations with a response time of 15ms. To mitigate against the effects of coastal environmental factors, the Sollatek AVR's are housed in a 40" container which complies to SEN specifications SP-NET-SST-510.

This design ensures maintenance free operation and extends the operational lifespan of the AVR's. The Galloper site required a Pre-Bias system which enables the AVR to anticipate and prepare

for very high or very low voltage transitions. This proactive approach ensures that the AVR can adjust accordingly, consistently maintaining the output voltage within the predefined parameters.

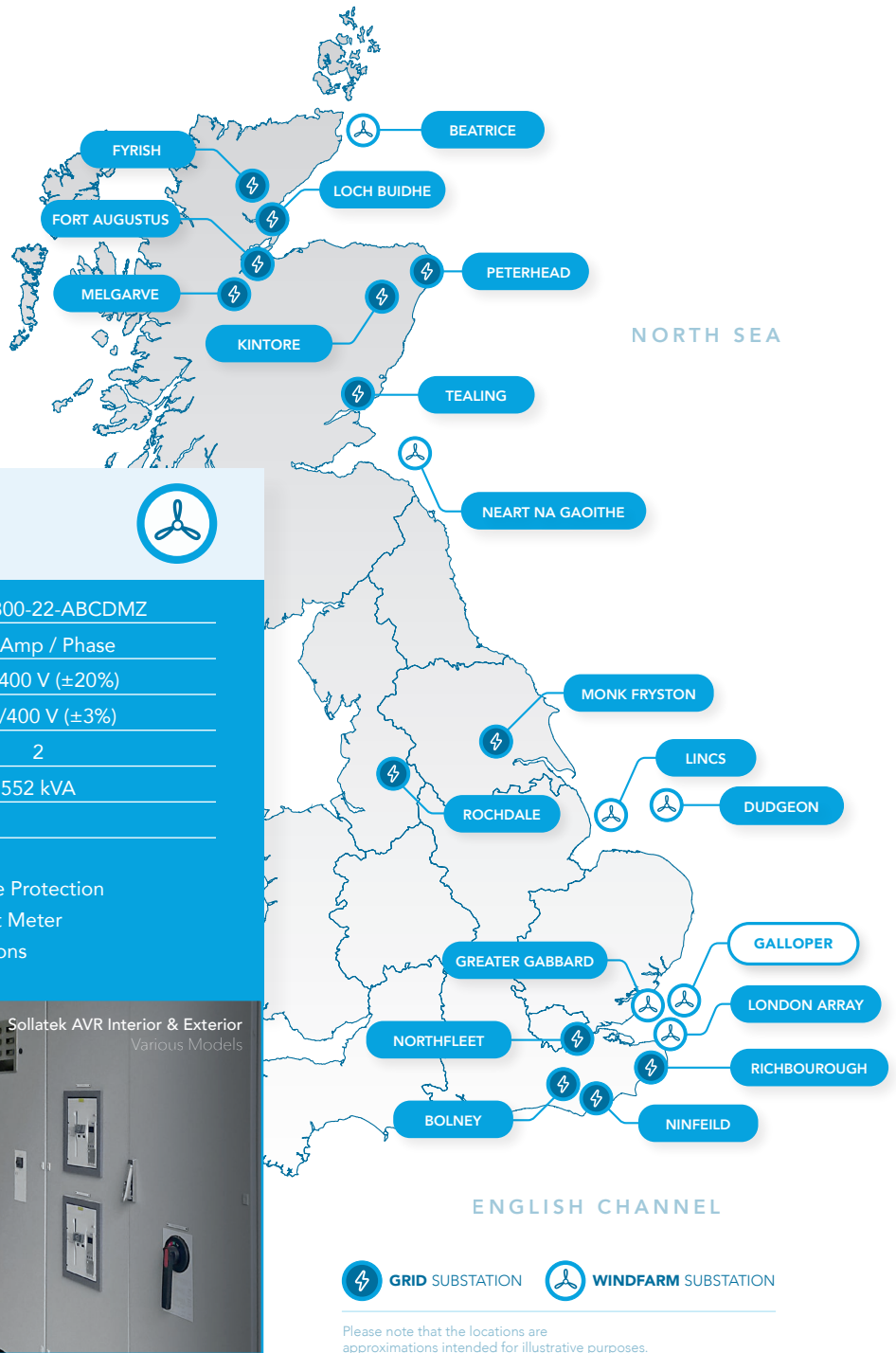
The Sollatek AVR connects to the site SCADA system doing so with a variety of alarms signals and controls. All Sollatek AVR's can be cloud enabled via a secure end to end encrypted platform to deliver all its internal measurements and data logging, allowing maintenance engineers to download files for analysis.



POWER PROJECTS

UNITED KINGDOM

Sollatek has cemented its reputation as a dependable partner in the power supply infrastructure by providing Automatic Voltage Regulators (AVR) to numerous projects across the UK.



Galloper Windfarm

SUBSTATION AVR SPECIFICATION



| | |
|-------------------|--------------------|
| Model | AVR3S800-22-ABCDMZ |
| Max Current | 800 Amp / Phase |
| Input Voltage | 230/400 V (±20%) |
| Output Voltage | 230/400 V (±3%) |
| Number of Systems | 2 |
| Max Output Power | 552 kVA |

INCLUDED FEATURES

- AVS
- Input Circuit Breaker
- Output Circuit Breaker
- Class II Surge Protection
- Digital Smart Meter
- Special Options



GRID SUBSTATION WINDFARM SUBSTATION

Please note that the locations are approximations intended for illustrative purposes.



Sollatek's expertise extends worldwide through local networks

Established for over 40 years in the United Kingdom, Sollatek is a manufacturer of innovative products in power control, energy saving, temperature control and solar energy. Operating from 12 countries and a global distribution network in 60 more. Sollatek has grown to become a household name, particularly in harsh and demanding environments where reliability and affordability are essential to everyday life. The Sollatek voltage protection product range now includes full lines of voltage switches, stabilisers, conditioners and uninterruptible power supplies (UPS).

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