

Always on the safe side Solenoids for the Ex area



Category III

Simple installation



Flame-proof enclosure

*Engineering
GREAT Solutions*

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Engineering GREAT solutions through people, products, innovation and service

IMI Precision Engineering is a world-leader in fluid and motion control. Building close, collaborative relationships with our customers, we gain a deep understanding of their engineering needs and then mobilise our resources and expertise to deliver distinctive products and solutions.

Wherever precision, speed and engineering reliability are essential, our global footprint, problem-solving capability and portfolio of high performance products enables us to deliver GREAT solutions which help customers tackle the world's most demanding engineering challenges.

> **Reliability**

We deliver and support our high quality products through our global service network.

> **High performance products**

Calling on a world-class portfolio of fluid and motion control products including IMI Norgren, IMI Buschjost, IMI FAS, IMI Herion and IMI Maxseal. We can supply these singly, or combined in powerful customised solutions to improve performance and productivity.

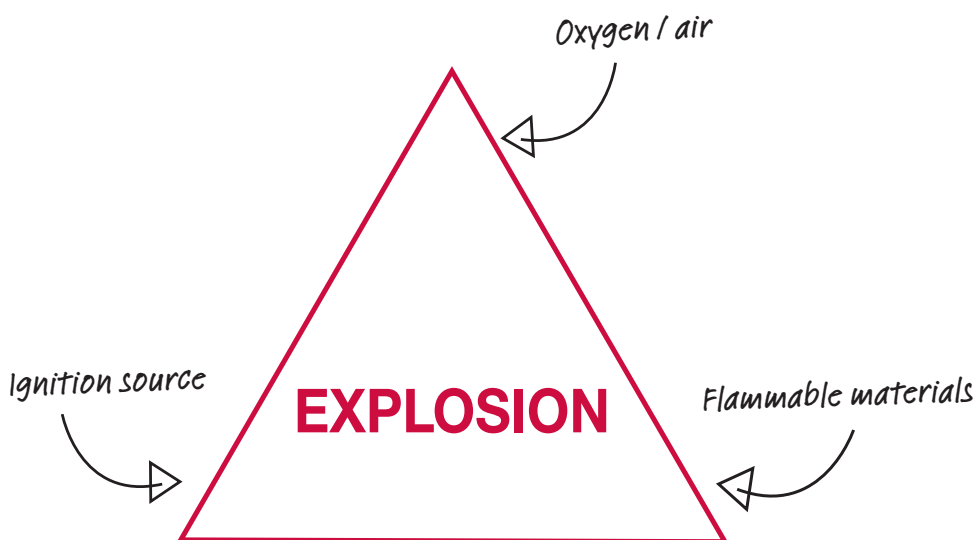
> **Partnership & Problem solving**

We get closer to our customers to understand their exact challenges.

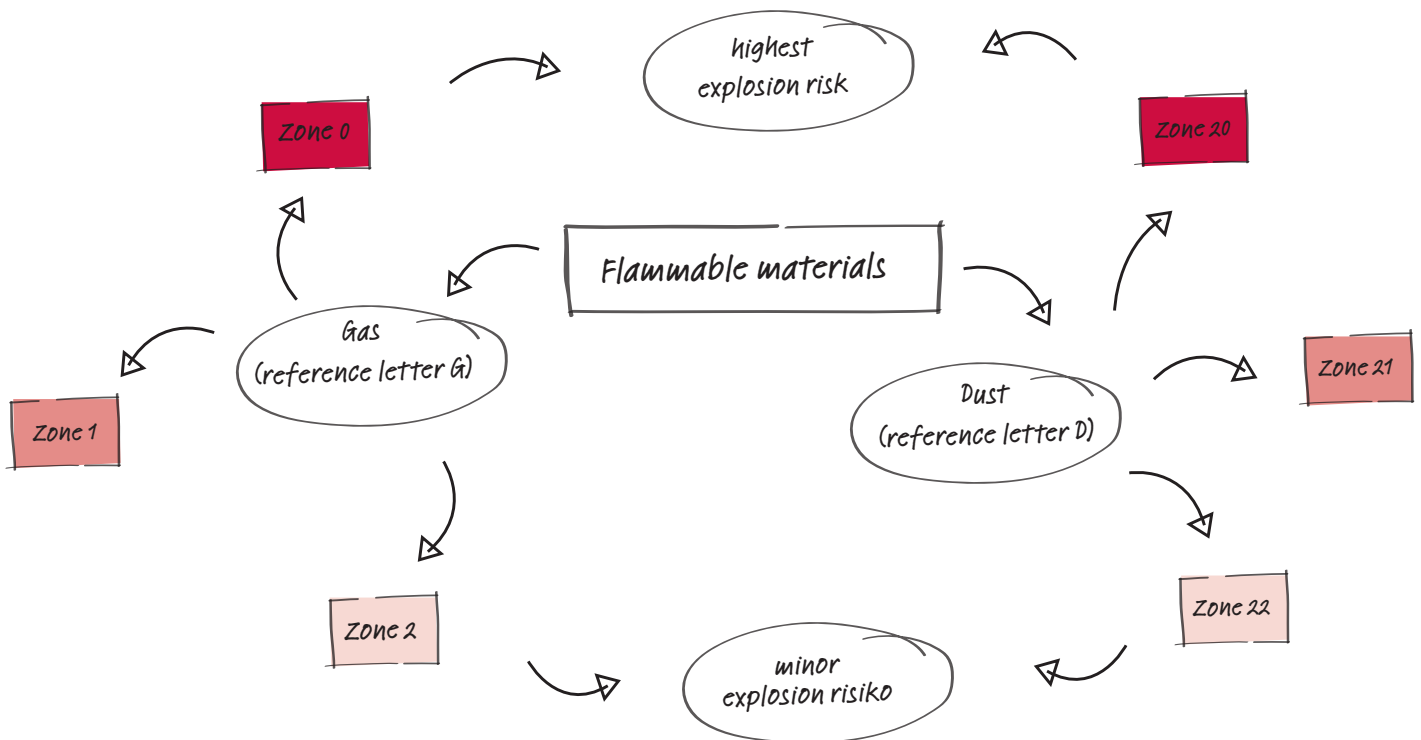
Clear explosion protection – safe in transit in potentially explosive areas

Wherever a small spark or a hot surface can lead to a serious explosion, comprehensive explosion protection for machinery and systems is indispensable. IMI Precision Engineering has developed special IMI Buschjost ex proof solenoids for environments such as these. They have proven themselves in practice many times and are almost universally applicable in explosive atmospheres. But what is an explosive atmosphere and how does it lead to an explosion?

Whether in the chemical or petrochemical industry, the pharmaceutical or food industry: Where flammable substances are manufactured or processed, vapours, mists, gases and dusts occur. They come into contact with the oxygen from the air, creating an explosive atmosphere. Should this ignite an explosion occurs that can severely endanger people and the environment.

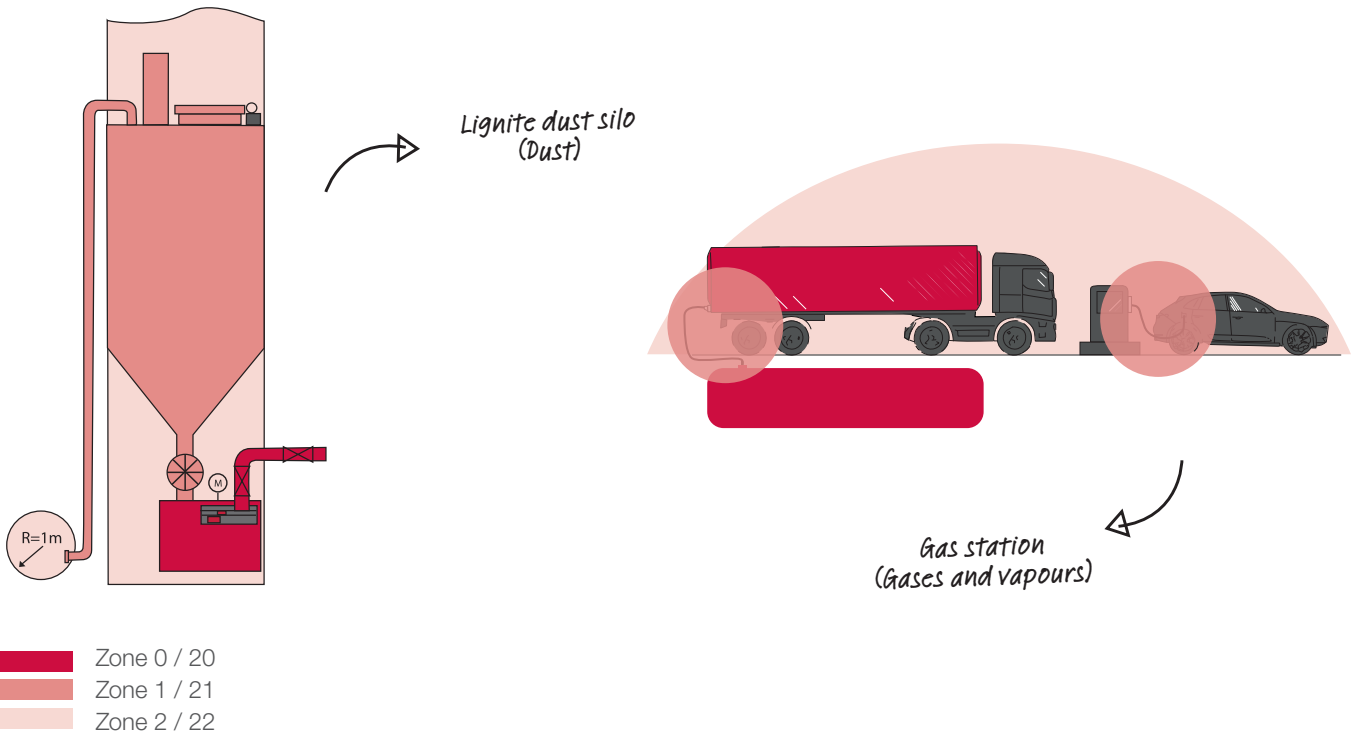


In order to avoid explosions, or at least control these immediately after they occur, there are numerous standards, laws and regulations that apply to ensure the highest possible level of safety. In Europe the ATEX Directive 2014/34/EU sets the necessary level of safety, while the IECEx Regulations apply internationally. Both require plant operators to have a comprehensive protection concept in which potential hazards are analysed and suitable protective measures defined. This also includes the classification of individual areas into different ex-zones. A distinction is made according to the type of flammable substance and the probability of an explosive atmosphere occurring.



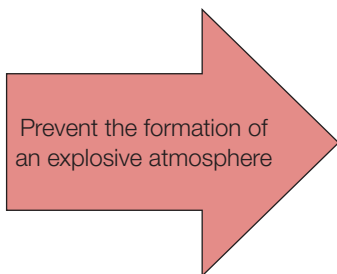
- Zone 0 / 20:** Is permanent, long-term or frequent
- Zone 1 / 21:** Forms occasionally in normal operation
- Zone 2 / 22:** Does not normally occur in normal operation or only briefly

Explosive areas

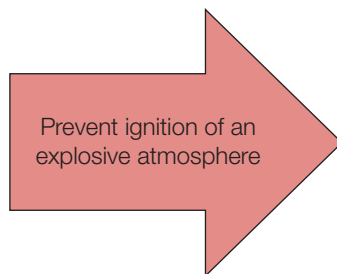


The more hazardous the zone, the more extensive the explosion protection must be. Successive primary, secondary and tertiary protective measures minimise the risk of explosion. The primary explosion protection prevents the formation of an explosive atmosphere. Measures such as the prevention of flammable substances and the limitation of their concentration belong, for example, in this area. Secondary explosion protection concerns preventing existing sources of ignition becoming active in order to prevent the ignition of the atmosphere. Tertiary explosion protection intervenes when an explosion has already occurred, and reduces its effects as far as possible. System depressurisation or the use of pressure-resistant components are suitable protective measures that fall into this category.

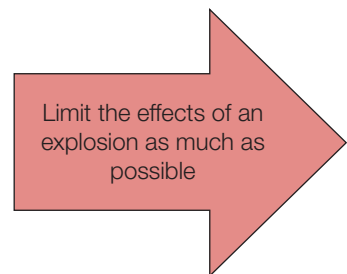
Primary explosion protection



Secondary explosion protection

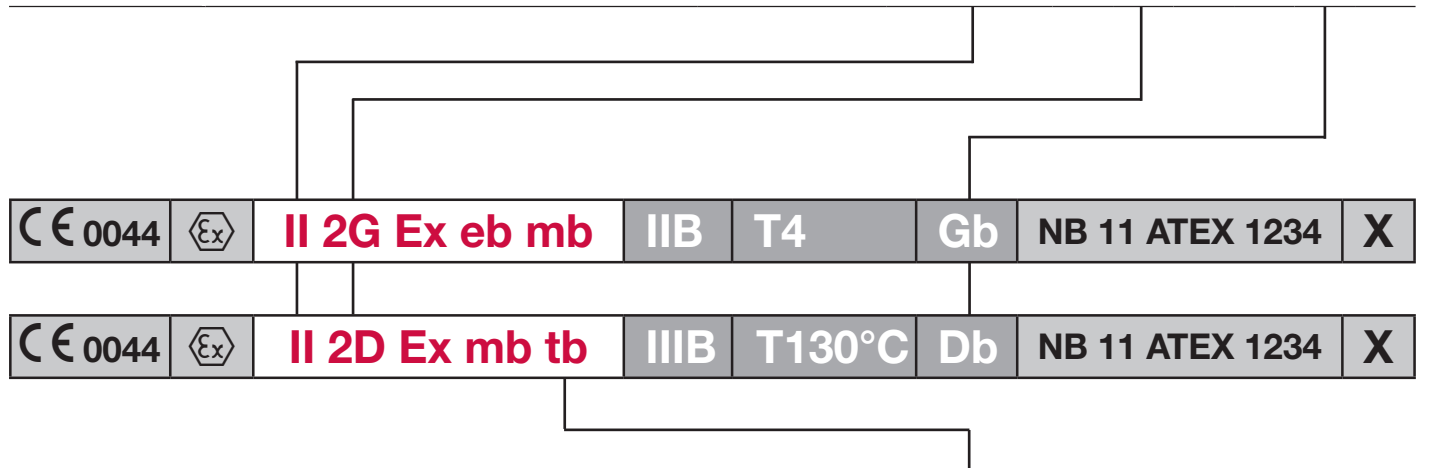


Tertiary explosion protection



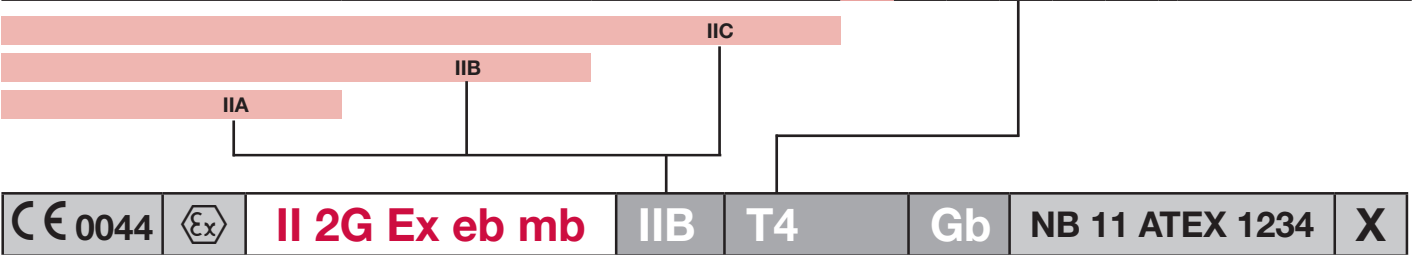
Marking of electrical devices in potentially explosive atmospheres

Conditions and subdivisions			Required marking on the usable operating equipment				
Flammable materials	Temporary behaviour of flammable substances in hazardous places	Classification of hazardous areas	Group	Equipment category	Equipment protection level (EPL) as defined in EN 60079-0		
Gases, vapours	Is present continuously or for long periods or frequently	Zone 0	II	1G	Ga		
	Arises in normal operation occasionally	Zone 1				2G	Gb
	Is not likely to arise in normal operation, or if it does, will persist for a short time only	Zone 2					
Dusts	Is present in the form of a cloud continuously, or for long periods or frequently	Zone 20	II	1D	Da		
	Occasionally develops into a cloud during normal operation	Zone 21				2D	Db
	Is not likely to develop into a cloud during normal operation, or if it does, for a short time only	Zone 22					
Methane, carbon dust	Operation where there is a risk of explosion	-	I	M1	Ma		
	Disconnection where there is a risk of explosion	-				I	M2 oder M1



Type of protection	Protection principle	Flammable materials	Marking in accordance with the equipment protection level			Norm
			a Very high level of protection	b High level of protection	c Enhanced level of protection	
General requirements	-	Gases, vapours and dusts (G)	-	-	-	EN60079-0
Flameproof enclosure	Propagation of an explosion inside to the outside is excluded	Gases and vapours (G)	Ex da	Ex db	Ex dc	EN60079-1
Increased safety	Avoidance of arcs, sparks and excessive temperature	Gases and vapours (G)	-	Ex eb	Ex ec	EN60079-7
Protection by enclosure	Explosive dust atmosphere keep at a distance from the ignition source	Dusts (D)	Ex ta	Ex tb	Ex tc	EN60079-31
Encapsulation	Explosive atmosphere keep at a distance from the ignition source	Gases and vapours (G)	Ex ma	Ex mb	Ex mc	EN60079-18
		Dusts (D)				
Intrinsic safety	Limitation of energy as well as arcs and temperature	Gases and vapours (G)	Ex ia	Ex ib	Ex i	EN60079-11
		Dusts (D)				

Subdivisions of gases and vapours				
Gases and vapours			Temperature class	Maximum surface temperature of equipment
acetone, ammonia, benzene - pure, acetic acid, ethane, ethyl acetate, ethyl chloride, carbon monoxide, methane, methanol, methylene chloride, naphthalene, phenol, propane, toluene	town gas, acrylnitril	hydrogen	T1	450°C
ethyl alcohol, i-amyl acetate, n-butane, n-butyl alcohol, cyclohexane, acetic acid anhydrit	ethylene, ethylene oxide	ethine (acetylene)	T2	300°C
benzines - general, diesel fuel, jet fuel, heating oil DIN 51603, n-hexane	ethylene glycol, hydrogen		T3	200°C
acetaldehyde	ethyl-ether		T4	135°C
-	-	-	T5	100°C
		sulphide of carbon	T6	85°C



Identification number of the notified body for the certification of the quality management system

Dust groups	
Dust groups	Dusts
IIIA	flammable fluff
IIIB	non-conductive dust
IIIC	conductive dust

Use of the operating equipment	
Conditions	Marking
without	Operating equipment can be used without restriction
X	Special conditions of use
U	Operating equipment with partial certificate, CE-conformity is certified when it is installed into a complete item of operating apparatus

Official notified bodies		
Code number	Notified bodies	Country
0589	BAM	Germany
0158	DEKRA EXAM	Germany
0637	IBExU	Germany
0344	KEMA	Netherlands
0081	LCIE	France
0102	PTB	Germany
0044	TÜV (NORD CERT)	Germany

Symbol of the testing laboratory for product certification

Our new range of solenoids... ...available from April 2018!

Order-No. valid until 30.03.2018	Series "new"	Order "new"		Output	Temperature classes		Max. ambient temperature	Max. fluid temperature	Voltage d.c.		Voltage a.c.		Frequency
		Temp. Ambient -20 °C	-40°C		Gas	Dust			Min.	Max.	Min.	Max.	
		6109	-	5 W	T4	T125°C	60°C	60°C					
	6100	6100	-	8 W	T3	T135°C	60°C	80°C	12 V	250 V	12 V	250 V	40 - 60 Hz
9136		6106	6116	8 W	T4	T125°C	45°C	80°C					
		6129	-	10 W	T4	T125°C	60°C	70°C					
	6120	6123	-	14 W	T3	T125°C	60°C	80°C	12 V	250 V	12 V	250 V	40 - 60 Hz
9186		6126	6136	14 W	T4	T125°C	40°C	80°C					
9191		6120	6130	18 W	T3	T130°C	40°C	80°C					
		6149	-	10 W	T4	T125°C	60°C	80°C					
	6140	6143	-	14 W	T3	T135°C	60°C	80°C	12 V	250 V	12 V	250 V	40 - 60 Hz
9350		6146	6156	14 W	T4	T125°C	50°C	80°C					
9356		6140	6150	18 W	T3	T135°C	40°C	80°C					
		6179	-	7 W	T4	T135°C	60°C	80°C					
	6170	6173	-	9 W	T3	T140°C	60°C	80°C	12 V	250 V	12 V	250 V	40 - 60 Hz
8186		6176	-	9 W	T4	T135°C	50°C	80°C					
8191		6170	-	12 W	T3	T140°C	40°C	80°C					
		6199	-	7 W	T4	T135°C	60°C	80°C					
	6190	6193	-	9 W	T3	T150°C	60°C	80°C	12 V	250 V	12 V	250 V	40 - 60 Hz
8136		6196	6197	9 W	T4	T135°C	45°C	80°C					
8141		6190	6191	12 W	T3	T150°C	40°C	80°C					
		6209	-	7 W	T4	T135°C	60°C	80°C					
		6203	-	9 W	T3	T150°C	60°C	80°C					
8036	6200	6206	6216	9 W	T4	T135°C	45°C	80°C	12 V	250 V	12 V	250 V	40 - 60 Hz
8042		6202	6212	12 W	T3	T150°C	40°C	80°C					
8041		6200	6210	12 W	T3	T150°C	40°C	80°C					
		6223	-	14 W	T3	T135°C	60°C	80°C					
	6220	6229	-	14 W	T4	T125°C	60°C	80°C	12 V	250 V	12 V	250 V	40 - 60 Hz
8336		6226	6236	16 W	T4	T125°C	55°C	80°C					
8341		6220	6230	22 W	T3	T135°C	40°C	80°C					
		6249	-	23 W	T4	T125°C	60°C	80°C					
	6240	6243	-	29 W	T3	T140°C	60°C	80°C	12 V	250 V	24 V	250 V	40 - 60 Hz
8436		6246	6256	32 W	T4	T125°C	50°C	80°C					
8441		6240	6250	40 W	T3	T140°C	40°C	80°C					



Terminal box cable outlet with 180° rotation!



type examination certificate
PTZ 16 ATEX 0011 X
IECEX PTZ 17.0001X

Our new range of solenoids... ...available from April 2018!



Solenoid 6100



Solenoid 6120



Solenoid 6140



Solenoid 6170



Solenoid 6190



Solenoid 6200



Solenoid 6220



Solenoid 6240

Your benefits at a glance

- > ATEX and IECEx approvals
- > Explosion group IIC (previously IIB):
no restriction in the gas areas
- > IP66
- > Simple installation with spring-loaded terminals
- > Cover can be rotated 180° -
variable cable connection side
- > One central cover screw
(previously four screws)
- > Extension of the versions available
- > -40 °C and other power levels
on request

Solenoid



Category 2	6100	6120	6140	6170	6200	6220
Category 3	9116	9176	9326	8176	8026	8326
Tube diameter	10 mm	14,4 mm	13 / 16 mm	-	-	20 mm
Fastening	Click on®	Click on®	Screws	Twist on®	4 Screws	Screws



Series	Description	6100	6120	6140	6170	6200	6220
Diaphragm design							
82400	Indirectly actuated	•	•				
82730	Indirectly actuated – stainless steel	•	•				
82540	With forced lifting		•	•			•
82530	With forced lifting					•	
82560	With forced lifting – stainless steel					•	
82510	Directly actuated	•	•				
82610	Indirectly actuated	•	•				
83030	Indirectly actuated	•	•				
Piston design							
85360	Indirectly actuated		•	•			
86700	With forced lifting						•
86740	With forced lifting, stainless steel						•
86540	With forced lifting, stainless steel						•
86500	With forced lifting						•
86480	With forced lifting						•
86580	With forced lifting – stainless steel – with inspection certificate DIN EN 10204 - 3.1						•
85660	Indirectly actuated		•	•			
Sealed core tube with PTFE-bellows							
82080	Directly actuated with sealed core tube					•	
Pilot valve 3/2- way							
84660	Directly actuated	•					
84680	Directly actuated		•				
Dust cleaning valves							
82960	Indirectly actuated				•	•	

Solenoid



Category 2	6240	-	8900/ 8920	9540/ 9560	4200	4600
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Category 3	8426	9426	-	9526	-	-
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Tube diameter	30 mm	25 mm	30 mm	48 mm	13 / 16 mm	13/16 mm
Fastening	Screws	Click on®	Screws	Screws	Screws	Screws

Series	Description	6240	8900/ 8920	9540/ 9560	4200	4600
Diaphragm design						
82400	Indirectly actuated					•
82730	Indirectly actuated – stainless steel					•
82540	With forced lifting	•	•	•	•	•
82530	With forced lifting					
82560	With forced lifting – stainless steel					
82510	Directly actuated					
82610	Indirectly actuated					
83030	Indirectly actuated					•
Piston design						
85360	Indirectly actuated					•
86700	With forced lifting	•	•	•		
86740	With forced lifting, stainless steel	•	•	•		
86540	With forced lifting, stainless steel	•	•	•	•	
86500	With forced lifting	•	•	•	•	
86480	With forced lifting				•	
86580	With forced lifting – stainless steel – with inspection certificate DIN EN 10204 - 3.1	•		•		
85660	Indirectly actuated					•
Sealed core tube with PTFE-bellows						
82080	Directly actuated with sealed core tube					
Pilot valve 3/2- way						
84660	Directly actuated					
84680	Directly actuated					•
Dust cleaning valves						
82960	Indirectly actuated					•

Series 9116

ATEX-marking:

II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc



ATEX Zone 2/22



Electrical connection	
Protection class	IP65
Cable gland	PG 9
Cable diameter	Ø 4,5 ... 7 mm
Cable	T _{permissible} ≥ 90°C
Conductor cross section	Max. 1,5 mm ²

Fastening and mechanical characteristics	
Fastening	Click-on®
Body	Duroplast
Tube diameter	Ø = 10 mm
Weight	m = 0,15 kg

Technical Data

T _{amb}	Model	Power consumption		T _{amb} (°C)	T _{fluid max.} (°C)	Temperature class		U _{nom} (V)
		Inrush	Holding			Gas	Dust	
9116		18 W	18 W	-25 ... 50	110	T4	T130°C	12 ... 230 ±10% d.c.
9116		45 VA	35 VA	-25 ... 50	110	T4	T130°C	12 ... 230 ±10% a.c.

Series 6100

ATEX-marking:

II 2G Ex eb mb IIC T4 - T3 Gb
II 2D Ex mb tb IIIB T125°C - T135°C



ATEX Zone 1/21

Type examination certificate:

PTZ 16 ATEX 0011 X
IECEX PTZ 17.0001X



Electrical connection	
Protection class	IP66
Cable gland	M16 x 1,5
Cable diameter	Ø 7 ... 9 mm (T _{amb min.} = -20 °C) Ø 5 ... 9 mm (T _{amb min.} = -40 °C)
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	Click-on®
Body	Duroplast
Tube diameter	Ø = 10 mm
Weight	m = 0,2 kg

Technical Data

T _{amb min.} -20 °C	Model	P _{nom} (W)	T _{amb max.} (°C)	T _{fluid max.} (°C)	Gas	Temperature class		U _{nom} (V)
						T _{amb min.} -40 °C	Dust	
6100		8	60	80	T3	T135 °C		
6106	6116	8	45	80	T4	T125 °C		12 ... 250 ±10% a.c.
6109		5	60	80	T4	T125 °C		12 ... 250 ±10% d.c.

Series 9176

ATEX-marking:

II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc



ATEX Zone 2/22



Electrical connection	
Protection class	IP65
Cable gland	PG 9
Cable diameter	Ø 4,5 ... 7 mm
Cable	T _{permissible} ≥ 90°C
Conductor cross section	Max. 1,5 mm ²

Fastening and mechanical characteristics	
Befestigung	Click-on®
Gehäuse	Duroplast
Hülsendurchmesser	Ø = 14,4 mm
Masse	m = 0,34 kg

Technical Data

T _{amb}	Type	Power consumption		T _{amb} max. (°C)	T _{fluid} max. (°C)	Temperature class		U _{nom} (V)
		Inrush	Holding			Gas	Dust	
	9176	18 W	18 W	-25 ... 50	110	T4	T130°C	12 ... 230 ±10% d.c.
	9176	45 VA	35 Va	-25 ... 50	110	T4	T130°C	12 ... 230 ±10% a.c.

Series 6120

ATEX-marking:

II 2G Ex eb mb IIC T4 - T3 Gb
II 2D Ex mb tb IIIB T125 - T140°C Db



ATEX Zone 1/21

Type examination certificate:

PTZ 16 ATEX 0011 X
IECEX PTZ 17.0001X



Electrical connection	
Protection class	IP66
Cable gland	M16 x 1,5
Cable diameter	Ø 7 ... 9 mm (T _{amb} min. = -20 °C) Ø 5 ... 9 mm (T _{amb} min. = -40 °C)
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	Click-on®
Body	Duroplast
Tube diameter	Ø = 14,4 mm
Weight	m = 0,43 kg

Technical Data

T _{amb} min. -20 °C	Model	P _{nom} (W)	T _{amb} max. (°C)	T _{fluid} max. (°C)	Gas	Temperature class		U _{nom} (V)
						T _{amb} min. -40 °C	Dust	
	6120	18	40	80	T3	T140 °C		
	6123	14	60	80	T3	T140 °C		12 ... 250 ±10% a.c.
	6123	14	40	80	T4	T125°C		12 ... 250 ±10% d.c.
	6129	10	60	70	T4	T125 °C		

Series 9326

ATEX-marking:

II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc



ATEX Zone 2/22



Electrical connection	
Protection class	IP65
Cable gland	PG 9
Cable diameter	Ø 4,5 ... 7 mm
Cable	T _{permissible} ≥ 90°C
Conductor cross section	Max. 1,5 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Duroplast
Tube diameter	Ø = 13 mm / 16 mm
Weight	m = 0,4 kg

● Technical Data

T _{amb}	Model	Power consumption		T _{amb} (°C)	T _{fluid max.} (°C)	Temperature class		U _{nom} (V)
		Inrush	Holding			Gas	Dust	
9326		18 W	18 W	-25 ... 60	90	T4	T130 °C	12 ... 230 ±10% d.c.
9326		106 VA	35 VA	-25 ... 60	90	T4	T130°C	12 ... 230 ±10% a.c.

Series 6140

ATEX-marking:

II 2G Ex eb mb IIC T4 - T3 Gb
II 2D Ex mb tb IIIB T125°C - T135°C



ATEX Zone 1/21

Type examination certificate:

PTZ 16 ATEX 0011 X
IECEX PTZ 17.0001X



Electrical connection	
Protection class	IP66
Cable gland	M16 x 1,5
Cable diameter	Ø 7 ... 9 mm (T _{amb min.} = -20°C) Ø 5 ... 9 mm (T _{amb min.} = -40°C)
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Duroplast
Tube diameter	Ø = 13 mm / 16 mm
Weight	m = 0,49 kg

● Technical Data

T _{amb min.} -20 °C	Model	P _{nom} (W)	T _{amb max.} (°C)	T _{fluid max.} (°C)	Gas	Temperature class		U _{nom} (V)
						T _{amb min.} -40 °C	Dust	
6140	6150	18	40	80	T3	T135°C		
6143	-	14	60	80	T3	T135°C	12 ... 250 ±10% a.c..	
6146	6156	14	50	80	T4	T125°C	12 ... 250 ±10% d.c.	
6149	-	10	60	80	T4	T125°C		

Series 4200

ATEX-marking:

II 2G Ex eb mb IIC T4 - T6 Gb
II 2D Ex tb IIC T130°C Db



Type examination certificate:

KEMA 98ATEX4452 X



Electrical connection	
Protection class	IP66
Cable gland	M20 x 1,5 *1)
Cable diameter	Ø 5 ... 14 mm *2)
Cable	T _{permissible} ≥ 88°C *3)
Conductor cross section	Max. 4 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Polymer
Tube diameter	Ø = 13 mm / 16 mm
Weight	m = 0,8 kg

● Technical Data

Model	P _{nom} (W/VA)	T _{amb} (°C) *2)	T _{fluid} (°C) *2)	Temperature class		U _{nom} (V)
				Gas	Dust	
4260/4261	4/5	-40 ... 80/55	80/55	T4/T6	T130 °C	24 ... 230 ±10% a.c.
4270/4271	8/9	-40 ... 65/55	65/55	T4/T5	T130 °C	24 ... 230 ±10% d.c.
4280/4281	11/13	-40 ... 65/55	50/40	T4/T5	T130 °C	

*1) Depending on the temperature class
*2) Depending on the cable gland used

*3) Depending on nominal power and ambient temperature
Solenoid is supplied without cable gland!

Series 4600

ATEX-marking:

II 2G Ex d mb IIC T4/T6 Gb
II 2D Ex tb IIC T130/ T180°C Db



Type examination certificate:

PTB 02 ATEX 2085 X



Electrical connection	
Protection class	IP66
Cable gland	M20 x 1,5/ 1/2 ... 14 NPT
Cable diameter	Ø 10 ... 14 mm Ø 5 ... 9 mm
Cable	T _{permissible} > 95°C
Conductor cross section	Max. 4,0 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Steel
Tube diameter	Ø = 13 mm / 16 mm
Weight	m = 0,8 kg

● Technical Data

Model	P _{nom} (W/VA)	T _{amb} (°C)	T _{fluid} max. (°C)	Temperature class		U _{nom} (V)
				Gas	Dust	
4660/4662	4/5	-40 ... 80/55	80/55	T4/T6	T130°C	24 ... 230 ±10% a.c.
4670 ... 4673	8/9	-40 ... 70/40	70/40	T4/T6	T130°C	24 ... 120 ±10% d.c.
4680 ... 4683	11/13	-40 ... 50/40	50/40	T4/T5	T130°C	

Series 8176

ATEX-marking:

II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc



ATEX Zone 2/22



Electrical connection	
Protection class	IP65
Cable gland	PG 9
Cable diameter	Ø 4,5 ... 7 mm
Cable	T _{permissible} ≥ 90°C
Conductor cross section	Max. 1,5 mm ²

Fastening and mechanical characteristics	
Fastening	Twist-on®
Body	Duroplast
Tube diameter	Ø = 16 mm
Weight	m = 0,80 kg

Technical Data

T _{amb}	Model	Power consumption		T _{amb} (°C)	T _{fluid max.} (°C)	Temperature class		U _{nom} (V)
		Inrush	Holding			Gas	Dust	
8176		12 W	12 W	-20 ... 65	100	T4	T130 °C	12 ... 230 ±10% d.c.
8176		23 VA	16 VA	-20 ... 65	100	T4	T130°C	12 ... 230 ±10% a.c.

Series 6170

ATEX-marking:

II 2G Ex eb mb IIC T4 - T3 Gb
II 2D Ex mb tb IIIB T135°C - T140°C



ATEX Zone 1/21

Type examination certificate:

PTZ 16 ATEX 0011 X
IECEX PTZ 17.0001X



Electrical connection	
Protection class	IP66
Cable gland	M16 x 1,5
Cable diameter	Ø 7 ... 9 mm (T _{amb min.} = -20°C) Ø 5 ... 9 mm (T _{amb min.} = -40°C)
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	Twist-on®
Body	Duroplast
Tube diameter	Ø = 11,4 mm
Weight	m = 0,25 kg

Technical Data

T _{amb min.} -20 °C	Model	P _{nom} (W)	T _{amb max.} (°C)	T _{fluid max.} (°C)	Temperature class		U _{nom} (V)
					Gas	Dust	
6170		12	40	80	T3	T140 °C	
6173		9	60	80	T3	T140 °C	12 ... 250 ±10% a.c.
6176		9	50	80	T4	T135 °C	12 ... 250 ±10% a.c.
6179		7	60	80	T4	T135°C	

Series 8026

ATEX-marking:

II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc



ATEX Zone 2/22



Electrical connection	
Protection class	IP65
Cable gland	PG 9
Cable diameter	Ø 4,5 ... 7 mm
Cable	T _{permissible} ≥ 90°C
Conductor cross section	Max. 1,5 mm ²

Fastening and mechanical characteristics	
Fastening	4 Screws
Body	Duroplast
Tube diameter	Ø = 11,4 mm
Weight	m = 0,22 kg

Technical Data

T _{amb}	Model	Power consumption		T _{amb} (°C)	T _{fluid max.} (°C)	Temperature class		U _{nom} (V)
		Inrush	Holding			Gas	Dust	
8026		12W	12 W	-25 ... 50	110	T4	T130 °C	12 ... 230 ±10% d.c.
8026		23 VA	16 VA	-25 ... 50	110	T4	T130°C	12 ... 230 ±10% a.c.

Series 6200

ATEX-marking:

II 2G Ex eb mb IIC T4 - T3 Gb
II 2D Ex mb tb IIIB T135°C - T150°C



ATEX Zone 1/21

Type examination certificate:
PTZ 16 ATEX 0011 X
IECEx PTZ 17.0001X



Electrical connection	
Protection class	IP66
Cable gland	M16 x 1,5
Cable diameter	Ø 7 ... 9 mm (T _{amb min.} = -20 °C) Ø 5 ... 9 mm (T _{amb min.} = -40 °C)
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	4 Screws
Body	Duroplast
Tube diameter	Ø = 11,4 mm
Weight	m = 0,26 kg

Technical Data

T _{amb min.} -20 °C	Model	P _{nom} (W)	T _{amb max.} (°C)	T _{fluid max.} (°C)	Gas	Temperature class		U _{nom} (V)
						T _{amb min.} -40 °C	Dust	
6200	6210	12	40	80	T3	T150 °C		
6202	6212	12	40	80	T3	T150 °C		
6203	6213	9	60	80	T3	T150 °C	12 ... 250 ±10% a.c. 12 ... 250 ±10% d.c.	
6206	6216	9	45	80	T4	T135 °C		
6209	6219	7	60	80	T4	T135 °C		

Series 9426

ATEX-marking:

II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc IP65



ATEX Zone 2/22



Electrical connection	
Protection class	IP65
Cable gland	PG 9
Cable diameter	Ø 4,5 ... 7 mm
Cable	T _{permissible} ≥ 90°C
Conductor cross section	Max 1,5 mm ²

Fastening and mechanical characteristics	
Fastening	Click-on®
Body	Duroplast
Tube diameter	Ø = 25 mm
Weight	m = 1,5 kg

● Technical Data

T _{amb}	Model	Power consumption		T _{amb} (°C)	T _{fluid max.} (°C)	Temperature class		U _{nom} (V)
		Inrush	Holding			Gas	Dust	
9426		38 W	38 W	-25 ... 50	110	T4	T130°C	12 ... 230 ±10% d.c.

Series 6190

ATEX-marking:

II 2G Ex eb mb IIC T4 - T3 Gb
II 2D Ex mb tb IIIB T135°C - T150°C



ATEX Zone 1/21

Type examination certificate:

PTZ 16 ATEX 0011 X
IECEx PTZ 17.0001X



Electrical connection	
Protection class	IP66
Cable gland	M16 x 1,5
Cable diameter	Ø 7 ... 9 mm (T _{amb min.} = -20°C) Ø 5 ... 9 mm (T _{amb min.} = -40°C)
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	4 Screws
Body	Duroplast
Tube diameter	Ø = 11,4 mm
Weight	m = 0,28 kg

● Technical Data

T _{amb min.} -20 °C	Model	P _{nom} (W)	T _{amb} (°C)	T _{fluid max.} (°C)	Gas	Temperature class		U _{nom} (V)
						T _{amb min.} -40 °C	Dust	
6190	6191	12	40	80	T3	T150°C		
6193	-	9	60	80	T3	T150°C	12 ... 250 ±10% a.c.	
6196	6197	9	45	80	T4	T135°C	12 ... 250 ±10% d.c.	
6199	-	7	60	80	T4	T135°C		

Series 8326

ATEX-marking:

II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc



ATEX Zone 2/22



Electrical connection	
Protection class	IP65
Cable gland	PG 9
Cable diameter	Ø 4,5 ... 7 mm
Cable	T _{permissible} ≥ 90°C
Conductor cross section	Max 1,5 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Duroplast
Tube diameter	Ø = 20 mm
Weight	m = 0,75 kg

Technical Data

T _{amb}	Model	Leistungsaufnahme		T _{amb} (°C)	T _{fluid max.} (°C)	Temperature class		U _{nom} (V)
		Anzugsleistung	Halteleistung			Gas	Dust	
8326		22 W	22 W	-25 ... 50	110	T4	T130°C	12 ... 230 ±10% d.c.

Series 6220

ATEX-marking:

II 2G Ex eb mb IIC T4 - T3 Gb
II 2D Ex mb tb IIIB T125°C - T135°C



ATEX Zone 1/21

Type examination certificate:
PTZ 16 ATEX 0011 X
IECEx PTZ 17.0001X



Electrical connection	
Protection class	IP66
Cable gland	M16 x 1,5
Cable diameter	Ø 7 ... 9 mm (T _{amb min.} = -20 °C) Ø 5 ... 9 mm (T _{amb min.} = -40 °C)
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Duroplast
Tube diameter	Ø = 20 mm
Weight	m = 0,75 kg

Technical Data

T _{amb min.} -20 °C	Model	P _{nom} (W)	T _{amb} (°C)	T _{fluid max.} (°C)	Gas	Temperature class		U _{nom} (V)
						T _{amb min.} -40 °C	Dust	
6220	6230	22	40	80	T3	T135°C		
6223	-	14	60	80	T3	T135°C	12 ... 250 ±10% a.c.	
6226	6236	16	55	80	T4	T125°C	12 ... 250 ±10% d.c.	
6229	-	14	60	80	T4	T125°C		

Series 8426

ATEX-marking:

II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc



ATEX Zone 2/22



Electrical connection	
Protection class	IP65
Cable gland	PG 9
Cable diameter	Ø 4,5 ... 7 mm
Cable	T _{permissible} ≥ 90°C
Conductor cross section	Max. 1,5 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Duroplast
Tube diameter	Ø = 29,8 mm
Weight	m = 1,8 kg

● Technical Data

T _{amb}	Model	Power consumption		T _{amb} (°C)	T _{fluid max.} (°C)	Temperature class		U _{nom} (V)
		Inrush	Holding			Gas	Dust	
8426		40 W	40 W	-25 ... 50	110	T4	T130°C	12 ... 230 ±10% d.c.

Series 6240

ATEX-marking:

II 2G Ex eb mb IIC T4 - T3 Gb
II 2D Ex mb tb IIIB T125°C - T140°C



ATEX Zone 1/21

Type examination certificate:

PTZ 16 ATEX 0011 X
IECEX PTZ 17.0001X



Electrical connection	
Protection class	IP66
Cable gland	M16 x 1,5
Cable diameter	Ø 7 ... 9 mm (T _{amb min.} = -20°C) Ø 5 ... 9 mm (T _{amb min.} = -40°C)
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Duroplast
Tube diameter	Ø = 29,8 mm
Weight	m = 1,83 kg

● Technical Data

T _{amb min.} -20 °C	Model	P _{nom} (W)	T _{amb} (°C)	T _{fluid max.} (°C)	Gas	Temperature class		U _{nom} (V)
						T _{amb min.} -40 °C	Dust	
6240	6250	40	40	80	T3	T140°C		
6243	-	29	60	80	T3	T140°C	24 ... 250 ±10% a.c.	
6246	6256	32	50	80	T4	T125°C	12 ... 250 ±10% d.c.	
6249	-	23	60	80	T4	T125°C		

Series 8900

ATEX-marking:

II 2G Ex db eb IIC T4/T5 Gb
 II 2D Ex tb III C T130°C/ 95°C Db



Type examination certificate:

ATEX: BVS 19 ATEX E 013X
 IECEx: BVS 19.0016X



Electrical connection	
Protection class	IP65
Cable gland	M20 x 1,5
Cable diameter	Ø 8 ... 11,5 mm
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Steel
Tube diameter	Ø = 29,8 mm
Weight	m = 6,6 kg

● Technical Data

T _{amb}	Model	P _{nom} (W)	T _{amb} (°C)	T _{fluid max.} (°C)	Gas	Temperature class		U _{nom} (V)
						Dust		
8900		29	-40 ... 40/60	90/110	T5/T4	T95/130°C		24 ... 400 ±10% a.c. 12 ... 400 ±10% d.c.

Series 8920

ATEX-marking:

II 2G Ex db eb IIC T4/T5 Gb
 II 2D Ex tb III C T130°C/ 95°C Db



Type examination certificate:

ATEX: BVS 19 ATEX E 014X
 IECEx: BVS 19.0017X



Electrical connection	
Protection class	IP65
Cable gland	M20 x 1,5
Cable diameter	Ø 8 ... 11,5 mm (T _{amb min.} = -40 °C)
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Steel
Tube diameter	Ø = 29,8 mm
Weight	m = 6,6 kg

● Technical Data

T _{amb}	Model	P _{nom} (W)	T _{amb} (°C)	T _{fluid max.} (°C)	Gas	Temperature class		U _{nom} (V)
						Dust		
8920		29	-40 ... 40/75	90/100	T5/T4	T95/130°C		24 ... 400 ±10% a.c. 12 ... 400 ±10% d.c.

Series 9526

ATEX-marking:

II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc IP65



ATEX Zone 2/22



Electrical connection	
Protection class	IP65
Cable gland	PG9
Cable diameter	Ø 4,5 ... 7 mm
Cable	T _{permissible} ≥ 120°C
Conductor cross section	Max. 1,5 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Steel
Tube diameter	Ø = 47,7 mm
Weight	m = 6 kg

● Technical Data

T _{amb}	Model	P _{nom} (W)	T _{amb} (°C)	T _{fluid max.} (°C)	Gas	Temperature class		U _{nom} (V)
						Dust		
9526		80	-25 ... 50	110	T4	T130°C		24 ... 230 ±10% a.c. 24 ... 230 ±10% d.c.

Series 9540/ 9560

ATEX-marking:

II 2G Ex e mb II T4/ T3
II 2D Ex tD A21 IP65 T140°C



Type examination certificate:

TÜV 07 ATEX 553412X
IECEx (coming soon)



Electrical connection	
Protection class	IP66
Cable gland	M16 x 1,5
Cable diameter	Ø 6 ... 12 mm
Cable	T _{permissible} ≥ 85°C
Conductor cross section	0,08 ... 2,5 mm ²

Fastening and mechanical characteristics	
Fastening	Screws
Body	Steel
Tube diameter	Ø = 47,7 mm
Weight	m = 7,4 kg

● Technical Data

T _{amb min.} -40 °C	Model	P _{nom} (W)	T _{amb} (°C)	T _{fluid max.} (°C)	Gas	Temperature class		U _{nom} (V)
						Dust		
9540		65	40/40	60/100	T4/T3	T130/140°C		24 ... 400 ±10% a.c. 24 ... 400 ±10% d.c.
9560		47	60/70	100/100	T4/T3	T130/140°C		24 ... 400 ±10% a.c. 24 ... 400 ±10% d.c.



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