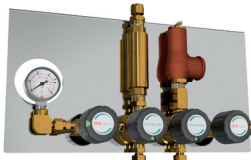
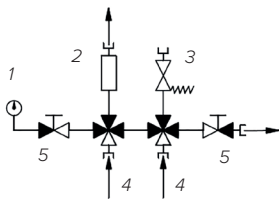


SAFETY AND MAINTENANCE PANELS FOR INDUSTRIAL GAS SUPPLY SYSTEMS - STLMID



Middle version



- 1-Pressure measure element (gauge, contact gauge, pressure transmitter)
2-Safety device with multiple functions for flammable gases or Oxygene
3-Safety relief valve
4-Shut off valve type VTMF000
5-Shut off valve type VTLA000

DRUVATEC LOW- FLOW RANGE- MIDDLE- VERSION

for industrial, inert, flammable, oxidizing gases and gas mixtures.
Not usable for corrosive or toxic gases and gas mixtures.



SPECIAL FEATURES:

On a Safety and Maintenance Panel, both safety-related components and maintenance-related systems of a central, industrial gas supply are combined.

SAFETY RELATED COMPONENTS:

- > **safety device with multiple functions** for flammable, oxidizing gases
- > **safety relief valve** designed and adjusted based on worst case scenario measurements of DruvaTEC Low Flow manifold regulators
- > **pressure indication port** for monitoring of pipeline pressure, separate lockable, gauges are exchangeable without disassembly of the panel

MAINTENANCE-RELATED SYSTEMS:

- > inlet port for connecting external source
 - as a second supply source to avoid system downtime during maintenance at manifolds
 - as a test gas inlet port for pressure test of piping system after installation or during maintenance
- existing additional valve for releasing of pressure in piping system

PANEL CONSISTS OF TWO PLATES

- Easy installation of ground plate without weight of complete safety and maintenance panel
- Simple hang front plate including safety and maintenance panel
- Fixing front plate by only one bolt

TECHNICAL DATA	
Nominal working pressure rates:	10; 20; 40 bar
Maximal allowable working pressure:	11,5 bar, 21,2 bar, 51,7 bar
Nominal flow rate:	20 m ³ /h (at 20 bar)
Test after production	100% functionality
	100% seat leakage test
	100% pressure test

TECHNICAL DATA - VALVES VTLA		
Working temperature:	-20°C to + 60°C	
Inlet/Outlet ports:	NPT 1/4" female	
Max. working pressure:	300 bar	
Kv-value:	0,25	
Seat diameter:	5 mm	
Leakage rate seat:	less than 6 cm³/h (20°C; 1,013 bar absolut)	Compressed Air
Leakage rate outside:	less than 6 cm³/h (20°C; 1,013 bar absolut)	Compressed Air
Filter inlet:	100 µm mesh	
Filter outlet ports:	100 µm mesh	
Mounting holes:	M6	
Weight:	0,30 kg	
Valve body:	BRASS (2.0401.26)	
Valve diaphragm:	2 x Elgiloy (2.4711)	
Valve seat:	PCTFE	
Valve popet:	BRASS (2.0401.26)	
Tests in production:	Pressure test with dry air (ISO 8573 [1:2:2]) of each item	
	Seat leakage test with dry air (ISO 8573 [1:2:2]) of each item	
	Test of functionality of each item	
Approvals during development:	Type test accordance with relevant sections of EN ISO 10297	
	O2 ignition test regarding EN ISO 10297 for main shut off valve	
	Electrostatic chargeability test	
	- fulfill requirements according DIN EN ISO 80079-36; IEC TS 60079-32-1 and German TRGS 727	
	- usable in EX- areas zones 1 and 2 for gases with explosion risk group I; IIA; IIB; IIC	

TECHNICAL DATA - VALVE VTMF	
Working temperature:	-20°C to + 60°C
Inlet/Outlet ports:	NPT 3/8" female
Max. working pressure:	40 bar
Kv-value:	0,35
Seat diameter:	7 mm
Leakage rate seat:	less than 6 cm ³ /h (20°C; 1,013 bar absolut) Compressed Air
Leakage rate outside:	less than 6 cm ³ /h (20°C; 1,013 bar absolut) Compressed Air
Filter inlet:	100 µm mesh
Filter outlet ports:	100 µm mesh
Mounting holes:	M6
Weight:	0,62 kg
Valve body:	BRASS (2.0401.26)
Valve diaphragm:	1 × Hastelloy (2.4819), 1 × Elgiloy (2.4711)
Valve seat:	PCTFE
Valve popet:	BRASS (2.0401.26)
Tests in production:	Pressure test with dry air (ISO 8573 [1:2:2]) of each item
	Seat leakage test with dry air (ISO 8573 [1:2:2]) of each item
	Test of functionality of each item
Approvals during development:	Type test accordance with relevant sections of EN ISO 10297
	O2 ignition test regarding EN ISO 10297 for main shut off valve
	Electrostatic chargeability test
	- fulfill requirements according DIN EN ISO 80079-36; IEC TS 60079-32-1 and German TRGS 727
	- usable in EX- areas zones 1 and 2 for gases with explosion risk group I; IIA; IIB; IIC

TECHNICAL DATA - SAFETY RELIEF VALVE	
P.E.D. 2014/68/EU and AD2000 (A2) approved	
Cracking pressure:	13 bar, 24 bar, 57 bar (based on pressure version)
Seat diameter:	9,5 mm
Inlet thread:	NPT ½" male
Outlet thread:	NPT ¾" female
Working temperature rate:	-20°C up to 60°C
Material gas wetted parts:	
Valve body:	Brass (C83600)
Seat:	CW614N
Seal:	Viton
Inner plunger:	CW614N

TECHNICAL DATA - SAFETY DEVICE WITH MULTIPLE FUNCTIONS**FLAMMABLE GASES**

according Standards EN 730-1 and ISO 5175:

Included safety elements inside are flame arrestor, temperature sensitive cut- off valve and dust filter

Maximum working pressure:	10 bar
Cracking pressure:	10 mbar
Working temperature range:	-20 °C up to 70 °C
Maximum flow rate:	more than 20 m³/h
Material body:	brass (2.0401)
Material Internal spring:	stainless steel 1.4301

OXYGENE

according Standards EN 730-1 and ISO 5175:

Included safety elements inside are flame arrestor, temperature sensitive cut- off valve and dust filter

Maximum working pressure:	10 bar
Cracking pressure:	10 mbar
Working temperature range:	-20 °C up to 70 °C
Maximum flow rate:	more than 20 m³/h
Material body:	brass (2.0401)
Material Internal spring:	stainless steel 1.4310

TECHNICAL DATA - PRESSURE INDICATION PORT - GAUGE

based on requirement of EN 837 (safety gauge without baffle wall)

Suitable for max. steady working pressure 75% of max. scale value

Nominal size:	50 mm
Inlet connection:	NPT ¼" male
Cleaned for:	
Scale range (bar):	16 bar (10 bar); 40 bar (20 bar); 65 bar (40 bar)
Accuracy class:	2,5
Temperature range:	-20°C up to 60 °C
Material	
Pressure element:	brass
Pressure inlet connection:	brass nickel plated
Dial:	Aluminum
Pointer:	Aluminum
Case:	stainless steel polished
Window:	plastic crystal clear

TECHNICAL DATA - PRESSURE INDICATION PORT - OPTION REED CONTACT GAUGE

based on requirement of EN 837 (safety gauge with baffle wall and blow out back- S3)

Suitable for max. steady working pressure 75% of max. scale value

Nominal size:	50 mm
Inlet connection:	NPT ¼" male
Cleaned for:	Oxygene
Scale range (bar):	16 bar (10 bar); 40 bar (20 bar); 65 bar (40 bar)
Accuracy class:	2,5
Temperature range:	-20°C up to 60 °C
Material	
Pressure element:	stainless steel
Pressure inlet connection:	stainless steel
Dial:	Aluminum
Pointer:	Aluminum
Case:	stainless steel blank
Window:	plastic crystal clear
Electrical data contacts:	operating voltage U max. = 24 V DC/AC
	Current input: I _{max.} = 0,4 A
	Breaking capacity: P max. = 8W/8 VA
Contact type:	RK 1.1, normally open, contact opens by decreasing value
	RK 1.2, normally open, contact closed by decreasing value

TECHNICAL DATA - PRESSURE INDICATION PORT - OPTION INDUCTIVE CONTACT GAUGE

based on requirement of EN 837 (safety gauge with baffle wall and blow out back- S3)

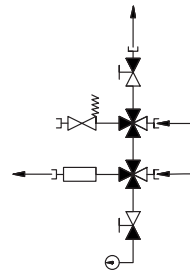
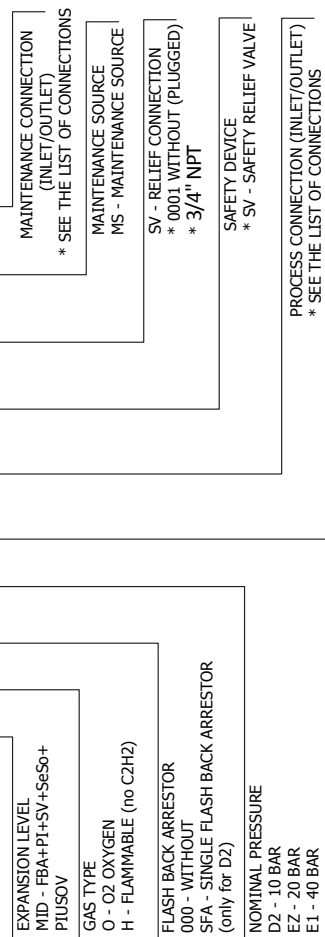
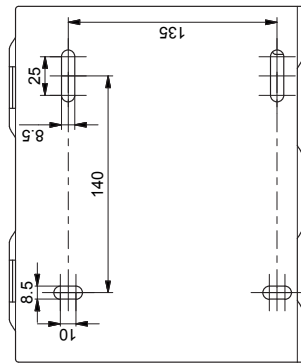
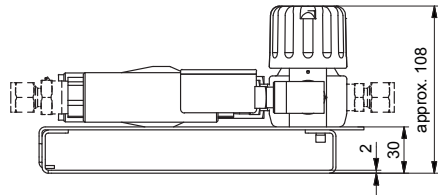
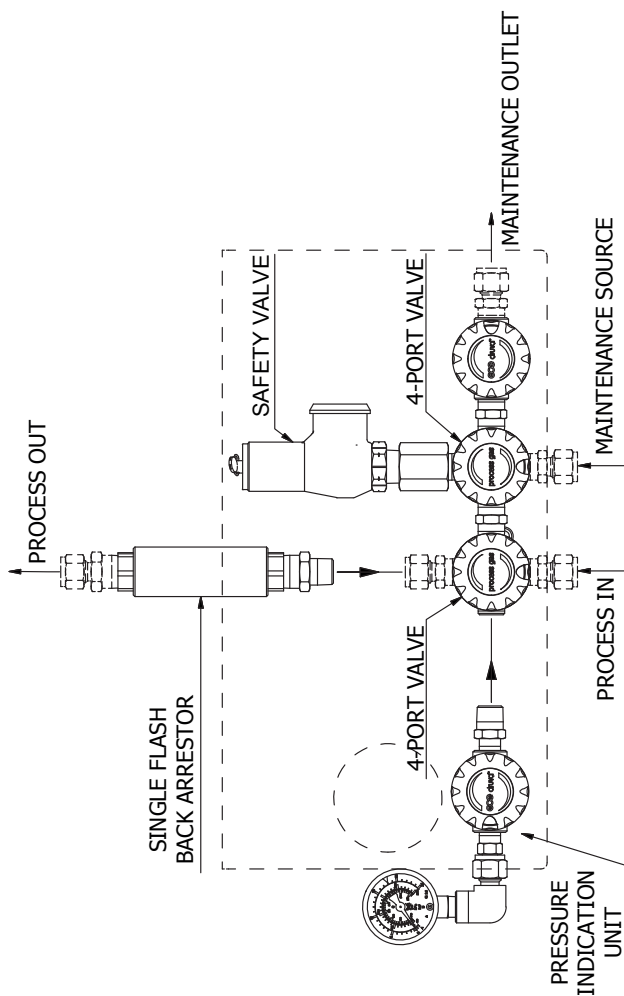
Suitable for max. steady working pressure 75% of max. scale value

Nominal size:	50 mm
Inlet connection:	NPT ¼" male
Cleaned for:	Oxygene
Scale range (bar; psi):	16 bar (10 bar); 40 bar (20 bar); 65 bar (40 bar)
Accuracy class:	2,5
Temperature range:	-20°C up to 60 °C
Material	
Pressure element:	stainless steel
Pressure inlet connection:	stainless steel
Dial:	Aluminum
Pointer:	Aluminum
Case:	stainless steel blank
Window:	plastic crystal clear
Electrical data contacts:	operating voltage U nominal = 8,2 V DC
	Current input contact closed: > 3 mA
	Current input contact open: ≤ 1 mA
Contact type:	IK 1.1, inductive contact, contact opens by decreasing value
	IK 1.2, inductive contact, contact closed by decreasing value

TECHNICAL DATA - PRESSURE INDICATION PORT - OPTION PRESSURE TRANSMITTER	
FOR INERT, NON-CORROSIVE GASES AND GAS MIXTURES, OXYGEN (Not for flammable gases, not useable in EX-Areas)	
Long Term Drift:	0,2% Full Scale/YR (non-cumulative)
Accuracy:	0,25% Full Scale
Thermal Error	0,83% Full Scale/100°F (1,5% Full Scale/100°C)
Compensated Temperatures	-40°C to +125°C
Operating Temperatures	-40°C to +125°C
Zero Tolerance	0,5% of span
Span Tolerance	0,5% of span
Fatigue Life	Designed for more than 100 M cycles
Mechanical Configuration:	stainless steel
Pressure Port	¼" NPT Male
Electrical Connection	M12x1 – 4 pin
Parts in Contact with Gas	Stainless Steel
Enclosure	IP67 (IP65 for electrical code G)
Supply Voltage:	2 Volts above full scale to 30 V DC max @ 4.5mA (6.5mA at output version)
Vibration:	40G peak to peak sinusoidal (Random Vibration: 20 to 100 Hz @ aprox.. 40G) Peak per MIL-STD-810E
Shock:	Withstands free fall to IEC 68-2-32 procedure 1
Approvals:	CE, conform to European Pressure Directive, Fully RoHS compliant UL recognized files # E219842 & E174228
Weight:	35 grams
Output signal:	4...20mA
FOR FLAMMABLE GASES, USEABLE IN EX-AREAS	
Material gas wetted parts:	Stainless steel, fully welded.
Accuracy:	</= +/- 0,50% of span
Output signal:	4...20mA
Operating temperature medium:	-15°C to +70°C
Operating temperature ambient:	-15°C to +70°C
Manufacture's information	SIL 2, Functional safety, MTTF:>100 years and certificates China RoHS directive
Long term stability	</= +/- 0,2% of span/year
Mechanical Configuration	
Pressure Port:	¼" NPT Male
Electrical Connection	M12x1 – 4 pin
Parts in Contact with Gas:	Stainless Steel
Enclosure:	IP65 (IP 68 also available)
Power Supply:	24 V DC
Vibration resistance:	20 g
Shock resistance:	1,000 g
Approvals:	ATEX, IECEx, FM, CSA, SIL rating per IEC61508/ IEC 61511



Link to product configurator



TECHNICAL SPECIFICATION	
Inlet pressure: 10.20/40 BAR Flow nominal: 20m ³	
BOM	
Name	
4-Port Valve	VTFLR000 1x1N 3xOUT
2-Port Valve	VTLA000
Safety-Valve	Seetru 63610C1.293
Flashback Valve	IBEDA D6911NH without GRV
Plate	400x210 Stainless Steel

EXAMPLE: STL MIDOSFAD2BTN38FSV0001MSN38F