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DRUM, CONTAINER AND GAS CYLINDER HEATERS FOR HAZARDOUS AREA LOCATIONS

CONTENT OVERVIEW							
Temp.	Type	Dimensions		Explosion Protection Marking		Wholesale €	Page
IBC HEATERS							without Controller
T6-T3		1000 L Item #23-4255	1 Zone / 2.400 W	T6, T5, T4, T3 (depending on limiter temperature setting) <u>Marking</u> Gas: EX II 2G Ex e mb IIC T3 Gb Dust: EX II 2D Ex e mb IIIC T120°C Db		3.931,00 €	34
EX DRUM HEATERS							without Controller
T6-T3		25 - 30 L Item #23-4262	350 W	T6, T5, T4, T3 (depending on limiter temperature setting) <u>Marking</u> Gas: EX II 2G Ex e mb IIC T3 Gb Dust: EX II 2D Ex e mb IIIC T120°C Db		2.301,00 €	35
		50 - 60 L Item #23-4261	400 W			2.387,00 €	
		100 - 120 L Item #23-4260	800 W			2.632,00 €	
		200 - 220 L Item #23-4259	1.200 W			3.056,00 €	
EX GAS CYLINDER HEATERS							without Controller
T6-T3		10 L Item #23-4266	380 W	T6, T5, T4, T3 (depending on limiter temperature setting) <u>Marking</u> Gas: EX II 2G Ex e mb IIC T3 Gb Dust: EX II 2D Ex e mb IIIC T120°C Db		2.691,00 €	36
		50 L Item #23-4265	850 W			3.032,00 €	
		79 L Item #23-4264	850 W			3.417,00 €	
ACCESSORIES - EX DRUM AND IBC HEATERS							
Type	Dimensions		Explosion Protection Marking		Price in €	Page	
LIDS							INSULATION LID FOR IBC HEATERS
	Height Item #23-4256	150 mm	<u>Marking</u> Gas: EX II 2G Ex e mb IIC T3 Gb Dust: EX II 2D Ex e mb IIIC T120°C Db		626,00 €	34	
LIDS							INSULATION LID FOR 200-220 L EX DRUM HEATERS
	Height Item #23-4263	150 mm	<u>Marking</u> Gas: EX II 2G Ex e mb IIC T3 Gb Dust: EX II 2D Ex e mb IIIC T120°C Db		358,00 €	35	
Type		Operating voltage	Current	Sensor type		Price in €	Page
	Temperature Controller Item #23-4258	230 VAC (± 10 %)	25 A	2x Pt100 ATEX		2.302,00 €	37

Customized versions (sizes, special voltages, connectors, pin assignment and sensors) available on request.

Product range					
Temperature controller					
In-line controller		IP67	90-260 V	10 A	
Mounting clip for L330 PR		Wall mounting clip			
Temperature controller standard device for gas cylinder, container and drum heaters	50 °C	IP65	90-260 V	10 A	
	90 °C				
	150 °C				
	200 °C				
Tempertaure controller with additional cut-off relais for additional safety	50 °C	IP65	90-260 V	10 A	
	90 °C				
	150 °C				
	200 °C				
IR-remote control		IP40	-	-	

For more details refer to seperate temperature controller data sheet.

Customized versions (sizes, special voltages, connectors, pin assignment and sensors) available on request.

Flexible Heaters for Hazardous Area Locations



Product Examples



ATEX-IBC-Container Series

IBC containers are used for protection against frost, temperature maintenance and process heating in the temperature range from -40 °C to +200 °C.

Features	Structure
<ul style="list-style-type: none"> • Container heater suitable for 1000-liter IBC-Container of all types and manufacturers. The IBC insulating lid may be used additionally. • Robust, flexible and dissipative construction for indoor and outdoor use • Standard and customer-oriented solution - the heating jacket is customized according to the required drum dimensions System-approved with an EC-type examination certificate according to RL 2014/34/EU appendix III • Extensive documentation for the explosion protection document according to §6 para. 9 of the German Ordinance on Hazardous Materials (GefStoffV) 	
Explosion protection marking	
Marking Gas II 2G Ex e mb IIC T3 Gb Dust II 2D Ex e mb IIIC T120°C Db -40°C ≤ Ta ≤ +60°C (ambient temperature)	
<u>EC-type examination certificate</u> TPS 11 ATEX 29587 011 X	

Specifications		Dimensions IBC container 1000L *		
Nominal voltage	230 VAC *	Total length	Containerheizer	Isolierdeckel
Nominal power	2400 W		4400	-
Max. operating temperature	+180 °C / +200 °C (steel IBC-Container)	C (heated length)	3900	-
Temperature class	+80 °C (plastic IBC-Container)	A (Height)	1000	-
	T6, T5, T4, T3 (depending on temperature setting limiter)	D (Height)	-	150
Electrical connection	terminal boxes for network (EX-e) / sensor (EX-i)	All dimensions in mm * Other capacity sizes on request		
Protection degree / class	IP65 / I			
Zones	1/2 (Gas); 21/22 (Dust)			
Sensor Pt100 (EX-i, EX-e)	Standard: 2 Optional: 3 (SIL3), 4, 5...			
Weight	30kg, 5kg (container heater, insulation lid)			

* Other nominal voltages upon request

ATEX drum heater series



Drum heater are used for protection against frost, temperature maintenance and process heating in the temperature range from -40 °C to +200 °C.

Features

- Robust, flexible and dissipative construction for indoor and outdoor use
- Standard and customer-oriented solution - the heating jacket is customized according to the required drum dimensions
- System-approved with an EC-type examination certificate according to RL 2014/34/EU appendix III
- Extensive documentation for the explosion protection document according to §6 para. 9 of the German Ordinance on Hazardous Materials (GefStoffV)

Note: Custom-build versions for drums with handle, recess and special dimensions are possible.

Structure



Option: insulation lid



Explosion protection marking

Marking

Gas II 2G Ex e mb IIC T3 Gb
 Dust II 2D Ex e mb IIIC T120°C Db
 -40°C ≤ Ta ≤ +60°C (ambient temperature)

EC-type examination certificate

TPS 11 ATEX 29587 011 X

Specifications		Dimensions			
Nominal voltage	230 VAC *	Volume*	A (Length)	U (circumference)	C (width)
Nominal power	350W, 400W, 800W, 1200W (30L, 60L, 120L, 200L)	30L	1200	870-1170	400
Max. operating temperature	+180 °C / +200 °C (steel drum)	60L	1350	1100-1400	460
	+70 °C (plastic drum)	120L	1700	1500-1800	680
Temperature class	T6, T5, T4, T3 (depending on temperature setting limiter)	200L - 220L	2100	1800-2100	800
	All dimensions in mm * Other capacity sizes on request				
Electrical connection	terminal boxes for Network (EX-e) / Sensor (EX-i)				
Protection degree / class	IP65 / I				
Zones	1/2 (Gas); 21/22 (Dust)				
Sensor Pt100 (EX-i, EX-e)	Standard: 2 Optional: 3 (SIL3), 4, 5...				
Weight	4kg, 5kg, 10kg, 12kg (30L, 60L, 120L, 200L)				

* Other nominal voltages upon request

ATEX gas bottles heaters series



Heating gas bottles are used for protection against frost, temperature maintenance and process heating in the temperature range from -40 °C to +50/60 °C

Features	Structure
<ul style="list-style-type: none"> Robust, flexible and dissipative construction for indoor and outdoor use Standard and customer-oriented solution - the heating jacket is customized according to the required gas bottle dimensions System-approved with an EC-type examination certificate according to RL 2014/34/EU appendix III Extensive documentation for the explosion protection document according to §6 para. 9 of the German Ordinance on Hazardous Materials (GefStoffV) <p>Note: Please consider the technical rules TRG 310 / TRBS 3145 / TRGS 745 Maximum operating temperature 50 °C (cylinder temperature)</p>	
Explosion protection marking	
<p>Marking</p> <p>Gas II 2G Ex e mb IIC T3 Gb Dust II 2D Ex e mb IIIC T120°C Db -40°C ≤ Ta ≤ +60°C (ambient temperature)</p> <p><u>EC-type examination certificate</u> TPS 11 ATEX 29587 011 X</p>	

Specifications		Dimensions			
Nominal voltage	230 VAC *	Volume	X	Y	∅
Nominal power	380W; 850W; 850W (10L, 50L, 79L) (or application specific)	10L	1010	800	140
		50L	1670	1400	230
		79L	1290	1000	318
Max. operating temperature	+50/60°C (Manschette max. 200 °C)	All dimensions in mm * Other capacities/cylinder sizes on request			
Temperature class	T6, T5, T4, T3 (depending on temperature setting limiter)				
Electrical connection	terminal boxes for network (EX-e) / Sensor (EX-i)				
Protection degree / class	IP65 / I				
Zones	1/2 (Gas); 21/22 (Dust)				
Sensor Pt100 (EX-i, EX-e)	Standard: 2 Optional: 3 (SIL3), 4, 5...				
Weight	6 kg, 9,5kg, 10kg (10L, 50L, 79L)				

* Other nominal voltages upon request

DIGITAL ATEX CONTROLLER LIMITER AND POWER SELECTOR COMBINATION SERIES



Application

Comprehensive solution for Controlling and limiting the temperature in areas with potentially explosive gas or dust atmospheres according to zones 1/2 (gas) and 21/22 (dust), incl. power selector function. Appropriate for ATEX heated lines and heated hoses, ATEX heating mantles and ATEX drum heaters. Not suitable for zone 0 and 20.

Structure (interior view)



External grounding,
body

Big display for
temperature controller
temperature limiter

Fixture
for cover

Clear glass window
for easy reading of
temperature display

Cover
Limiter adjustment

Power selector

Clamp
for spare fuse



Cover with connection diagram

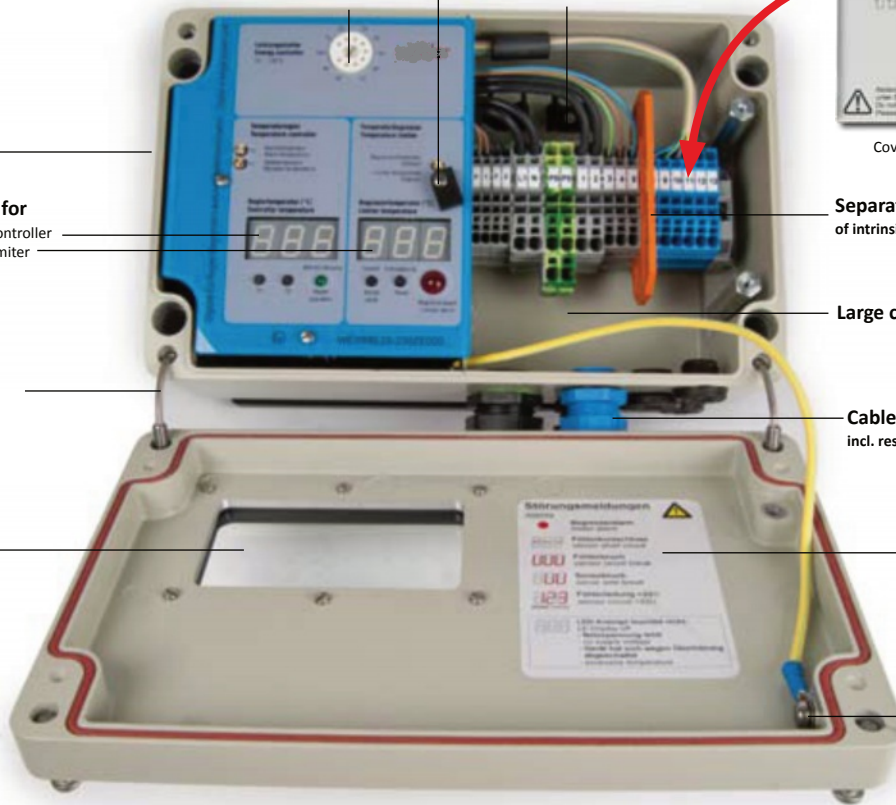
Separation
of intrinsically safe circuit (Ex i)

Large connection box

Cable glands
incl. reserve screw connector

Short information
troubleshooting

Interior grounding
Cover



Structure (Cable insertion)

Factory terminated cable insertion

Sensors (M20)

Mains supply (M25)

Heater (M20)



Robust body
made of aluminum, IP64

Provisions for additional
cable glands
Enclosed accessories ▶ page 21

Heat sink

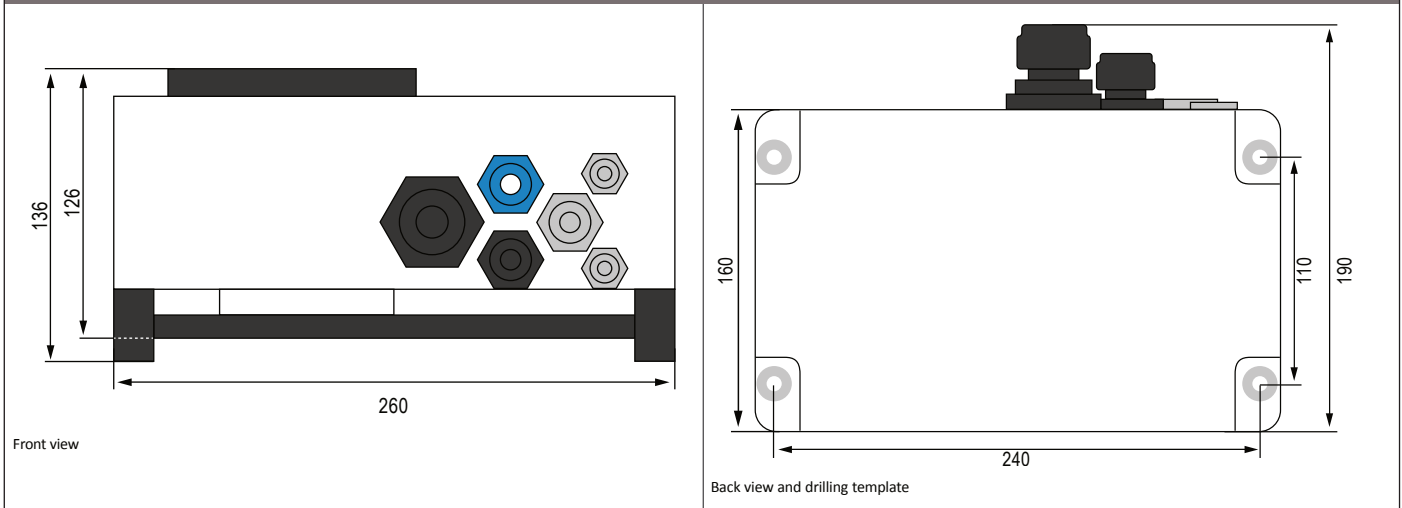
Features and benefits

- Approved to zones 1/2 (gas) and 21/22 (dust)
- Not appropriate for applications in zones 0 (gas) and 20 (dust)
- Approved to explosion groups IIC hydrogen and IIIC static dust
- Appropriate for temperature classes T1, T2, T3, T4
- Approval / certified to latest Standards
EN 60079-7:2003 Protection Standard - e - high safety
EN 60079-11:2007 Protection Standard - i - intrinsic safety
EN 60079-18:2004 Protection Standard - m - encapsulation
EN 60079-31:2009 Protection Standard - 1 - protection by body
- Complete documentation



EC-Type examination certificate

Dimensions and technical data



ATEX marking	Ⓜ II 2G Ex e ib [ib Gb] mb IIC T4 Gb Ⓜ II 2D Ex tb IIIC IP6X T90°C Db
EC-Type examination certificate	TÜV 10 ATEX 556065
Supply voltage	230 VAC (-15% bis +10%); 50-60 Hz
Load Output	elektronic solid state relay with 25 A nominal current
External fuse	25 A automatic cut out, Type A, B, C (Siemens), or Z, B, C (ABB)
Power input	< 11 VA (without load)
Sensor	Pt100 DIN resistance thermometer
Measuring circuit - intrinsically safe -	[Ex ib] IIC U _o =6.3 V; I _o =22 mA; P _o =35 mW max. outer capacitance 1,5 pF max. outer inductance 10 mH [Ex ib] IIB U _o = 6.3 V, I _o = 22 mA; P _o =35 mW max. outer capacitance 8.2 pF max. outer inductance 10 mH
Messbereich	0 ... 450 °C
Abmessungen/Gewicht	260 × 160 × 136 mm / 6 kg
Einbau	Wall mounting, mounting on base panel
Gehäuse/Schutzgrad	Aluminium / IP64 according to DIN EN 60529
Umgebungstemperatur	-20 °C... +40 °C
Übertemperaturschutz	Integrated temperature switch (cut-o temperature approx. 90 °C)
Anschlussquerschnitt Klemmen	Mains input 0.5..6 mm ² (< 4 mm ² with ferrules) Load Output 0.5..6 mm ² (< 4 mm ² with ferrules) Sensors 0.2..4 mm ² (< 2.5 mm ² with ferrules) Reset/signal 0.2..4 mm ² (< 2.5 mm ² with ferrules)

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Approved accessories

Option

<p>Additional cable glands 1 × M20 2 × M16</p>	<p>Bridges 2 x bridges for Operation with two-wire Pt 100</p>	<p>Mounting 4 × bolts</p>	<p>Plug connection Version</p>
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