ARCHIGAS
LEADER IN HYDROGEN MEASUREMENT

Document name (Archigas):	
Offer number (Archigas):	

Application questionnaire

Archigas TCD3000 gas analysers

Thank you for taking the time to complete this questionnaire. The information you provide will help us to better understand your application and provide you with a suitable product offer.

All information will be treated confidentially and will only be used to process your request. Please fill in the fields as completely as possible and to the best of your knowledge. Any missing details can be discussed directly with our technical team afterwards and before ordering the product.

If you have any questions, please do not hesitate to contact us for a personal consultation.

Step 1: Application

☐ Electrolysis	☐ Fuel cell	☐ Synthesis gas	☐ Refinery
☐ Metallurgy	☐ Gas production	☐ Petrochemistry	☐ Institute / University
Other / further remarks:			

Step 2: Process

Please read:

If your process conditions are constant and consistent, it is sufficient to fill in the “normal” column with the corresponding values and units. You can add additional comments if required. You do not need to fill in the “min.” and “max.” columns if no deviations occur.

However, if your process conditions vary, please complete the table in full. Enter the typical value in the “normal” column and complete “min.” and “max.” accordingly.

	min.	normal	max.	Units	Remarks
Ambient temperature at the installation site					
Dew point of the sample gas (if known)					
Sample gas pressure Note: The normal pressure specified here corresponds to the pressure at which the sensors are calibrated (calibration pressure). Calibration at the factory is possible for pressures up to a maximum of 10 bara. For pressures above 10 bara, calibration must be carried out by the customer (see operating instructions).					
Sample gas temperature					
Flow rate (pipe cross-section, if applicable)					

Step 3: Measuring range

	Measuring range Beginning	Measuring range End	Unit	Sample gas	Background gas(es) See table below
Measuring range	until				

Sample gas composition and properties

Please list all gases that may occur in the process. The normal value is the typical concentration. The sum of all gases with typical composition should be 100%.

	Gas component	min. (vol.%)	normal (vol.%)	max. (vol.%)	Is the component measured separately?
1.					☐
2.					☐
3.					☐
4.					☐
5.					☐
6.					☐
7.					☐
8.					☐
9.					☐

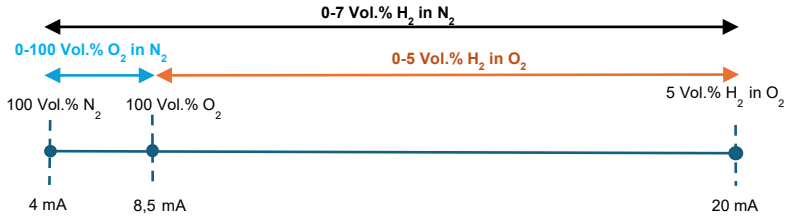
total 100 vol.%

Step 4: TCD3000 product selection

	TCD3000 SiA	TCD3000 Si	TCD3000 Transmitter
Version	 Screw-in unit for use directly in the process up to zone 1 II 2 G Ex db IIC T4/T3 Gb, - 40°C < Ta < +90°C /+125°C ☐	 Screw-in unit for use directly in the process ☐	 Transmitter for non-flammable gases and low flow rates (up to 120 l/h) ☐
Is the ATEX designation sufficient?	Yes ☐ No ☐		
Sample gas connection	G ½“ ☐ NPT ½“ ☐	G ½“ ☐ NPT ½“ ☐	6 mm Ø Rohr
Pressure compensation Info: The change in pressure of a gas mixture can influence the measurement to varying degrees depending on the gas. In low pressure ranges, this influence can lead to measurement deviations. In higher pressure ranges, this influence stabilizes. With the pressure compensation curve, you can correct the measurement signal on the customer side. Note: An external pressure measurement is required for pressure compensation.	Are you interested in a consultation on pressure compensation? ☐ Yes ☐ No Is a pressure compensation curve necessary? (additional service for a fee) ☐ Yes, based on the pressure range: A pressure measurement by the customer is required for pressure compensation.		
Humidity compensation Note: Moisture in the system can influence your measurement. For optimum measurement results, we recommend that you take advantage of our consultation.	Are you interested in a consultation on humidity compensation? ☐ Yes ☐ No		

Individual adaptation for e.g. high gas temperatures >125 °C, radioactive environments, pressure ranges >200 bar Note: Individual adaptations are dependent on technical feasibility and can lead to longer delivery times. You will receive more detailed information after checking your requirements.	Are you interested in customizing the product? ☐ Yes ☐ No If yes, please describe your requirements:

Step 5: Interfaces and additional services for a fee

Two measuring ranges via a common analog output (additional service for a fee) Info: Assignment of the analog signal with O_2 in N_2 and H_2 in O_2 in the measuring ranges for monitoring purching processes, e.g. in electrolyzers. Note: This solution using one sensor can offer you an advantage. The simple setup saves you time and money.	☐ Yes, this function is required Example calibration: The example shows an extension of the measuring range from O_2 in N_2 by a second measuring range H_2 in O_2. The end value of the analog output (20 mA) is set to the extended measuring range end value of 5 vol.% H_2 in O_2. The transition point of the two measuring ranges is 100 vol.% O2 at 8.5 mA. 

Substitute gas calibration with defined equivalence values (additional service for a fee) Info: It is possible to calibrate the measuring device with a safer or more readily available gas if the actual process gas cannot be used. A substitute gas is used, the measured values of which are converted into the corresponding values of the process gas using an equivalent value.	☐ Yes, a substitute gas calibration with defined equivalent values is required ☐ No, calibration with the actual process gas is sufficient ☐ Not sure, further information is requested
Individual calibration gases (additional service for a fee)	☐ Yes, please use individual calibration gases If yes, please enter the desired calibration gases here:

General note: The Archigas TCD3000 gas analyzers use the thermal conductivity of gases as the measuring principle. For physical reasons, this measuring method is non-selective and therefore predestined for determining the concentration in **binary** or **quasi-binary** gas mixtures. In multi-component gas mixtures, the type, concentration and dynamics of the individual gas components must be taken into account. This characterization forms the basis for the definition of a reference gas and the selection of the appropriate cross-sensitivity correction.

Step 6: Contact details

Company / Institution:		
Please select the appropriate option:	☐ End customer (user of the product / the solution) ☐ System integrator (implementation / project planning for end customers) Please name the end customer (if possible): ☐ Reseller (sale of the solution to third parties) Please name the end customer (if possible): ☐ Other:	
Contact person:		
Department:		
Project name:		
Country:		
E-Mail:		**Telephone:**
Website:		
Delivery address:		

Remarks

☐ I confirm that the information provided is correct and complete to the best of my knowledge.

☐ I agree to the Privacy Policy and the General Terms and Conditions (available at Privacy Policy and GTC).

Completed by (Name)

Signature

The following table is filled in by Archigas:

Checked and released on:		By:
Signature:		