

ENCODERS IN A COMMERCIAL WIND TURBINE APPLICATION

Background

Wind turbines have gotten larger and more powerful, making them competitive with convention fuel-fired power plants. Since they rely on wind, there are a lot of control surfaces (like an airplane) that need to be instrumented and adjusted for optimum performance. This is where multi-turn absolute encoders have a strong role to play.

Solution


Two of the most critical areas for correct operation of a wind turbine include “Yaw angle” – or the direction of the turbine relative to the wind direction, and blade pitch. Most modern wind turbines have the ability to rotate the blade around its major axis, which adjusts the pitch or “angle of attack” of the blade leading edge relative to the wind speed. This is analogous to a sailor being able to trim the sails of the sailboat in order to increase the speed of the boat. Wind turbines are heavy pieces of equipment so a lot of leverage or gearing is required to adjust blade pitch and yaw. This makes them ideal for multi-turn encoders.

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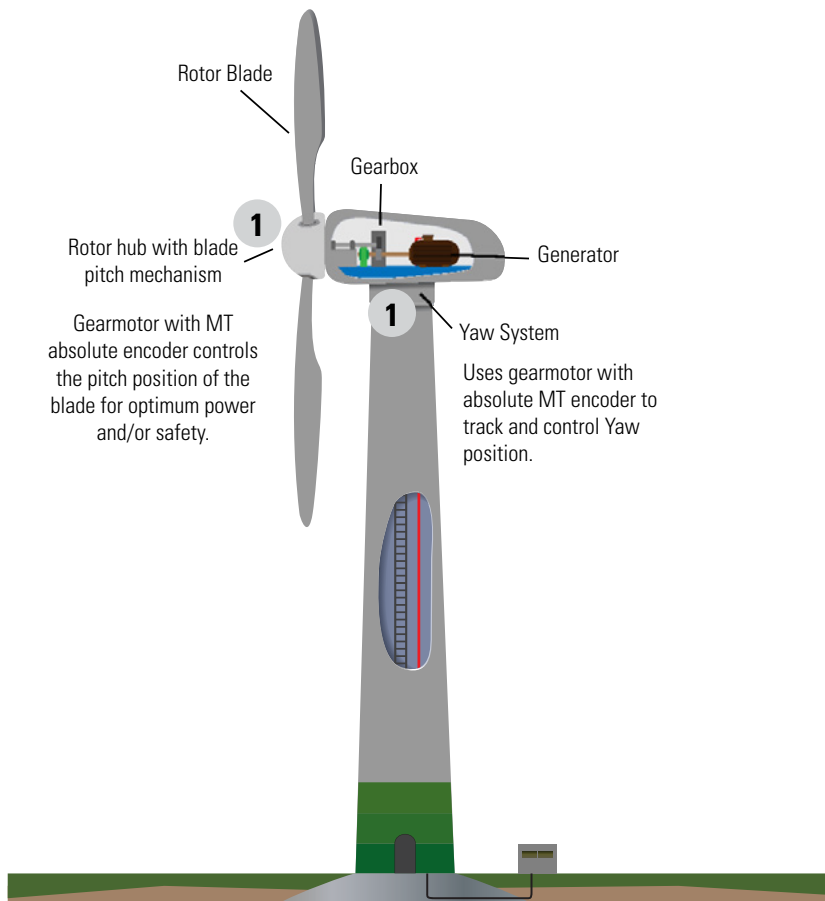


RECOMMENDED PRODUCTS

Reference on Diagram	Product	Type	Features	Part Number	Function	Brand
1	 M5M5	Shafted And Hollow-Shaft Encoder	Rotary Multi-Turn Absolute Output. Etherne/Ip Or Profinet Options	M5M5/M5HK5 Family	Multi-Turn Absolute	BEI Sensors



DIAGRAM



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