



Revision V1.01

PZA-MC N/P

Two meas. ranges in a single sensor
 Sensor for accurate PPM & vol.-% measurement
 Long lifetime and low drift



KEY FEATURES

- Highly sensitive to oxygen
- Dual measurement range
- Diffusion- and forced-flow variants
- Easy connectivity and integration
- Bluetooth interface
- Analog output: 4 – 20mA (linear)
- Excellent long-term stability
- Fast response & recovery times
- Low maintenance and long lifetime



APPLICATION AREAS

- Additive Manufacturing
- Semiconductor Manufacturing
- Air Separation/ O₂ Gas Purification
- Shielded Gas Welding/ Brazing
- Industrial Safety & Process Control
- Soldering Units and Annealing Ovens
- O₂ Concentrators & Generators
- N₂ Generators
- Metal Processing and Manufacturing



MEASUREMENT SPECIFICATIONS

Measuring Gas	Oxygen O ₂
Measurement Method	Zirconia oxide ZrO ₂ – Potentiometric
Standard Detection Range (can also be configured for customer-specific range)	PZA-MC25 N/P: 0 – 1000ppm & 0 – 25vol.-% O ₂ PZA-MC100 N/P: 0 – 25vol.-% & 0 – 100vol.-% O ₂
Lower Detection Limit (LDL) ¹	1ppm (configurable to ppb)
Measuring Accuracy	Please refer to accuracy table on pg. 4
Output Signal	Linear
Response Time t ₉₀	approx. 2 seconds
Sensor Heating-up Time ²	approx. 5 minutes
Flow rate (for PZA-MC-P)	0.5 – 2 l/min (Nominal flow rate: 1.3 l/min)

TECHNICAL SPECIFICATIONS

Ambient Temperature	-10°C to +80°C
Max. Sample Gas Temperature	200°C
Humidity Range	0 to 95% r.h. [non-condensing]
Storage Temperature	-40°C to +80°C
External Dimensions	A19-N/P: diameter ~70mm, height 75mm incl. plug Z19 (L x W x H): 120 x 130 x 40 mm
Mounting Depth	30mm (incl. thread PZA-MC-N), Diameter 20mm
Weight	1kg + 0.5kg (control unit)
Supply Voltage	24VDC
Power Consumption	Acc. to sensor type, approx. 20W
Output Signal	Analog: 4 – 20 mA potential-free (0 – 20mA opt.) Relay output: for collective alarm, 1A, 24V(ohmic)
Lifetime	Up to 10 years (under clean environment)
Electrical Interface	Control unit → A-19 N/P: M12 (4-pin) Control unit: Terminal block/ single wires
Mechanical Interface (for PZA-MC-N)	M27 x 2mm external thread
Mounting (for PZA-MC-P)	Possible with two M5 screws on the sides
Gas interface (for PZA-MC-P)	Inlet: G3/8" Outlet: G1/4"
Additional Interfaces	Bluetooth (PC-software for evaluation)
Sensing Head Material	Stainless-steel

ORDERING INSTRUCTIONS

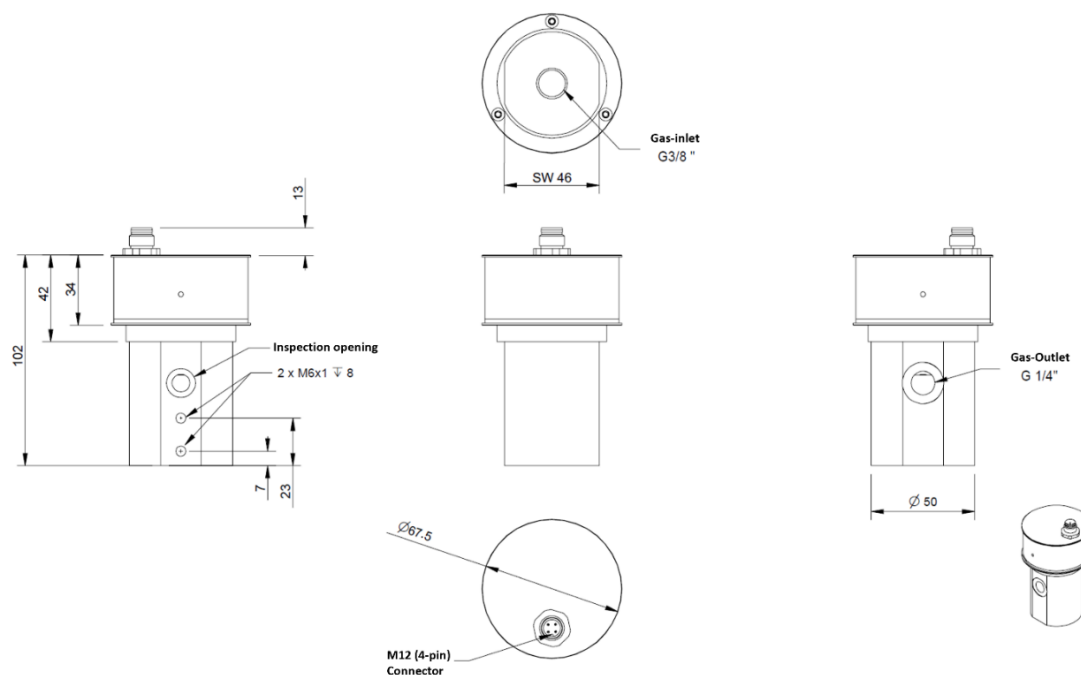
Part no.	1620215811	1620215812	1620215809	1620215810
Model	PZA-MC25-N (Diff)	PZA-MC25-P (Flow)	PZA-MC100-P (Flow)	PZA-MC100-N (Diff)
Meas. Range	0 – 25vol.-% O ₂ & 0 – 1000ppm O ₂	0 – 25vol.-% O ₂ & 0 – 1000ppm O ₂	0 – 100vol.-% O ₂ & 0 – 25vol.-% O ₂	0 – 100vol.-% O ₂ & 0 – 25vol.-% O ₂

¹ Measurement range with Log variant: 100% - 10⁻⁵ bar O₂

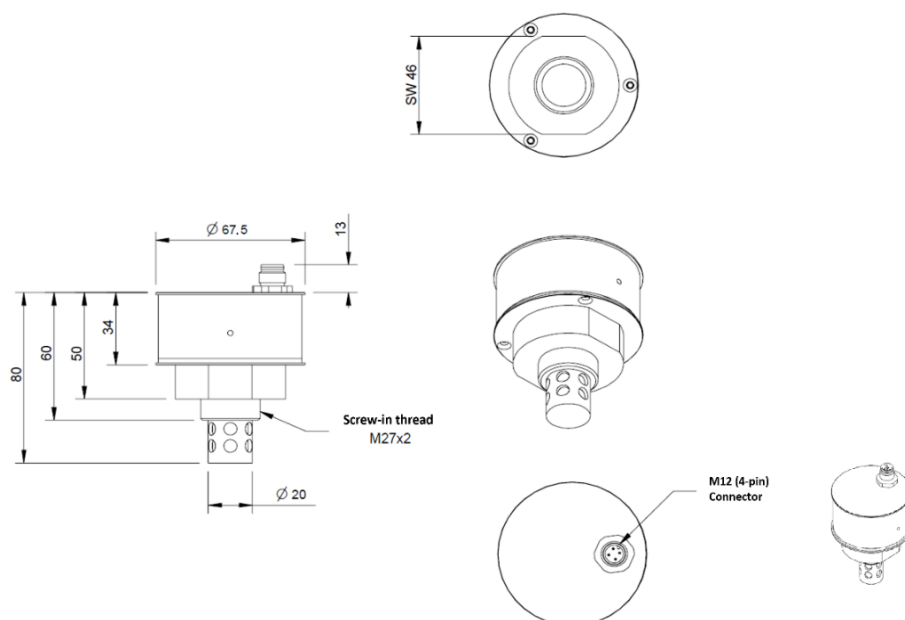
² Dependent on the ambient temperature; measured at 25°C

EXTERNAL DIMENSIONS

SENSOR HEAD A19-P

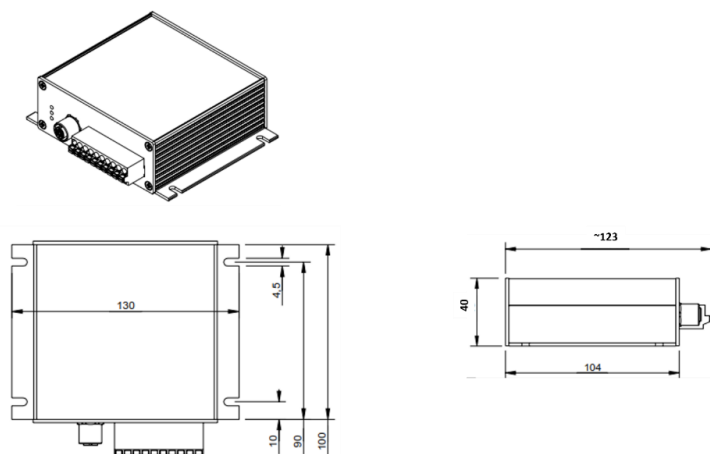


SENSOR HEAD A19-N





CONTROL UNIT Z19-F



ACCURACY TABLE Measured at standard temperature and pressure / in N₂

Measurement Range

10ppm	±0.5ppm
100ppm	±1ppm
1000ppm	±3ppm at 100ppm ±1ppm at 10 ppm
1 vol.-%O ₂	±5ppm at 100ppm
25 vol.-%O ₂	±0.03% at 1vol.-%O ₂ ±0.02% at 0.1vol.-%O ₂
100 vol.-%O ₂	±1% at 99vol.-%O ₂

LIABILITY / DISCLAIMER

 **CAUTION!**

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 Typical values related to 1013 hPa, T_a = 25 °C, flow = 1.3 l/min for dry (non-condensing) and clean sample gas. Stated values exclude calibration gas tolerance.

All specifications – technical included – are subject to change without notice. Depending on the application, the target gas and the measurement range the technical data may differ. No liability is accepted for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. The data is given for guidance only. It does not constitute a specification or an offer for sale.

For more information, please visit sensorsandpower.angst-pfister.com

We are here for you. Addresses and Contacts.

Headquarter Switzerland:

Angst+Pfister Sensors and Power AG
Thurgauerstrasse 66
CH-8050 Zurich
Phone +41 44 877 35 00
sensorsandpower@angst-pfister.com

Office Germany:

Angst+Pfister Sensors and Power Deutschland GmbH
Edisonstraße 16
D-85716 Unterschleißheim
Phone +49 89 374 288 87 00
sensorsandpower.de@angst-pfister.com

Office North America:

Angst+Pfister North America Inc.
10391 Brecksville Rd.
US-Brecksville, OH 44141
Phone +1 440 375-5212
info.apus@angst-pfister.com

Scan here and get an overview of personal contacts!



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