



**Manometr Kharkiv**

# SAFIR

NUCLEAR GRADE  
PRESSURE  
TRANSMITTERS

**20**  
**YEARS**  
IN INDUSTRY

## Analog Transmitter for Harsh Environment Safir ACc

- ◆ LOCA Qualified
- ◆ Seismic Qualification
- ◆ Stainless Steel Housing
- ◆ Lifetime - 30 years
- ◆ Optional Remote Sensor Design
- ◆ Radiation TID up to 2.88 MGy
- ◆ Response Time < 0.1 s

## Nuclear Industry References

**total of over 30 000 units**

- Zaporizhzhya NPP (Ukraine)
  - Rivne NPP (Ukraine)
- South-Ukraine NPP (Ukraine)
- Khmelnytsky NPP (Ukraine)
  - Mochovce NPP (Slovakia)
  - Kozloduy NPP (Bulgaria)
  - Armenian NPP (Armenia)



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# NUCLEAR GRADE PRESSURE TRANSMITTERS



## ANALOG

**Accuracy:** 0,25% FS  
**Turndown:** 1:10  
**Output:** 4-20 mA, 0-5 mA  
**Inter calibration period:** 24 months



## DIGITAL

**Accuracy:** 0,1% FS  
**Turndown:** 1:25  
**Output:** 4-20 mA, 0-5 mA  
**Inter calibration period:** 36 months  
**Indicator:** LCD



## SMART

**Accuracy:** 0,05 % FS  
**Turndown:** 1:100  
**Output:** 4 – 20 mA, 0 – 5 mA, HART 7.0  
**Inter calibration period:** 36 months  
**Indicator:** dot-matrix display, LCD Self-diagnostic

## Spent Fuel Pool Level Measurement for PAMS Safir 2536 ACc1(2;3)

- ◆ 3x Combined sensor module
- ◆ Medium density change correction
- ◆ Up to 25 m deep
- ◆ Radiation TID 2,88 MGy
- ◆ Temperature up to 250 °C
- ◆ Cable length up to 300 m



## Nuclear Certification

Transmitters Can Be Used Both in Systems of Normal Operation and in Systems Important for Safety

Safety Classes 2,3,4 as per NP 306.2.141-2008

Functional Classes A, B, C according to DSTU IEC 61226:2007

Corresponds to the 1E Class Equipment Requirements

EMC Certified according to IEC61000-4-x (x - 2,3,4,5,6,9,10,11,12,16,18)



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