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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 gear limit switches for yaw (azimuth) and pitch control



**Rope descending devices for personal safety and rescue
Fall prevention devices**



Drive and Inverter engineering and panel building



PLC engineering, software development and panel building



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Rotary Gear Limit Switches for Yaw- and Pitch Control



Rotary gear limit switches with up to 12 cam switches and 2 different ratios



Rotary gear limit switch with integrated incremental or absolute encoder and circuit board



Rotary gear limit switch with absolute SSI, CAN or Profibus encoder on extended shaft



Rotary gear limit switch with integrated potentiometer



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Encoders for pitch and generator control



Incremental hollow shaft encoder for generator control - 100 mm housing diameter



Incremental and absolute encoders with double bearing design for heavy duty



Absolute multiturn encoders with mechanical gear – no battery



Incremental and absolute optical and magnetic encoders from 24 to 100 mm housing diameter



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Wind speed and direction sensors



Wind speed anemometer and wind direction sensor combinations. Reliable and heavy duty sensors



Wind speed anemometers and wind direction sensors without and with heating for cold climate. Seawater resistant aluminium housing



Ultrasonic anemometers with 200 W high power heating for cold climate applications. Economic compact versions without heating



Ultrasonic anemometers for wind speed, wind direction and virtual temperature measurements. RS 232, RS 422, RS 485, NMEA or 4-20 mA output

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 - 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 or battery life time.

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 gear limit switches are used for yaw control (azimuth control) and pitch control. For yaw control they monitor the position of the nacelle and avoid twisted cables (cable twist sensor). Additional accurate positioning can be achieved by integrating a MEYLE incremental or absolute encoder or a potentiometer.

In pitch control applications the rotary gear limit switches monitor the position of the rotor. This is usually achieved through the integration of a MEYLE high resolution encoder.

The rotary gear limit switches are connected with the gear box of the nacelle or of the rotor by a pinion. These pinions can be made according to the customers specification in size and number of teeth.

The rotary gear limit switches are designed for use in rough conditions and cold climate up to -40°C .

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

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