



To Be SURE To Be ALL



SUREALL TECHNOLOGY LIMITED

- sales@sure_all.com
- +86 731 8571 5806 (\redsymbol{r})
- (IIII) +86 153 8801 6808
- () No.8,Road 3 Fenglin, District Yuelu Changsha, Hunan, China
- (\mathbf{e}) www.sureall-light.com

Product Catalogue

Explosion Proof Junction Boxes, Panels, Receptacles Use in Hazardous Locations



Explosion Protection by SUREALL

SUREALL TECHNOLOGY LIMITED



Sales

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SUREALL TECHNOLOGY LIMITED No.8, Road 3rd Fenglin, District Yuelu Changsha, Hunan, China Tel: +86 731 8571 5806 Email: sales@sure-all.com

Web: www.sureall-light.com

Explosion Proof Box

Power On Devices

The function of explosion proof box depend on the electrical components installed such as switch, terminal blocks, circuit breaker, buttons, indicators, plug-in contact. The safety of all electrical components are enhanced in advance and protected by flame proof aluminum alloy housing, increased safety glass reinforced plastic housing or stainless steel housing, thus any electrical arcing can be confined to prevent the explosion from conveying to outer explosive atmosphere where flammable gas, vapor or dust present. They can be used in harsh and hazardous location whose optional hazard class division can be class 1 div 1, class 1 div 2, class 2 division 1, class 2 division 2, gas group A, B, C, D, gas group C, D, dust group E, F, G, zone 1, zone 2, zone 21, zone 22, gas group IIB, gas group IIC, dust group IIIC.

Explosion proof box consist of:

- **Explosion proof Switch**
- **Explosion proof Junction Box**
- **Explosion proof Panel**
- **Explosion proof Enclosure**
- **Explosion proof Receptacles**

Why Choose SUREALL Explosion Proof Box?

SUREALL sophisticated understanding for explosion proof standard for explosion proof box, strict seasoned practical experience combined with scientific theory to make technological breakthrough and innovation

SUREALL concentrate on details and strive to perfection for stable and safe performance for explosion proof box abide by craftsmanship spirit to polish functional impeccable competitive products.

• SUREALL custom-made configuration through rigorous patented technology for explosion proof box and electrical components to maximize the inner space for connection and tamp the safety foundation.

• SUREALL harsh tests for every critical electrical parameters in global recognized lab for every explosion proofbox with EU-ATEX certificated.

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Power Distribution for Near-end Lighting Control System In Harsh and Hazardous location

In the narrow sense, explosion proof junction box means connection box are equipped with terminal blocks for branch circuit cables. Whereas, in the broad sense, explosion proof junction box means explosion proof box with many kinds of electrical components during all electrical control process from field bus to loads, explosion proof box function as explosion proof switch with built-in switch to control the power on and off for explosion proof lighting, explosion proof box function as explosion proof panel with built-in circuit breakers to distribute feeder electricity from main circuits to brand circuits, explosion proof box function as explosion proof enclosure with built-in other control devices to act certain functions, explosion proof box function as explosion proof receptacle with built-in plug-in contact through plug to connect and disconnect the power for explosion proof lighting and loads.

As for the principle to make the box explosion proof, SUREALL mainly apply for two methods, one is flame proof, the other is increased safety, you know flame proof means we put all electrical devices in the high resistance aluminum alloy housing, this housing isolate the ignition to make the explosion happen in the outer environment in hazardous location. Increased safety means all material of electrical device are made of high guality and performance metal and plastic to limit the electrical arcing exactly inside the housing without leakage.

Now we are listing some widely used actual explosion proof technology for explosion proof box as below:



What is Ex de box?

Ex d box means the box set only have one or several sets of flame proof (Ex d) aluminum alloy housing, you can put general(non-hazardous) electrical components inside to make it explosion proof, it is widely used for simple control units in hazardous location. In case you need to install operating handle (normally buttons, switches, indicators) to control the power on and off forbuilt-in components on the housing cover surface, the thread of handle and c hubs on the housing cover should be flame proof (Ex d).



What is an explosion proof junction box?

What is Ex de box?

There are two types Ex de box as below:

> Ex de box means the box set only have one or several sets of flame proof aluminum alloy housing, you can put increased safety (Ex e) electrical components inside to make it explosion proof, this kind of combination for flame proof (Ex d) housing and increased safety (Ex e) electrical components conclude Ex de box, it is widely used for complicated control units in hazardous location.

> Ex de box also means the box set do not only have at least one set of flame proof(Ex d) aluminum alloy housing with increased safety(Ex e) electrical components, but also at least one set of increased safety(Ex e) housing (normally glass reinforced plastic or stainless steel material) with builtin increased safety(Ex e) components(normally terminal blocks), this kind of combination for flame proof(Ex d) housing and increased safety(Ex e) housing conclude Ex de box, it is widely used for extra complicated control units in hazardous location.



What is Ex de box?

Ex ed box means the box set have only one or several sets of increased safety(Ex e) housing (normally glass reinforced plastic or stainless steel material), you can put flame proof(Ex d) electrical components inside the housing, this kind of combination for increased safety(Ex e) housing and flame proof(Ex d) electrical components conclude Ex ed box, it is widely used for complicated control units in hazardous location and high corrosive environment.

Data	Ex d H	ousing	Ex e H	ousing		Compon	ents Type
Туре	Туре	Qty	Ex e	Туре	Ex d	Туре	Non-hazardous
Ex d box	\checkmark	≥1					
Ev do boy	\checkmark	≥1					
Ex de box		≥1		≥1			\checkmark
Ex ed box				≥1	\checkmark	\checkmark	\checkmark



Power Distribution for Near-end Lighting Control System In Harsh and Hazardous location

FAQS about Explosion Proof boxes

1. What is an explosion proof box?

Explosion proof box is classified designed enclosure widely used in class 1, class 2, div 1 and div 1, zone 1 and zone 2 hazardous location, it features the electrical functions based onthe built-in electrical components through explosion proof protected housing to improve the safety.

Now we are listing some widely used actual explosion proof technology for explosion proof box as below:



2. What is explosion proof equipment?

Explosion proof equipment is the joint name for many explosion proof electrical equipment including explosion proof lighting, explosion proof switch, explosion proof junction box, explosion proof panel, explosion proof receptacle, and non-electrical equipment such as explosion proof motor, explosion proof pump.

3. What is the difference bet ween Ex e and Ex d?

Ex e means increased safety explosion proof technology, Ex d means flame proof explosion proof technology. Increased safety is ensured through using better insulation electrical material and maximize the electrical creep distance inside a factory sealed enclosure. Flame proof is treated by using impact resistance flame proof housing with designed flame path for explosion energy to escape to insignificant condition outside the housing.

4. Is IP65 explosion proof?

No, IP65 is not explosion proof, but explosion proof normally is IP65. IP means international ingress protection to rate the water tight and dust tight degree, IP65 rating housing can be widely used in industrial wet, dusty condition without entering into the housing, whereas explosion proof housing can be used in not only wet, dusty condition but also hazardous location.

5. What is NEMA 4X enclosure?

NEMA means the ingress protection rating standard for electrical products in USA, NEMA 4X enclosure is water proof, dust proof and corrosive resistance enclosure indoor or outdoor, since the explosion proof electrical products are used in damp, dusty, even corrosive environment, SUREALL all explosion proof enclosure can reach at least NEMA 4X and up.

6. Is flameproof same as explosion proof?

No, flameproof is not same as explosion proof, instead, explosion proof include flameproof because explosion proof is the umbrella name of flame proof Ex d, increased safety Ex e, intrinsic safety Ex i, etc.. But flame proof is the most critical and common type which isolate the ignition and explosion in enclosed housing to protect the project site.

7. Is Ex e explosion proof?

Yes, Ex e is explosion proof, Ex e is increased safety type among all explosion proof technology applying for extra safety measure to reduce the electrical arcing to increase the safety degree based on general safety electrical components.

8. Which enclosure is suitable for use in Class I hazardous locations?

Mainly flame proof Ex d enclosure, combination of flame proof and increased safety Ex de enclosure is suitable for use in Class I hazardous locations based on NEC500 standard and UI844 standard in USA, some special pressurized Ex p enclosure is also suitable with higher gas pressure than international standard atmosphere when filled with inert gas.

9. What is an Ex d enclosure? What is flameproof enclosure? What is FLP enclosure?

Ex d enclosure, also name flameproof enclosure and FLP enclosure, consist of aluminum alloy housing designed with flame path for explosion heat to escape to outer of housing, the empty enclosure can be put many kinds of electrical components to be explosion proof panel, explosion proof circuit breaker, explosion proof junction box.



General information for Luminaires for Use in Hazardous Locations

1.Explosion Formation

Explosion takes place in the conditions of the following factors:

- Combustible substances, such as gas, vapour, mist and dust
- Air (oxygen)
- Ignition source

2. Explosion Protection

In order to avoid explosions and consequential dangers, the operator must incorporate effective explosion-proof protection precautions. Measures :

- Avoiding the formation of explosive atmospheres
- Avoid the ignition of hazardous explosive atmospheres
- Confining explosion impact to a negligible extent

3.Hazardous Location Classificaton

Hazardous locations are classified into different Group/Class, Zones/Divisions depending on the composition and presence of an flammable subst ances, which enables anyone to select the suitable explosion-proof equ ipments.











4.Flammable Substances Classificaton

Flammable substances are classified into different groups depending on the exact flammable substances, which enables anyone to select the suitable explosion-proof equipments.

Gas and Vapour			
Presence Frequency	EU/IEC	NEC500	
Acetylene C2H2	IIC	Class I/Group	
Hydrogen H2	IIB+H2	AClass I/Group	
Ethylene C2H4	IIB	BClass I/Group	
Propane C3H8	IIA	CClass I/Group	
Methane CH4	I	D	
		Mining	

Dust and Fiber			
Typical Dust and Fiber	EU/IEC	NEC500	
Metal dusts	IIIC	Class II/Group	
Carbonaceous dusts	IIIB	EClass II/Group	
Non-conductive dusts	IIIB	FClass II/Group	
Fibers and flyings	IIIA	G	
		Class III	

3.1 Group/Class

Locations	Group		Class
Locations	EU	IEC	US NEC500
methane under mine	Group I	Group I	М
hazardous gas and vapour		Group II	Class I
hazardous dust	Group II	Group III	Class II
hazardous fiber			Class III

3.2 Division/Zone

Gas and Vapour			
Presence Frequency	Flammable Substances		
	Present Continuously	Present Intermittently	Present Abnormally
EU/IEC	Zone 0	Zone 1	Zone 2
US NEC500	Divis	Division 2	

Dust and Fiber			
Presence Frequency	Flammable Substances		
	Present Continuously	Present Intermittently	Present Abnormally
EU/IEC	Zone 20	Zone 21	Zone 22
US NEC500	Divis	Division 2	





6. Explosion-proof Protection Types

5. Explosive Temperature Classification

Explosive temperature is the lowest temperature of a surface of an explosion–proof products at which an flammable substance is able to ignites on it. Explosion–proof products may be classified into different temperature groups.

Typical Dust and Fiber	EU/IEC	NEC500
450℃	T1	T1
300°C	T2	T2
280°C		T2A
260°C		T2B
230°C		T2C
215°C		T2D
200°C	Т3	Т3
180°C		ТЗА
165℃		ТЗВ
160℃		T3C
135℃	T4	T4
120°C		T4A
100℃	Τ5	T5
85°C	Т6	Т6

Ex–Mark	Protection Types
Ex d	Flameproof
Ex e	Increased safety
Ex p	Pressurized
Ex q	Powder filling
Exi	Intrinsic safety
Ex o	Oil immersion
Ex m	Encapsulation
Ex n	"n" protection



Diagram

*	The enclosures are constructed so that the internal explosions can not be transmitted to the external atmosphere
	Prevention to ignition sources, only simple electrical components
)	Electrical parts are purged and pressurized with a protective gas
*	Electrical parts are submerged in a quartz powder
**	Limitation of the energy stored in the electrical circuits
*	Electrical parts are submerged in oil
	Electrical parts are encapsulated in a specific resin
])	No ignition source in normal operation, no sparks, no hot surfaces











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Ambient Tem	perature	−60°C~+60°C	/ - 76°	F ~ +140°
Cable Entry		Metric or NPT	thread	type plugs
Terminal blocks		3x(2.5~4)mm ²		
Catalogue Numbering System				
SW-A-		<u>0</u>		
Ļ				
Switch Function Rate			Rated	
	0:	On-off		16
	$C \cdot Ch$	angoovor		05

C: Changeover

Mounting Options & Dimensions (mm/inch)



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SW-A Series Explosion Proof Lighting Switch

Class I Division 1, Group A, B, C, D Class II Division 1, Group E, F, G Class III Ex d IIC T6 Gb Ex tb IIIC T80 C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X,IP66 Max.25A Built-in Switch

Applications

- Usage by application: Depends on the application field, explosion proof switch can be used in where explosion proof lighting installed, such as oil extraction plant, oil or gas refinery plant, oil processing plant, petrochemical and chemical plant anywhere there is combustible gas, vapor, mist and dust.
- Function: From the filed bus cable to feeder cable, a large number and kinds of resistor and control units will be put among the electrical circuit, explosion proof junction is to connect one end of cable with another end in an enclosed housing for well-organized branch wiring.

Features

- As a common used explosion proof switch, SW–A series explosion proof light switch is protected by flame proof aluminum housing to turn on and off the explosion proof lighting. Designed with on and off position for easy handling, this flame proof on and off switch directly connect and disconnect one or certain numbers of explosion proof lighting in planned areas with electrical power to realizing the illumination when necessary. Hazard class division can be class 1 div 1, zone 1 in hazardous location.
 - Tailor-made built-in terminal blocks for enhanced safety and convenient cable connection
 - Flexible On-off operation handle on the cover for quick shut-down feature
 - Notched mounting feet for adjustable mounting space with bolts

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–31 Ex d IIC T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–1, EN60079–31 Il 2 G Ex d IIC T6 Gb Il 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.1, Group A, B, C, D Class II, Div.1, Group E, F, G Class III	
Material	Glass Reinforced Plastic, black			
Switch Function	On-off / Changeover			
Rated Voltage	Max.250V AC			
Rated Current	16A / 25A			
IP Grade	Wet Locations, Type 4X, IP66			



F

(standard) or cable gland











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Cable Entry		Metric or NPT	thread	type pl
Terminal b	locks	9~16mm ²		
Catalogue Nu	mbering	System		
SW-P-		0		
	Switc	↓ h Function		R
	0:	On–off		

Mounting Options & Dimensions (mm/inch)



F	On	OFF	Ň
		R	
	V		
Ō			0

SW-P Series Explosion Proof Lighting Switch

- Class I Division 2, Group A, B, C, D Class II Division 1, Group E, F, G Class III Ex d e IIC T6 Gb Ex tb IIIC T80°C Db IP66
- Zone 1, Zone 2 Zone 21, Zone 22 Type 4X,IP66 Max.16A Built-in Switch

Type 4X,II Max.16A Built–in Sv

Applications

- Usage by application: Depends on the application field, explosion proof switch can be used in where explosion proof lighting installed, such as oil extraction plant, oil or gas refinery plant, oil processing plant, petrochemical and chemical plant anywhere there is combustible gas, vapor, mist and dust.
- After installing any explosion proof lighting, you need install explosion proof switch to control the power on and off of explosion proof lighting in order to manager when and how to lighten for any place at dark time or night to run the projects constantly even with 24 hours.

Features

- Born for extreme corrosive environment such as strong acid, strong alkaline, electrostatic discharging areas, SW-P series explosion proof switch is a special presence and usage to replace other traditional metal material of explosion proof light switch. Application for low temperature rise electrical material for components and increased safety glass fiber reinforced polyester housing, this model can be used as zone 2 light switch, division 2 for switch and anti spark power switch.
 - Labor-saving on-off operating handle to control the power on and off rapidly
 - Glass reinforced plastic material housing for corrosion resistance and anti-magnetic performance

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–31 Ex d IIC T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–1, EN60079–31 Il 2 G Ex d IIC T6 Gb II 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.1, Group A, B, C, D Class II, Div.1, Group E, F, G Class III			
Material	Glass Reinforced Plastic, black					
Switch Function	On-off / Changeover					
Rated Voltage	Max.250V AC					
Rated Current	10A / 16A					
IP Grade	Wet Locations, Type 4X, IP66					
Ambient Temperature	–20°C~ +55°C /–4° F~ +131° F					













SJB-IIB Series Explosion Proof Junction Box

Class I Division 1, Group C, D Class II Division 1, Group E, F, G Class III Ex d IIB T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.25A Built-in Terminal Blocks

Applications

- Usage by application: Depends on the application field, explosion proof junction box can be used in upstream oil and gas plant, processing refinery and petrochemical plant, fuel related plant, chemical and mining plant and anywhere there is flammable gas, vapor, mist and dust.
- Function: From the filed bus cable to feeder cable, a large number and kinds of resistor and control units will be put among the electrical circuit, explosion proof junction box is to connect one end of cable with another end in an enclosed housing for well–organized branch wiring.

Features

- Designed with 4 available threaded hubs, explosion proof junction box SJB–IIB series can connect conduit system in compact condition to change the conduit direction especially in corners as requested in hazardous location. Available for Metric thread M25x1.5, NPT thread NPT 3/4" and larger hub with adaptors, this flame proof junction box can transfer the electrical circuit within 25 ampere rated current as explosion proof conduit outlet box and dust proof electrical outlets. Hazard class division can be class 1 div 1, group C, D and zone 1, group IIB.
 - Increased safety stud type built-in terminal blocks for tight conductor connection
 - ➡ In various ways and numbers of hubs to arrange the incoming and outgoing cables

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–31 Ex d IIB T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–1, EN60079–31 Il 2 G Ex d IIB T6 Gb Il 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.1, Group C, D Class II, Div.1, Group E, F, G Class III				
Material	Copper-free aluminium, grey						
Switch Function	On-off / Changeover						
Rated Voltage	Max.250V AC						
Rated Current	16A/25A						
IP Grade	Wet Locations, Type 4X, IP6	66					

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Ambient Temperature	-60°C∼ +60°C /-76° F ~ +
Cable Entry	Metric or NPT thread type
Terminal blocks	3x(2.5~4)mm ²
Туре	1/11/111/1V/V/VI

Catalogue Numbering System

SJB-IIB-		<u> </u>
		\downarrow
		Outline Code
	A–Type I	B-Type II
	D-Type IV	E-Type V

Mounting Options & Dimensions (mm/inch)



Type IV



+140° F

e plugs (standard) or cable glands









Type II



Type V

Type III



Type VI



SJB-IIC Series Explosion Proof Junction Box

Class I Division 1, Group A, B, C, D Class II Division 1, Group E, F, G Class III Ex d IIC T6 Gb Ex tb IIIC T80°C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.25A **Built-in Terminal Blocks**

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Applications

- Usage by application: Depends on the application field, explosion proof junction box can be used in upstream oil and gas plant, processing refinery and petrochemical plant, fuel related plant, chemical and mining plant and anywhere there is flammable gas, vapor, mist and dust.
- Function: From the filed bus cable to feeder cable, a large number and kinds of resistor and control units will be put among the electrical circuit, explosion proof junction box is to connect one end of cable with another end in an enclosed housing for well-organized branch wiring.

Features

- To fit in 1–way, 2–way, 3–way and 4–way threaded hubs arrangement, explosion proof junction box SJB–IIC series install terminal blocks in a rigid light-weight round box to protect the conductor in good manner and provide access for maintenance and future change of conduit layout. Different numbers of pipe blind plugs can be used for spare hubs with standard metric and NPT thread. You can use this explosion junction box, explosion proof conduit outlet box and dust proof electrical outlets in class 1 div 1, group A, B, C, D and zone 1, group IIC.
 - Excellent insulation material made inner terminal blocks to avoid the arcing
 - > Various styles of outlets to thread with cable gland and conduit from four sides

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1 IEC60079–31 Ex d IIC T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	ļ,	EU Standard EN60079–0, EN60079–1, EN60079–31 Il 2 G Ex d IIC T6 Gb Il 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.1, Group A, B, C, D Class II, Div.1, Group E, F, G Class III			
Material	Copper-free aluminium, grey						
Rated Voltage	Max.500V AC						
Rated Current	16A/25A						
IP Grade	Wet Locations, Type 4X, IF	P66					
Ambient Temperature	-60°C∼ +60°C /-76° F ~ +	140°	F				

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Cable Entry	Metric or NPT thread type
Terminal blocks	6x(0.2~2.5)mm ²
Туре	I / II / III / IV / V / VI









Type IV



plugs (standard) or cable glands

Type II



Type V

Type III





• Usage by application: Depends on the application field, explosion proof junction box can be used in upstream oil and gas plant, processing refinery and petrochemical plant, fuel related plant, chemical and mining plant and anywhere there is flammable gas, vapor, mist and dust.

Class III Ex e IIC T6 Gb

Class I Division 2, Group A, B, C, D

Class II Division 1, Group E, F, G

Ex tb IIIC T80°C Db IP66

Function: From the filed bus cable to feeder cable, a large number and kinds of resistor and control units will be put among the electrical circuit, explosion proof junction box is to connect one end of cable with another end in an enclosed housing for well-organized branch wiring.

Features

- Born for class 1 div 2 junction box, explosion proof junction box SJB-A-e series is protected by strictly sealed increased safety housing and terminal blocks and can be designed into CAD drawing by our engineer team subject to the class 1 div 2 distance requirement and project junction box arrangement before production, no matter how many feeders and how high the rated current is, our engineer can maximize the flexibility for internal space and future changes to be ATEX approved junction box.
 - High impact resistance aluminum alloy increased safety Ex e housing
 - Scientific rail mounted terminal blocks for concentrated all-in-one layout

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–7, IEC60079–31 Ex e IIC T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–7, EN60079–31 Il 2 G Ex e IIC T6 Gb II 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.2, Group A, B, C, D Class II, Div.1, Group E, F, G Class III			
Material	Copper-free aluminium, grey					
Rated Voltage	Max.690V AC					
Rated Current	Max.125A					
IP Grade	Wet Locations, Type 4X, IP66					
Ambient Temperature	–50℃~ +55℃ /–58° F ~ +131° F					
Cable Entry	Metric or NPT thread type plu	Metric or NPT thread type plugs (standard) or cable glands				

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Zone 1, Zone 2

Max.125A

Zone 21, Zone 22 Type 4X, IP66

Built-in Terminal Blocks

SJB-A-e Series Explosion Proof Junction Box

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Cable Entry	Metric or NPT thread type plugs (standard) or cable glands							
Suitable Cable &	2.5mm ²	4mm ²	6mm ²	10mm ²	16mm ²	35mm ²		
Rated Current	24A	32A	41A	57A	76A	125A		
Туре	1/11/111/1V/V/VI/VII/VII							

Catalogue Numbering System



Mounting Options & Dimensions (mm/inch)





190

Type I

132



190



Type V







SJB-A-IIB Series Explosion Proof Junction Box

Class I Division 1, Group C, D Class II Division 1, Group E, F, G Class III Ex d IIB T6 Gb Ex tb IIIC T80°C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.400A **Built-in Terminal Blocks**

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Suitable Cable & Rated Current	2.5mm ²	nm ² 4mm ² 6mm ²		10mm ² 16mm ²		35mm ²	70mm ²	240mm ²
	24A	32A	41A	57A	76A	125A	192A	400A
Туре	1/11/111/1V/V/VI/VI							

Catalogue Numbering System







Applications

- Usage by application: Depends on the application field, explosion proof junction box can be used in upstream oil and gas plant, processing refinery and petrochemical plant, fuel related plant, chemical and mining plant and anywhere there is flammable gas, vapor, mist and dust.
- Function: From the filed bus cable to feeder cable, a large number and kinds of resistor and control units will be put among the electrical circuit, explosion proof junction box is to connect one end of cable with another end in an enclosed housing for well-organized branch wiring.

Features

- As a class 1 div 1 junction box requesting the most quantity in flammable gas atmosphere, explosion proof junction box SJB-IA-IIB put the bigger rated current terminal blocks normally higher than 32 amperes in a high strength die cast aluminum flame proof housing to eliminate the hidden danger for explosion. Looked a square shape designed with flat joint surface of flame proof path on housing and cover, this flameproof junction box can be used in class 1 div 1, group C, D and zone 1, group IIB.
 - Varied dimension and size of housing with full inner creepage distance between conductors
 - Plane joint flame proof path for inner explosion for rapid evacuation with low surface roughness

Compliances	IEC Standard IEC60079–0, IEC60079–1 IEC60079–31 Ex d IIB T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	,	EU Standard EN60079–0, EN60079– EN60079–31 Il 2 G Ex d IIB T6 Gb Il 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	·1,	NEC & CEC Standard Class I, Div.1, Group C, D Class II, Div.1, Group E, F, G Class III		
Material	Copper-free aluminium, grey						
Rated Voltage	Max.690V AC						
Rated Current	Max.400A						
IP Grade	Wet Locations, Type 4X, IP66						
Ambient Temperature	–60℃~ +55℃ /–76° F~ +131° F						
Cable Entry	Metric or NPT thread type p	olug	s (standard) or cable glan	ds			





• Usage by application: Depends on the application field, explosion proof junction box can be used in upstream oil and gas plant, processing refinery and petrochemical plant, fuel related plant, chemical and mining plant and anywhere there is flammable gas, vapor, mist and dust.

Class III Ex d IIC T6 Gb

Class I Division 1, Group A, B, C, D

Class II Division 1, Group E, F, G

Ex tb IIIC T80°C Db IP66

• Function: From the filed bus cable to feeder cable, a large number and kinds of resistor and control units will be put among the electrical circuit, explosion proof junction box is to connect one end of cable with another end in an enclosed housing for well-organized branch wiring.

Features

- Among all class 1 div 1 junction box types, explosion proof junction box SJB-A-IIC only occupy 30% because this flameproof junction box can also be used in higher dangerous location of class 1 div 1 group A, B, C, D and zone 1 group IIC with the anti explosion flame proof aluminum housing and more complicated and longer flat or threaded joint surface of flame proof path between housing and cover. This explosion proof junction box can be tailor-made as ATEX junction box zone 1 based on the actual electrical diagram and flame proof junction box specifications in hazardous location.
 - Spigot joint with both cylindrical joint and plane joint of flame proof path to meet IIC standard
 - Circular cover structure for convenient opening with flat wrench to protect the flame proof path

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1 IEC60079–31 Ex d IIC T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU St EN60 EN60 EN60 EN60 EN12 EN12 D12 D5 IPC Zone 2	andard 079–0, EN60079–1 079–31 G Ex d IIC T6 Gb D Ex tb IIIC T80°C 66 I, Zone 2 21, Zone 22	, Cla A, E Cla E, F Cla	C & CEC Standard ss I, Div.1, Group 3, C, D ss II, Div.1, Group 5, G ss III	
Material	Copper-free aluminium, grey					
Rated Voltage	Max.690V AC					
Rated Current	Max.250A					
IP Grade	Wet Locations, Type 4X, IP66					
Ambient Temperature	–20℃~ +55℃ /–4° F ~ +13	31° F				

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Zone 1, Zone 2

Max.250A

Zone 21, Zone 22 Type 4X, IP66

Built-in Terminal Blocks

SJB-A-IIC Series Explosion Proof Junction Box

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Cable Entry	Metric or NPT thread type plugs (standard) or cable glands									
Suitable Cable &	2.5mm ²	4mm ²	6mm²	10mm ² 16mm ²		35mm²	70mm²	95mm ²		
Rated Current	24A	32A	41A	57A	76A	125A	192A	250A		
Туре	1/11/111/	IV / V / VI								

Catalogue Numbering System



Mounting Options & Dimensions (mm/inch)









Features

and anywhere there is flammable gas, vapor, mist and dust.

end in an enclosed housing for well-organized branch wiring.

Multifarious size for different current of main circuit and branch circuit

electromagnetic field of hazardous location.

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Zone 1, Zone 2

Zone 21, Zone 22

Built-in Terminal Blocks

Type 4X, IP66

Max.125A

SJB-P Series Explosion Proof Junction Box

Class I Division 2, Group A, B, C, D

Class II Division 1, Group E, F, G

Class III

Ex e IIC T6 Gb

• Usage by application: Depends on the application field, explosion proof junction box can be used in upstream

• Function: From the filed bus cable to feeder cable, a large number and kinds of resistor and control units will be put among the electrical circuit, explosion proof junction box is to connect one end of cable with another

• Developed for extreme and corrosive environment, explosion proof junction box SJB-P series is increased

safety type ex proof junction box widely used as class 1 div 2 junction box in combustible gas atmosphere.

Structured by glass reinforced polyester material housing and safety enhancing terminal blocks. Particularly,

this explosion proof terminal box is the best solution to reduce the electromagnetic interference for

Interior chassis mounted terminal blocks for precise connection location inside the housing

oil and gas plant, processing refinery and petrochemical plant, fuel related plant, chemical and mining plant

Ex tb IIIC T80°C Db IP66

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Suitable Cable & Rated Current	2.5mm ²	4mm ²	6mm ²	10mm ²	16mm ²	35mm ²
	24A	32A	41A	57A	76A	125A
Туре	1/11/111/1V	/ V / VI / VII				

Catalogue Numbering System







Compliances	IEC Standard IEC60079–0, IEC60079–7 IEC60079–31 Ex e IIC T6 Gb Ex tb IIIC T80℃ Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	7,	EU Standard EN60079–0, EN60079–7 EN60079–31 Il 2 G Ex e IIC T6 Gb Il 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	7,	NEC & CEC Standard Class I, Div.2, Group A, B, C, D Class II, Div.1, Group E, F, G Class III	
Material	Glass Reinforced Plastic, black					
Rated Voltage	Max.690V AC					
Rated Current	Max.125A					
IP Grade	Wet Locations, Type 4X, IP66					
Ambient Temperature	-40℃~ +55℃ /-40° F ~ +131° F					
Cable Entry	Metric or NPT thread type plugs (standard) or cable glands					





Type VII



• Usage by application: Depends on the application field, explosion proof junction box can be used in upstream oil and gas plant, processing refinery and petrochemical plant, fuel related plant, chemical and mining plant and anywhere there is flammable gas, vapor, mist and dust.

Class III

Ex e IIC T6 Gb

Ex d IIC T6 Gb

Ex tb IIIC T80°C Db IP66

Class I Division 2, Group A, B, C, D

Class II Division 1, Group E, F, G

• Function: From the filed bus cable to feeder cable, a large number and kinds of resistor and control units will be put among the electrical circuit, explosion proof junction box is to connect one end of cable with another end in an enclosed housing for well–organized branch wiring.

Features

- Featuring brilliant mechanical impact resistance and excellent corrosion resistance, explosion proof junction box SJB–S series is actually an increased safety stainless steel junction box with good quality terminal blocks. This stainless steel junction can be made of stainless steel 304 or 316 to be used as class 1 div 2 junction box factory–made based on more strict standards than intrinsically safe junction box requirements.
 - Support rails to assembly terminal blocks in modular way for clear maintenance
 - Factory sealed stainless steel increased safety explosion proof housing to increase the safety level

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–7, IEC60079–3 ⁻¹ Ex e IIC T6 Gb Ex d IIC T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–1, EN60079–7, EN60079–31 Il 2 G Ex e IIC T6 Gb II 2 G Ex d IIC T6 Gb II 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.2, Group A, B, C, D Class II, Div.1, Group E, F, G Class III				
Material	Stainless steel						
Rated Voltage	Max.500V AC						
Rated Current	Max.125A						
IP Grade	Wet Locations, Type 4X, IP66						
Ambient Temperature	–40℃~ +55℃ /–40° F ~ +131° F						
Cable Entry	Metric or NPT thread type plugs (standard) or cable glands						

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Zone 1, Zone 2

Zone 21, Zone 22

Built-in Terminal Blocks

Type 4X, IP66

Max.125A

SJB-S Series Explosion Proof Junction Box

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Catalogue Numbering System





18

6mm ²	10mm ²	16mm ²	35mm ²
41A	57A	76A	125A
II			



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SPN-d-IIB Series Explosion Proof Panel

Class I Division 1, Group C, D Class II Division 1, Group E, F, G Class III Ex d IIB T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.630A Built–in Circuit Breaker

Applications

- Usage by application: Depends on the application field, explosion proof junction box can be used in oil and gas plant, processing refinery, oil tankers, underground mining plant chemical plant and anywhere there is flammable gas, vapor, mist and dust.
- Function: From the incoming wires to the outgoing wires, from main circuit to brand circuit, explosion proof panel play an intermediate allocator role in distributing electricity for load.

Features

- To be suitable for class 1 div 1, group C, D and zone 1 group IIB, SPN-d-IIB series explosion proof panel have flame proof Ex d type aluminum housing and internal general type circuit breaker, control pushbuttons, indicators and can resist the mostly used hazardous condition excluding acetylene and hydrogen atmosphere. Flexible operating handle of explosion proof panelboards is designed for free switch off on the front cover access and optional surface and free-standing bracket bring convenience for installation.
 - Rigorous overall layout for electrical components inside the housing to reduce the potential of explosion
 - > Low surface roughness plane joint flame proof path to disperse explosion energy occurs in the housing
 - Four-side available hubs to arrange the incoming and outgoing cable as requested
 - Buttons, indicator, switches are clearly installed in front surface for accurate controlling

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–31 Ex d IIB T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–7, EN60079–31 Il 2 G Ex d IIB T6 Gb Il 2 G Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.1, Group C, D Class II, Div.1, Group E, F, G Class III			
Material	Copper-free aluminium, grey					
Rated Voltage	Max.690V AC					
Rated Current	Max.630A					
IP Grade	Wet Locations, Type 4X, IP66					
Ambient Temperature	–60℃~ +55℃ /–76° F ~ +131° F					

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Mounting Options & Dimensions (mm/inch)



Type I

Type II





Type V



Type VII



Metric or NPT thread type plugs (standard) or cable glands

Main Switch (MCB or MCCB), Branch Switch (MCB or MCCB), Terminal etc.





SPN-d-IIC Series Explosion Proof Panel

Class I Division 1, Group A, B, C, D	Zone 1, Zone 2
Class II Division 1, Group E, F, G	Zone 21, Zone 22
Class III	Type 4X, IP66
Ex d IIC T6 Gb	Max.250A
Ex tb IIIC T80°C Db IP66	Built-in Circuit Breaker

Applications

- Usage by application: Depends on the application field, explosion proof junction box can be used in oil and gas plant, processing refinery, oil tankers, underground mining plant chemical plant and anywhere there is flammable gas, vapor, mist and dust.
- Function: From the incoming wires to the outgoing wires, from main circuit to brand circuit, explosion proof panel play an intermediate allocator role in distributing electricity for load.

Features

To be used in acetylene and hydrogen gas environment, SPN-d-IIC series explosion proof panel is protected by flame proof aluminum housing to prevent the ignition for explosive atmosphere to be widely used for class 1 div 1 group A, B, C, D and zone 1 group IIC. Railed mounted molded case circuit breaker or miniature circuit breaker, explosion proof panelboards provide over-current protection for downstream load and circuit, available 4 sides drilled threaded flame proof hubs for different directions cable wiring.

High strength anti-explosion die-cast aluminum alloy housing for fast energy transmit without deformation when inner explosion occurs

Spigot non-thread joint with cylindrical joint and plane joint of flame proof path to be used in acetylene environment

- Blanked or cable gland plugged threaded holes to tight the cable from four directions
- Operated buttons or switch handle on the housing cover for quick operation after complete isolation for inner electrical device

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1 IEC60079–31 Ex d IIC T6 Gb Ex tb IIIC T80℃ Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	Ι,	EU Standard EN60079–0, EN60079–7, EN60079–31 II 2 G Ex d IIC T6 Gb II 2 G Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.1, Group A, B, C, D Class II, Div.1, Group E, F, G Class III	
Material	Copper–free aluminium, g	rey			
Rated Voltage	Max.690V AC				
Rated Current	Max.250A				

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IP Grade	Metric or NPT thread type
Ambient Temperature	6x(0.2~2.5)mm ²
Cable Entry	/ / / V / V / VI
Built-in Components	6x(0.2~2.5)mm ²

Catalogue Numbering System

SPN-d-IIC-



Mounting Options & Dimensions (mm/inch)







Type III



Type V





Type VI



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SPN-de-IIB Series Explosion Proof Panel

Class I Division 2, Group C, D Class II Division 1, Group E, F, G Class III Ex d e IIB T6 Gb Ex tD A21 T80°C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.250A Built-in Circuit Breaker

Applications

- Usage by application: Depends on the application field, explosion proof junction box can be used in oil and gas plant, processing refinery, oil tankers, underground mining plant chemical plant and anywhere there is flammable gas, vapor, mist and dust.
- Function: From the incoming wires to the outgoing wires, from main circuit to brand circuit, explosion proof panel play an intermediate allocator role in distributing electricity for load.

Features

- Constructed with the enclosure combination for flame proof aluminum alloy Ex d housing and increased safety aluminum alloy Ex e housing, SPN-de-IIB series explosion proof panel is defended by dual protection and operated by flame proof threaded switching handle on hubs of the housing cover. A scientific combination for several pieces housing of explosion proof panelboards have both panel function and junction box function meeting parts of complicated need, the hazard class division is class 1 div 2 for group C, D and zone 1 for group IIB.
 - Flame proof Ex d IIB aluminum alloy housing together with electrical breakers, buttons and indicators
 - Increased safety Ex e aluminum alloy housing together with increased safety Ex e terminal blocks

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079– IEC60079–7, IEC60079– Ex d e IIB T6 Gb Ex tD A21 T80℃ IP66 Zone 1, Zone 2 Zone 21, Zone 22	1, 31	EU Standard EN60079–0, EN60079– EN60079–7, EN60079– & II 2 G Ex d e IIB T6 G & II 2 D Ex td IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	-1, -31 b	NEC & CEC Standard Class I, Div.2, Group C, D Class II, Div.1, Group E, F, G Class III	
Material	Copper-free aluminium, grey					
Rated Voltage	Max.415V AC					
Rated Current	Max.250A					
IP Grade	Wet Locations, Type 4X, IP66					
Ambient Temperature	–20°C~ +55°C /–4° F~ +131° F					
Cable Entry	Metric or NPT thread type plugs (standard) or cable glands					















Type VII



Type VIII



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SPN-de-IIC Series Explosion Proof Panel

Class I Division 2, Group A, B, C, D Class II Division 1, Group E, F, G Class III Ex d e IIC T6 Gb Ex tb IIIC T80°C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.200A Built-in Circuit Breaker

Applications

- Usage by application: Depends on the application field, explosion proof junction box can be used in oil and gas plant, processing refinery, oil tankers, underground mining plant chemical plant and anywhere there is flammable gas, vapor, mist and dust.
- Function: From the incoming wires to the outgoing wires, from main circuit to brand circuit, explosion proof panel play an intermediate allocator role in distributing electricity for load.

Features

- Aiming to be used in class 1 div 2 for group A, B, C, D and zone 1 for group IIC, the enclosure combination for flame proof aluminum alloy housing (gas group IIC) and increased safety aluminum alloy housing, together with increased safety terminal blocks, formed the suitable Ex de explosion proof panel and explosion proof panelboards, this explosion proof power distribution panel play an significant role in hazardous area control system, especially for usage for explosion proof motor starter and explosion proof motor enclosure.
 - Flame proof Ex d IIC aluminum alloy housing together with electrical breakers, buttons and indicators
 - Increased safety Ex e aluminum alloy housing together with increased safety Ex e terminal blocks

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–7, IEC60079–31 Ex d e IIC T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–1, EN60079–7, EN60079–31 Il 2 G Ex d e IIC T6 Gb Il 2 G Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.2, Group A, B, C, D Class II, Div.1, Group E, F, G Class III		
Material	Copper-free aluminium, grey				
Rated Voltage	Max.690V AC				
Rated Current	Max.200A				
IP Grade	Wet Locations, Type 4X, IP66				
Ambient Temperature	–40℃~ +55℃ /–40° F ~ +131° F				
Cable Entry	Metric or NPT thread type plugs (standard) or cable glands				















Main Switch (MCB or MCCB), Branch Switch (MCB or MCCB), Indicator,



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SPN-ed-P Series Explosion Proof Panel

Class I Division 2, Group A, B, C, D Class II Division 1, Group E, F, G Class III Ex d e IIC T5 Gb Ex tb IIIC T80°C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.160A Built-in Circuit Breaker

Applications

- Usage by application: Depends on the application field, explosion proof junction box can be used in oil and gas plant, processing refinery, oil tankers, underground mining plant chemical plant and anywhere there is flammable gas, vapor, mist and dust.
- Function: From the incoming wires to the outgoing wires, from main circuit to brand circuit, explosion proof panel play an intermediate allocator role in distributing electricity for load.

Features

- With contained flame proof Ex d circuit breaker and enclosed by increased safety Ex e glass reinforced plastic housing, SPN-ed-P series explosion proof panel is Ex ed type explosion proof panelboards which can be used as electrical distribution unit in harsh, hazardous, corrosive and electromagnetic field whose hazard class division can be class 1 div 2, group A, B, C, D and zone 1 group IIC. Along with flame proof miniature circuit breaker, it is the most light-weight and economic solution for class 1 div 2 miniature circuit breaker.
 - Increased safety Ex e glass reinforced plastic housing
 - Flame proof Ex d electrical breakers, buttons and indicators

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–7, IEC60079–31 Ex d e IIC T6 Gb Ex tD A21 T80°C IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–1, EN60079–7, EN60079–31 Il 2 G Ex d e IIC T6 Gb II 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.2, Group A, B, C, D Class II, Div.1, Group E, F, G Class III	
Material	Glass Reinforced Plastic, black			
Rated Voltage	Max.415V AC			
Rated Current	Max.160A			
IP Grade	Wet Locations, Type 4X, IP66			
Ambient Temperature	–20°C~ +55°C /–4° F~ +131° F			
Cable Entry	Metric or NPT thread type plugs (standard) or cable glands			





















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Class I Division 2, Group A, B, C, D Class II Division 1, Group E, F, G Class III Ex d e IIC T5 Gb Ex tb IIIC T80°C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.160A Built-in Circuit Breaker

Applications

- Usage by application: Depends on the application field, explosion proof junction box can be used in oil and gas plant, processing refinery, oil tankers, underground mining plant chemical plant and anywhere there is flammable gas, vapor, mist and dust.
- Function: From the incoming wires to the outgoing wires, from main circuit to brand circuit, explosion proof panel play an intermediate allocator role in distributing electricity for load.

Features

- Stainless steel material explosion proof panel SPN-ed-S series are widely used to withstand high strength mechanical impact and resist high corrosive condition in explosive atmosphere. Installed with built-in flame proof Ex d circuit breaker in increased safety Ex e housing and operating handle on the housing cover, this explosion proof panelboards can be used as hazardous location panel and ATEX db whose hazard class division is class 1 div 2 group A, B, C, D and zone 1 group IIC.
 - Increased safety Ex e stainless steel housing
 - Flame proof Ex d electrical breakers, buttons and indicators

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–7, IEC60079–31 Ex d e IIC T6 Gb Ex tD A21 T80°C IP66 Zone 1, Zone 2 Zone 21, Zone 22	EC Standard EU Standard EC 60079-0, IEC60079-1, EN60079-0, EN60079-1, EC60079-7, IEC60079-31 IEC60079-7, EN60079-31 Ex d e IIC T6 Gb II 2 G Ex d e IIC T6 Gb Ex tD A21 T80°C IP66 II 2 D Ex tb IIIC T80°C Zone 1, Zone 2 Db IP66 Zone 21, Zone 22 Zone 1, Zone 2 Zone 21, Zone 22 Zone 21, Zone 22			
Material	Stainless Steel				
Rated Voltage	Max.100V AC				
Rated Current	Max.160A				
IP Grade	Wet Locations, Type 4X, IP66				
Ambient Temperature	−60°C~ +60°C /−76° F~ +140° F				
Cable Entry	Metric or NPT thread type plugs (standard) or cable glands				



Type VIII



SEE-e Series Explosion Proof Enclosure

Class I Division 2, Group A, B, C, D Class II Division 1, Group E, F, G Class III Ex e IIC T6 Gb Ex tb IIIC T80°C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.250A

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Catalogue Numbering System

I–Type A	II–Type B
V-Type V	VI-Type V











Type VIII

Applications

- Usage by application: Depends on the application field, explosion proof enclosure can be used in production plants relative to crude oil, fuel gas and liquefied petroleum gas and gas storage plants and anywhere flammable gas, vapor, mist and dust present.
- Function: To put electrical components included but are not limited to circuit breakers, buttons, indicators, relays, terminal blocks in an explosion enclosed protected housing for the relative functions for electrical components in explosive atmosphere

Features

- Explosion proof enclosure SEE-e series whose housing is made of aluminum alloy and increased safety enclosures, work as separate explosion proof junction box function normally through embedding terminal blocks, sometimes explosion proof enclosure SEE-e series only share the electrical terminal function as a part of explosion proof panel when combined with other chambers such as explosion proof power supply, class 1 div 2 miniature circuit breaker. Hazard class division rated class 1 div 2, group A, B, C, D and zone 1, IIC.
 - ▶ Increased safety Ex e aluminum alloy housing with dead four-way cable entries
 - Factory sealed for the joint between housing and cover to contain the electrical spark

Compliances	IEC Standard IEC60079–0, IEC60079–7, IEC60079–31 Ex e IIC Gb Ex tb IIIC Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–7, EN60079–31 Il 2 G Ex e IIC Gb II 2 D Ex tb IIIC Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.2, Group A, B, C, D Class II, Div.1, Group E, F, G Class III	
Material	Copper-free aluminium, grey			
Rated Voltage	Max.100V AC			
IP Grade	Wet Locations, Type 4X, IP66			
Ambient Temperature	-60°C~+60°C/-76° F~+140° F			
Cable Entry	Metric or NPT thread type plugs (standard) or cable glands			





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Type VII

SFF_I	R Series	Fynl	nsinn	Encl	osure
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Class I Division 1, Group C, D Class II Division 1, Group E, F, G Class III Ex d IIB T6 Gb Ex tb IIIC T80°C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.1200A

Applications

- Usage by application: Depends on the application field, explosion proof enclosure can be used in production plants relative to crude oil, fuel gas and liquefied petroleum gas and gas storage plants and anywhere flammable gas, vapor, mist and dust present.
- Function: To put electrical components included but are not limited to circuit breakers, buttons, indicators, relays, terminal blocks in an explosion enclosed protected housing for the relative functions for electrical components in explosive atmosphere.

Features

- SEE-IIB series explosion proof enclosure, default flameproof enclosure or FLP enclosure, is constructed by flame proof aluminum body and inbuilt increased safety type circuit breakers to be Ex de enclosure and can withstand the explosion brought by flammable gas or dust and prevent the explosion from transmitting into the outer of enclosure in hazardous location. As a classic and mostly used class 1 div 1 enclosure and zone 1 enclosure, this explosion proof enclosure can be used as class 1 div 1 junction box with terminal blocks and explosion proof panel with circuit breakers.
 - Aluminum alloy plane joint smooth flame proof path with low surface roughness to conclude IIB explosion proof standard
 - Flexible hinge to open and hold the heavy cover for convenient future maintenance

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–31 Ex d IIB T6 Gb Ex tb IIIC Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–1, EN60079–31 Il 2 G Ex d IIB Gb Il 2 D Ex tb IIIC Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.1, Group C, D Class II, Div.1, Group E, F, G Class III		
Material	Copper-free aluminium, grey				
Rated Voltage	Max.415V AC				
Rated Current	Max.1200A				
IP Grade	Wet Locations, Type 4X, IP66				
Ambient Temperature	–40℃~ +55℃ /–40° F ~ +13	1° F			





 Usage by application: Depends on the application field, explosion proof enclosure can be used in production plants relative to crude oil, fuel gas and liquefied petroleum gas and gas storage plants and anywhere flammable gas, vapor, mist and dust present.

Class III

Ex d IIC T6 Gb

Ex tb IIIC T80°C Db IP66

Class I Division 1, Group A, B, C, D

Class II Division 1, Group E, F, G

 Function: To put electrical components included but are not limited to circuit breakers, buttons, indicators, relays, terminal blocks in an explosion enclosed protected housing for the relative functions for electrical components in explosive atmosphere.

Features

- Designed with longer and more complicated flame path through threaded and plane structure, SEE–IIC series explosion proof enclosure is an aluminum alloy FLP enclosure to tough the inner probable explosion and cut off the possibility of explosion for the outer environment. Via installing with explosion proof electrical components, this explosion proof enclosure can be used as class 1 div 1 junction box with terminal blocks and explosion panel with circuit breakers for gas group A, B, C, D and gas group IIC. Customized configuration handle operators, direction and numbers of cable entries and explosion proof cable glands.
 - Aluminum alloy spigot joint with long cylindrical joint and plane joint of flame proof path to meet IIC explosion proof standard
 - Special Opening feet on cover for convenient opening with flat wrench to protect the flame proof path

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–31 Ex d IIC T6 Gb Ex tb IIIC Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–1, EN60079–31 & II 2 G Ex d IIC Gb & II 2 D Ex tb IIIC Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.1, Group A, B, C, D Class II, Div.1, Group E, F, G Class III		
Material	Copper-free aluminium, grey				
Rated Current	Max.630V AC				
IP Grade	Wet Locations, Type 4X, IP66				
Ambient Temperature	–40℃~ +55℃ /–40° F ~ +131° F				
Туре	1/11/111/1V/V/VI				

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Zone 1, Zone 2 Zone 21, Zone 22

Type 4X, IP66

Max.630A

SEE-IIC Series Explosion Proof Enclosure

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Catalogue Numbering System

SEE-IIC-



Mounting Options & Dimensions (mm/inch)











Type V





Type II



Type IV





Type VI





flammable gas, vapor, mist and dust present.

components in explosive atmosphere.

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SEE-P Series Explosion Proof Enclosure

Class I Division 2, Group A, B, C, D Class II Division 1, Group E, F, G Class III Ex e IIC T6 Gb Ex tb IIIC T80°C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.125A

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Catalogue Numbering System















Features

Applications

• Enclosed with glass reinforced plastic housing, SEE-P series explosion proof enclosure is ex e enclosure strictly meet class 1 div 2 deal off requirements and explosion proof enclosure definition widely used as explosion proof junction box with terminal blocks and as explosion proof panel with flame proof circuit breakers. Meanwhile, it can also work as ATEX zone 2 power supply, zone 2 enclosure and ATEX zone 22 enclosures among increased safety enclosures suitable for gas group A, B, C, D and gas group IIC.

• Usage by application: Depends on the application field, explosion proof enclosure can be used in production

- ▶ Increased safety Ex e glass reinforced plastic housing with dead four-way cable entries
- Optional dimensions housing depends on the type and number of electrical components

Compliances	IEC Standard IEC60079–0, IEC60079–7 IEC60079–31 Ex e IIC Gb Ex tb IIIC Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	7,	EU Standard EN60079–0, EN60079–7 EN60079–31 Il 2 G Ex e IIC Gb Il 2 D Ex tb IIIC Db IP6 Zone 1, Zone 2 Zone 21, Zone 22	7, 66	NEC & CEC Standard Class I, Div.2, Group A, B, C, D Class II, Div.1, Group E, F, G Class III
Material	Glass Reinforced plastic, black				
Rated Current	Max.125A				
IP Grade	Wet Locations, Type 4X, IP66				
Ambient Temperature	–20℃~ +55℃ /–4° F ~ +131° F				
Туре	1 / 11 / 111 / 1V / V / VI/VII/VIII				







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SEE-S Series Explosion Proof Enclosure

Class I Division 2, Group A, B, C, D Class II Division 1, Group E, F, G Class III Ex e IIC T6 Gb Ex tb IIIC T80°C Db IP66

Zone 1, Zone 2 Zone 21, Zone 22 Type 4X, IP66 Max.250A

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Catalogue Numbering System

SEE-S-

	En
I–Type A	II–Type B
V-Type V	VI–Type VI











Type VII

A	pplications
•	Usage by application: Depends on the application field, explosion proof enclosure can be used in production plants relative to crude oil, fuel gas and liquefied petroleum gas and gas storage plants and anywhere flammable gas, vapor, mist and dust present.
•	Function: To put electrical components included but are not limited to circuit breakers, buttons, indicators, relays, terminal blocks in an explosion enclosed protected housing for the relative functions for electrical components in explosive atmosphere.
Fe	eatures
	To resist high corrective equiverment and withstand mechanical impact SEE 8 series evaluation proof

- To resist high corrosive environment and withstand mechanical impact, SEE-S series explosion proof enclosure is made from stainless steel 304 or 316 with increased safety protection to be applied as hazardous location enclosure and ex n enclosure. Along with terminal blocks, it can reach the features of explosion proof junction box or stainless steel junction box, installed with db box components, it can work as explosion proof panel or class 1 div 2 miniature circuit breaker. It becomes explosion proof battery enclosure based on inbuilt battery.
 - Increased safety Ex e stainless steel housing with dead four-way cable entries
 - Excellent factory sealed performance for stainless steel housing and cover

Compliances	IEC Standard IEC60079–0, IEC60079–7, IEC60079–31 Ex e IIC Gb Ex tb IIIC Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–7, EN60079–31 Solution II 2 G Ex e IIC Gb Solution II 2 D Ex to IIIC Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div.2, Group A, B, C, D Class II, Div.1, Group E, F, G Class III			
Material	Stainless Steel					
Rated Current	Max.250A					
IP Grade	Wet Locations, Type 4X, IP66					
Ambient Temperature	-40°C~ +55°C /-40° F~ +131° F					
Туре	1/11/111/1V/V/VI/VII/VII					





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Туре	2P	3P (2P+PE or 1P+N+PE)	4P (3P+PE)	5P (3P+N+PE)

Catalogue Numbering System

SSP-P-

<u>16</u>	<u>250</u>
Ļ	↓
Rated Current	Rated Voltage
16–16A	690:600-690V AC
32–32A	500:480-500V AC
63–63A	415:380-415V AC
125–125A	250:200-250V AC
	130:100-130V AC
	36:DC 36V
	24:DC 24V

Mounting Options & Dimensions (mm/inch)





730



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Clas
014

SSP-P Series Explosion Proof Receptacle

ss I Division 2, Group A, B, C, D Zone 1, Zone 2 ss II Division 1, Group E, F, G Class III Ex d e IIC T6 Gb Ex tb IIIC T80°C Db IP66

Zone 21, Zone 22 Type 4X, IP66 Max.125A Built-in interlocking device

Applications

- Usage by application: Depends on the application field, explosion proof enclosure can be used in refinery plants, petroleum plants, chemical plants, metal processing plant, mining plants, waste water plants and anywhere flammable gas, vapor, mist and dust present.
- Function: To be available plug-in power on device, explosion proof receptacle connect the contact of electricity to any load with plugs under the explosion protected condition closely for lighting and especially for three phase high voltage devices.

Features

- As a class 1 division 2 receptacle, SSP-P series explosion proof receptacle have increased safety glass reinforced plastic housing for both receptacle and plug and flame proof and damage protection for the electrical contacts. By inserting the explosion proof plug, the explosion proof receptacle can be used as explosion proof socket, explosion proof plug and socket, explosion proof electrical outlets for fixed or portable electrical equipment during maintenance or plant turnarounds.
 - Glass reinforced plastic housing with various size for optional for rated current 16A, 32A, 63A and 125A.
 - Same color for socket and relative plug to avoid plug-in mistake

Technical Datasheet

Compliances	IEC Standard IEC60079–0, IEC60079–1, IEC60079–7, IEC60079–31 Ex d e IIC T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22		9–1, 9–31 6	EU Standard EN60079–0, EN60079–1, EN60079–7, EN60079–31 Il 2 G Ex d e IIC T6 Gb Il 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22			NEC & CEC Standard Class I, Div.2, Group A, B, C, D Class II, Div.1, Group E, F, G Class III	
Material	Glass Reinforced Plastic, black							
Rated Voltage	600–690V AC	480–690V AC	480–690V 380–145V AC AC		200–250V AC	100–130V AC	DC 24V	DC 36V
Rated Current	16A	32A			63A		125A	
IP Grade	Wet Locations, Type 4X, IP66							
Ambient Temperature	-40°C~ +55°C /-40° F~ +131° F							
Cable Entry	Metric (standard) or NPT thread type plugs (standard) or cable glands							







SSP-P-16A,32A



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Cable Entry	Metric (standard) or NPT th			
Туре	2P	(2P+PE		

Catalogue Numbering System



Mounting Options & Dimensions (mm/inch)

SSP-A-125A





			December
SSP-A Ser	les Explos	sion Proof	Recentacie
			1100000000000

Class I Division 1, Group A, B, C, D Zone 1, Zone 2 Class II Division 1, Group E, F, G Class III Ex d IIC T6 Gb Ex tb IIIC T80°C Db IP66

Zone 21, Zone 22 Type 4X, IP66 Max.125A Built-in interlocking device

Applications

- Usage by application: Depends on the application field, explosion proof enclosure can be used in refinery plants, petroleum plants, chemical plants, metal processing plant, mining plants, waste water plants and anywhere flammable gas, vapor, mist and dust present.
- Function: To be available plug-in power on device, explosion proof receptacle connect the contact of electricity to any load with plugs under the explosion protected condition closely for lighting and especially for three phase high voltage devices.

Features

- To fit in class 1 div 1 receptacle, SSP-A series explosion proof receptacle make it easy to bring power wherever it is needed in explosion atmosphere through flameproof Ex d aluminum housing. Designed with interlocked device make the stable connection and plug can not be drawn out after plug-in, when you want to make or breaking the circuit, any electrical arcing is restricted in the factory sealed housing. It can be worked as flame proof industrial socket, explosion proof outlet, flame proof socket and flame proof plug and socket for class 1 div 1, zone 1.
 - Aluminum alloy housing with various dimensions to usage for rated current 16A, 32A, 63A and 125A.
 - Same color for receptacle and relative plug to avoid plug-in mistake

Compliances	IEC Standard IEC60079–0, IE IEC60079–31 Ex d IIC T6 Gb Ex tb IIIC T80°C Zone 1, Zone 2 Zone 21, Zone 2	C60079–1, Db IP66 22	E E © D Z	U Standard N60079–0, EN60 N60079–31 II 2 G Ex d IIC T II 2 D Ex tb IIIC b IP66 one 1, Zone 2 one 21, Zone 22	079–1, 6 Gb T80℃	NEC & Class I A, B, C Class I E, F, G Class I	CEC Standard , Div.1, Group , D I, Div.1, Group II
Material	Copper-free aluminium, grey						
Rated Voltage	600–690V AC	480–500V AC		380–415V AC	200– A	250V C	100–130V AC
Rated Current	16A	32A		63A	125A		5A
IP Grade	Wet Locations, Type 4X, IP66						
Ambient Temperature	-40℃~ +55℃ /-	-40° F~+13	1° F	:			





