

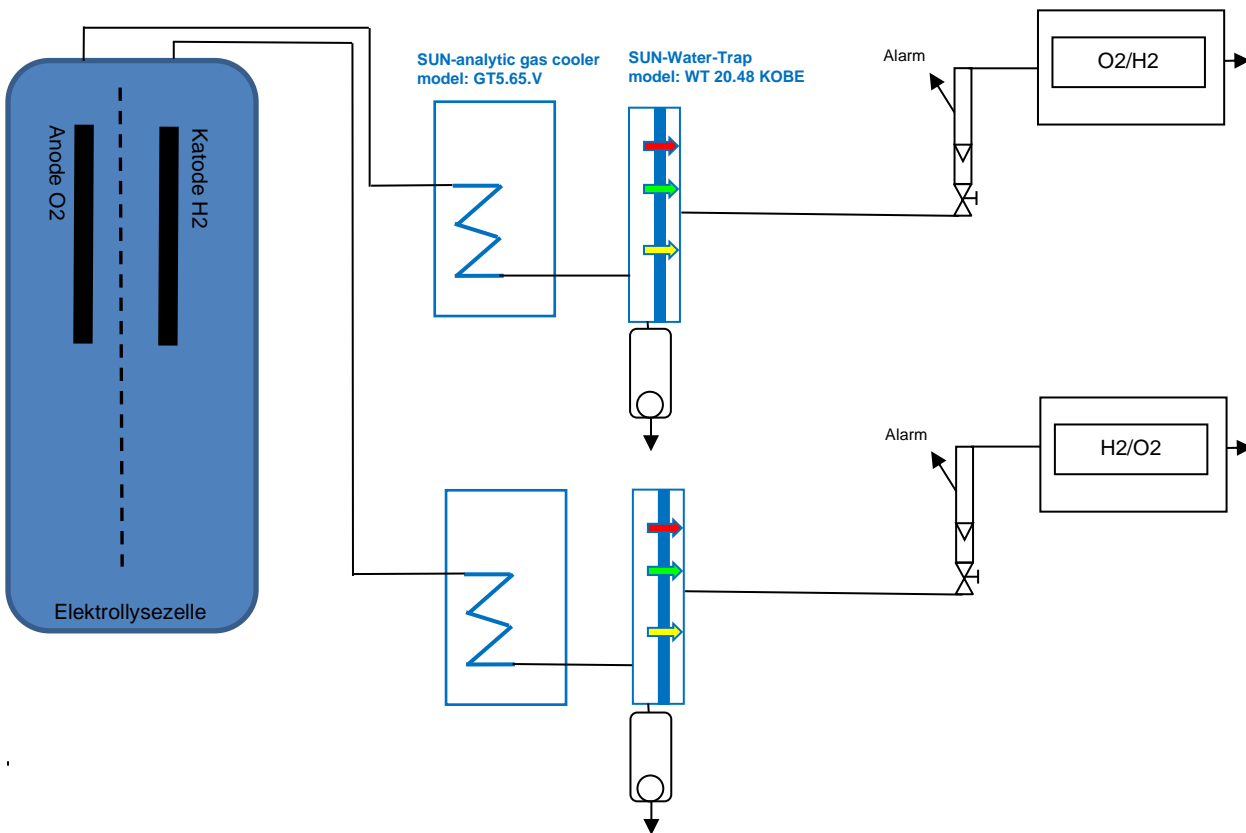
Technical report of gas analytic technology

Sample application electrolyser:

Safety-related operational measurement of oxygen (O₂) and hydrogen (H₂) on electrolyzers for the production of hydrogen.

In the course of climate change, there is an increasing focus on the production of **renewable hydrogen**, so-called **green hydrogen**. **Power to gas** and **Power to liquid** processes are being used to replace fossil fuels. **Hydrogen electrolysis** is monitored for gas quality, impurities and explosive gas mixtures (oxyhydrogen) using **extractive gas analysis technology**.

Gas flow diagram:



Explanation of symbols:

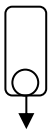


SUN-analytic gas cooler model: GT5.65.V

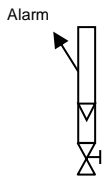




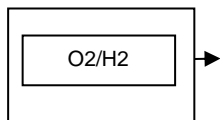
SUN-Water-Trap model: WT 20.48 KOBE



Automatic condensate drain



Flow meter with regulator valve and alerting



Gas analyser

Function description:

The electrode gas is cooled down to a defined dew point via the **Process-Analytic-Cooler** model GT5.65.V. An automatic condensate drain removes the resulting liquid.

The **Water-Trap** model WT 20.48 KOBE with the built-in SUN-Control-Analytik-Membrane® protects the high-quality analyzer from penetrating condensate and fine dust.

The gas flow monitoring is carried out by a variable area flow meter with a regulating valve. Optical and electrical alarms are standard. The analyzer converts the required gas concentrations into an analog or digital signal, which is processed further as a control, regulation and alarm signal.

The alternative to installation in potentially explosive areas is the Process-Analytic-Cooler model GT5.EX is available.



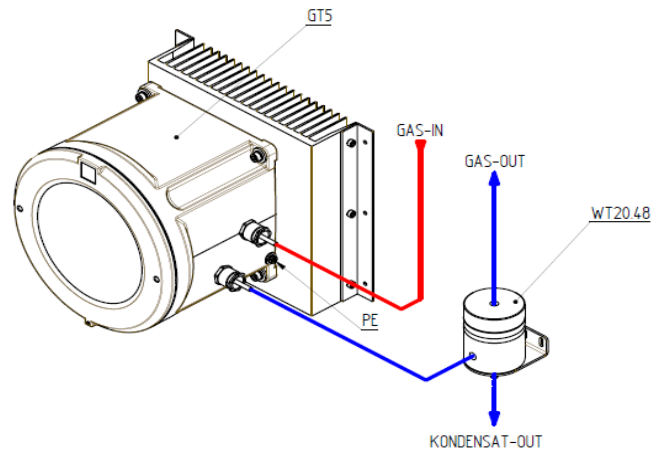
IEC/EN 60079-0, 60079-1, 60079-31

EPS 17 ATEX 1 072

- Gas: II 2G Ex db IIC T4 Gb (Tamb +60°C)
 II 2G Ex db IIC T6 Gb (Tamb +40°C)
Dust: II 2D Ex tb IIIC T130° Db (Tamb +60°C)
 II 2D Ex tb IIIC T80° Db (Tamb +40°C)

IECEX EPS 17.0036

- Gas: Ex db IIC T4 Gb (Tamb +60°C)
Ex db IIC T6 Gb (Tamb +40°C)
Dust: Ex tb IIIC T130° Db (Tamb +60°C)
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