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Solutions for Wind Power Industry



Incremental and Absolute Encoders with mechanical multiturn gear for pitch and drive control



Metrological instruments for wind speed, wind direction, temperature and humidity. Heavy duty and cold climate versions available



Rotary Limit Switches for azimuth and yaw control



**Rope descending devices for abseiling
Fall prevention devices**



**Ethernet switches and router
Systems for connection of wind parks
with fiber optic networks**



**Systems for lightning and surge protection
Systems for PLC control and visualisation using
components from market leading manufacturers**



**Drive and Inverter engineering and
panel building**



**PLC engineering, software development
and panel building**

Engineering and installations for wind power industry - System integration

As an engineering company and system integration company MEYLE offers products from a single component up to complete system solutions for wind power industry. System solution mainly focus on pitch control systems, metrological measurements, industrial ethernet connection of wind parks, inverter and PLC control systems.

Wind power industry - Components

For wind power applications MEYLE offers a wide range of sensors, switches and safety products.

Incremental and absolute encoders are one of the most important products in this field and are used in the generator and pitch control. MEYLE offers heavy duty incremental encoders for use in generator control and absolute multiturn encoders for pitch control applications in combination with pitch drives or blade control. The absolute multiturn encoders use a mechanical multiturn gear to avoid any influence of electromagnetic fields

Metrological instruments such as wind speed and wind direction sensors are available as cup versions or ultrasonic anemometer versions from standard temperature ranges up to ice free devices for cold climate regions.

Rotary limit switches are used in the area of yaw control (azimuth control) and pitch control. In yaw control applications they are used to avoid twisted cables. The rotation of the nacelle is monitored and if necessary the movement can be blocked in one direction to prevent the twisting of the hanging cables. For this reason also the term cable twist sensor is used.

If rotary limit switches are used in the area of pitch control it is possible to have accurate monitoring of the rotor position. This is usually achieved through the integration of a MEYLE high resolution encoder or potentiometer.

The rotary limit switch is always connected with the gear box of the nacelle or the rotor respectively, using a specially designed pinion gear. The pinion gears can be supplied according to customer specification, in order to integrate the machine into the existing structure.

The switch offers many advantages as opposed to other technical solutions. The end positions are secured through the switch contacts of cam switches. In addition to the limiting of the end position, it is possible to determine positions exactly using the evaluation of encoder or potentiometer signals. In this way a diverse function of great importance can be accommodated in one housing unit. The housing of the rotary limit switch has a protection degree of IP65, which allows for it to be used under harsh conditions.

Safety abseiling devices are used for the abseiling of persons from high work locations. MEYLE offers certified complete sets consisting of a descender abseiling device, rope, hook, harness and bag of highest quality.

Another product for wind energy are the **slip ring collectors** available in different models. The power transmission is transferred from a rotating to a fixed part using the slip ring collector.

For repair purposes every nacelle in a larger wind energy facility is equipped with a service crane. This hoisting device is controlled using a **pendant control switch** which we can offer from our range of crane control components.