

Gas Control Unit: GCU

Gas Control Unit for controlling and monitoring of gas manifold systems

Highlights

- Future-proof through data exchange via MQTT and OPC-UA, for the data exchange as a platform-independent, service-oriented architecture
- Simple and intelligent communication with networked machines and systems
- Control of auto-change gas manifolds for uninterrupted gas supply
- Monitoring of mechanical and semi-automatic gas manifold systems as well as tank and compressed air systems
- Easy integration and monitoring of existing systems RETROFIT
- Optimal use of gas resources with regeneration of the gas source
- Reduction of stock of gas and rented gas cylinders through monitoring
- Providing and recording information on pressure and filling level
- Leakage check of the supply lines and high-pressure collection pipes
- Function control of the pressure regulators, prevention of unintentional release of the safety valves
- Reminder of due maintenance of the gas supply systems
- Clear messages and warnings by email
- WEB browser-based operation and display
- LAN connection to the corporate network
- Adjustable pressure and volume
- Multilingual navigation



Use in explosive areas

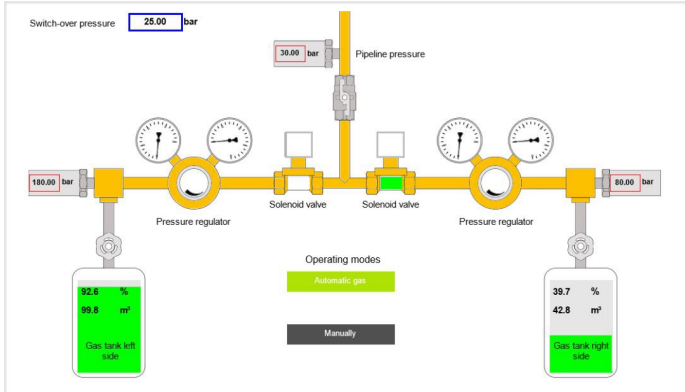
- The GCU must always be installed outside the potentially explosive area.
- Alarm devices (pressure transmitters) installed within a potentially explosive atmosphere must be controlled via an ATEX-approved switch amplifier.
- When ordering, it must therefore be indicated how many gas manifold systems are operated in the explosion protection area.
- The appropriate numbers of switch amplifiers are integrated into the GCU then.

Technical Data:						
Model:	GCU-1	GCU-2	GCU-3	GCU-4	GCU-5	GCU-6
Number of connectable gas manifold systems	1	2	3	4	5	6
Size [LxWxH mm]	535 x 535 x 223			635 x 635 x 263	635 x 835 x 313	
Voltage:	110-230 V / 50-60 Hz					
Max power input:	1,3 bis 2,5 A					
Safety class:	IP55					
Analogue inputs 4-20mA:	3	6	9	12	15	18
Analogue inputs 0-10V:	4	8	12	16	20	24
Digital outputs 24 V/DC max 500 mA/outlet:	2	4	6	8	10	12

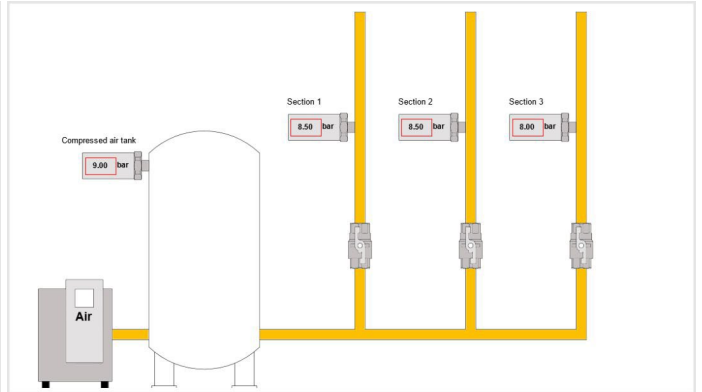
Depending on the version, the GCU can control and monitor up to 10 gas sources.
Further versions on request.

Type: GCU

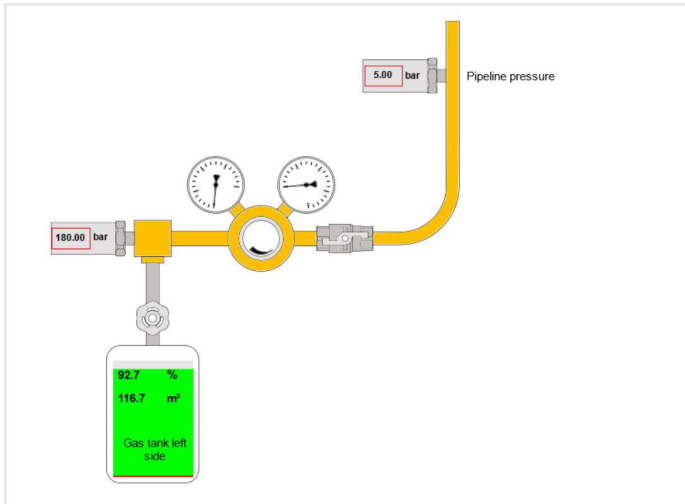
Picture:
Electrically controlled auto-change gas manifold system



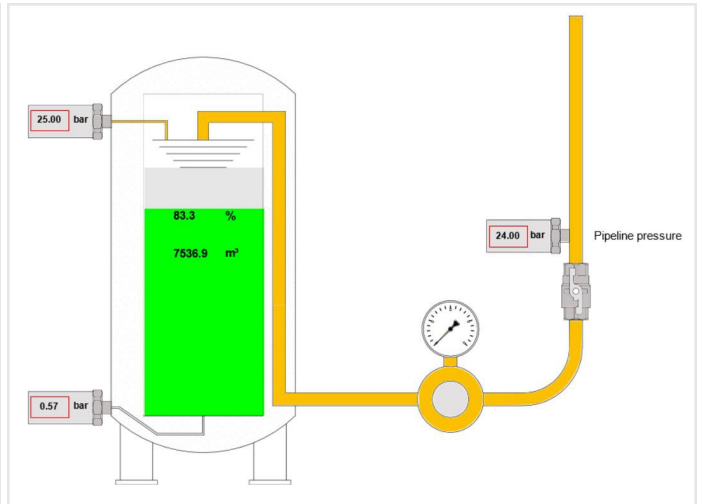
Picture:
Gas supply Compressed Air Tank



Picture:
Single-sided gas manifold system



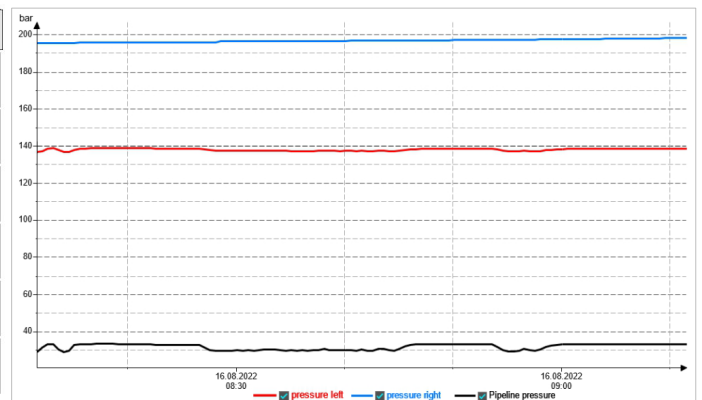
Picture:
Gas supply Liquid gas tank



Picture
Overview of all connected gas manifold systems

Location	Manifold-type	Description	Pressure / Fill level		Active side	Operating mode	Pipeline pressure	Switch-over-pressure	Alarm
			Left side	Right side					
Details	53577 Neustadt Bahnhofstraße 27 Gaslager	auto-change manifold Test gas N2/H2	13.0 m³ 27.8 bar 12.4 %	109.5 m³ 197.1 bar 100.0 %	left	automatic gas	24.6 bar	26.0 bar	<input type="radio"/>
Details	53577 Neustadt Bahnhofstraße 27 Gaslager	auto-change manifold Oxygen (O2)	16.3 m³ 325.2 bar 100.0 %	8.7 m³ 19.2 bar 5.0 %	right	automatic gas	12.2 bar	8.0 bar	<input type="radio"/>
Details	53577 Neustadt Bahnhofstraße 27 Gaslager	single-sided manifold (left) Acetylene (C2H2)	18.3 m³ 4.4 bar 15.6 %				2.8 bar		<input type="radio"/>
Details	53577 Neustadt Bahnhofstraße 27 Gaslager	manual manifold Nitrogen (N2)	12.5 m³ 351.0 bar 100.0 %	13.0 m³ 307.9 bar 100.0 %			5.3 bar		<input type="radio"/>
Details	53577 Neustadt Bahnhofstraße 27 Gaslager	single-sided manifold (left) Methane (CH4)	6.6 m³ 119.9 bar 56.6 %				11.2 bar		<input type="radio"/>
Details	53577 Neustadt Bahnhofstraße 27 Gaslager	single-sided manifold (left) Propane (C3H8)	9.3 bar				6.4 bar		<input type="radio"/>

Picture:
Trend-chart of a gas manifold system



Certification/ Technical Standards/ Rules

TRBS German Technical rules for operation safety, DVS German Association for Welding, Cutting and Allied Processes, DGUV German Employer's liability insurance association rules and regulations.

Standards/ Approvals

Company certified according to ISO 9001:2000, CE-marking according to: Directive 2014/35/EU
(Subject to change without notice)