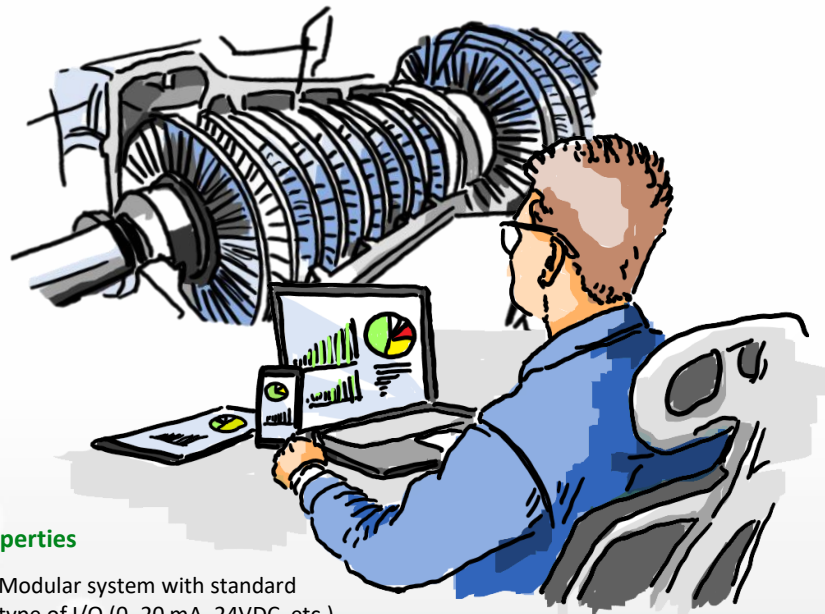
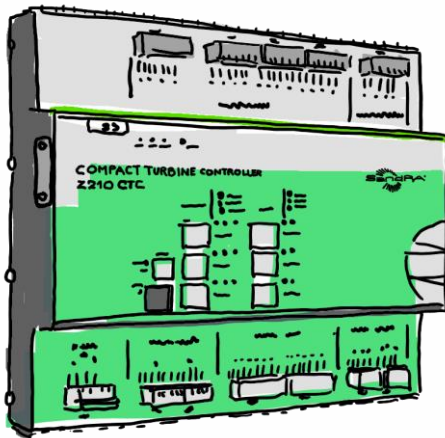




# COMPACT TURBINE CONTROLLER

...small solution for great performance



## SandRA Z210 CTC

### Description

#### Compact solution for control and protection of turbines

The compact system is built into 1200x800x400 mm industrial cabinet and contains turbine control and protection system based on instrumentation SandRA Z210. HMI control panel for local control is situated on the front door of the cabinet. Power supply is accomplished by two channel supplying ensuring safe operation and the signals from technology are transferred via wires coming through the bottom side of the cabinet.

#### Cost effective solution

The control part has a PID structure for stable turbine operation and the possibility to change the control mode smoothly. Basic parameters can be easily configure by the users themselves, without the need for special commissioning engineer. The possibility to provide engineering software Pertinax for wider modification of the control loops is optional.

### Properties

- Modular system with standard type of I/O (0–20 mA, 24VDC, etc.)
- High level of system auto-diagnostics and diagnostics of connected circuits
- Standard types of communication protocols (Ethernet, Modbus RTU, TCP/IP etc.)

#### Turbine control system (TCS)

- Measuring and speed control
- Load control – primary and secondary regulation
- Pressure control
- Manual valve control
- Thermal stress (mathematic calculation)

#### Turbine protection system (TPS)

- Indication of the first-in
- Summary of protection
- Option of including overspeed protection

### Basic overview

- Application in industrial environment (IP65)
- External HMI control panel for local control
- Two independent modules – first one for turbine control and the second one for turbine protection
- Possibility to extend the system by remote I/O
- Communication with DCS system or remote diagnostics
- All in One solution