



## WatchDog for wind power

### Reliable green-field wind power

#### Problem

Wind turbines are unmanned, local and autonomously operated power stations. Special monitoring technologies are needed for them to be safely operated.

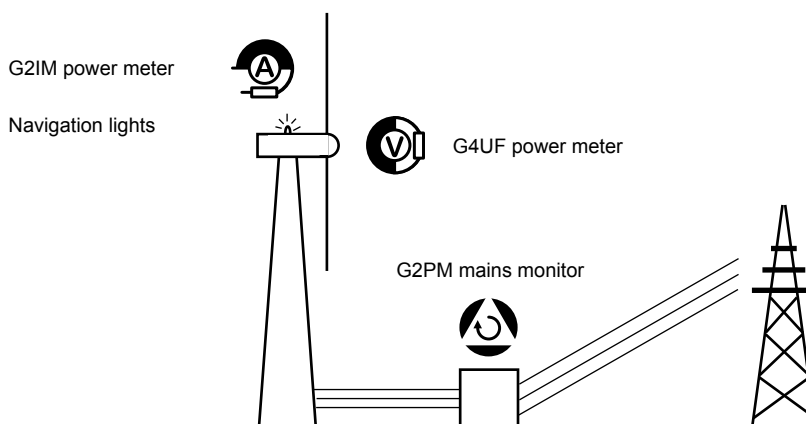
#### Task

Operational reliability demands that the battery charges be monitored in the UPS systems, which move the blades out of the wind in the event of malfunctions (vane position). Navigation light malfunctions and problems with the supply of power to the wind power generators also need to be rapidly recognized and reported.

#### Solution

TELE's WatchDog G4UF monitors the charge state in the pitch control system's batteries. The voltage thresholds for over- and undervoltage may be adapted to suit the number of cells. This prevents overcharging so that the energy storage systems do not age prematurely while undervoltage monitoring ensures that sufficient power remains available at all times to move the blades out of the wind. The G2IM unit monitors the navigation lights by measuring their power consumption. The integrated time functions also allow irregular currents (flashing lights) to be monitored with the WatchDog system. This product by TELE is highly reliable and possesses a robust design, a flexible supply voltage and a three-way cut-out with a rated surge voltage of 4 kV (supply/measure/output).

While the G2PM relay may be employed to monitor the main power supply and its branches. The settings that are variously possible for switch thresholds, asymmetry monitoring and optional phase-sequence monitoring allow the WatchDog G2PM to be adapted to any requirement. It is able to recognize and provide warning about any problems that may occur in the main supply and allows corresponding responses to be set.



#### Modules



G4UF500V03  
Art.No. 2394504



G2IM10AL10  
Art.No. 2390400



G2PM400VSY20 24-240V  
Art.No. 2390505