TECHNICAL DATA SHEET

SIL GAS CONTROL (SGC)

Safety-related gas flow monitoring and shutdown up to SIL 3

SIL Gas Control (SGC) is a modular, safety-related system for monitoring, regulating and shutting down potentially hazardous gas mixtures. It has been specially developed for industrial applications where there are the highest requirements for functional safety, process stability and verifiability according to IEC 61511.

As part of a Safety Instrumented Function (SIF), the SGC enables reliable detection and shutdown in the event of dangerous or impermissible mixing conditions. If the dangerous limit is exceeded, the system is automatically transferred to the safe state. This ensures that critical gas components always remain within the permissible limits.

The SGC is available in three variants and can be flexibly adapted to different process requirements:

- SGC Monitor – pure safety-related monitoring without interfering with the gas control – ideal for upgrading existing gas mixers
- SGC Manual – Monitoring and manual mixing using precise needle valves
- SGC Automatic – fully automatic mixing with high-precision mass flow controllers as an expansion stage of the SGC Monitor

The entire series is qualified for use up to SIL 3 and is designed to monitor safety-critical gas processes efficiently, stably and in compliance with standards.

SPECIFICATIONS	
Total flow rate	4 – 300 m³n/h
Gas temperature	-10 – +60 °C
Inlet pressure	35 bar (g)
Outlet pressure	inlet pressure – 2 bar
Operating mode	continuous operation with continuous monitoring and shutdown
Possible active gases	H_2 I CNG I other gases on request
Gas Count	Any
Safety integrity level*	SIL 1 I SIL 2 I SIL 3
SYSTEM	
Dimensions	3000 × 1800 × 600 mm (other form factors possible)
Weight	100 kg (may vary depending on configuration)
Degree of protection	IP40
Ambient temperature	0 – 50 °C
Ambient humidity	0 – 95 %rH, non-condensing
Process connection	depending on configuration
Power supply	100 – 240 VAC, 50 – 60 Hz
Communication	LTE-Modem, USB, LAN
MIXER	
Flow controller accuracy	± 0.3 % of full scale plus ± 0.5 % of reading
Operating principle	separate digital control of individual gas flows
Operating modes	pressure or flow control

APPLICATIONS		
Heat treatment	Refineries	Metallurgy
Chemical industry	New Energy	Energy sector
Petrochemical	Power to Gas	R&D

FEATURES

- STANDARD COMPLIANT
  meets IEC 61511, suitable up to SIL 3
- REMOTE ACCESS
  control I operation
- ALARM NOTIFICATION
  SMS and email alerts I relay contact I signal tower
- INDUSTRIAL CONTROL
  10.1" Touchscreen
- MONITORING
  print I flow

* SIL 3 capable, confirmed by TÜV Austria; final acceptance on site required.