

SNx IGNITER

HOT SURFACE IGNITER FOR GAS & H₂

All advantages at one glance.

2-in-1 solution for temperature sensors



Hot Surface Igniter (HSI)

HSI for Fuel cell SOFC/PEFC high temperature systems

Flame sensor / temperature sensor for hydrogen combustion

1,200 °C

SNx-1

D.8xL40 mm



SNx-2

M18 thread



SNx-3

D.14xL30 mm



1,300 °C

often used for fuel cell

SNx-4

D.19xL50 mm



SNx-5

M16 thread



SNx-6

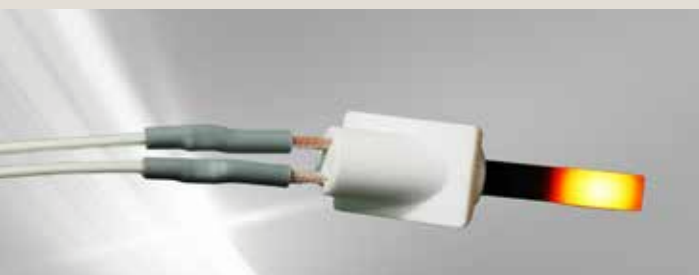
32 mm round



> KEY BENEFITS AT A GLANCE:

- High reliability and Japanese quality
- Rated lifetime: over 90,000 hours (almost 10 years)
- Very high temperature: 1,400 °C in 30 seconds
- High pressure resistance and very low temperature at lead wire junction (below 100-200 °C)
- Power rating: 45-75 Watt
- Competitive cost: by providing major fuel cell makers, we achieved high cost/quality performance
- Long experience in fuel cell industry (12 years of production)
- Can be used not only as flame detection sensor but also as flame temperature sensor
- Very robust: chemically non-sensitive and high temperature resistant
- No degradation in resistance vs. life time
- Long lifetime even in direct flame
- Linear correlation of signal with temperature
- Low mass inertia (quick response)
- Easy manufacture of the housing, flange and cable

2-in-1



6s to 1,000 °C

High sealing property

H2 ready flame sensor

Long rated lifetime

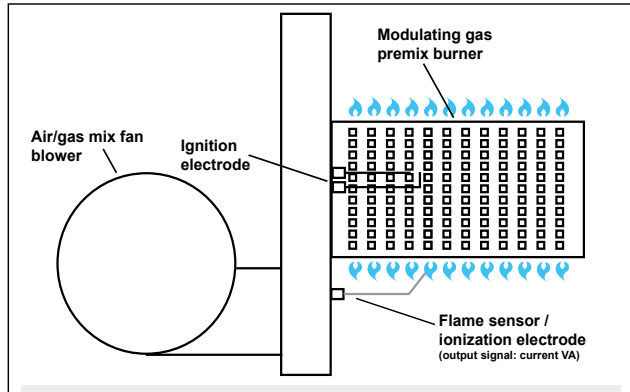
> COMPARISON WITH UV OR IR SENSORS:

- Cost-effective compared to UV or IR sensors
- Passive use of the PTC property (measuring resistance variation)
- No optical view or window required, unlike UV/IR sensors. The detection occurs directly in the flame
- No problem with steam or vapor blocking UV sensor
- Constant signal that does not decrease with lambda (air/gas mixture), unlike UV/IR sensors
- Does not create false flame detection as UV sensors may do. Can be certified as Class C construction

We create your solution - Fully customizable solutions available

SNx Ceramic igniter/sensor applications in hydrogen combustion systems

> DIAGRAM OF A CONVENTIONAL GAS BURNER



Only 30 %
Gas / H₂ Mix
is possible

> OUR SOLUTION

Diagram of a H₂ 100 % ready gas burner with SNx sensor (sensor function only)

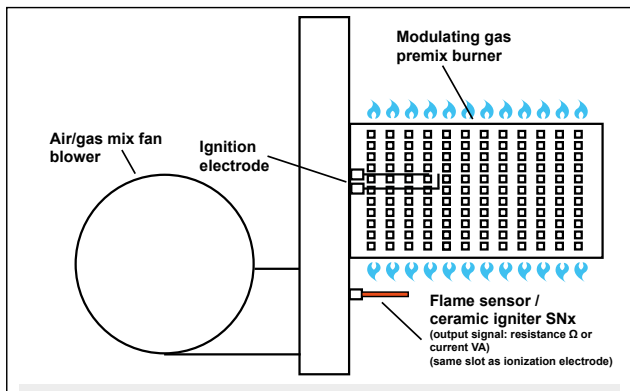
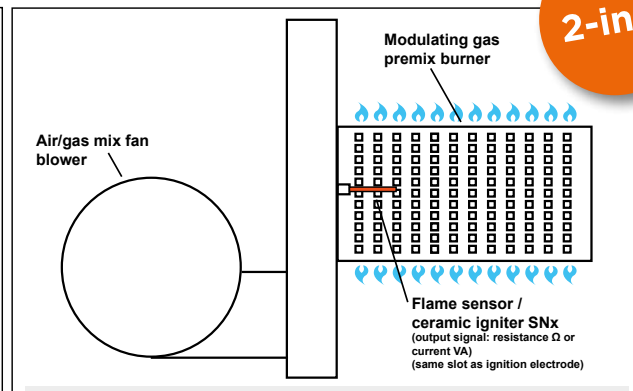


Diagram of a H₂ 100 % ready gas burner with SNx sensor and igniter 2 in 1



H₂ 100 % ready gas burner

REFERENCES

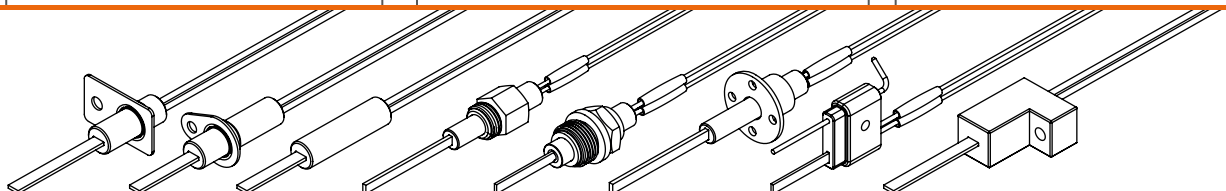
- Osaka gas Ene- Farm
- Panasonic Ene-Farm
- Toshiba Brennstoffzelle
- Honda Brennstoffzelle
- Tokyo Gas Brennstoffzelle
- JX Eneos Brennstoffzelle

APPLICATION

- Igniter for gas pre-heating
- Igniter for start-up burner
- Igniter for off-gas burner
- Igniter for cathode air preheater
- Igniter for SOFC/PEFC reformer high temperature burner
- Flame sensor in 0~100 % H₂ mix
- Temperature sensor

SYSTEMS

- Micro CHP: SOFC/PEFC
- Fuel cell back-up power
- Hydrogen burner
- H₂ reforming unit
- H₂ boiler





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