



Czech

# INSPECTION CERTIFICATE

**File number 14.375.401**

Issued by inspection body No. 4002 accredited by CAI according to ČSN EN ISO/IEC 17020:2012:

**ZAT a.s.  
K Podlesí 541  
261 80 Příbram VI**

On the basis of results conducted by the checking, testing and evaluation, which are listed under Inspection report of TÜV SÜD Czech file No.: 14.375.400 we hereby confirm conformity of the below mentioned device:

Name: **E/E/PE systems related to safety turbine protection system with PLC system concept ZAT SandRa Z100**  
Type: **TPS – KS65**  
Production number: **E6114/3063338 (E6114-KS65)**

With requirements **ČSN EN 61508-1 ed.2:2011 (idt EN 61508-1:2010),  
ČSN EN 61508-2 ed.2:2011 (idt EN 61508-2:2010),  
ČSN EN 61508-3 ed.2:2011 (idt EN 61508-3:2010),  
ČSN EN 61508-6 ed.2:2011 (idt EN 61508-6:2010).**

**The system related to the safety of the turbine protection system TPS – KS65 complies with ČSN EN 61508 ed. 2 series requirements up to level SIL3:**

- a) in low demand mode and backup variants 1oo1, 1oo2 and 2oo3,
- b) in high demand mode and backup variants 1oo2 and 2oo3.

**Valid conditions:**

- specified in TÜV SÜD Czech Inspection report, file number 14.375.400, dated 2022-03-16:
  - a) the instructions for use of the equipment under SIL3 conditions will be followed,
  - b) the requirements of the above given standards will be complied with,
  - c) the scope and frequency of regular inspections and revisions will be accepted.

Detailed technical data are specified on the page 2.

In Ostrava, on 2022-03-16

**On behalf of TÜV SÜD Czech s.r.o. : Ing. Petr Navrátil**

This language version of the inspection certificate is a translation of the official Czech version dated 2022-03-16, which is considered to be the only correct one in the case of a dispute.

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Detailed technical data characterizing the product type:

Name:	<b>E/E/PE systems related to safety turbine protection system with PLC system concept ZAT SandRa Z100</b>
Brief characteristics of the equipment:	The turbine protection system TPS supervises the operation of a functional technological unit - a steam turbine - from the point of view of its safe operation. It performs continuous collection and evaluation of operational information / values. In the case of exceeding the permitted range of these operating values, the protection system will ensure a controlled and safe shutdown of the technological functional unit (closing of the turbine quick-closing valve).
Power voltage	
- for main / control circuits:	two separate external inlets 230V AC 50Hz
- auxiliary circuits:	separate external inlet 230V AC 50Hz
Voltage of programmable electronics control system:	48 V DC from a pair of power supplies (-TA31, -TA32)
Voltage for supplying system sensors, stages / output circuits, actuators:	24 V DC from a pair of power supplies (-TA21, -TA22)
Electrical coverage:	IP65
Protection against mechanical shocks:	IK10
Manufacturer:	ZAT a.s., K Podlesí 541, 261 80 Příbram VI

