PRESSURIZED CONTROL PANELS

	Housing model 1		Housing model 2		
					
APEX Control unit	APEX^{px}	APEX^{py}	APEX^{px}	APEX^{py}	APEX 2003
Power supply	DC 24 V to 44 V or AC 100 V to 240 V	DC 24 V to 44 V or AC 100 V to 240 V	DC 24 V to 44 V or AC 100 V to 240 V	DC 24 V to 44 V or AC 100 V to 240 V	DC 24 V, AC 115 V or AC 230 V
Safety integrity level	SIL 2	SIL 2	SIL 2	SIL 2	SIL 2
Inputs	3 x PT100/1000 Bypass Main switch 1 x 4 – 20 mA [Ex ib] 1 x 4 – 20 mA [Ex ia]	3 x PT100/1000 Bypass Main switch 1 x 4 – 20 mA [Ex ib] 1 x 4 – 20 mA [Ex ia]	3 x PT100/1000 Bypass Main switch 1 x 4 – 20 mA [Ex ib] 1 x 4 – 20 mA [Ex ia]	3 x PT100/1000 Bypass Main switch 1 x 4 – 20 mA [Ex ib] 1 x 4 – 20 mA [Ex ia]	Temperature switch Bypass Main switch
Outputs	1 x release 1 x release, 4 NO 2 x signal relays, CO 1 x inlet valve 1 x outlet valve	1 x release 1 x release, 4 NO 2 x signal relays, CO 1 x inlet valve 1 x outlet valve	1 x release 1 x release, 4 NO 2 x signal relays, CO 1 x inlet valve 1 x outlet valve	1 x release 1 x release, 4 NO 2 x signal relays, CO 1 x inlet valve 1 x outlet valve	1 x release 2 x signal relays, 1 CO, 3 NO 1 x inlet valve 1 x outlet valve
Interface	Ethernet	Ethernet	Ethernet	Ethernet	–
Valve control	Proportional or digital	Proportional or digital	Proportional or digital	Proportional or digital	Proportional or digital
Additionally required system components	Sensor box Pressure monitor Purge gas valve Valve fuse Pressure reducer	Sensor box Pressure monitor Purge gas valve Valve fuse Pressure reducer	Pressure monitor Purge gas valve Valve fuse Pressure reducer	Pressure monitor Purge gas valve Valve fuse Pressure reducer	Purge gas valve Pressure reducer
Pressure measurement	Separate 0 to 25 mbar 0 to 300 mbar	Separate 0 to 25 mbar 0 to 300 mbar	Integrated 0 to 25 mbar 0 to 300 mbar	Integrated 0 to 25 mbar 0 to 300 mbar	Integrated 0 to 25 mbar
Display	Optional	Optional	Optional	Optional	Integrated
Ambient temperature	-25 °C to +70 °C	-25 °C to +70 °C	-25 °C to +70 °C	-25 °C to +70 °C	-20 °C to +40 °C
Application	Gas, dust	Gas, dust	Gas, dust	Gas, dust	Gas
Approvals	ATEX, IECEx	ATEX, IECEx	ATEX, IECEx	ATEX, IECEx	ATEX, IECEx, EAC-Ex, Kosha, CSA
Additional components (optional)	p operator panel Polaris SMART HMI	p operator panel Polaris SMART HMI	p operator panel Polaris SMART HMI	p operator panel Polaris SMART HMI	–
Variants					Various models
Type	07-37A2-2211/x510	07-37A2-2111/x510	07-37A2-2211/x520	07-37A2-2111/x520	07-3711-12xx/xxxx
Dimensions	W x H x D 250 mm x 250 mm x 130 mm	W x H x D 250 mm x 250 mm x 130 mm	W x H x D 250 mm x 300 mm x 130 mm	W x H x D 250 mm x 300 mm x 130 mm	Depends on the version
Product status	Market launch Q1 2018	Market launch Q1 2018	Market launch Q1 2018	Market launch Q1 2018	Product discontinuation 12/2018

	Housing model 1	Housing model 2	With/without viewing pane
			

SILAS Control unit	SILAS^{pz}	SILAS^{pz}	SILAS
Power supply	DC 24 V to 44 V or AC 100 V to 240 V	DC 24 V to 44 V or AC 100 V to 240 V	DC 24 V, AC 115 V or AC 230 V
Inputs	3 x PT100/1000 Bypass Main switch	3 x PT100/1000 Bypass Main switch	Bypass jumper (internal)
Outputs	1 x release 1 x release, 4 NO 2 x signal relays, CO 1 x inlet valve	1 x release 1 x release, 4 NO 2 x signal relays, CO 1 x inlet valve	1 x release relay 1 x alarm relay 1 x inlet valve
Interface	Ethernet	Ethernet	–
Valve control	Proportional or digital	Proportional or digital	Digital
Additionally required system components	Sensor box Pressure monitor Purge gas valve Valve fuse Pressure reducer	Pressure monitor Purge gas valve Valve fuse Pressure reducer	Purge gas valve Pressure monitor Pressure reducer
Pressure measurement	Separate 0 to 25 mbar 0 to 300 mbar	Integrated 0 to 25 mbar 0 to 300 mbar	Integrated 0 to 25 mbar
Display	Optional	Optional	Integrated
Ambient temperature	-25 °C to +70 °C	-25 °C to +70 °C	-20 °C to +60 °C
Application	Gas, dust	Gas, dust	Gas, dust
Approvals	ATEX, IECEx	ATEX, IECEx	ATEX, IECEx, EAC-Ex, Kosha, CSA, INMETRO
Additional components (optional)	p operator panel Polaris SMART HMI	p operator panel Polaris SMART HMI	–

Variants			
Type	A7-37S2-2111/x510	A7-37S2-2111/x520	A7-3741-1110/x00x
Dimensions	W x H x D 250 mm x 250 mm x 130 mm	W x H x D 250 mm x 300 mm x 130 mm	W x H x D 90 mm x 120 mm x 60 mm
Product status	Market launch Q1 2018	Market launch Q1 2018	

	Zones 1, 21	Zones 2, 22
		
MODEL	APEX^{mpc}	SILAS^{mpc}
Power supply	DC 24 V to 44 V or AC 100 V to 240 V	DC 24 V to 44 V or AC 100 V to 240 V
Inputs	3 x PT100/1000 Bypass Main switch	3 x PT100/1000 Bypass Main switch
Outputs	1 x release 1 x release, 4 NO 2 x signal relays, CO	1 x release 1 x release, 4 NO 2 x signal relays, CO
Interface	Ethernet	Ethernet
Purge gas valve	Digital purge gas valve (purging) Proportional valve (leakage compensation)	Digital purge gas valve (purging) Throttle valve, mechanical (leakage compensation)
Pressure measurement	Integrated 0 to 25 mbar 0 to 300 mbar	Integrated 0 to 25 mbar 0 to 300 mbar
Display	Optional	Optional
Ambient temperature	-25 °C – +60 °C (standard) -50 °C – +60 °C (high-temperature)	-25 °C – +60 °C (standard) -50 °C – +60 °C (high-temperature)
Application	Gas, dust	Gas, dust
Approvals	ATEX, IECEx	ATEX, IECEx
Additional components (optional)	p operator panel Polaris SMART HMI	p operator panel Polaris SMART HMI

Variants		
Type	07-37A2-2211/xM5x	07-37S2-2111/xM5x
Dimensions	W x H x D 550 mm x 400 mm x 250 mm	W x H x D 550 mm x 400 mm x 250 mm
Product status	Market launch Q1 2018	Market launch Q1 2018

	APEX for analysis systems (containment systems)			APEX (separate unit)	
					
MODEL	APEX^{cf}	APEX^{hp}	APEX 2003.SI	APEX^{mv}/SILAS^{mv}	APEX 2003.MV
	Continuous purging cf = continuous flow	High-pressure system dp = dynamic pressure		Separate equipment mv = with valve	Separate equipment mv = with valve
Power supply	DC 24 V to 44 V or AC 100 V to 240 V	DC 24 V to 44 V or AC 100 V to 240 V	DC 24 V, AC 115 V or AC 230 V	DC 24 V to 44 V or AC 100 V to 240 V	DC 24 V, AC 115 V or 230 V AC
Safety integrity level	SIL 2	SIL 2	SIL 2	SIL 2	SIL 2
Inputs	3 x PT100/1000 Bypass Main switch 1 x 4 to 20 mA [Ex ib] 1 x 4 to 20 mA [Ex ia]	3 x PT100/1000 Bypass Main switch 1 x 4 to 20 mA [Ex ib] 1 x 4 to 20 mA [Ex ia]	Temperature switch Bypass Main switch	APEX: 3 x PT100/1000 Bypass Main switch 1 x 4 to 20 mA [Ex ib] 1 x 4 to 20 mA [Ex ia] SILAS: 3 x PT100/1000 Bypass Main switch	Temperature switch Bypass Main switch
Outputs	1 x release 1 x release, 4 NO 2 x signal relays, CO	1 x release 1 x release, 4 NO 2 x signal relays, CO	1 x release 2 x signal relays, 1 CO, 3 NO	1 x release 1 x release, 4 NO 2 x signal relays, CO	1 x release 2 x signal relays, 1 CO, 3 NO
Interface	Ethernet	Ethernet	–	Ethernet	–
Valve control	Proportional, integrated	Proportional, integrated	Proportional or digital	Proportional, integrated	Proportional, integrated
Pressure measurement	Integrated 0 – 25 mbar	Integrated 0 – 300 mbar	Integrated 0 – 25 mbar	Integrated 0 – 25 mbar 0 – 300 mbar	Integrated 0 – 25 mbar
Display	Optional	Optional	Integrated	Optional	Integrated
Ambient temperature	-25 °C to +70 °C	-25 °C to +70 °C	-20 °C to +40 °C	-25 °C to +70 °C	-20 °C to +40 °C
Application	Containment system Gas, dust With constant flow rate during the operating phase Separate unit for p volume of up to 70 litres	Containment system Gas, dust With dynamic Δp regulation Separate unit for p volume of up to 70 litres	Containment system Gas	Gas, dust Separate unit for p volume of up to 70 litres	Gas Separate unit for p volume of up to 70 litres
Approvals	ATEX, IECEx	ATEX, IECEx	ATEX, EAC-Ex, KTL, CSA	ATEX, IECEx	ATEX, EAC-Ex, KTL, CSA
Additional components (optional)	p operator panel Polaris SMART HMI	p operator panel Polaris SMART HMI	–	p operator panel Polaris SMART HMI	–
Type	07-37A2-2211/x725	07-37A2-2211/x720	07-3711-x2x3/xxxx	07-37A2-2211/x730	A7-37S2-2111/x730
Dimensions	W x H x D 400 mm x 300 mm x 130 mm	W x H x D 400 mm x 300 mm x 130 mm	W x H x D 400 mm x 250 mm x 120 mm	W x H x D 400 mm x 300 mm x 130 mm	W x H x D 255 mm x 250 mm x 120 mm
Product status	Market launch Q1 2018	Market launch Q1 2018	Product discontinuation 12/2018	Market launch Q1 2018	Product discontinuation 12/2018

- Black box system
- Automatic calculation of the purge time
- WEB interface
- 3 x PT100/1000 inputs
- Modular design
- Safety-related control system
- Separate purge gas input and output

The APEX^{px} Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure equipment protected in accordance with ignition protection type px. Digital or proportional purge gas valves can be used as purge gas valves. The parameters can be set using the integrated WEB interface or the optionally available p operator panel. The APEX^{px} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. Model I comes complete with separate pressure measurement.

The following components are additionally required to set up a complete control system:

- Sensor box^{px}
- Pressure monitor
- Purge gas valve, proportional or digital
- Valve fuse
- Pressure reducer
- There is the option to connect a p operator panel

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex eb mb ib [ib pxb] [ia Ga] IIC T6, T5, T4 Gb Ⓔx II 2(1)D Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex eb mb ib [ib pxb] [ia Ga] IIC T6, T5, T4 Gb Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +70 °C

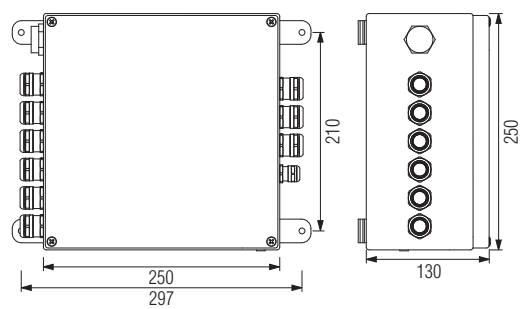
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mb/ib-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm², fine-wire, tension spring Ex i: 0.2 to 1.5 mm², fine-wire, push-in
Pressure measurement range	0 to 25 mbar (standard) or 0 to 300 mbar (on request)
Pre-purge time	0 to 120 min
Weight	5.8 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10% or 100 V AC to 230 V AC, ±10%
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 (SIL) release, max. 5 A (AC1) K2 (SIL) release, floating, max. 230 V AC/4.5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch 1 x 4 to 20 mA [ib] – pressure sensor 1 x 4 to 20 mA [ia] – pressure sensor
Vibration	0.7 g/1 mm, 5 Hz to 500 Hz in all three axes
Shock	15 g/11 ms in all three axes

Dimensions



Ordering information	Code no.
24 V DC to 44 V DC, ±10 %	1
100 V AC to 230 V AC, ±10 %	2

Complete oder no. 07-37A2-2211/ ☐ 510

Please enter code number.

The accessories and order information can be found on the accessory pages.

Technical data subject to change without notice.

- Black box system
- Automatic calculation of the purge time
- WEB interface
- 3 x PT100/1000 inputs
- Modular design
- Safety-related control system
- Separate purge gas input and output

The APEX^{px} Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure equipment protected in accordance with ignition protection type px. Digital or proportional purge gas valves can be used as purge gas valves. The parameters can be set using the integrated WEB interface or the optionally available p operator panel. The APEX^{px} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. Model II comes complete with integrated pressure measurement. The following components are additionally required to set up a complete control system:

- Pressure monitor
- Purge gas valve, proportional or digital
- Valve fuse
- Pressure reducer
- There is the option to connect a p operator panel

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex eb mb ib [ib pxb] [ia Ga] IIC T4 Gb Ⓔx III 2(1)D Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex eb mb ib [ib pxb] [ia Ga] IIC T4 Gb Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +70 °C

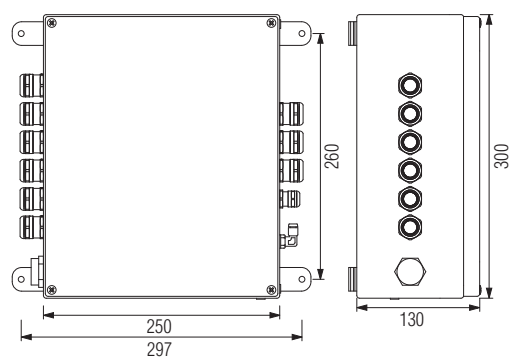
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mb/ib-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm², fine-wire, tension spring Ex i: 0.2 to 1.5 mm², fine-wire, push-in
Pneumatic connections	2 x hoses, 4 mm dia.
Pressure measurement range	0 to 25 mbar (standard) or 0 to 300 mbar (on request)
Pre-purge time	0 to 120 min
Weight	6.8 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 (SIL) release, max. 5 A (AC1) K2 (SIL) release, floating, max. 230 V AC/4.5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch 1 x 4 to 20 mA [ib] – pressure sensor 1 x 4 to 20 mA [ia] – pressure sensor

Dimensions



Ordering information	Code no.
24 V DC to 44 V DC, ±10 %	1
100 V AC to 230 V AC, ±10 %	2

Complete oder no. 07-37A2-2211/ ☐ 520

Please enter code number.

The accessories and order information can be found on the accessory pages.

Technical data subject to change without notice.

APEX^{py} control unit Model I

- Black box system
- Automatic calculation of the purge time
- WEB interface
- 3 x PT100/1000 inputs
- Modular design
- Safety-related control system
- Separate purge gas input and output

The APEX^{py} Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure equipment protected in accordance with ignition protection type py. Digital or proportional purge gas valves can be used as purge gas valves. The parameters can be set using the integrated WEB interface or the optionally available p operator panel. The APEX^{py} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. Model I comes complete with separate pressure measurement. The following components are additionally required to set up a complete control system:

- Sensor box^{px}
- Pressure monitor
- Purge gas valve, proportional or digital
- Valve fuse
- Pressure reducer
- There is the option to connect a p operator panel

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex eb mb ib [ib pyb] [ia Ga] IIC T6, T5, T4 Gb Ⓔx II 2(1)D Ex tb [ib pyb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex eb mb ib [ib pyb] [ia Ga] IIC T6, T5, T4 Gb Ex tb [ib pyb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +70 °C

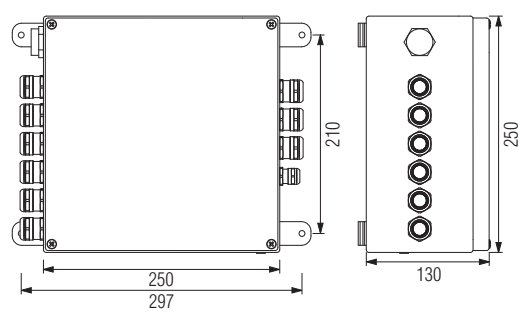
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mb/ib-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm^2, fine-wire, tension spring Ex i: 0.2 to 1.5 mm^2, fine-wire, push-in
Pressure measurement range	0 to 25 mbar (standard) or 0 to 300 mbar (on request)
Pre-purge time	0 to 120 min
Weight	5.8 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 (SIL) release, max. 5 A (AC1) K2 (SIL) release, floating, max. 230 V AC/4.5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch 1 x 4 to 20 mA [ib] – pressure sensor 1 x 4 to 20 mA [ia] – pressure sensor
Vibration	0.7 g/1 mm, 5 Hz to 500 Hz in all three axes
Shock	15 g/11 ms in all three axes

Dimensions



Ordering information	Code no.
24 V DC to 44 V DC, ±10 %	1
100 V AC to 230 V AC, ±10 %	2

Complete oder no. 07-37A2-2111/ ☐ 510

Please enter code number.
The accessories and order information can be found on the accessory pages.
Technical data subject to change without notice.

- Pressure monitor
- Purge gas valve, proportional or digital
- Valve fuse
- Pressure reducer
- There is the option to connect a p operator panel
- Separate purge gas input and output

The APEX^{py} Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure equipment protected in accordance with ignition protection type py. Digital or proportional purge gas valves can be used as purge gas valves. The parameters can be set using the integrated WEB interface or the optionally available p operator panel. The APEX^{py} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. Model II comes complete with integrated pressure measurement. The following components are additionally required to set up a complete control system:

- Pressure monitor
- Purge gas valve, proportional or digital
- Valve fuse
- Pressure reducer
- There is the option to connect a p operator panel

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex eb mb ib [ib pyb] [ia Ga] IIC T6, T5, T4 Gb Ⓔx II 2(1)D Ex tb [ib pyb] [ia Da] IIIC 80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex eb mb ib [ib pyb] [ia Ga] IIC T6, T5, T4 Gb Ex tb [ib pyb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +70 °C

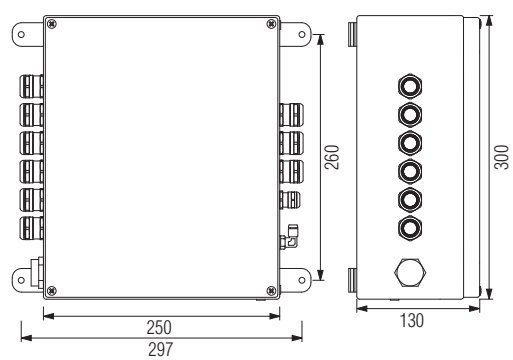
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mb/ib-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm², fine-wire, tension spring Ex i: 0.2 to 1.5 mm², fine-wire, push-in
Pneumatic connections	2 x hoses, 4 mm dia.
Pressure measurement range	0 to 25 mbar (standard) or 0 to 300 mbar (on request)
Pre-purge time	0 to 120 min
Weight	6.8 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 (SIL) release, max. 5 A (AC1) K2 (SIL) release, floating, max. 230 V AC/4.5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch 1 x 4 to 20 mA [ib] – pressure sensor 1 x 4 to 20 mA [ia] – pressure sensor

Dimensions



Ordering information	Code no.
24 V DC to 44 V DC, ±10 %	1
100 V AC to 230 V AC, ±10 %	2

Complete oder no. 07-37A2-2111/☐520

Please enter code number.

The accessories and order information can be found on the accessory pages.

Technical data subject to change without notice.

APEX 2003.00I control unit

- Four floating contacts
- Three-line LCD
- LED status indicator
- Modular design
- Safety-related control system
- Separate purge gas input and output
- Separate display

The APEX 2003.00I Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure equipment protected in accordance with ignition protection type px. Digital or proportional purge gas valves can be used as purge gas valves. The parameters are adjusted using rotary switches and keys. The control unit features two programmable relays and one non-floating release contact. The control unit is designed for internal installation in p-protected equipment, and the following components are required to set up a complete control system:

- Sensor module
- Pressure monitor
- Purge gas valve, proportional or digital, depending on the version
- Pressure reducer

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex d e ib [ia Ga px] IIC T6 Gb
Certification	DMT 99 ATEX E 082
IECEx marking	Ex de ib [ia Ga pxb] IIC T6 Gb
Certification	IECEx BVS 13.0039
Other approvals and certificates, see www.bartec.de	
Ambient temperature	During operation -20 °C to +40 °C

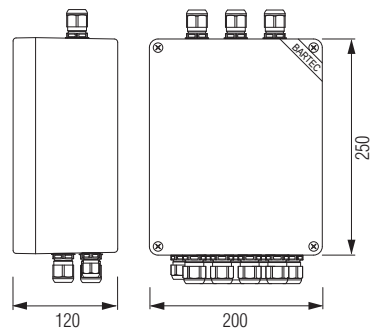
Technical data

Directives	Directive 2014/30/EU Directive 94/9/EC
Structure	Ex e protective housing
Housing material	Fibreglass-reinforced polyester
IP rating	IP 65
Terminals	2.5 mm², fine-wire
Pressure measurement range	0 to 25 mbar (standard)
Pre-purge time	0 to 99 min, 5 sec dropout delay
Weight	3.8 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	230 V AC (115 V AC), ±10 % or 24 V DC, ±10 %
Power consumption	Pv = 8 watts
Normally open contacts	K2/3, 5 A when cos ϕ = 1, K4 and K54, floating

Dimensions



Ordering information		Code no.
9 W version	230 V AC	1
	115 V AC	2
	24 V DC	4

Complete oder no. 07-3711-1200/ ☐ 010
Please insert code number.

Ordering information		Code no.
15 W version	230 V	1
	115 V	2

Complete oder no. 07-3711-1200/ ☐ 099
Please insert code number.
Technical data subject to change without notice.

APEX 2003.00 control unit

- Four floating contacts
- Three-line LCD
- LED status indicator
- Modular design
- Safety-related control system

The APEX 2003.00 control unit controls and monitors the pre-purge and operating phase of pressurised enclosure housings. Digital or proportional purge gas valves can be used to input purge gas. The parameters are adjusted using rotary switches and keys. There is the option to transmit the parameters via an RS485 interface. The control unit features two programmable relays and one non-floating release contact.

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex d e ib [ia Ga px] IIC T4 Gb
Certification	DMT 99 ATEX E 082
IECEx marking	Ex d e ib [ia Ga px] IIC T4 Gb
Certification	IIECEx BVS 13.0039
Other approvals and certificates, see www.bartec.de	
Ambient temperature	-20 °C to +40 °C

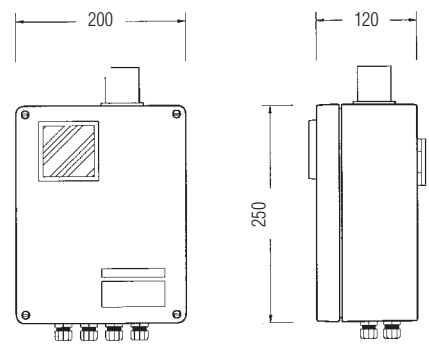
Technical data

Directives	Directive 2014/30/EU Directive 94/9/EC
Structure	Ex e protective housing with viewing pane in the cover
Housing material	Fibreglass-reinforced polyester
IP rating	IP 65
Terminals	2.5 mm², fine-wire
Pressure sensors	MIN. A/B = 0 to 25 mbar MAX. = 0 to 25 mbar DIFF. A/B = 0 to 25 mbar
Pre-purge time	0 to 99 min; 5 sec dropout delay
Weight	4.3 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	230 V AC (115 V AC) ±10 % 24 V DC ±10 %
Power consumption	P_V = 15 W/230 V
Normally open contacts	K 2/3, 5 A when cos ϕ = 1 K 4 and K 5; floating
Temperature switch value (optional)	0 °C to +80 °C
Bypass key switch (optional)	

Dimensions



Ordering information

9 W version	Orifice plate	Code no.	Version	Code no.
	12 mm	4	230 V AC	1
	15 mm	5	115 V AC	2
	18 mm	6	24 V DC	4

Complete oder no. 07-3711-121☐/☐000
Please insert code number.

Ordering information

15 W version	Orifice plate	Code no.	Version	Code no.
	12 mm	4	230 V	1
	15 mm	5	115 V	2
	18 mm	6		

Complete oder no. 07-3711-121☐/☐082
Please insert code number.
Technical data subject to change without notice.

APEX 2003.002x control unit

- Four floating contacts
- Three-line LCD
- LED status indicator
- Modular design
- Safety-related control system

The APEX 2003.002x control unit controls and monitors the pre-purge and operating phase of pressurised enclosure housings. Digital or proportional purge gas valves can be used to input purge gas. The parameters are adjusted using rotary switches and keys. There is the option to transmit the parameters via an RS485 interface. The control unit features two programmable relays and one non-floating release contact.

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex d e ib [ia Ga px] IIC T4 Gb
Certification	DMT 99 ATEX E 082
IECEx marking	Ex d e ib [ia Ga px] IIC T4 Gb
Certification	IECEx BVS 13.0039
Other approvals and certificates, see www.bartec.de	
Ambient temperature	-20 °C to +40 °C

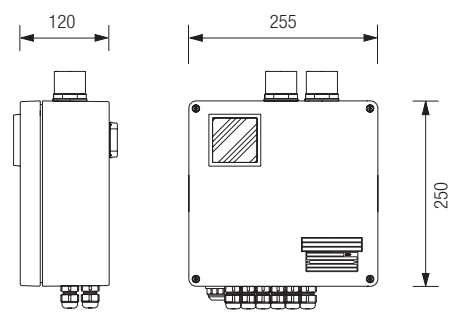
Technical data

Directives	Directive 2014/30/EU Directive 94/9/EC
Structure	Ex e protective housing with viewing pane in the cover
Housing material	Fibreglass-reinforced polyester
IP rating	IP 65
Terminals	2.5 mm^2, fine-wire
Pressure sensors	MIN. A/B = 0 to 25 mbar MAX. = 0 to 25 mbar DIFF. A/B = 0 to 25 mbar
Pre-purge time	0 to 99 min; 5 sec dropout delay
Weight	7.5 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	230 V AC (115 V AC) ±10 % 24 V DC ±10 %
Power consumption	P_V = 15 W/230 V
Normally open contacts	K 2/3, 5 A when cos ϕ = 1 K 4 and K 5; floating
Temperature switch value (optional)	0 °C to +80 °C
Bypass key switch (optional)	

Dimensions

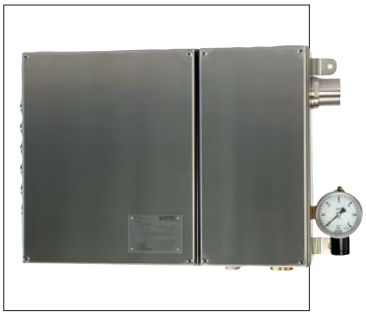


Ordering information		Code no.
9 W version	230 V AC	1
	115 V AC	2
	24 V DC	4

Complete oder no. 07-3711-1216/ ☐ 017
Please insert code number.

Ordering information		Code no.
15 W version	230 V AC	1
	115 V AC	2

Complete oder no. 07-3711-1216/ ☐ 107
Please insert code number.
Technical data subject to change without notice.



- Black box system
- Automatic calculation of the purge time
- Adjustable continuous flow, automatically adjustable
- WEB interface
- 3 x PT100/1000 inputs
- Safety-related control system

The APEX^{cf} Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure equipment with integrated containment, protected in accordance with ignition protection type px, and additionally features an adjustable continuous flow during the operating phase. The parameters can be set using the integrated WEB interface or the optionally available p operator panel. The APEX^{cf} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. The design of the APEX^{cf} means that all components required for the pressurised enclosure are located in the control unit. The equipment to be monitored is connected to the Ex p control unit by means of a pipe, which allows a maximum purge volume of 70 litres, maintains overpressure and performs constant purging with a defined volume of purge gas. The following components can also be connected:

- There is the option to connect a p operator panel

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex eb mb ib [ib pxb] [ia Ga] IIC T4 Gb Ⓔx II 2(1)D Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex eb mb ib [ib pxb] [ia Ga] IIC T4 Gb Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +70 °C

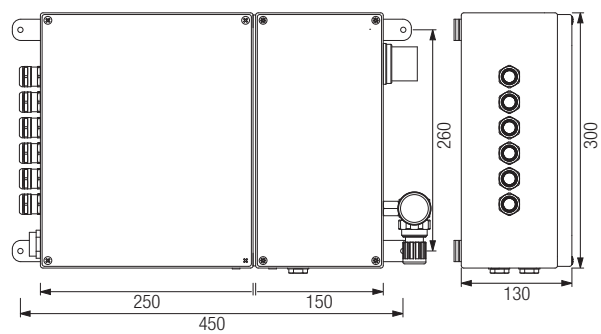
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mb/ib-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm², fine-wire, tension spring Ex i: 0.2 to 1.5 mm², fine-wire, push-in
Pneumatic connections	2 x pipe connections, 10 mm dia.
Pressure measurement range	0 to 25 mbar
Continuous purging	Adjustable, 0 to 20 l/min
Orifice plate size	8 mm
Max. flow rate	6000 l/h
Pre-purge time	0 to 120 min
Weight	6.8 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 (SIL) release, max. 5 A (AC1) K2 (SIL) release, floating, max. 230 V AC/4.5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch 1 x 4 to 20 mA [ib] – pressure sensor 1 x 4 to 20 mA [ia] – pressure sensor

Dimensions



Ordering information	Code no.
24 V DC to 44 V DC, ±10 %	1
100 V AC to 230 V AC, ±10 %	2

Complete oder no. 07-37A2-2211/ ☐ 725
Please insert code number.
The accessories and order information can be found on the accessory pages.
Technical data subject to change without notice.

- Four floating contacts
- Three-line LCD
- LED status indicator
- Safety-related control system
- Integrated multiport valves for purge gas inlet

The APEX 2003.SI control unit controls and monitors the pre-purge and operating phase of Ex p-protected analysis systems with integrated containment.

Additional function:
During the pre-purge phase, the maximum purge gas flow rate is 4100 NL/h. During the operating phase, continuous purging at a rate of 5 litres/minute is set via a bypass. The control unit features two freely programmable relays and one non-floating release contact.

Explosion protection

ATEX marking	Ⓔx II 2(1)G 2(1) G Ex d e ib [ia Ga px] IIC T4 Gb
Certification	DMT 99 ATEX E 082
Other approvals and certificates, see www.bartec.de	
Ambient temperature	-20 °C to +40 °C

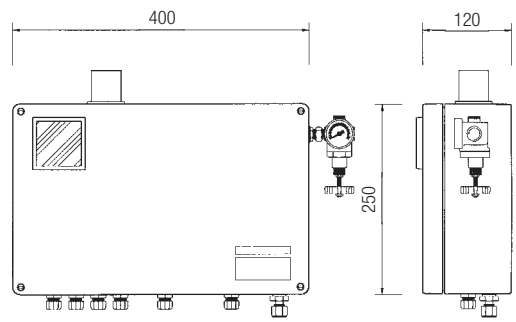
Technical data

Directives	Directive 2014/30/EU Directive 94/9/EC
Structure	Ex e protective housing
Housing material	Fibreglass-reinforced polyester
IP rating	IP 65
Terminals	2.5 mm², fine-wire
Purge gas connection	10 mm dia.
Pressure measurement range	0 to 25 mbar (standard)
Pre-purge time	0 to 99 min; 5 sec dropout delay
Weight	11 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	230 V AC (115 V AC), ±10 % or 24 V DC, ±10 %
Power consumption	P_V = 15 W
Normally open contacts	K 2/3, 5 A when cos ϕ = 1 K 4 and K 5; floating

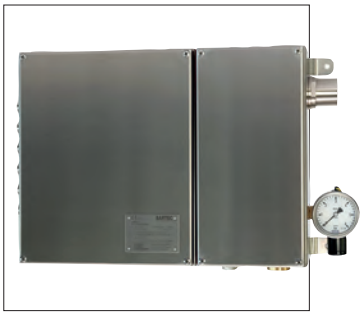
Dimensions



Ordering information

		Code no.
Version	230 V AC	1
	115 V AC	2

Complete oder no. 07-3711-4213/☐001
Please insert code number.
Technical data subject to change without notice.



- Black box system
- Automatic calculation of the purge time
- Adjustable dynamic pressure feed
- Option to connect separate pressure sensors
- WEB interface
- 3 x PT100/1000 inputs
- Safety-related control system

The APEX^{dp} Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure equipment with integrated containment, which is protected in accordance with ignition protection type px, and additionally maintains the internal pressure of the protected equipment by Δp regulation during the operating phase. Connecting additional pressure sensors allows the pressure inside the housing to be regulated to a higher value than that of the measurement gas using a proportional valve. The parameters can be set using the integrated WEB interface or the optionally available p operator panel.
The APEX^{dp} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. The design of the APEX^{dp} means that all components required for the pressurised enclosure are located in the control unit. The equipment to be monitored is connected to the Ex p control unit by means of a pipe, which allows a maximum purge volume of 70 litres. The following components can also be connected:

- There is the option to connect a p operator panel
- Pressure sensors

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex eb mb ib [ib pxb] [ia Ga] IIC T4 Gb Ⓔx II 2(1)D Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex eb mb ib [ib pxb] [ia Ga] IIC T4 Gb Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +70 °C

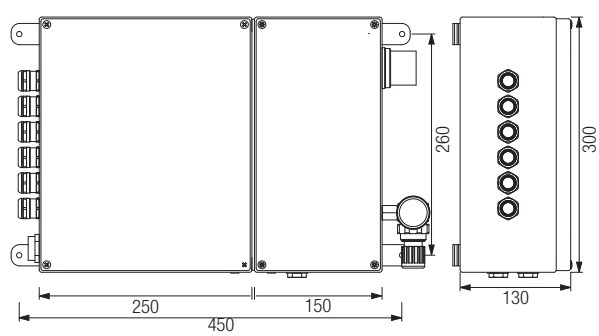
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mb/ib-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm², fine-wire, tension spring Ex i: 0.2 to 1.5 mm², fine-wire, push-in
Pneumatic connections	2 x pipe connections, Ø 10 mm
Pressure measurement range	0 to 300 mbar
Adjustable differential pressure	Adjustable, 0 to 300 mbar
Orifice plate size	8 mm
Max. flow rate	6000 l/h
Pre-purge time	0 to 120 min
Weight	6.8 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 (SIL) release, max. 5 A (AC1) K2 (SIL) release, floating, max. 230 V AC/4.5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch 1 x 4 – 20 mA [ib] – pressure sensor 1 x 4 – 20 mA [ia] – pressure sensor

Dimensions



Ordering information

Version	Code no.
24 V DC to 44 V DC, ±10 %	1
100 V AC to 230 V AC, ±10 %	2

Complete oder no. 07-37A2-2211/☐720

Please enter code number.
The accessories and order information can be found on the accessory pages.
Technical data subject to change without notice.

- Four floating contacts
- Three-line LCD
- LED status indicator
- Modular design
- Safety-related control system
- Integrated multiport valves for purge gas inlet and outlet
- Option to connect separate pressure sensors

The APEX 2003.SI control unit controls and monitors the pre-purge and operating phase of Ex p-protected analysis systems with integrated containment.

Additional function:
Connecting additional pressure sensors allows the pressure inside the housing to be regulated to a higher value than that of the measurement gas using a proportional valve. During the pre-purge phase, the maximum purge gas flow rate is 4100 NL/h at a pressure of 50 mbar inside the housing. The control unit features two freely programmable relays and one non-floating release contact.

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex d e ib [ia Ga px] IIC T4 Gb
Certification	DMT 99 ATEX E 082
Other approvals and certificates, see www.bartec.de	
Ambient temperature	-20 °C to +40 °C

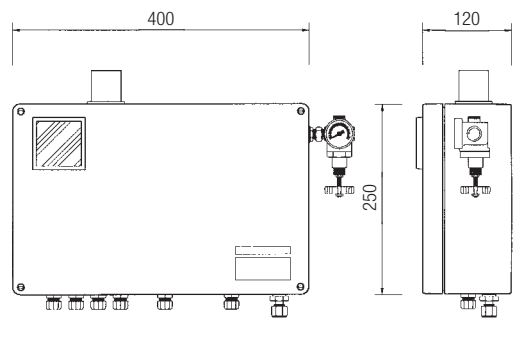
Technical data

Directives	Directive 2014/30/EU Directive 94/9/EC
Structure	Ex e protective housing with viewing pane in the cover
Housing material	Fibreglass-reinforced polyester
IP rating	IP 65
Terminals	2.5 mm², fine-wire
Purge gas connection	10 mm dia.
Pressure sensors	MIN. A/B = 0 to 300 mbar MAX. = 0 to 300 mbar DIFF. A/B = 0 to 25 mbar
Pre-purge time	0 to 99 min; 5 sec dropout delay
Weight	11 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	230 V AC (115 V AC) ±10 %
Power consumption	P_V = 21 W/230 V
Normally open contacts	K 2/3, 5 A when cos ϕ = 1 K 4 and K 5; floating
Temperature switch value (optional)	0 °C to +80 °C
Bypass key switch (optional)	

Dimensions

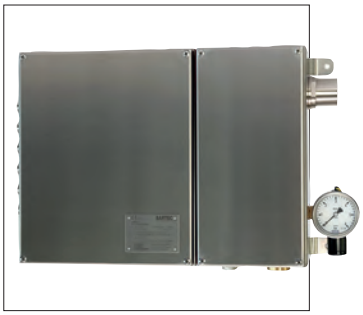


Ordering information

		Code no.
Version	230 V AC	1
	115 V AC	2

Complete oder no. 07-3711-3223/ ☐ 003
Please insert code number.
Technical data subject to change without notice.

APEX^{mv} control unit



- Black box system
- Automatic calculation of the purge time
- WEB interface
- 3 x PT100/1000 inputs
- Safety-related control system

The APEX^{mv} Ex p control unit controls and monitors the pre-purge and operating phase of small, separate, pressurised enclosure equipment protected in accordance with ignition protection type px. The parameters can be set using the integrated WEB interface or the optionally available p operator panel.
The APEX^{mv} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. The design of the APEX^{mv} means that all components required for the pressurised enclosure are located in the control unit. The equipment to be monitored is connected to the Ex p control unit by means of a pipe, which allows a maximum purge volume of 70 litres. The following components can also be connected:

- There is the option to connect a p operator panel
- Pressure sensors

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex eb mb ib [ib pxb] [ia Ga] T4 Gb Ⓔx II 2(1)D Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex eb mb ib [ib pxb] [ia Ga] IIC T4 Gb Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +70 °C

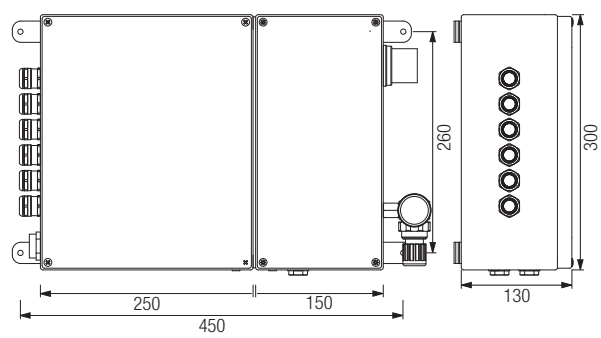
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mb/ib-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm^2, fine-wire, tension spring Ex i: 0.2 to 1.5 mm^2, fine-wire, push-in
Pneumatic connections	2 x pipe connections, 10 mm dia.
Pressure measurement range	0 to 25 mbar
Orifice plate size	8 mm
Max. flow rate	6000 l/h
Pre-purge time	0 to 120 min
Weight	6.8 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 (SIL) release, max. 5 A (AC1) K2 (SIL) release, floating, max. 230 V AC/4.5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch 1 x 4 to 20 mA [ib] – pressure sensor 1 x 4 to 20 mA [ia] – pressure sensor

Dimensions



Ordering information

Version	Code no.
24 V DC to 44 V DC, ±10 %	1
100 V AC to 230 V AC, ±10 %	2

Complete oder no. 07-37A2-2211/ ☐ 730
Please enter code number.
The accessories and order information can be found on the accessory pages.
Technical data subject to change without notice.

APEX 2003.MV control unit

- Four floating contacts
- Three-line LCD
- LED status indicator
- Safety-related control system
- Integrated multiport valve

The APEX 2003.MV control unit controls and monitors the pre-purge and operating phase of small, separate, pressurised enclosure housings with a maximum internal volume of 70 litres. The parameters are adjusted using rotary switches and keys. There is the option to transmit the parameters via an RS 485 interface. The control unit features two freely programmable relays and one non-floating release contact.

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex d e ib [ia Ga px] IIC T4 Gb
Certification	DMT 99 ATEX E 082
Other approvals and certificates, see www.bartec.de	
Ambient temperature	-20 °C to +40 °C

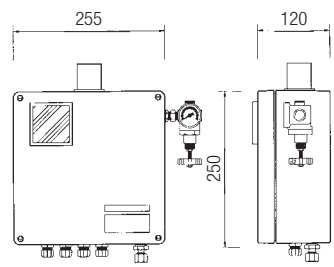
Technical data

Directives	Directive 2014/30/EU Directive 94/9/EC
Structure	Ex e protective housing with viewing pane in the cover
Housing material	Fibreglass-reinforced polyester
IP rating	IP 65
Terminals	2.5 mm², fine-wire
Purge gas connection	10 mm dia.
Pressure sensors	MIN. A/B = 0 to 25 mbar MAX. = 0 to 25 mbar DIFF. A/B = 0 to 25 mbar
Pre-purge time	0 to 99 min; 5 sec dropout delay
Weight	5.9 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	230 V AC (115 V AC) ±10 %
Power consumption	P_V = 15 W/230 V
Normally open contacts	K 2/3, 5 A when cos ϕ = 1 K 4 and K 5; floating
Temperature switch value (optional)	0 °C to +80 °C
Bypass key switch (optional)	

Dimensions



Ordering information

		Code no.
Version	230 V AC	1
	115 V AC	2

Complete oder no. 07-3711-2213/ ☐ 000
Please insert code number.
Technical data subject to change without notice.

- Black box system
- Automatic calculation of the purge time
- WEB interface
- 3 x PT100/1000 inputs
- Modular design
- Separate purge gas input and output

The SILAS^{pz} Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure equipment protected in accordance with ignition protection type pz. Digital or proportional purge gas valves can be used as purge gas valves. The parameters can be set using the integrated WEB interface or the optionally available p operator panel. The SILAS^{pz} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. Model I comes complete with separate pressure measurement. The following components are additionally required to set up a complete control system:

- Sensor box^{pz} 25 mbar
- Pressure monitor
- Purge gas valve, proportional or digital
- Valve fuse
- Pressure reducer
- There is the option to connect a p operator panel

Explosion protection

ATEX marking	Ⓔx II 3G Ex ec mc ic [ic pzc] IIC T6, T5, T4 Gb Ⓔx II 3D Ex tc [ic pzc] IIIC T80°C, T95°C, T130°C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex ec mc ic [ic pzc] IIC T6, T5, T4 Gb Ex tc [ic pzc] IIIC T80°C, T95°C, T130°C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +70 °C

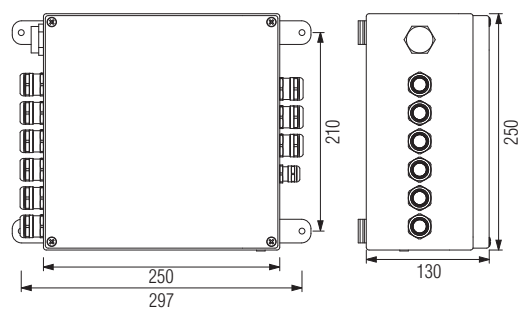
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mc/ic-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm², fine-wire, tension spring Ex i: 0.2 to 1.5 mm², fine-wire, push-in
Pressure measurement range	0 to 25 mbar (standard) or 0 to 300 mbar (on request)
Pre-purge time	0 to 120 min
Weight	5.8 kg

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 release, max. 5 A (AC1) K2 release, floating, max. 230 V AC/5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch

Dimensions



Ordering information

Version	Code no.
24 V DC to 44 V DC, ±10 %	1
100 V AC to 230 V AC, ±10 %	2

Complete oder no. A7-37S2-2111/ ☐ 510
Please enter code number.
The accessories and order information can be found on the accessory pages.
Technical data subject to change without notice.

- Black box system
- Automatic calculation of the purge time
- WEB interface
- 3 x PT100/1000 inputs
- Modular design
- Separate purge gas input and output

The SILAS^{pz} Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure equipment protected in accordance with ignition protection type pz. Digital or proportional purge gas valves can be used as purge gas valves. The parameters can be set using the integrated WEB interface or the optionally available p operator panel. The SILAS^{pz} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. Model II comes complete with integrated pressure measurement. The following components are additionally required to set up a complete control system:

- Pressure monitor
- Purge gas valve, proportional or digital
- Valve fuse
- Pressure reducer
- There is the option to connect a p operator panel

Explosion protection

ATEX marking	Ⓔx II 3G Ex ec mc ic [ic pzc] IIC T4 Gb Ⓔx II 3D Ex tc [ic pzc] IIIC T80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex ec mc ic [ic pzc] IIC T4 Gb Ex tc [ic pzc] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +70 °C

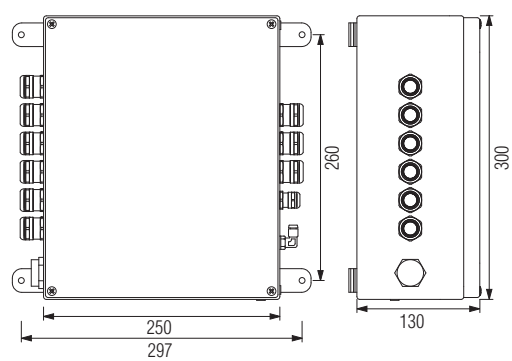
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mc/ic-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm², fine-wire, tension spring Ex i: 0.2 to 1.5 mm², fine-wire, push-in
Pneumatic connections	2 x hoses, 4 mm dia.
Pressure measurement range	0 to 25 mbar (standard) or 0 to 300 mbar (on request)
Pre-purge time	0 to 120 min
Weight	5.8 kg

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 release, max. 5 A (AC1) K2 release, floating, max. 230 V AC/4.5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch

Dimensions



Ordering information	Code no.
24 V DC to 44 V DC, ±10 %	1
100 V AC to 230 V AC, ±10 %	2

Complete oder no. A7-37S2-2111/ ☐ 520
Please insert code number.
The accessories and order information can be found on the accessory pages.
Technical data subject to change without notice.

SILAS control unit

- Small design
- Easy to use
- Separate purge gas input and output

The SILAS control system is used to monitor electrical equipment constructed in accordance with the method of "pressurised enclosure with leakage loss compensation". Consisting of a SILAS control unit type A7-3741-1110/*000 and a pressure monitor type 17-51P3-1604, this is a complete safety device. The following components are additionally required to set up a complete control system:

- Pressure monitor
- Purge gas valve, digital (gas application)
- Pressure reducer

Explosion protection

Marking/ambient temperature		
ATEX marking	Ⓔx II 3G Ex nA nC [pzc] IIC T4 Gc Ⓔx II 3G Ex nA nC [pzc] IIC T6 Gc Ⓔx III 3D Ex tc [pzc] IIIB T85 °C Dc	
Certification	TÜV 09 ATEX 553359 X	
IECEx marking	Ex nA nC [pzc] IIC T4 Gc Ex nA nC [pzc] IIC T6 Gc Ex tc [pzc] IIIB T85 °C Dc	
Certification	IECEx TUN 10.0030 X	
Other approvals and certificates, see www.bartec.de		
Approved for	Zone 2 and Zone 22	
Ambient temperature	In storage During operation	-20 °C to +60 °C -20 °C to +60 °C/T4 -20 °C to +40 °C/T6

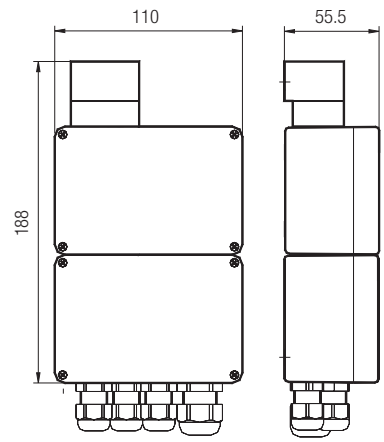
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Protective housing with or without viewing pane
Housing material	Polyester, fibreglass-reinforced
IP rating	IP 54
Terminals	0.08 to 2.5 mm², fine-wire, tension spring
Pressure measurement range	0 to 25 mbar (standard)
Pre-purge time	0 to 60 min
Weight	1.2 kg

Electrical data

Supply voltage	24 V DC, ±10 % 115 V AC, ±10 % 230 V AC, ±10 %
Power consumption	8 watts
Normally open contacts	Release relay, floating Alarm relay, floating Control relay Purge valve

Dimensions

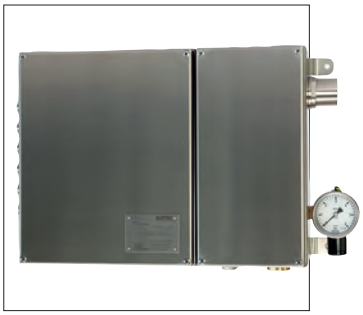


Ordering information

Supply voltage	Code no.	Version	Code no.
230 V AC, ±10 %, 50 Hz – 60 Hz	1	Without viewing pane	0
115 V AC, ±10 %, 50 Hz – 60 Hz	2	With viewing pane	2
24 V DC, ±10 %	4		

Complete oder no. A7-3741-1110/ ☐ 00 ☐
Please insert code number.
Technical data subject to change without notice.

SILAS^{mv} control unit



- Black box system
- Automatic calculation of the purge time
- WEB interface
- 3 x PT100/1000 inputs

The SILAS^{mv} Ex p control unit controls and monitors the pre-purge and operating phase of small, separate, pressurised enclosure equipment protected in accordance with ignition protection type pz. The parameters can be set using the integrated WEB interface or the optionally available p operator panel.
The SILAS^{mv} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. The design of the SILAS^{mv} means that all components required for the pressurised enclosure are located in the control unit. The equipment to be monitored is connected to the Ex p control unit by means of a pipe, which allows a maximum purge volume of 70 litres. The following components can also be connected:

- There is the option to connect a p operator panel

Explosion protection

ATEX marking	Ⓔx II 3G Ex ec mc ic [ic pzc] IIC T4 Gb Ⓔx II 3D Ex tc [ic pzc] IIIC T80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex ec mc ic [ic pzc] IIC T6, T5, T4 Gb Ex tc [ic pzc] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +70 °C

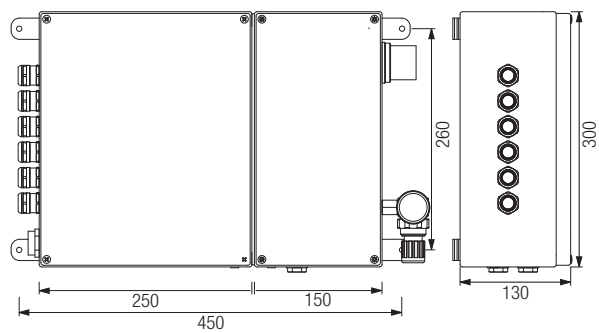
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mc/ic-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm^2, fine-wire, tension spring Ex i: 0.2 to 1.5 mm^2, fine-wire, push-in
Pneumatic connections	2 x pipe connections, 10 mm dia.
Pressure measurement range	0 to 25 mbar
Orifice plate size	8 mm
Max. flow rate	6000 l/h
Pre-purge time	0 to 120 min
Weight	6.8 kg

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 release, max. 5 A (AC1) K2 release, floating, max. 230 V AC/4.5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch

Dimensions



Ordering information	Code no.
24 V DC to 44 V DC, ±10 %	1
100 V AC to 230 V AC, ±10 %	2

Complete oder no. A7-37S2-2111/ ☐ 730
Please insert code number.
The accessories and order information can be found on the accessory pages.
Technical data subject to change without notice.

- Black box system
- Automatic calculation of the purge time
- WEB interface
- 3 x PT100/1000 inputs
- Safety-related control system

The APEX^{mpc} Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure motors protected in accordance with ignition protection type px. The parameters can be set using the integrated WEB interface or the optionally available p operator panel. The APEX^{mpc} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. All the components required to set up Ex px monitoring and purge gas valves are integrated in the APEX^{mpc}. The following components are additionally required to set up a complete control system:

- "Motor purge valve MPC" outlet
- There is the option to connect a p operator panel

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex eb mb ib [ib pxb] [ia Ga] IIC T4 Gb Ⓔx II 2(1)D Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex eb mb ib [ib pxb] [ia Ga] IIC T4 Gb Ex tb [ib pxb] [ia Da] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +60 °C -50 °C to +60 °C (HT) 230 V AC or 110 V AC heating is available on the HT version. Please state which voltage you require when ordering.

Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mb/ib-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm^2, fine-wire, tension spring Ex i: 0.2 to 1.5 mm^2, fine-wire, push-in
Pneumatic connections	Purge gas supply in: G 1 ½", internal thread Purge gas supply out: G 1 ½", external thread MPV activation: Pipe connection 10 mm Pressure measurement: 2 x pipe connections 10 mm
Pressure measurement range	0 to 25 mbar (standard) or 0 to 300 mbar (on request)
Pre-purge time	0 to 120 min
Flow rate	Leakage compensation: Proportional up to 11.5 litres/second Purge gas volume: Digital 0 to 450 m^3/hour
Weight	40 kg
Safety integrity level	SIL 2

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 (SIL) release, max. 5 A (AC1) K2 (SIL) release, floating, max. 230 V AC/5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch 1 x 4 – 20 mA [ib] – pressure sensor 1 x 4 – 20 mA [ia] – pressure sensor

- Black box system
- Automatic calculation of the purge time
- WEB interface
- 3 x PT100/1000 inputs

The SILAS^{mpc} Ex p control unit controls and monitors the pre-purge and operating phase of pressurised enclosure motors protected in accordance with ignition protection type px. The parameters can be set using the integrated WEB interface or the optionally available p operator panel. The SILAS^{mpc} features two release relays; one which is energised and one which has floating contacts. Two signal relays with one changeover contact each are additionally available. Three PT100/1000 inputs are available to monitor the temperature of the Ex p-protected equipment. Up to three switch values can be assigned to them. All the components required to set up Ex px monitoring and the purge gas valve are integrated in the SILAS^{mpc}. The following components are additionally required to set up a complete control system:

- "Motor purge valve MPC" outlet
- There is the option to connect a p operator panel

Explosion protection

ATEX marking	Ⓔx II 2(1)G Ex ec mc ic [ic pzc] IIC T4 Gb Ⓔx II 2(1)D Ex tc [ic pzc] IIIC T80 °C, T95 °C, T130 °C Db
Certification	BVS 17 ATEX…
IECEx marking	Ex ec mc ic [ic pzc] IIC T4 Gb Ex tc [ic pzc] IIIC T80 °C, T95 °C, T130 °C Db
Certification	IECEx BVS 17. …
Other approvals and certificates, see www.bartec.de	
Ambient temperature	In storage -20 °C to +60 °C During operation -25 °C to +60 °C -50 °C to +60 °C (HT) 230 V AC or 110 V AC heating is available on the HT version. Please state which voltage you require when ordering.

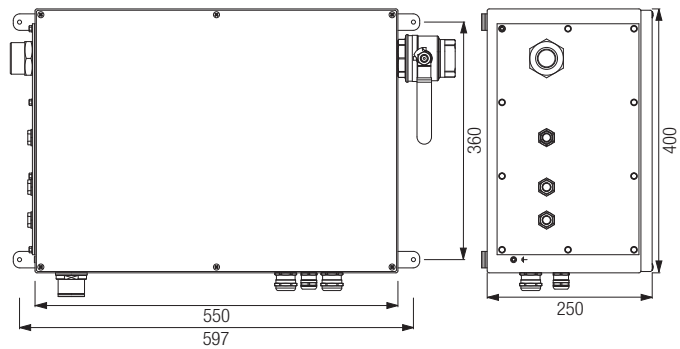
Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Ex e protective housing with integrated Ex mb/ib-protected p control system
Housing material	V4A stainless steel
IP rating	IP 66
Terminals	Ex e: 0.08 to 2.5 mm², fine-wire, tension spring Ex i: 0.2 to 1.5 mm², fine-wire, push-in
Pneumatic connections	Purge gas supply in: G 1 ½", internal thread G Purge gas supply out: 1 ½", external thread MPV activation: Pipe connection 10 mm Pressure measurement: 2 x pipe connections 10 mm
Pressure measurement range	0 to 25 mbar (standard) or 0 to 300 mbar (on request)
Pre-purge time	0 to 120 min
Flow rate	Leakage compensation: Mechanical, up to 11.5 l/sec Purge gas volume: Digital, 0 to 450 m³/hour
Weight	40 kg

Electrical data

Supply voltage	24 V DC to 44 V DC, ±10 % or 100 V AC to 230 V AC, ±10 %
Power consumption	Pv = approx. 19 watts
Normally open contacts	K1 release, max. 5 A (AC1) K2 release, floating, max. 230 V AC/5 A (AC1) K3 and K4 signal relays, floating, changeover contact, max. 5 A (AC1)
Inputs	3 x PT100/1000 1 x bypass 1 x main switch

Dimensions



Ordering information

Controller supply voltage	Code no.	Temperature range, UV heating	Code no.
24 V DC to 44 V DC, ±10 %	1	-25 °C to+60 °C	0
		-50 °C to+60 °C, 230 V AC	1
100 V AC to 230 V AC, ±10 %	2	-50 °C to +60 °C, 110 V AC	2

Complete oder no. Zones 1, 21 07-37A2-2211/ ☐ M5 ☐
Zones 2, 22 A7-37S2-2211/ ☐ M5 ☐

Please insert code number.
The accessories and order information can be found on the accessory pages.
We reserve the right to make technical changes.

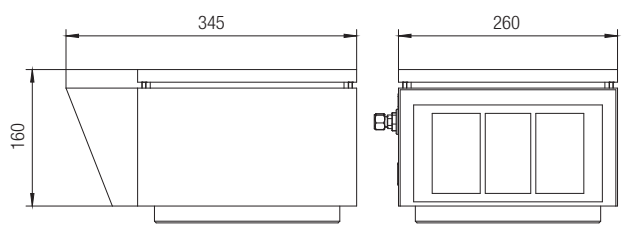
- Mounting position independently

The motor purge control system consisting of an MPC Motor Purge Controller and an MPV Motor Purge Valve (outlet valve) is a unit which allows the safe operation of electric motors in hazardous environments. The explosion protection is ensured by means of a pressurised enclosure with leakage loss compensation. The Motor Purge Control System monitors, controls and regulates the supply of purge gas to the Ex p motor. Any faults that arise within the system or during the supply of purge gas will be reliably reported and deactivated by a safe disconnection of the Ex p motor.

Technical Data

Construction	valve-controlled outlet for MPC
Varnish	RAL 7035
Enclosure material	Sheet steel (stainless steel on request)
Protection class	IP 65
Pressure relief	integrated, opens at 50 mbar
Connections	2 x pipe connection 10 mm
Mounting	horizontal or vertical
Flying spark and particle barrier	integrated
Flow rate	0 to 180 m^3/h at MPV 2 with MPC 2 0 to 450 m^3/h at MPV 3 with MPC 3
Connection flange	DIN2633 NW 50 PN16 (MPV 2) DIN2633 NW 100 PN16 (MPV 3) (Dimensions and details see Operating Instructions)
Ambient temperature	-30 °C to +60 °C

Dimensions



Ordering information

Description	Variant	Code no.
System MPC	MPV 2	8
	MPV 3	9

Complete order no. 17-51P3-3 ☐ 03
Please enter code number.
Technical data subject to change without notice.

p Operator panel

- Optional expansion p control system
- Plain text display
- Visual pressure information via LED
- Menu operation
- Status screens
- Three versions: Front panel mounting, front panel installation, or mobile use

The p Operator panel is designed for optional use with the new generation of Ex p control systems. It displays and visualises system-specific pressures, and displays parameters, plain text messages and system statuses. The p operator panel can be directly connected to the Ex p control unit, which supplies it with the required intrinsically safe voltage. Three versions of the p operator panel are available:

Version I – Mobile unit
The mobile unit is equipped with an Ex-protected plug connector. When using multiple Ex p control units, in order to carry out maintenance, the mobile unit can be connected to the Ex p control unit and removed again once the work is complete. The flanged socket required is securely installed on the control unit and is enclosed when the shipment is first ordered.

Version II – Front panel mounting
The front panel mounting version is secured to doors or adjacent walls, for example, using the mounting brackets fitted to the protective housing. The connection between the p operator panel and Ex p control system can be 2 m long.

Version III – Front panel installation
The front panel installation version has no protective housing and can be installed directly in the door of the p-protected equipment, for example.

Explosion protection		
ATEX marking	Ⓔx II 2G Ex ib IIC T4 Gb	
Certification	BVS 17 ATEX…	
IECEx marking	Ex ib IIC T4 Gb	
Certification	IECEx BVS 17. …	
Other approvals and certificates, see www.bartec.de		
Ambient temperature	In storage	-20 °C to +50 °C
	During operation	-25 °C to +60 °C

Version I – Mobile unit	
Connection	Plug connector, 2m cable One matching part for control unit included in the delivery
Weight	Approx. 2.5 kg (depending on the version)

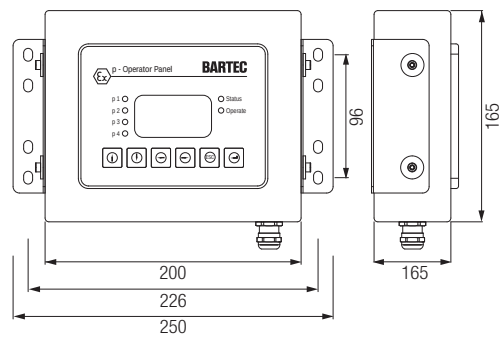
Version II – Front panel mounting	
Connection	4 x 0.5 mm², 2 m cable Fixed connection on the control unit
Weight	Approx. 2.5 kg (depending on the version)

Version III – Front panel installation	
Connection	4 x 0.5 mm², 2 m cable Fixed connection on the control unit
Weight	Approx. 2.5 kg (depending on the version)

Technical specifications	
Directives	Directive 2014/30/EU Directive 2014/34/EU
Housing material	V4A stainless steel (variant)
IP rating	IP 66

Electrical data	
Supply voltage	3.3 V DC (internal)
Power consumption	Pv = approx. 2 watts

Dimensions



Ordering information	Code no.
Version I – Mobile unit	0
Version II – Surface-mounted	1
Version III – Installed version	2

Complete oder no. 17-51P5- ☐ 111
Please insert code number.
The accessories and order information can be found on the accessory pages.
Technical data subject to change without notice.

Sensor box

The sensor box is for APEX px/py or SILAS^{pz} Ex p control units, model I. This contains the measuring card to measure the pressures inside the Ex p equipment and to convert them into an electrical signal. The maximum length between the Ex p control unit and the sensor box is 2 m.

Explosion protection		
Zone 1		
ATEX marking	Ⓔx II 2G Ex ib IIC T4/T6 Gb	
Certification	BVS 17 ATEX…	
IECEx marking	Ex ib IIC T4/T6 Gb	
Certification	IECEx BVS 17. …	
Zone 2		
ATEX marking	Ⓔx II 3G Ex ic IIC T4/T6 Gb	
Test certificate	BVS 17 ATEX…	
IECEx marking	Ex ic IIC T4/T6 Gc	
Test certificate	IECEx BVS 17. …	
Other approvals and certificates, see www.bartec.de		
Ambient temperature	In storage	-20 °C to +50 °C
	During operation	-25 °C to +60 °C

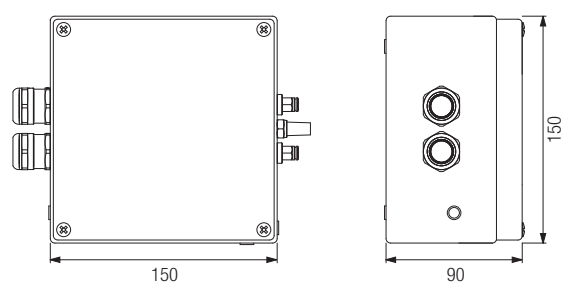
Technical data	
Directives	Directive 2014/30/EU Directive 2014/34/EU
Housing material	V4A stainless steel (variant)
IP rating	IP 66

Electrical data	
Supply voltage	3.3 V DC (internal)
Power consumption	Pv = approx. 2 watts
Terminals	Ex i: 0.2 to 1.5 mm^2, fine-wire, screw terminal

Pneumatic data	
Pneumatic connections	2 x hoses 4 mm
Pressure measurement range	0 to 25 mbar (standard) or 0 to 300 mbar (on request)

Versions	
SENSOR BOX^{px}	For APEX^{px} Ex px control system, model I
SENSOR BOX^{py}	For APEX^{py} Ex py control system, model I
SENSOR BOX^{pz}	For SILAS^{pz} Ex pz control system, model I

Dimensions



Ordering information

Version	Order number
SENSOR BOX^{px}	05-xxxx-xxxx
SENSOR BOX^{py}	05-xxxx-xxxx
SENSOR BOX^{pz}	05-xxxx-xxxx

Technical data subject to change without notice.

- Easy to install
- Easy to use

The sensor module is designed to be used in APEX control systems. It measures the system-specific pressures and displays parameters and pressure values. The sensor module is directly connected to the APEX control unit, which supplies it with the required intrinsically safe voltage. Measured signals are forwarded to the APEX control module in an intrinsically safe manner. The sensor module is connected by single conductors or a hose line, depending on the version.

Explosion protection

ATEX marking	Ⓔx II 2G Ex ib IIC T4
Certification	DMT 99 ATEX E 108 X
IECEx marking	Ex ib IIC T4, T6
Certification	IECEx BVS 09.0055X
Other approvals and certificates, see www.bartec.de	
Approved for	Zones 1 and 2

Technical data

Mounting	Screw attachment on mounting plate, front mounting with mounting frame	
Housing materials	Plastic housing with metal front panel	
IP rating	Min. IP 20	
Displays	LCD in the front of the housing	
Controls	Membrane push-buttons	
Weight	1.0 kg	
Ambient temperature	In storage	-20 °C to +60 °C
	During operation	-20 °C to +60 °C

Electrical data

Power consumption	P_V = 1.2 W	
Ex i circuits	Supply circuit	U_i = 30 V C_i = 50 nF L_i = negligible
	LCD supply circuit	U_i = - 7.5 V I_i = 10 mA P_i = 20 mW C_i = negligible L_i = negligible
	Signal current circuits	U_i = 7.5 V C_i = 1 µF L_i = negligible
	Interconnected supply circuits and signal current circuits Maximum total current = 250 mA Maximum total power = 1.2 W	
Option	T6 special design available on request	

Ordering information

T4 sensor module	Version	Code no.	Pressure range	Code no.
	Installation	1	0 to 25 mbar	1
	Mounting	2	0 to 300 mbar	2

Complete oder no. 17-51P2-☐☐00
Please insert code number.

T6 available on request.
Technical data subject to change without notice.

The pressure monitor module forms part of pressurised enclosure control systems. Various versions are available for applications in Zones 1, 21 and 2, 22.

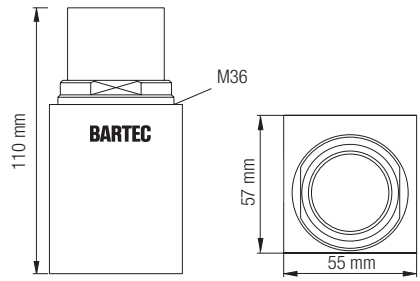
Function of pressure monitor module for Zones 1, 21

- Overpressure monitor
- Taps for flow rate measurement

Function of pressure monitor module for Zones 2, 22

- Overpressure monitor
- Flow valve

Dimensions Zone 1 version

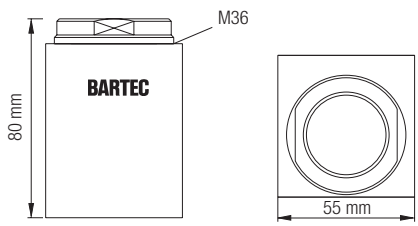


Pressure monitor module for Zones 1, 21

Technical data

Temperature range	-20 °C to +80 °C
Installation	In Ex px/py equipment
Mounting hole	Ø 37 mm
Connection	Quick connector for hose
Flying spark barrier	x 3
Installation position	Plastic body inside Ex p equipment
Opening pressure	3 mbar
IP rating	IP 65

Dimensions Zone 2 version



Pressure monitor module for Zones 2, 22

Technical data

Temperature range	-25 °C to +80 °C
Installation	In Ex pz equipment
Mounting hole	Ø 37 mm
Flying spark barrier	x 2
Installation position	Plastic body inside Ex p equipment
Opening pressure	3 mbar
IP rating	IP 54

Ordering information

Version		Order number
Zone 1 module	Orifice plate, 5 mm	17-51P3-1203
	Orifice plate, 8 mm	17-51P3-1303
	Orifice plate, 12 mm	17-51P3-1403
	Orifice plate, 15 mm	17-51P3-1503
	Orifice plate, 18 mm	17-51P3-1603
Zone 2 or 22 module		17-51P3-1604

The accessories and order information can be found on the accessory pages.
Technical data subject to change without notice.

Ordering information

Figure	Description	Order number
	**Purge gas valve with integrated leakage air compensation** Ex Zone 1, Ex px/py control systems Operating principle: Open/closed; 2/2-way; closed in the idle position Nominal size: 13 mm Material: Brass Line connection: G3/8 bushing Power consumption: 9 watts Cable length: 3 m Items supplied: Valve, 2 x purge air nozzles with no holes	
	Types	
	230 V AC	05-0056-0071
	110 V AC	05-0056-0072
	24 V DC	05-0056-0073
	**Purge gas valve – Proportional** Ex Zone 1, Ex px/py control systems Operating principle: Proportional; 2/2-way; closed in the idle position Nominal size: 6 mm Material: Brass Line connection: G3/8 bushing Power consumption: 15 watts Cable length: 3 m Items supplied: Valve, 2 x purge air nozzles with no holes	
	Types	
	230 V AC	05-0056-0077
	110 V AC	05-0056-0078
	24 V DC	05-0056-0081
	**Purge gas valve with integrated leakage air compensation** Ex Zone 2, Ex pz control systems Operating principle: Open/closed; 2/2-way; closed in the idle position Nominal size: 13 mm Material: Brass Line connection: G3/8 bushing Power consumption: 9 watts Cable length: 3 m Items supplied: Valve, 2 x purge air nozzles with no holes	
	Types	
	230 V AC	03-5110-0081
	110 V AC	03-5110-0082
	24 V DC	03-5110-0083
	**Valve fuse** Back-up fuse for purge gas valves	
	1.0 A for digital purge gas valve	05-0080-1016
	1.6 A for proportional purge gas valve	05-0080-1017

Technical data subject to change without notice.

Ordering information

Figure	Description	Order number
	**Pressure reducer** Ambient temperature: -10 °C to +60 °C Medium temperature: -10 °C to +40 °C Controls: Handwheel with locking mechanism Any installation position is possible Pressure regulation range: 0.5 to 6 bar Items supplied: Pressure reducer with installation material	
	G ¼" pressure reducer Max. inlet pressure: 16 bar Connection: G ¼" Nominal flow rate (QN): 1000 l/min	05-0056-0007
	G ½" pressure reducer Max. inlet pressure: 25 bar Connection: G ½" Nominal flow rate (QN): 2200 l/min	05-0056-0041
	**Pressure maintenance valve** Zones 21, 22 With installation material for pressure reducer	05-0056-0062 05-0056-0007
	**Programming switch** For the new generation of APEX/SILAS	05-0003-0089
	**Programming jumper** for APEX 2003	05-0012-0193
	**Rain/dust cap** The rain/dust cap for the pressure monitor output protects against rain or dust deposits. This can be used as an optional accessory for pressure monitors with an internal orifice plate of up to 15 mm.	05-0032-0011

Technical data subject to change without notice.

APC APEX **p**ressurised **c**abinet for Zone 1
SPC SILAS **p**ressurised **c**abinet for Zone 2 or 22

The need for complex automation functions for processes in the chemical, pharmaceutical, oil and gas sectors is constantly increasing.

Flexible, reliable and low-maintenance solutions are required for measurement, control, regulation and visualisation, especially in potentially explosive atmospheres.

Complete control systems and switchgears, drives, pumps, large displays and industrial monitors, including keyboard and printer, must be prepared for use in Ex areas.

The Ex p pressurised enclosure is one of the most flexible Ex solutions for many applications.

This type of ignition protection makes it possible to operate non-ex-capable devices in potentially explosive atmospheres in Zones 1/21, 2/22. The idea behind this is to prevent a potentially explosive atmosphere from entering a sealed protective housing by generating constant overpressure compared to the surrounding atmosphere.

BARTEC offers a completely new Ex solution for controlling and automating devices, machines and systems in Zones 1/21, 2/22 in the form of the pressurised enclosure Ex p systems.

Depending on the application, non-Ex-protected control units and switching devices, as well as complete automation systems, are installed in the housing. Modern, ready-for-operation Ex solutions – including the required ATEX or IECEx certification – are created on the basis of BARTEC's modular, ATEX-certified pressurised enclosure. The overpressure as a result of the purge gas is produced by compensating for the leakage losses. The pressurised enclosure solution is designed for a large range of ambient temperatures in temperature classes T3 to T5.

The main focus is on maintenance and availability of Ex devices and systems. The experts at BARTEC have many years of experience in explosion protection applications and in designing complete systematic solutions for automation.

This expertise is the basis for developing reliable and efficient solutions, from engineering, manufacturing and procurement, through to commissioning and approval.

The Ex p solutions are designed from sheet steel or stainless steel, with air conditioning, with different coatings, seawater-resistant or drip-resistant, depending on the application.

Custom solutions

BARTEC offers custom pressurised enclosure solutions for

- Devices
- Printers
- Operating terminals
- Control systems
- Frequency converters
- Monitors

Air conditioning

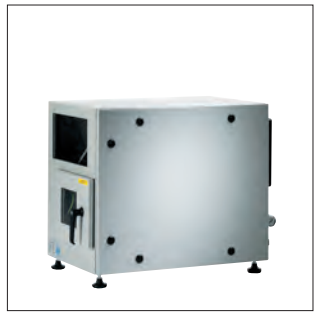
BARTEC can also provide you with various solutions for the air conditioning of Ex p systems on request

- Heating during operation
- Heating when stationary
- Air cooler
- Air conditioning

Accessories

- Purge gas filter systems
- Release contactor
- Isolating relay for data lines
- Bypass key switch

Pressurised enclosure solutions



Explosion protection

APC marking

ATEX	Ⓔx II 2G Ex px IIC T3 to T6 Gb Ⓔx II 2G Ex px ib IIC T3 to T6 Gb
Certification	BVS 11 ATEX E 144
IECEx	Ex px IIC T3 to T6 Gb Ex px ib IIC T3 to T6 Gb
Certification	IECEx BVS 13.0049
Other approvals and certificates, see www.bartec.de	

SPC marking

ATEX	Ⓔx II 3G Ex pz IIC T3 to T6 Gc Ⓔx II 3G Ex pz ib IIC T3 to T6 Gc
Test certificate	BVS 11 ATEX E 145
IECEx	Ex pz IIC T3 to T6 Gc Ex pz ib IIC T3 to T6 Gc
Test certificate	IECEx BVS 11.0070
Other approvals and certificates, see www.bartec.de	

Technical data

Directives	Directive 2014/30/EU Directive 2014/34/EU
Structure	Standard housing or custom solution
Housing material	Stainless steel, sheet steel
Ambient temperature	-20 °C to +60 °C (application-dependent)
IP rating	Application-dependent, at least IP 54
Housing volume	Up to 6336 litres
Purge gas	Purified compressed air or inert gas, Tmax = +40 °C
Purge gas inlet pressure	3 to 25 bar
Operating pressure	Version-dependent, between 2 and 4 mbar
Purge pressure	Version-dependent, between 1 and 20 mbar
Pre-purge time	Application-dependent

Electrical data

Supply voltage	Max. 690 V AC
Power consumption	Application-dependent

We would be happy to provide a pressurised enclosure solution on request.

Please use the specification sheet below for your request.
Technical data subject to change without notice.

Customer request Specification sheet request for Ex p

Customer

Company

Street

Town/postcode

Country

Contact

E-mail

BARTEC (to be completed by BARTEC employee)

Sales employee

Project name

Request number

Deadlines

Submission of quote

Telephone

Documents provided

☐ Wiring diagrams

☐ Drawings

☐ Other

☐ Parts list

☐ Data sheets

Area of application

☐ Zone 1 (2G)

☐ Zone 2 (3G)

☐ Zone 21 (2D)

☐ Zone 22 (3D)

☐ ATEX-certified

☐ Explosion group:

☐ Temperature class

☐ Outdoors

☐ Indoors

☐ Cleanroom

☐ Other:

☐ IECEx-certified

☐ T4 ☐ T6

Temperatures

Internal power loss W

Max. outdoor temperature °C

Min. outdoor temperature °C

Max. indoor temperature °C

Min. indoor temperature °C

Operating voltage

☐ 400 V AC

☐ 230 V AC

☐ 115 V AC

☐ 24 V DC

☐ Power consumption:

☐ Other:

Activation

☐ Direct activation via control unit, max. L/N, 5 A

☐ Indirect activation via Ex d contactor

☐ Activation from non-Ex zone

☐ Manual activation, for Zone 2 only

Material and "pressurised cabinet" design

Housing size (mm): Width x Height x Depth

☐ V2A stainless steel (1.4301, AISI 304)

☐ V4A stainless steel V4A (1.4401, AISI 316L)

☐ Sheet steel, coating according to RAL:

☐ Single-door

☐ Two-door

☐ Multi-door

☐ Base, height: mm

☐ Sun canopy

☐ Lifting brackets

☐ Viewing pane, size W mm

H mm

☐ Mounting plate provided

☐ Wiring by BARTEC MGH

Interfaces used

☐ Two-wire ☐ PROFIBUS ☐ Ethernet

☐ Four-wire ☐ PROFINET ☐ Other:

Controls

HMI, Type:

x push-button(s) Contact type:

x illuminated push-button(s) Contact type, colour:

x selector switch(s) Contact type:

x indicator light, colour:

x key switch Contact type:

x Emergency stop Contact type:

Cable glands

Quantity	Size	Ex i	Quantity	Size	Ex i