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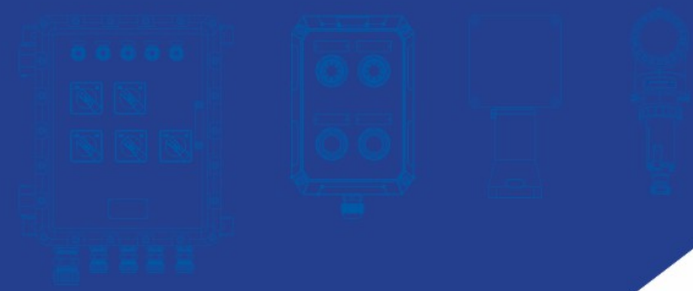
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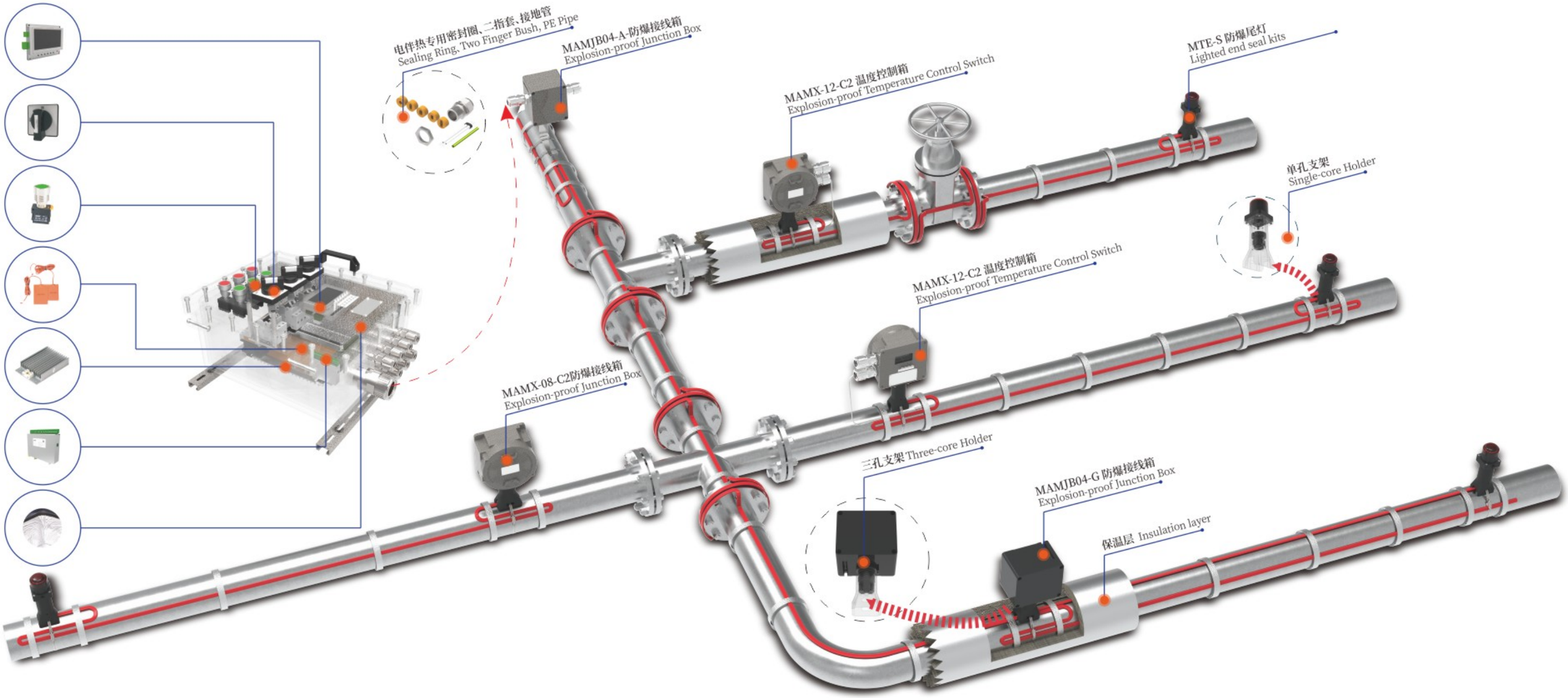
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爆炸性环境电伴热系统控制与安装示意图

Electric heat tracing system control and installation diagram
in explosive atmosphere



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TO BE SAFE AREA IN NEED.

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ABOUT US

明迈智能科技股份有限公司位于浙江省国家经济开发区，母公司为明迈防爆技术（上海）有限公司，明迈拥有超过35,000平方米的生产基地，是一家专注于防爆技术、电气技术、新能源科技及工业自动化领域的中国高新技术企业。

明迈是一家专业的防爆技术服务商，致力于为石油化工、军工、化学、制药、生物、电力、交通及基础设施等行业提供解决方案。

公司已通过ISO9001，ISO14000，OHSAS18001，QAN及QAR等管理体系认证，并取得CCC，CE，GB，IECEx，ATEX，EAC等多项国标国际防爆认证。

MINMILE intelligent technology Co.,Ltd is located in National Economy Development Park, Zhejiang Province and its head company is MAM Explosion-proof Technology (Shanghai) Co.,Ltd. MINMILE, with a plant area of more than 35,000 square meters, is a technologically innovative enterprise in China in the fields of explosion-proof technology, electrical technology, new energy science and technology, and industrial automation.

MINMILE is a professional company dedicated to providing explosion-proof technical services for petrochemical, military, chemical, pharmaceutical, biological, electric power, transportation and infrastructure industries.

MINMILE has passed ISO9001, ISO14000, OHSAS18001, QAN and QAR management systems certification and has obtained various explosion-proof certificates such as CCC, CE, GB, IECEx, ATEX and EAC.





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防爆的概念 Explosion protection

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防爆是一个综合的过程，包含了爆炸过程研究、爆炸环境控制、点燃源控制、爆炸损害控制等众多环节，涉及众多内容，知识繁杂。

在煤矿、化工等工业现场等场所，存在着大量的爆炸危险物质，如果不能采用有效的预防和防护措施，就会引起爆炸事故，导致重大的人员和财产损失。为了最大限度防止爆炸和减少爆炸带来的损失，我们有必要充分了解爆炸产生的必要条件。我们通常所说的爆炸更多的是指化学爆炸，这是一种剧烈的燃烧反应，在反应的过程中，存在剧烈的放热反应，产生高温高压和冲击波，从而引起强烈的破坏作用。一次化学爆炸，通常需要以下三个条件。

Explosion protection is a comprehensive process, which includes many aspects such as explosion process research, explosion environment control, ignition source control, explosion damage control,etc and involves many contents and complicated knowledge.

In mining, chemical industry and other industrial sites, there are a large number of explosive hazardous substances. If effective preventive and protective measures cannot be adopted, it will cause an explosion accident, resulting in significant personnel and property losses. In order to prevent explosions and reduce the damage caused by explosions, it is necessary to fully understand the necessary conditions for the explosion. The explosion we usually refer to is chemical explosion, which is a violent combustion reaction. During the reaction, a violent exothermic reaction occurs, producing high temperature and high pressure and shock waves, which cause strong damage.



可燃性物质 1
Flammable substances

既然是燃烧反应，首先需要的是可燃性物质。或者是可燃性粉尘，如糖粉，或者是可燃性蒸气，如石油脑，或者是爆炸性气体，如氢气、煤矿瓦斯。当环境中有可燃性物质时，并不一定会发生爆炸，只有当爆炸性物质的浓度在爆炸极限内时，遇到有效点燃源才会爆炸。

The first factor is flammable substances, either flammable dust, such as sugar powder, or flammable vapor, such as petroleum naphtha, or explosive gas, such ashydrogen, methane. When there is a flammable substance in the environment, it does not necessarily explode. Only when the concentration of the explosive substance is within the explosion limit will it explode if it encounters an effective ignition source.

氧气 2
Oxygen

燃烧反应本身是一种氧化反应，因此各种可燃性物质的爆炸也离不开氧气。

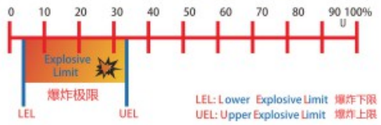
As the combustion reaction itself is an oxidation reaction, the explosion of various combustible materials is also inseparable from oxygen.

有效的点燃源 3
Ignition source

爆炸三要素同时存在时不一定发生爆炸，只有当可燃性物质与空气在一定浓度范围内并且有点燃源时才会发生爆炸。

An explosion can only occur if the mixture(flammable substance + air)has the right concentration and an ignition source is present.

可燃性气体或者粉尘在空气中的浓度
Level of a flammable gas or dust in the air





什么是可燃性物质的爆炸极限?
What is the Explosive Limit of a Flammable Substance?

可燃性物质的点燃取决于可燃性物质在空气中的浓度。当浓度介于以下两个极限之间时，可燃物会被点燃。

The ignition of a flammable substance depends on its concentrati on in the air. It can be produced within a range between two limits :

- 爆炸下限（LEL）指可燃性蒸汽，气体或粉尘与空气所组成的混合物遇火源即能发生爆炸的最低浓度，低于此浓度就不会发生爆炸。
- lower explosive limit (LEL) of a gas, vapor, mist or dust in the air is the minimum concentration above which the mixture could ignite.
- 爆炸上限（UEL）指可燃性蒸汽，气体或粉尘与空气所组成的混合物遇火源即能发生爆炸的最高浓度，超过此浓度就不会发生爆炸。
- upper explosive limit (UEL) of a gas, vapor, mist or dust in the air is the maximum concentration under which the mixture could ignite.

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气体防爆电气设备保护方法 Types of protection for electrical equipment in explosive gas atmospheres

防爆类型 Type of protection	标志 Symbol	区域 Zone	图解法 Diagram	主要应用 Main application	标准 Standard
隔爆型 Flameproof	da db dc	0 1 2		开关设备，控制站，指示设备，控制系统，电动机，变压器，加热设备，灯具 Switchgears, control stations, indicating equipment,control systems, motors, transformers, heating equipment, light fittings	GB/T 3836.2 IEC 60079-1 EN 60079-1
增安型 Increased safety	eb ec	1 2		接线盒，安装控制站，防爆元件（具有不同保护类型），鼠笼式电机，灯具 Junction boxes, control stations for installing, Ex-components (with a different type of protection),squirrel-cage motors, light fittings	GB/T 3836.3 IEC 60079-7 EN 60079-7
正压型 Pressurized	px py pz	1 1 2		开关柜和控制柜，分析仪，大型电动机 Switchgear and control cabinets, analyzers, large motors	GB/T 3836.5 IEC 60079-2 EN 60079-2
浇封型 Encapsulation	ma mb mc	0 1 2		小容量开关柜，控制和信号单元显示单元，传感器 Switchgear with small capacity, control and signalling units, display units, sensors	GB/T 3836.9 IEC 60079-18 EN 60079-18
充砂型 Powder filling	q	1		传感器，显示器，电子镇流器，发送器 Sensors, display units, electronic ballasts,transmitters	GB/T 3836.7 IEC 60079-5 EN 60079-5
油浸型 Oil immersion	ob oc	1 2		发送器，变压器，启动电阻器 Transmitters, transformers, starting resistors	GB/T 3836.6 IEC 60079-6 EN 60079-6
本安型 Intrinsic safety	ia ib ic	0 1 2		仪表技术，现场总线技术，传感器，执行器相关的电气设备安全区域的安装 Instrumentation technology, fieldbus technology, sensors, actuators associated electrical apparatus installation in the safe area	GB/T 3836.4 IEC 60079-11 EN 60079-11
“n”型 Type of protection 'n'	nA nC nR	2 2 2		2区的所有电气设备 "nC"密封装置、"nC"气密装置、"nC"非点燃元件和 "nR"限制呼吸外壳 All electrical equipment for Zone 2 nC = sealing device nC = gas check; obturaton nC = non-igniting elements and nR = restricted breathing enclosures	GB/T 3836.8 IEC 60079-15 EN 60079-15
光辐射型 Optical radiation	op is op pr op sh	0 1 0		op is=本质安全型光辐射 op pr =保护型光辐射 op sh =带互锁装置的光学系统 Op is = inherently safe optical radiation Op pr = protected optical radiation Op sh = optical radiation interlock	IEC 60079-28 EN 60079-28

粉尘防爆电气设备保护方法 Types of protection for electrical equipment in explosive dust atmospheres

防爆类型 Type of protection	标志 Symbol	区域 Zone	图解法 Diagram	主要应用 Main application	标准 Standard
外壳保护型 Protection by enclosure	ta tb tc	20 21 22		开关设备，控制站，接线箱，控制箱，发动机，灯具 Switchgear, control stations, junction boxes,control boxes,motors,light fittings	GB/T 3836.31 IEC60079-31 EN60079-31
正压型 Pressurized	pd	20 21		开关和控制柜，发动机 Switchgear and control cabinets, motors	GB/T 3836.5 IEC60079-2 EN60079-2
浇封型 Encapsulation	md md md	20 21		小容量开关柜，控制和信号单元显示单元，传感器 Switchgear with small capacity, control and signalling units, display units, sensors	GB/T 3836.9 IEC60079-18 EN60079-18
本安型 Intrinsic safety	id id id	20 21 22		仪表技术，现场总线技术，传感器，执行器相关的电气设备安全区域的安装 Instrumentation technology, fieldbus technology, sensors, actuators associated electrical apparatus – installation in the safe area	GB/T 3836.4 IEC60079-11 EN60079-11

隔爆型 Ex d

将能点燃爆炸性气体的部件置于防爆外壳内，爆炸性气体可以进入防爆外壳，但防爆外壳能承受内部的爆炸压力而不致损坏，并能防止传播到外壳外。

Ex d“Flameproof Enclosure”

Parts which can ignite an explosive atmosphere are contained within an enclosure into which the explosive atmosphere can enter but which will contain any resultant explosion and prevent its transmission outside of the enclosure.

增安型 Ex e

在正常运行时不会产生火花，结构上再进一步采取保护措施，提高设备的安全性。在正常和不正常的情况下，都必须避免危险高温。

Ex e“Increased Safety”

This protection method refers to equipment that does not ordinarily produce sparks and for which special precautions must be taken during construction. Unacceptably high temperatures must also be avoided, during both regular operation and certain irregular situations.

正压型 Ex p

保持电气设备内部保护气体的压力高于周围，以免爆炸性混合物进入外壳，或使足量的保护气体通过外壳，使内部的爆炸性混合物的浓度降至爆炸下限以下。

Ex p “Pressurized Equipment”

The ingress of an explosive atmosphere in a housing containing electrical equipment, is avoided by maintaining a protective gas (air or an inert gas) at a slight overpressure to the surrounding atmosphere. The overpressure may or may not be maintained by continuous floe.

浇封型 Ex m

将可能点燃爆炸性混合物的部分浇封在复合物中，使不能点燃周围的爆炸性气体。

Ex m “Encapsulation”

With this protection method all parts that may ignite an explosive atmosphere,are encapsulated in a resin that is sufficiently resistant to ambient influences.The atmosphere must neither be ignited by sparks, nor by heating inside the encapsulation.

充砂型 Ex q

将有可能产生电弧或火花的设备完全埋入装有石英或玻璃粉末颗粒外壳内，以防止点燃外部爆炸性气体环境。

Ex q “Powder Filling”

All equipment that has the potential to arc or to spark is contained within an enclosure filled with quartz or glass powder particles.The powder filling prevents the possibility of an ignition.

油浸型 Ex o

将电气设备的部件整个浸在保护液中，使设备不能点燃液面上或外壳外面的爆炸性气体。现在几乎不使用这种保护方法了。

Ex o “Oil immersion”

Electrical equipment or parts of it are immersed in oil, thus avoiding ignition of the explosive atmosphere above the oil surface or outside the housing. This protection method is rarely applied now.

本安型 Ex i

设备内部的电路在规定的条件下，正常工作或规定的故障状态下产生的电火花和热效应均不能点燃爆炸性混合物。与爆炸区域设备相连接的其它电气设备也应确保构造合理。

Ex i “Intrinsic Safety”

Intrinsic safety is intended for products in which the level of electrical energy circulating or stored in the product is insufficient to ignite a surrounding explosive atmosphere even under fault conditions. Because of the method by which intrinsic safety is achieved it is necessary to ensure that not only the electrical apparatus exposed to the potentially explosive atmosphere but also other electrical apparatus with which it is interconnected, is suitably constructed.

无火花型 Ex n

在正常的工作条件下和在确定的非正常工作条件下，电气设备不能点燃周围的爆炸性气体。此类电气设备可进一步分类如下：
2区的所有电气设备
"nC"密封装置、 "nC"气密装置、
"nC"非点燃元件和 "nR"限制呼吸外壳

Ex n “Non Sparking”

A type of protection where precautions are taken so that electrical equipment that has the potential to arc is not capable of igniting a surrounding explosive atmosphere. This can be further categorized as follows:
All electrical equipment for Zone 2
nC = sealing device nC = gas check; obturaton
nC = non-igniting elements and
nR = restricted breathing enclosures

光辐射型 Ex op

通过光缆控制脉冲和连续波光辐射，限制照射区域的发射光功率的比率。保护形式包括本质安全型，类似于Ex i和过功率/能量故障保护。其他方法包括光纤的机械保护和光学互锁。

Ex op “Optical radiation”

This is primarily concerned with the control of pulsed and continuous wave optical radiation through fiber optic cable with restrictions on the ratio of emitted optical power to the irradiated area. The protection concepts include Inherently Safe which is analogous to Ex i and provides over-power/energy fault protection. Other methods include mechanical protection of the fiber and optical interlocks.

外壳保护型 Ex t

该方法适用于受外壳和表面温度限制保护的电气设备，用于爆炸性和粉尘环境。

Ex t“Dust Protection by Enclosure”

This method is applicable to electrical equipment protected by enclosure and surface temperature limitation for use in explosive and dust atmospheres.

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二、爆炸性环境用电气设备分类及气体和粉尘的分级方法

Ⅱ、Classification of electrical equipment for explosive atmospheres and classification of explosive gases and dusts

在中国GB标准中，爆炸性物质包括各类爆炸性的气体、蒸气、纤维、粉尘等，其中煤矿井下由于存在瓦斯和煤尘，划为I类，不再继续细分；为了便于煤矿以外场所使用的隔爆型电气设备和本质安全型电气设备的制造，其余爆炸性气体根据其特性而划分为ⅡA、ⅡB、ⅡC三个等级。它们是根据气体/蒸气的最大试验安全间隙MESG和最小点燃电流比 MICR来划分的。见下表：

In the Chinese GB standard, explosive substances include various types of explosive gases, vapors, fibers, dust, etc. Group Ⅰ electrical equipment is for mining due to the presence of methane and coal dust and is not further subdivided. Group Ⅱ electrical equipment is for all other hazadous area with explosive gases. Group Ⅱ is further subdivided into groups ⅡA, ⅡB and ⅡC according to the gas/vapor maximum experience safety gap(MESG) and minimum ignition current ratio(MICR). See the table below:

分级 Group	最大试验安全间隙MESG（mm）	最小点燃电流比 MICR
ⅡA	MESG＞0.9	MICR＞0.8
ⅡB	0.5＜MESG＜0.9	0.45＜MICR＜0.8
ⅡC	MESG＜0.5	MICR＜0.45

由于MESG和MICR之间在点燃能量上存在着对数关系（MESG (mm)=0.022 × $MICR^{0.87}$(mA)），所以，大多数气体/蒸气在判定级别的时候，只需上述一种方法即可。

而爆炸性粉尘也可按照其特性可进一步再分类：ⅢA类：可燃性飞絮；ⅢB类：非导电粉尘；ⅢC类：导电性粉尘，标志ⅢB的设备可适用于ⅢA设备的使用条件，标志ⅢC类的设备可适用于ⅢA或ⅢB类设备的使用条件。

中国国家标准GB/T 3836、国际电工委员会IEC标准和欧洲EN标准等均采用上述的分级方法。美国NEC500标准却不相同，不过虽然方法不同，但可以基本对照，详见以下爆炸危险物质分级对照表

As there is a logarithmic relationship between the MESG and the MICR (MESG (mm)=0.022 × $MICR^{0.87}$(mA)), most of the gases/vapors are classified by only one method.

Group Ⅲ electrical equipment is for hazardous area with explosive dust. Group Ⅲ can be further subdivided to Groups ⅢA: combustible flyings, Group ⅢB: non-conductive dust and Group ⅢC: Conductive dust according to explosive features of explosive dust. Group ⅢB equipment can be applied to the conditions of use of ⅢA equipment and group ⅢC equipment can be used for the conditions of use of Group ⅢA or ⅢB equipment.

The Chinese national standardGB/T 3836, the International Electrotechnical Commission IEC standard and the European EN standard all adopt the above classification method. The US NEC500 standard is different, but the classification method is similar. See the following classification table of explosive hazardous substances.

爆炸性物质分级 Explosive substances classification			代表性物质 Typical Substances		点燃难易程度 Ignition
GB/T 3836、IEC60079、EN60079、NEC505		NEC500			
Ⅰ类 Group Ⅰ		/	瓦斯（甲烷）	Methane	难 Hard ↓ 易 Easy
Ⅱ类 Group Ⅱ	ⅡA	Class Ⅰ Group D	丙烷	Propane	
	ⅡB	Class Ⅰ Group C	乙烯	Ethylene	
	ⅡC	Class Ⅰ Group B	氢气	Hydrogen	
		Class Ⅰ Group A	乙炔	Acetylene	
Ⅲ类 Group Ⅲ	ⅢA	Class Ⅲ	可燃性飞絮	combustible flyings	难 Hard ↓ 易 Easy
	ⅢB	Class Ⅱ Group G	非导电尘	non-conductive dust	
	ⅢC（导电尘Conductive dust）	Class Ⅱ Group F	含碳尘	Carbon dust	
		Class Ⅱ Group E	金属尘	Metal dust	

三、爆炸危险区域划分 Ⅲ、Classification of Zones



气体环境 Gases/Vapors Atmosphere	GB/T 3836、IEC60079、EN60079、NEC505	NEC500
可燃气体等在正常条件下连续出现或经常存在 Continous or frequent presence of flammable gases/vapors	0区(zone 0)	Class Ⅰ Division 1
可燃气体等在正常条件下可能存在 Occasional presence of explosive gases/vapors	1区(zone 1)	
可燃气体等在正常条件下不可能存在 Infrequent presence of explosive gases/vapors	2区(zone 2)	Class Ⅰ Division 2
粉尘环境 Dusts and Fibres Atmosphere	GB/T 12476、GB/T 50058、IEC61241、EN61241、NEC505	NEC500
可燃粉尘等的爆炸性浓度在正常条件下连续出现或经常存在 Continous or frequent presence of flammable dust	20区(zone 20)	Class Ⅱ Division 1
可燃粉尘等的爆炸性浓度在正常条件下可能存在 Occasional presence of flammable dust	21区(zone 21)	
可燃粉尘等的爆炸性浓度在正常条件下不可能存在 Infrequent presence of flammable dust	22区(zone 22)	Class Ⅱ Division 2
处理、生产或使用可燃性纤维或材料产生可燃性飞絮 flammable flyings	/	Class Ⅱ Division 1
存储或处理可燃性纤维 flammable fibers	/	Class Ⅱ Division 2

关于NEC标准说明：NEC标准分NEC500、NEC505系列标准，NEC500系列标准是北美本地的标准，它与IEC系列标准在规定和要求等方面相差较大，采用的国家和区域主要是美国和加拿大及周边地区。NEC505系列标准是以IEC标准为基础制定的，基本等效于IEC标准。如果终端用户指定需要执行NEC标准的防爆产品，应明确规定执行NEC500标准，还是NEC505标准。

About the NEC standard: NEC standard is divided into NEC500 and NEC505 series standards. The NEC500 series standard is a North American standard. It differs greatly from the IEC series standards in terms of regulations and requirements and is mainly used in the United States and Canada and the surrounding areas. The NEC505 series of standards is based on the IEC standard and is basically equivalent to the IEC standard. If the end user specifies an explosion-proof product that requires NEC standards, it should clearly specify whether to implement the NEC500 standard or the NEC505 standard.

四、点燃温度组别说明及对照　IV、Classification of Ignition Temperature

各种气体/蒸气点燃温度的测定是在标准的试验环境、设备和方法下进行的，根据测试结果，可以将各种气体/蒸气的点燃温度确定，从而为分组提供依据。中国标准和IEC标准中，通常将爆炸性气体温度组别分成T1~T6这6个组别，而在北美地区，则对部分组别进行了进一步的细分，详细可以见表1。

Various gases/vapors ignition temperatures are measured under standard test environments, equipment, and methods. Based on the test results, the ignition temperatures of various gases/vapors can be determined to provide a basis for grouping. In the Chinese standard and the IEC standard, the explosive gas temperature group is usually divided into six groups of T1~T6, while in North America, some groups are further subdivided. See below table for details.

GB/T 3836、IEC60079、EN60079、NEC505		NEC500	
温度组别 Temperature class	最高温度值（℃） Maximum surface temperature（C）	温度组别 Temperature class	最高温度值（℃） Maximum surface temperature(C)
T1	450	T1	450
T2	300	T2	300
		T2A	280
		T2B	260
		T2C	230
		T2D	215
T3	200	T3	200
		T3A	180
		T3B	165
		T3C	160
T4	135	T4	135
		T4A	120
T5	100	T5	100
T6	85	T6	85

注： 对于用于煤矿井下的I类电气设备，其最高表面温度不应超过：
——150℃，当电气设备表面可能堆积煤尘时；
—— 450℃，当电气设备表面不会堆积煤尘时(例如防粉尘外壳内部)。
此外，当用户选用Ⅰ类电气设备时，如果温度超过150℃的设备表面上可能堆积煤尘，则应考虑煤尘的影响及其焖燃温度。

Note:

For Group Ⅰ electrical equipment used in mining, the maximum surface temperature should not exceed 150℃ when the surface of electrical equipment may accumulate coal dust and should not exceed 450℃ when the surface of electrical equipment does not accumulate coal dust (such as inside the dust-proof enclosure).In addition, when the user selects Group I electrical equipment, if coal dust may accumulate on the surface of the equipment whose temperature exceeds 150℃, the influence of coal dust and its smoldering temperature should be considered.

五、设备保护级别（EPL）　V、 Equipment Protection Level(EPL)

在最新的GB/T 3836、IEC60079等防爆设备的有关标准和ATEX指令中，为了便于有关单位选择合适的防爆电气设备，除了规定了防爆电气设备的防爆型式外，还规定了设备的设备保护级别（EPL），不同防爆型式的防爆电气设备，只要EPL相同，其保护能力也认为是相同的，例如Ex db eb mb IIC T6 Gb的设备与Ex db IIC T6 Gb的设备具有相同的保护能力，都可以在同样的爆炸危险区域内使用，这样有关单位只需根据不同危险区域划分情况直接选择对应EPL的设备即可，无需过多考虑设备的防爆型式，减少了工作量。各设备保护级别分级及含义见下表：

In the latest GB/T 3836, IEC60079 and other related standards and ATEX directives, in order to facilitate the selection of appropriate explosion-proof electrical equipment, in addition to the explosion-proof type of explosion-proof electrical equipment, the equipment protection level (EPL) is also specified. Explosion-proof electrical equipment of different explosion-proof type, as long as the EPL is the same, its protection ability is also considered to be the same. For example, the Ex db eb mb IIC T6 Gb equipment has the same protection capability as the Ex db IIC T6 Gb equipment, and they can all be used in the same hazadous area. Therefore, users can directly select the equipment corresponding to the EPL according to the division of different hazardous areas, without excessive consideration of the explosion-proof type of the equipment, reducing the workload. The classification and meaning of each equipment protection level are as follows:

GB/T 3836	ATEX指令 ATEX Directives	代表含义　Meaning	GB/T 3836	
			GB/T、IEC、EN、NEC505	NEC500
Ma	M1	煤矿爆炸性环境用设备，具有“很高”的保护级别 Electrical equipment with “very high” protection level for Explosive mining atmosphere	/	/
Mb	M2	煤矿爆炸性环境用设备，具有“高”的保护级别 Electrical equipment with “high” protection level for Explosive mining atmosphere	/	/
Ga	1G	爆炸性气体环境用设备，具有“很高”的保护级别 Electrical equipment with “Very high” protection level for Explosive gas atmosphere	0区 (zone 0)	Class Ⅰ Division 1
Gb	2G	爆炸性气体环境用设备，具有“高”的保护级别 Electrical equipment with “high” protection level for Explosive gas atmosphere	1区 (zone 1)	Class Ⅰ Division 1
Gc	3G	爆炸性气体环境用设备，具有“一般”的保护级别 Electrical equipment with “lower” protection level for Explosive gas atmosphere	2区 (zone 2)	Class Ⅰ Division 2
Da	1D	爆炸性粉尘环境用设备，具有“很高”的保护级别 Electrical equipment with “Very high” protection level for Explosive dust atmosphere	20区 (zone 20)	ClassⅡ Division 1
Db	2D	爆炸性粉尘环境用设备，具有“高”的保护级别 Electrical equipment with “high” protection level for Explosive dust atmosphere	21区 (zone 21)	ClassⅡ Division 1
Dc	3D	爆炸性粉尘环境用设备，具有“一般”的保护级别 Electrical equipment with “Lower” protection level for Explosive dust atmosphere	22区 (zone 22)	ClassⅡ Division 2

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六、防护等级说明（IP等级） VI、Index of IP protection

1ST Digit	图例 Test Parameter	含义 Protection Defination
0	无图标 No test applied	无防护 No specific protection
1	>50mm	防止直径不小于50mm的固体异物（如：手的意外接触） Protect against solid objects larger than 50mm. e.g. accidental touch by persons hands.
2	>12mm	防止直径不小于12.5mm的固体异物（如：手指） Protect against solid objects larger than 12mm. e.g. such as persons fingers.
3	>2.5mm	防止直径不小于2.5mm的固体异物（如：工具、导线） Protect against solid objects larger than 2.5mm. e.g. such as tools & screwdrivers.
4	>1mm	防止直径不小于1mm的固体异物（如：小工具、导线） Protect against solid objects larger than 1mm. e.g. such as tools, wires and small wires.
5		防尘（不能完全防止灰尘进入，但进入的灰尘量不得影响设备的正常运行，不得影响安全） Protect against dust limited ingress. (no harmful deposit).
6		尘密（无灰尘进入） Totally Protect against dust.

2nd Digit	图例 Test Parameter	含义 Protection Defination
0	无图标 No test applied	无防护 No specific protection
1		垂直方向滴水应无有害影响 Protect against vertically falling drops of water.e.g. condens
2		当外壳的各垂直面15° 范围内倾斜时，垂直滴水应无有害影响 Protect against direct sprays of water up to 15° from verticle.
3		各垂直面在60° 范围内淋湿，无有害影响 Protect against direct sprays of water up to 60° from verticle.
4		向外壳各方向溅水无有害影响 Protect against water sprayed from all directions. Limited ingress permitted.
5		向外壳各方向喷水无有害影响 Protect against low pressure jets of water from all directions. Limited ingress permitted.
6		向外壳各方向强烈喷水无有害影响 Protect against temporary flooding of water. e.g. for use on ship decks. Limited ingress permitted.
7		侵入规定压力的水中经规定时间后外壳进水量不致达有害程度 Protect against the effect of immersion between15cm to 1m for 30 minutes.
8		按生产厂和用户双方同意的条件（应比特征数字为7时严酷）持续潜水后外壳进水量不致达有害程度 Protect against long period of immersion under pressure
9		向外壳各方向喷射高温/高压水无有害影响 Spraying high temperature/high pressure water in all directions of the housing has no harmful effects.

IP Rating Example
IP等级举例

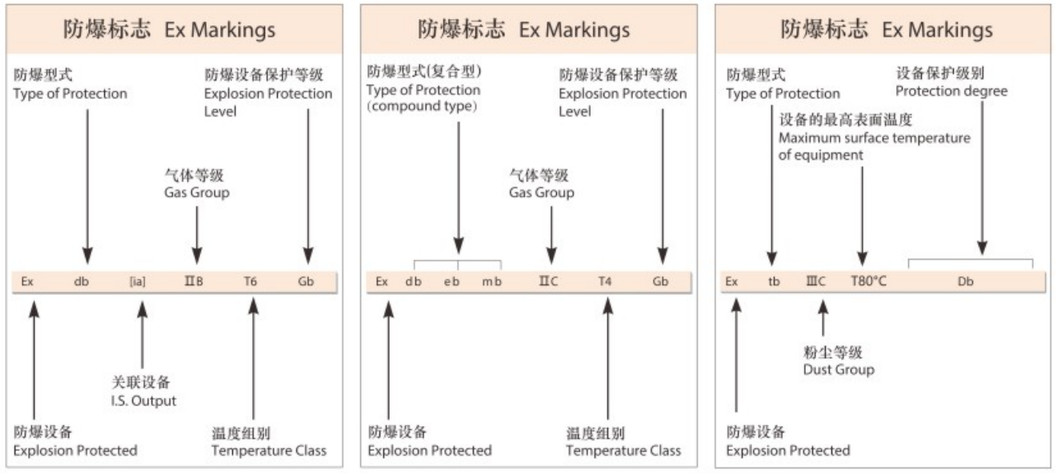
IP 6 6

Ingress Protection

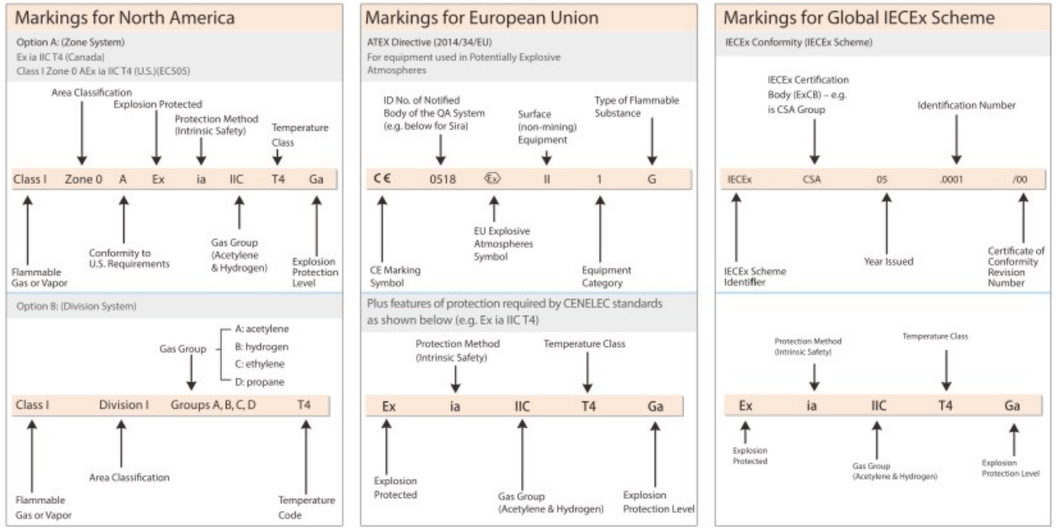


七、不同标准体系防爆标志举例 Ⅶ、Ex-marks examples in different standard systems

中国GB/T 3836 China GB/T 3836



北美、欧盟、IECEx 防爆标志说明 North America, European Union, IECEx standard system marks



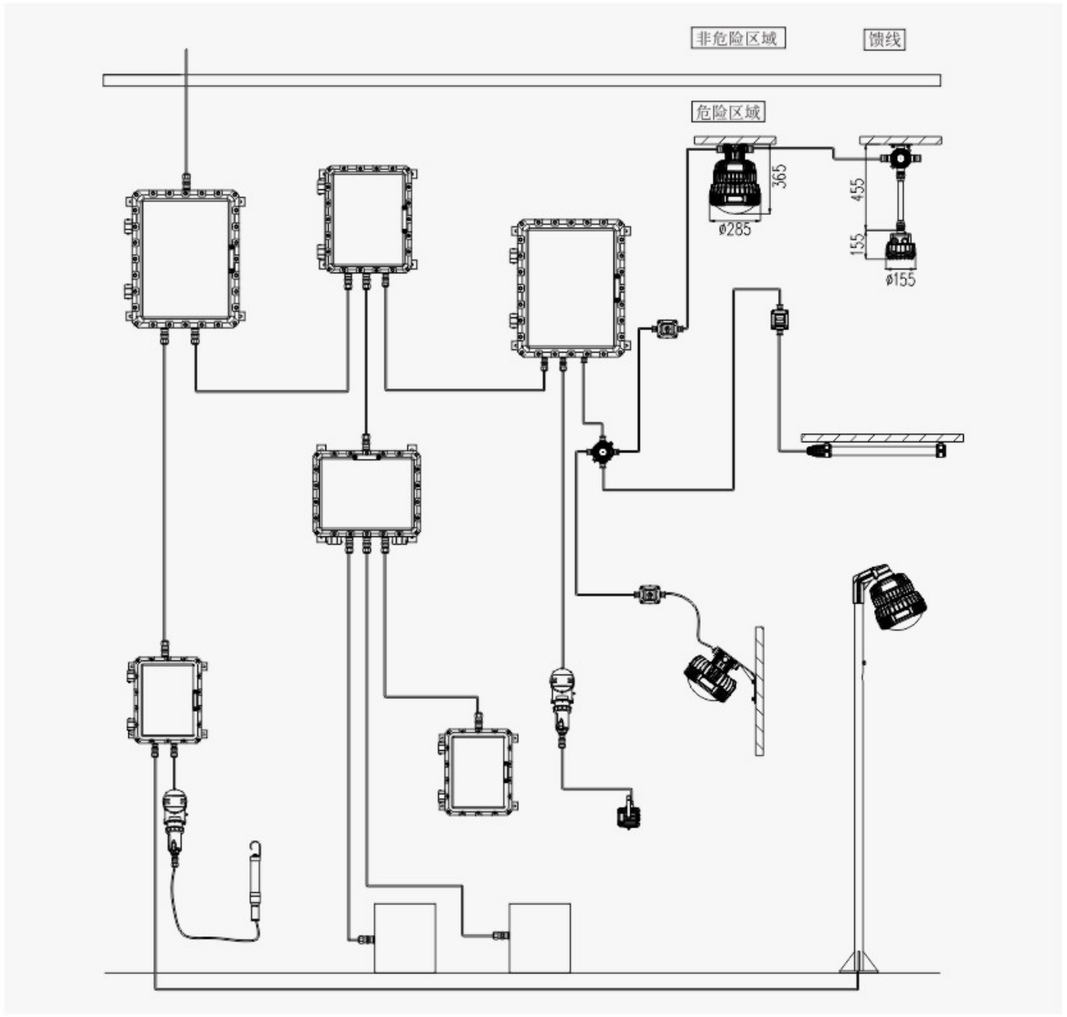
第六章 防爆电气设备的选型、安装、检查与维护

1. 爆炸性危险环境中的电气整体防爆系统

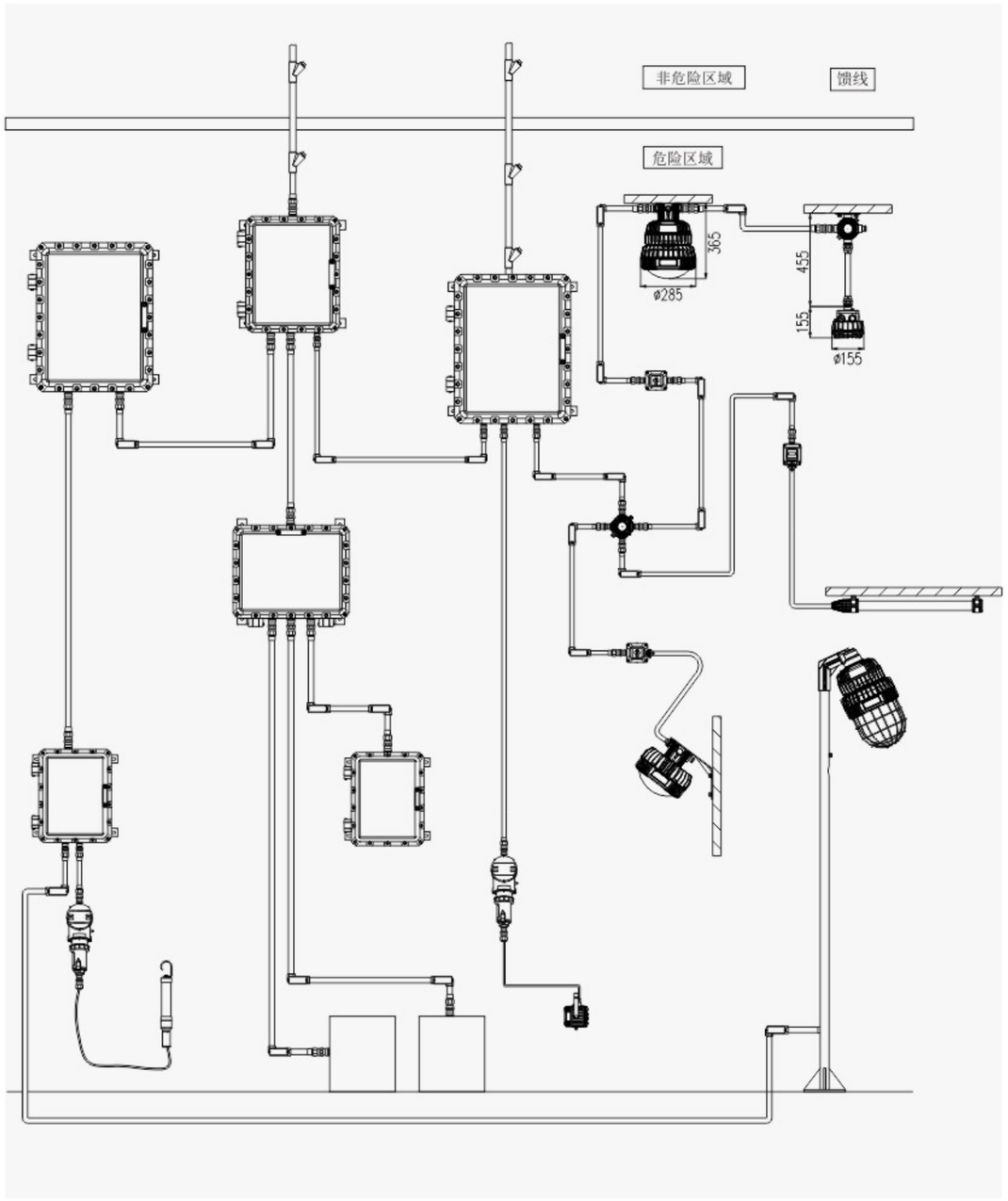
在存在爆炸危险的现场环境中，电气设备和线路往往存在诸多不符合防爆要求的情况。例如，部分设备的主机具备防爆功能，但其附件却未达到防爆标准；或者设备本身防爆，而与之配套的仪表却不具备防爆性能；甚至同类设备中，一部分满足防爆要求，而另一部分却不符合。此外，还存在防爆设备型号不齐全、系统配置不符合规范、备件不配套以及施工过程中的各类问题。这些现象均未能满足“电气整体防爆”的严格要求。

因此，在爆炸性危险环境中安装和使用的防爆电气设备，其安全性不仅取决于防爆电气设备的制造质量，还需从工程设计、安装使用、检查与维护等各个环节进行全面把控，以确保整个电气系统达到整体防爆的目标。这要求我们在进行电气系统设计时，应充分考虑防爆要求，选用符合标准的防爆设备和材料；在安装过程中，应严格按照规范进行操作，确保设备的正确安装和连接；在使用过程中，应定期对设备进行检查和维护，及时发现并处理潜在的安全隐患；同时，还应建立完善的应急预案，以应对可能发生的爆炸事故，从而保障人员和财产的安全。

1.1 下图为电缆布线方式的防爆系统图



1.1 下图为钢管布线方式的防爆系统图



防爆的概念 Explosion protection

在不同区域中，使用安装的格兰必须遵循相关的要求与技术规则做为参考，同时考虑 IEC 60079-14 中规定的准则及灵活的尺寸数据。参数选择表如下流程图。

In operation of the employment in classified areas, the cable gland must be assembled respecting the prescriptions of the technical rules of reference, considering that such assemblages can be determined following the parameters of the rules IEC 60079-14 in view of the date the sizing, parameters selectable as per following flow chart extrapolated by the same rule.

Selection of glands, adapters and blanking elements type of protection according to the enclosure type of protection

Protection technique for the equipment	Glands, adapters and blanking element protection technique			
	Ex "d"[c]	Ex "e"[d]	Ex "n"[d]	Ex "t"[e]
Ex "d"	×			
Ex "e"	×	×		
Ex "i" and Ex "nL" – Group II[a]	×	×	×[f]	
Ex "i" – Group III[a]				×[f]
Ex "m"	Ex "m" would not normally be applied to wiring connections. The protection technique for connections shall suit the wiring system used.			
Ex "n" except Ex "nL"[g]	×	×	×	
Ex "o"	Ex "o" would not normally be applied to wiring connections. The protection technique for connections shall suit the wiring system used.			
Ex "p", all types	×	×	×[b]	
Ex "pD"				×
Ex "q"	Ex "q" would not normally be applied to wiring connections. The protection technique for connections shall suit the wiring system used.			
Ex "s"	Only as allowed by the conditions of the certificate.			
Ex "t"				×

X denotes permitted use.

[a] If only one intrinsically safe circuit is applied then there are no specified requirements for cable glands.

[b] Only permitted for Gc installations

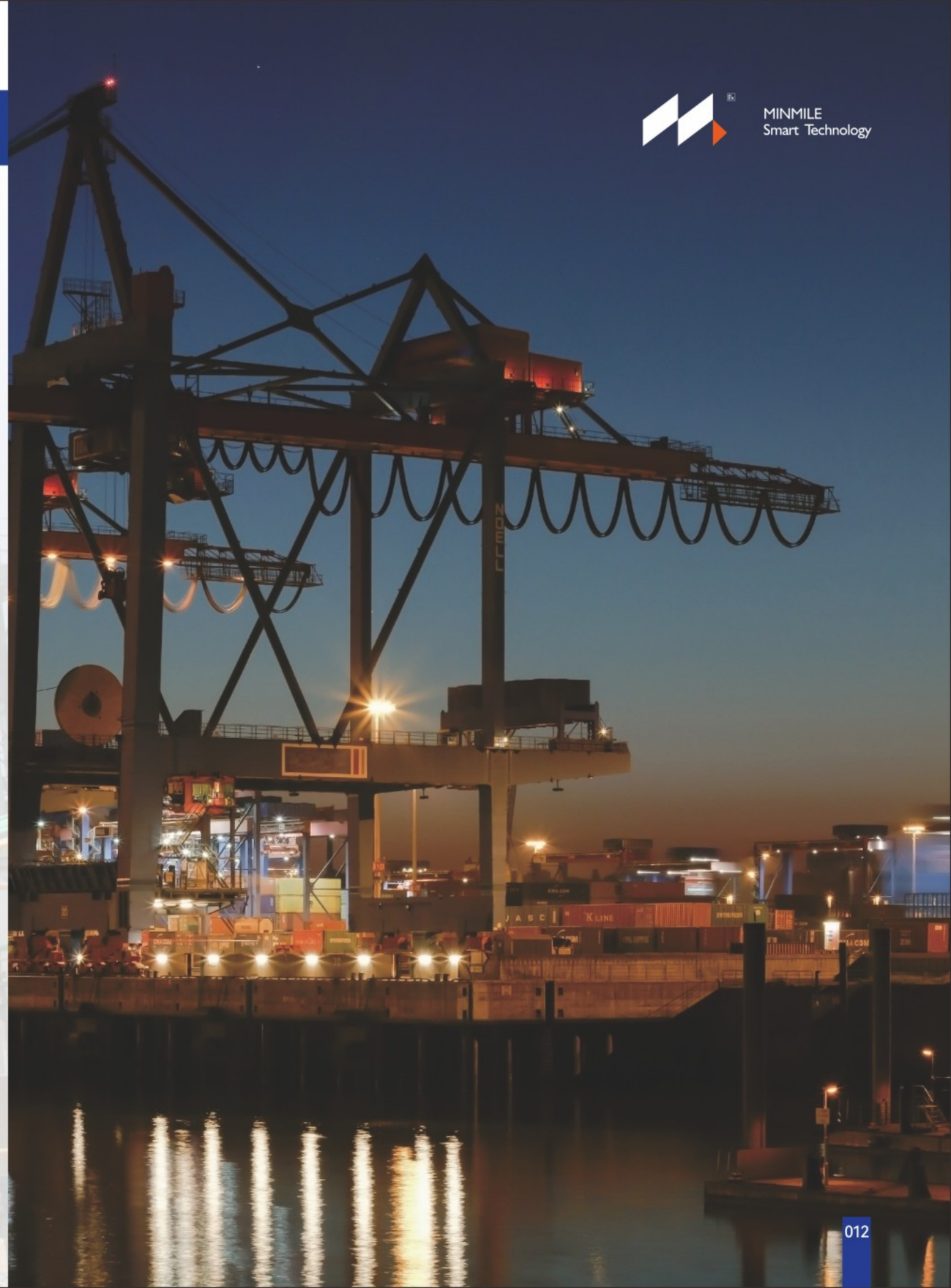
[c] Additional requirements for type of protection "d" Flameproof enclosures see IEC60079-14:2013 clause 10.6

[d] Additional requirements for entries other than Ex"d", Ex "t"or Ex "nR"see IEC60079-14:2013 clause 10.4

[e] Additional requirements for type of protection "t" Protection by enclosure see IEC60079-14:2013 clause 10.7

[f] Terminal boxes see IEC60079-14:2013 clause 16.6

[g] For Ex "nR" see IEC60079-14:2013 clause 10.8



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MAM X – □-□ □

-D：-43℃~+60℃（IECEx产品）
-S：-40℃~+60℃（IECEx产品）

-D: -43℃~+60℃ （ IECEx certified)
-S: -40℃~+60℃ （ IECEx certified)

功能代号 Function code
- 02－□(电气控制箱/Electrical control box，B1、B2...、B7、B8)
- 03－□(电气控制箱/Electrical control box，C2、C3)
- 04－□(操作柱/Control station，B1、B2...、B7、B8)
- 05－□(操作柱/Control station，C2、C3)
- 06－□(分线盒/Terminal box，C1)
- 07－□(接线箱/Junction box，B1、B2...、B7、B8)
- 08－□(接线箱/Junction box，C2、C3)
- 09－□(按钮盒/Pushbutton box，A1、A2、A3)
- 10－□(照明开关/Lighting switch，A1、A2、A3)
- 11－□(温度控制箱/Temperature control box，B1、B2...、B7、B8)
- 12－□(温度控制箱/Temperature control box，C2、C3)
- 13－□(AP接入点/AP Access Point，B1、B2...、B7、B8)
- 14－□(AP接入点/AP Access Point，C2、C3)
- 16－□(配电箱/Distribution box，B1、B2...、B7、B8,C1、C2、C3)
- 18－□(电气控制箱(带呼吸片)/Electrical control box(with respirator)，B1...B8)

防爆电气控制装置 Explosion-proof electrical control device

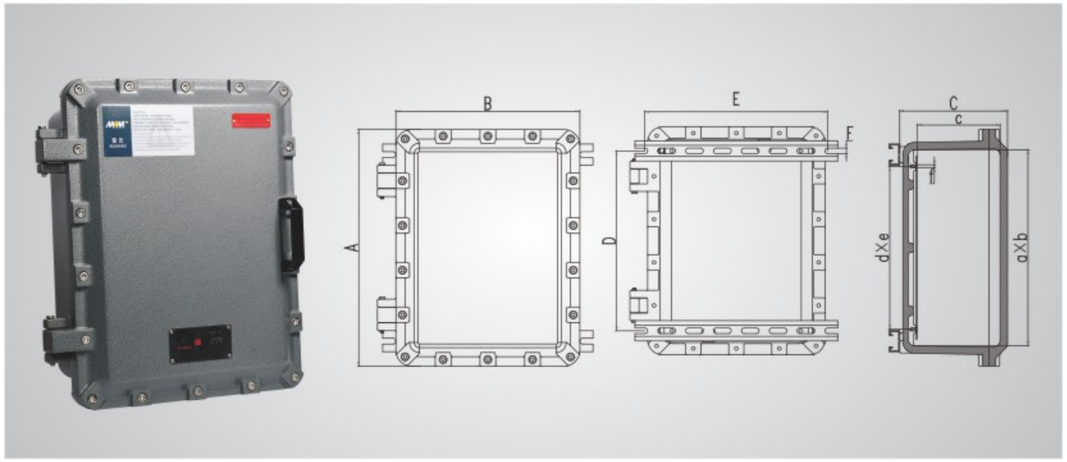
公司代码 Company Code

通用技术参数 / General Technical Parameters

产品型号 Production model	型号分类 Enclosure code	产品尺寸规格 Enclosure size	防爆标志 Ex- mark
MAMX-09 MAMX-10	A1	102*92*93	Ex db IIB T6...T4 Gb Ex tb IIIC T80℃...T135℃ Db I 2 G Ex db IIB T6...T4 Gb II 2 D Ex tb IIIC T80℃, T95℃, T135℃ Db
	A2	157*105*93	
	A3	212*105*93	
MAMX-02 MAMX-04 MAMX-07 MAMX-11 MAMX-13 MAMX-16 MAMX-18	B1	200*250*170	Ex db IIB+H2 T6...T4 Gb Ex tb IIIC T80℃...T135℃ Db 2G Ex db IIB+H2 T6...T4 Gb 2D Ex tb IIIC T80℃, T95℃, T135℃ Db
	B2	200*300*170	
	B3	200*350*170	
	B4	300*350*230	
	B5	350*450*205	
	B6	450*560*210	
	B7	450*560*280	
	B8	560*720*350	
MAMX-06	C1	108*108*75	Ex db IIC T6...T4 Gb Ex tb IIIC T80℃...T135℃ Db 2G Ex db IIC T6...T4 Gb 2D Ex tb IIIC T80℃, T95℃, T135℃ Db
MAMX-03 MAMX-05 MAMX-08	C2	161*161*109	
MAMX-12 MAMX-14 MAMX-16	C3	360*360*195	

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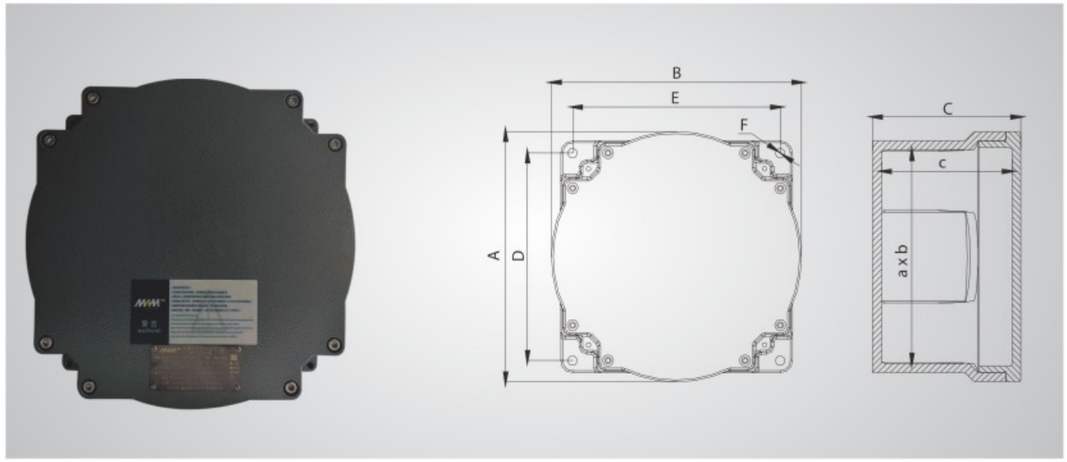
外形尺寸示意图 / Reference Details



● 外形尺寸选择参照表 Enclosure size table

代号 Code	外形尺寸 Outline dimensions			内部空间尺寸 Inner space dimensions			底板安装孔尺寸及规格 The hole distance on mounting plate			安装支架尺寸规格 Mounting bracket dimensions		
	A	B	C	a	b	c	d	e	f	D	E	F
B1	250	200	170	180	130	128	124	90	M6	171	200	10
B2	300	200	170	230	130	128	174	90	M6	221	200	10
B3	350	200	170	280	130	128	224	90	M6	271	200	10
B4	350	300	230	288	238	190	218	148	M6	255	310	10
B5	450	350	205	370	270	158	310	200	M6	355	360	12
B6	560	450	210	480	370	159	390	300	M6	465	440	14
B7	560	450	280	480	370	229	390	300	M6	465	440	14
B8	720	560	350	629	470	294	550	408	M6	600	560	14
B9	672	472	372	572	372	310	542	342	M6	560	480	14

外形尺寸示意图 / Reference Details

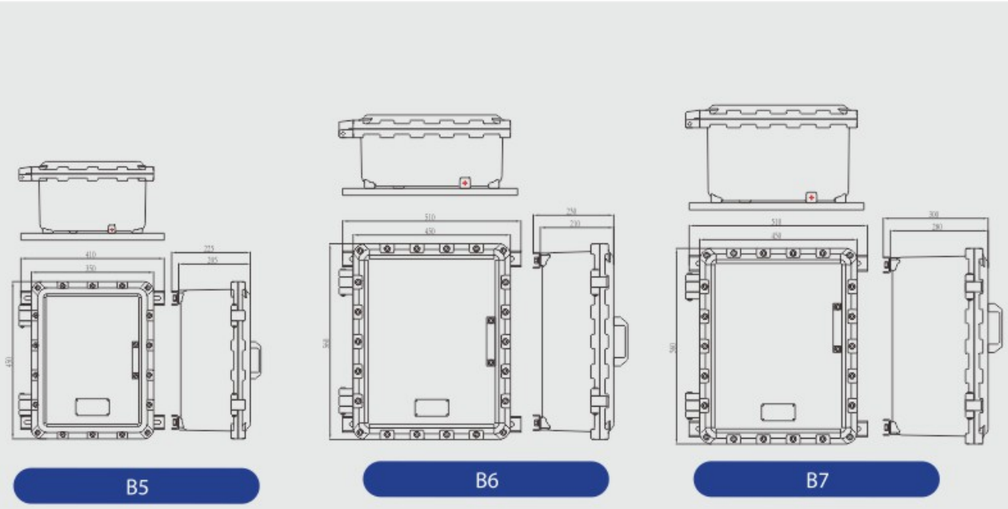


● 外形尺寸选择参照表 Enclosure size table

代号 Code	外形尺寸 Outline dimensions			内部空间尺寸 Inner space dimensions			安装尺寸规格 Mounting dimensions		
	A	B	C	a	b	c	D	E	F
C2	161	161	109	140	140	85.5	141	141	∅7
C3	360	360	195	305	305	167	306	306	∅12
C3-1	360	360	265	305	305	237	306	306	∅12
C4	270	270	160	220	220	141	224	224	∅10
C5	320	320	140	270	270	116	280	320	∅10

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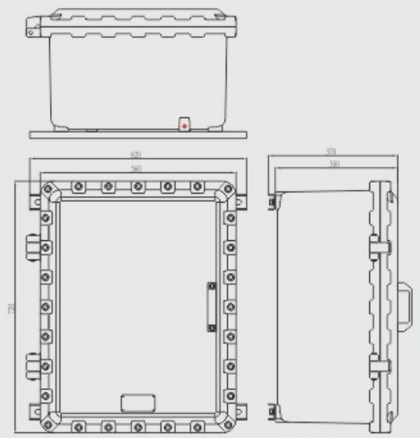
● 各代号对应实际外形尺寸图 Outline dimension drawings (all dimensions in mm)



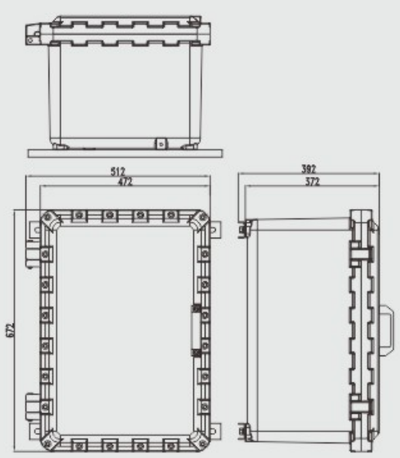
B5

B6

B7

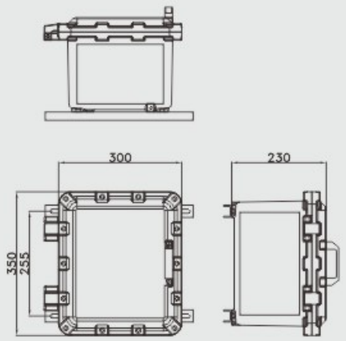


B8

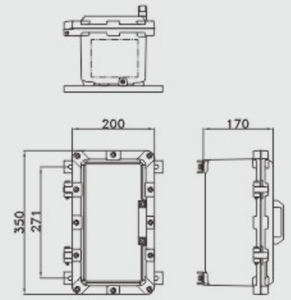


B9

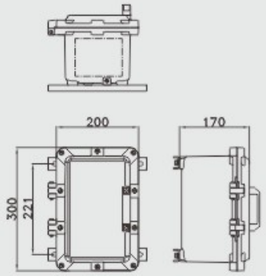
● 各代号对应实际外形尺寸图 Outline dimension drawings (all dimensions in mm)



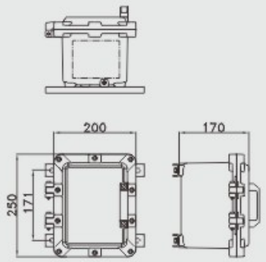
B4



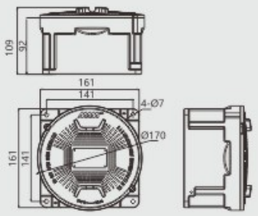
B3



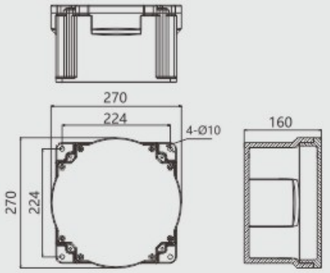
B2



B1

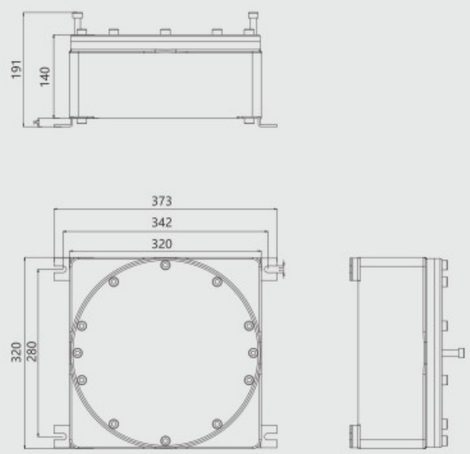


C2

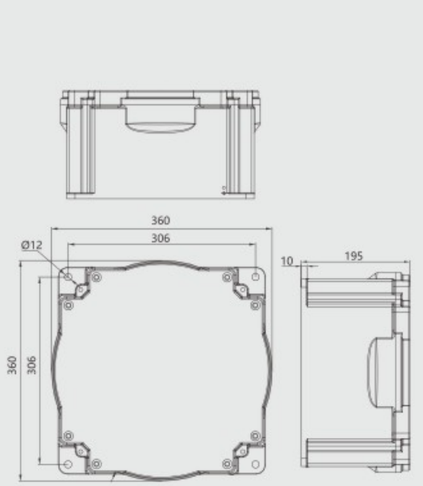


C4

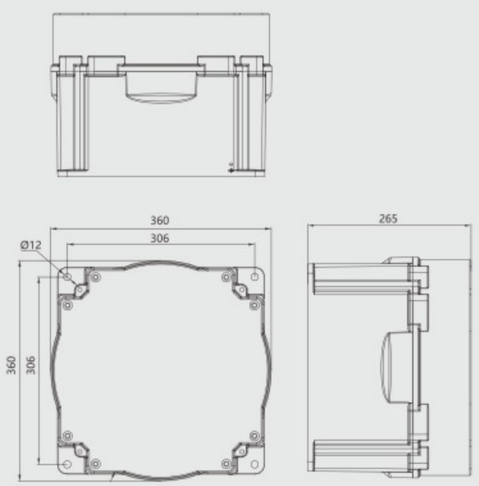
各代号对应实际外形尺寸图 Outline dimension drawings (all dimensions in mm)



C5



C3



C3-1

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防爆电气控制箱MAMX-02/03系列
Explosion-proof electric control box MAMX-02/03 series

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产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。用于照明、动力、检修配电箱。

Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.Used as lighting, power and maintenance distribution boards.

适用于控制危险区域的工艺维温和防冻中的电伴热，电伴热进行供电控制，采用不同的仪表、程序控制模块对加热物体的温度调控，满足不同客户的需求；

Suitable for controlling the temperature maintenance and the power supply of electric heating in the anti-freezing in hazardous area; Adopting different instruments and program control modules to control the temperature of the heating object so as to meet the requirements of different customers;

可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆等。

The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable.



型号含义 / Model Identification

MAMX – □ – □ □

□：
02：防爆电气控制箱
02:Electric control box(IIB+H2)
03：防爆电气控制箱
03:Electric control box(IIC)

□：
IIB+H2壳体
IIB+H2 Enclosure:
B1:200*250*170
B2:200*300*170
B3:200*350*170
B4:300*350*230
B5:350*450*205
B6:450*560*210
B7:450*560*280
B8:560*720*350

IIC壳体
IIC Enclosure:
C2:161*161*109
C3:360*360*195

□：
W：壳体带密封圈，不带不注（CCC产品）
-D：-43℃~+60℃
-S：-40℃~+60℃

W：The enclosure with sealing ring, not marked if no need (CCC certified)
-D：-43°C~+60°C
-S：-40°C~+60°C

举例:MAMX-02-B2-D，表示防爆电气控制箱，壳体尺寸为200*300*170mm.环境温度-43℃-+60℃。
For Example:MAMX-02-B2-D represents explosion-proof electric control box，with enclosure dimension 200*300*170mm and ambient temperature -43℃-+60℃.

通用技术参数 / General Technical Parameters

	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db ⅡB + H_2 T6...T4 Gb Ex db ⅡC T6...T4 Gb Ex tb ⅢC T80℃...T135℃ Db	Ⓔx Ⅱ2G Ex db ⅡB+H_2 T6...T4 Gb Ⓔx Ⅱ2G Ex db ⅡC T6...T4 Gb Ⓔx Ⅱ2D Ex tb ⅢC T80°C,T95°C,135°C,Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
通用电源供应 General power supply	额定电压 Rated voltage：MAX.AC690V 50/60Hz 额定电流 Rated current：MAX.630A	
防护防腐等级 Degree of protection and anti-corrosion level	IP66、WF2	
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel	
保护壳材质 Enclosure material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102	
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating , MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional	
内部安装元件 Built-in components 常用元件品牌 Normal components brand: 西门子 Siemens、施耐德 Schneider、ABB	微型断路器、塑壳式断路器、交流接触器、热继电器、电机保护开关、双电源开关、中间继电器、时间继电器、固态继电器、互感器、熔断器、变频器、软启动器等。 MCB,MCCB,AC contactor,Thermal Relay,MTH,SHK-M,Auxiliary Relay,Time Relay,SSR, PLC,Mutual inductor,FU,Frequency Converter,Soft Starter etc. 注：以上漏电断路器全部实现在箱外自复位，无需开盖复位； Note: Above leakage circuit breaker fully realize self-resetting in outside box, no need to open the cover of box	
内部安装仪表 Built-in instrument	程序控制模块、温控仪、电流表、电压表等显示仪表。 Different display instruments such as Program control modules, thermostat, ammeter and voltmeter. 注:以上仪表可显示、可操作; Note: Above instruments can be viewed and operated.	
接线端子品牌 Terminal brands	魏德米勒、菲尼克斯等; Weidmuller、Phoenix etc.	
进出线电缆 Cable entry	铠装电缆、橡胶电缆 Armored cable Rubber cable	

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耐低温环境产品配置图
Low temperature-resistant control box configuration diagram

低温环境使用的优势及说明
产品可使用在-60℃的环境中，箱内可配置保温层及硅胶加热装置，箱面采用耐低温金属操作及显示配件，保证了产品在低温环境下的使用。

Low temperature-resistant control box instructions:
The control box can be used in the -60℃ low temperature environment by being equipped with insulation layer, silicone heater, low temperature-resistant metal switches and pushbuttons and display accessories.

VS-100显示控制装置
VS-100 Display control instrument

耐低温-100℃防爆按键
Explosion-proof instrument push button, -100℃ low temperature resistance

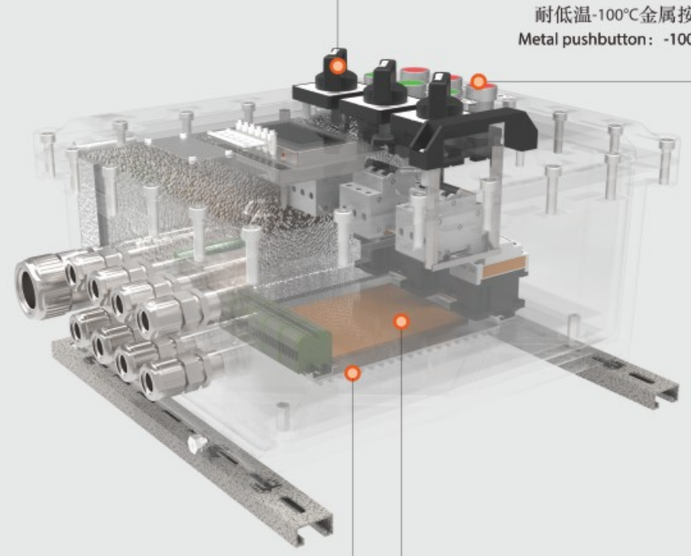
Insulation Layer 保温层

MGC-40程序控制器
MGC-40 Program controller

耐低温环境产品配置图
Low temperature-resistant control box configuration diagram

低温环境使用的优势及说明
产品可使用在-60℃的环境中，箱内可配置保温层及硅胶加热装置，箱面采用耐低温金属操作及显示配件，保证了产品在低温环境下的使用。

Low temperature-resistant control box instructions:
The control box can be used in the -60℃ low temperature environment by being equipped with insulation layer, silicone heater, low temperature-resistant metal switches and pushbuttons and display accessories.



耐低温-60℃金属操作手柄，并可配置3把挂锁
Metal switch:-60℃ low temperature-resistant and 3 padlocks optional

耐低温-100℃金属按钮，包括按钮片也采用金属材质
Metal pushbutton：-100℃ low temperature-resistant and with metal button sheet

Silicone heater 硅胶加热器

高效传热板，有效配合硅胶加热器将均匀传导
Heat transfer plate：effectively matched with silicone heater to conduct heat evenly

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● 产品细节展示与说明 Product details display and description





根据现场低温环境需求，箱内可配置保温层。
Insulation layer can be installed inside the box under low temperature upon customer's requirements.



PC阻燃材质指示灯罩，高强度，耐7J冲击；
The indication lamp cover is made of PC, with flame retardant material,high strength, 7J shock resistance.



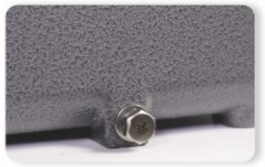
多种防爆格兰可选择，也可选配防爆呼吸阀。
A variety of explosion-proof cable glands and breather plugs are optional.



断路器手柄可配挂锁，防止现场误操作
The circuit breaker handle can be lockable to prevent the occasionally operation.



采用一体式压铸合页，方便开启；
Use integrated type hinges, easier for open.



定制防误伤专用不锈钢接地螺栓
Use stainless steel earth boss with earth symbol

● 硅胶加热器产品说明 Silicone heater instructions



硅胶加热器型号：Msgh-50 \Msgh-100\ Msgh-100B\ Msgh-150
注：Msgh 表示硅胶加热器，后面数字代表功率，100B的B代表大100W

Silicone heater model: Msgh-50 \Msgh-100\ Msgh-100B\ Msgh-150
Note: Msgh means silicone heater, the following number represents power, and 100B represents large size 100W.

■ 产品特点

* 产品发热体采用镍铬合金丝，发热块，热效率高，使用寿命长。
* 防潮化硅橡胶与无碱玻璃纤维双重绝缘，使加热器绝缘性能更加可靠。
* 铝板辅助散热，使加热器的热效率提高，并延长其使用寿命。
* 安装方便。

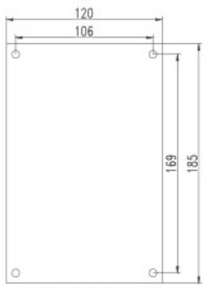
■ Product features

* Using nickel-chromium alloy wire heating elements with quick heating efficiency and long service life.
* The double insulation of the moisture-proof silicone rubber and the alkali-free glass fiber makes the insulation performance of the silicone heater more reliable.
* The aluminum plate assists in heat dissipation, which increases the thermal efficiency of the heater and extends its service life.
* Easy to install.

■ 产品参数 Product parameters

额定电压	Rated voltage	220V
介电强度	Dielectric strength	2000v / min
绝缘电阻	Insulation resistance	>50MΩ
绝缘材料	Insulation material	硅橡胶 Silicome rubber
耐温	Temperature resistance	-60℃-+250℃

■ 产品外形尺寸 Product dimension



50W/100W/150W

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VS-100显示控制装置 VS-100 display control device



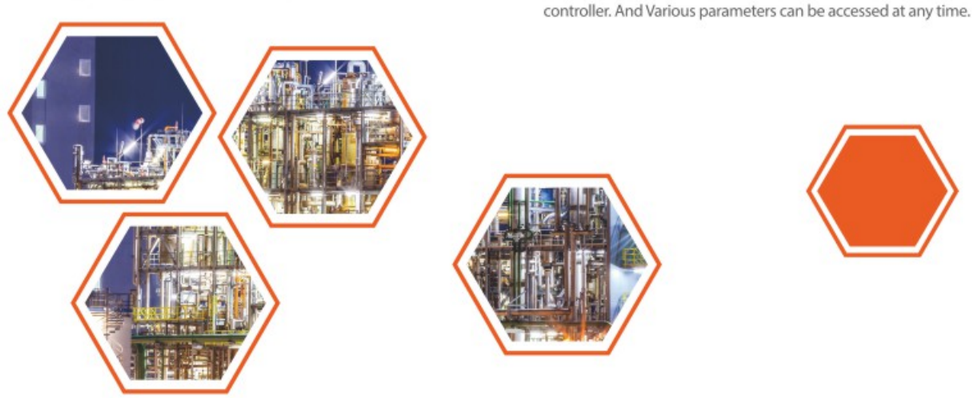
* MGC-40系统配备一个用户界面VS-100，采用4.3英寸显示屏并专门针对防爆功能带有防爆箱体箱外按键操作（无需键盘输入即可编程），便于用户从现场访问所有的伴热回路且易于操作使用，具有中文/英文可选择。VS-100显示控制装置可以安装在本地的配电装置上，也可安装在远程位置，通过以太网或串行接口与MGC-40伴热控制器通讯。
* The MGC-40 system is equipped with a user interface VS-100. This VS-100,with an 4.3-inch display, is designed with an explosion-proof box which can be operated outside the box and is programmable without keyboard input. And it allows users on site to access all heat traces and it is easy to operate and has Chinese/English options. The VS-100 display control unit can be installed on a local power distribution unit or in a remote location to communicate with the MGC-40 heat tracing controller via an Ethernet or serial interface.
* VS-100显示控制装置专为防爆配电装置设计，采用防爆按键可直接箱外设置参数及查询数据；
* VS-100 display control device is designed for explosion-proof power distribution device, using explosion-proof buttons to set parameters and query data directly outside the box;

产品优势说明

* 极大的节省防爆箱内安装的空间，缩短了安装时间，大大降低现场危险区域使用配电装置的成本。举例：如采用单回路配置1套温控器，如果12个回路的配电装置箱面就密密麻麻都是温度控制器，且由于防爆配电装置本身空间有限，导致需要采用更多的箱体才能满足多路控制和显示的要求，且现场调试维护等较为繁杂。而集成的MGC40系统对比单通道温控仪，功能更加全面，运行更加稳定，各种参数可以随时调阅。

Product Advantage

* Greatly save the space in the explosion-proof box, shorten the installation time and reduce the cost of using the power distribution device in the hazardous area on site. For example, if a single circuit is equipped with one set of thermostats, 12-circuit power distribution device box is densely covered with thermostats. And because of the limited space of the explosion-proof power distribution device itself, more boxes are needed to meet the requirements of multi-circuits control and display. And on-site debugging and maintenance are more complicated. On the contrary, the integrated MGC40 system is more comprehensive and more stable than the single-channel temperature controller. And Various parameters can be accessed at any time.



MGC-40程序控制器 MGC-40 program controller



* 每个IO模块最多可接受4路RTD输入，安装在现场的每个RMM2模块最多能接受8路RTD，可以通过RS-485以菊花链方式连接16个RMM2模块，最多达128（16*8）个RTD。由于可通过单根线缆将多个RMM2与MLC-500程序控制器联网，将大大降低TRD现场布线的成本。
* Each IO module can accept up to 4 RTD inputs. Each on-site RMM2 module can accept up to 8 RTD. Via RS-485 and by daisy-chain way, 16 RMM2 modules can be connected. Therefore, up to 128 (16*8) RTD can be accepted. As multiple RMM2s can be networked with the MLC-500 program controller via a single cable, the cost of TRD field wiring will be greatly reduced.

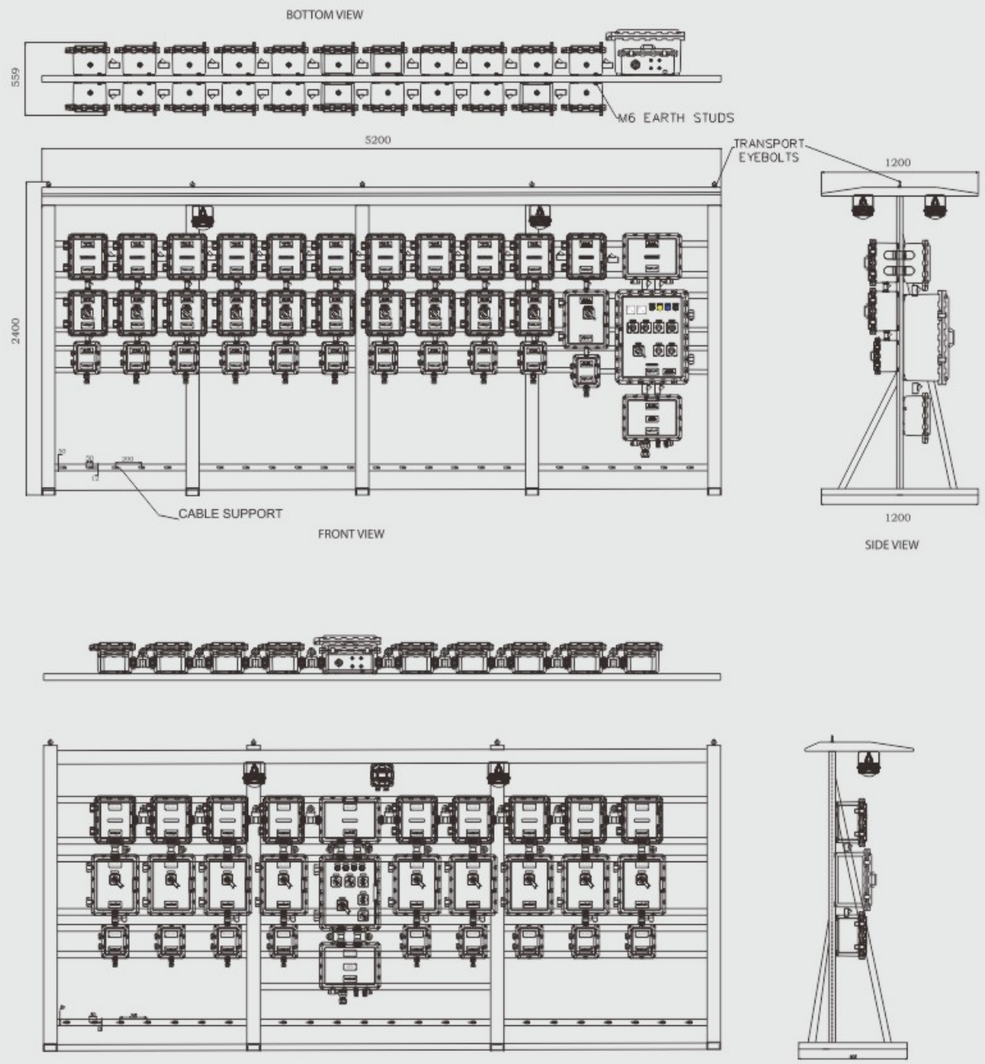
功能用途 Function and application

* 一款多点电子控制、监测和配电系统，独特的单电控制器架构，适用于电伴热工艺温度维持和防冻应用；
* One multi-point electronic control, monitoring and power distribution system with unique single-electric controller architecture, suitable for temperature maintenance and antifreeze applications in electric heat tracing systems;
* 每个伴热回路使用一个单点控制模块，高度的可靠性。控制模块包括控制电路、电流电压监控、线路故障监控和报警输出、等功能，精确控温的同时确保了多重安全保护；
* Each heat tracing circuit uses a single point control module which includes control circuit, current and voltage monitoring, line fault monitoring and alarm output, etc. This module ensures precise temperature control while ensuring multiple safety protection.
* 每个伴热回路可使用2个电阻温度传感器（RTD），实现温度控制、监测和警报保护等多种功能。系统可接受不同来源的RTD输入，可硬接RTD到伴热控制模块。
* Each heat tracing circuit can use two resistance temperature detectors (RTD) to achieve various functions such as temperature control, monitoring and alarm protection. The system can accept RTD inputs from different sources and can be hardwired to the heat tracing management module.
* MGC-40程序控制器具有标准的通讯端口，允许通过Modbus协议，通过RS-485方式与MGC-40配电装置以外的设备进行通讯（如上位机，DCS等）。
MGC-40可使用3线100Ω铂电阻RTD，2线或3线100Ω镍铁
* The MGC-40 program controller has a standard communication port which allows communication with devices other than the MGC-40 power distribution device (such as the PC, DCS, etc.)via the Modbus protocol and RS-485 way .
* RTD，或2线100Ω镍RTD，以及热电偶等万能输入测量温度，温度信息可来自直接硬线接线至MGC-40控制装置的单个RTD、本地MGC-40的IO模块或RMM2模块的远程来源。
* MGC-40 can use 3-wire 100Ω platinum resistance RTD, 2-wire or 3-wire 100Ω nickel-iron RTD, or 2-wire 100Ω nickel RTD, and thermocouple and other universal input to measure temperature. The temperature information can come from local MGC-40 IO module ,remote source of RMM2 module or the single RTD which are directly hardwired to MGC-40 control device.

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常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

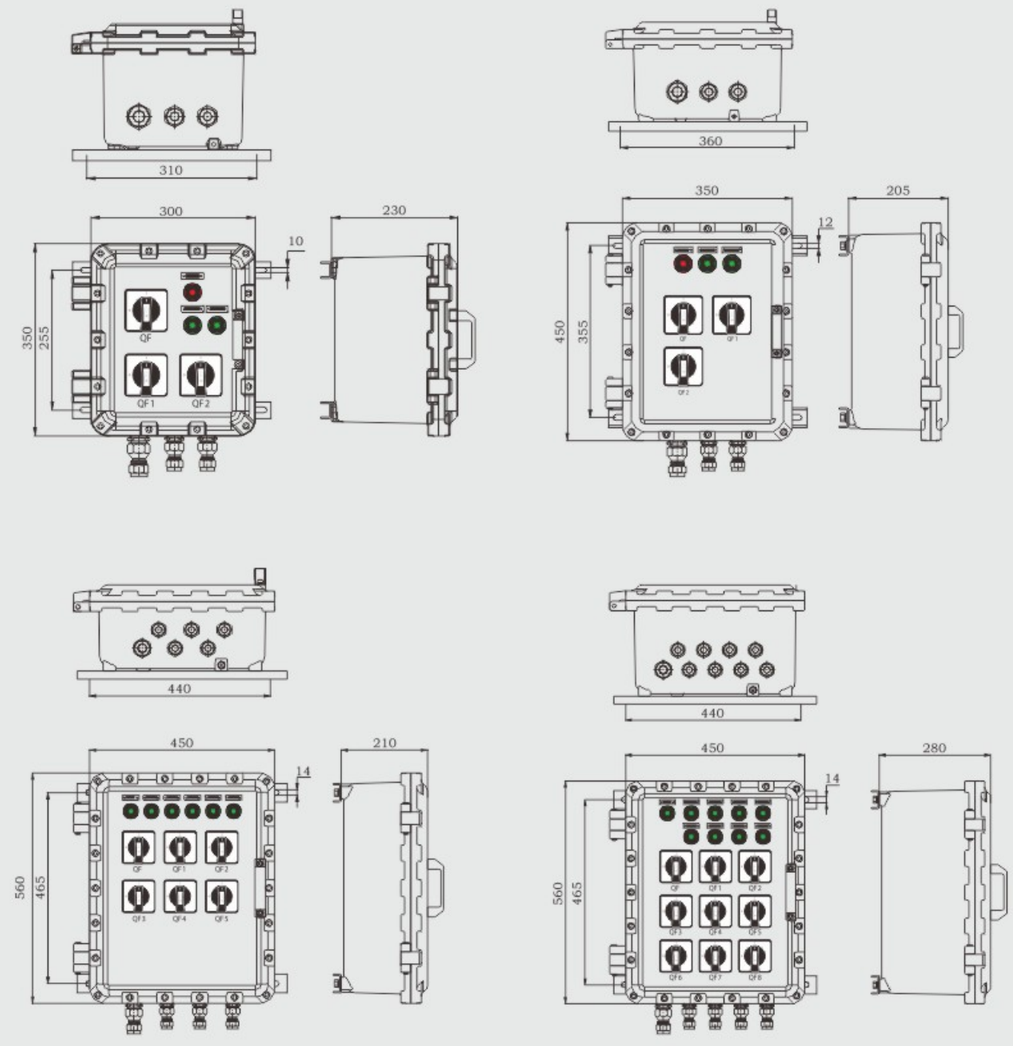
全分割式隔爆配电箱 Full compartmentalized flameproof distribution box



Explosion-proof electric control device MAMX-02

常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

全分割式隔爆配电箱 Full compartmentalized flameproof distribution box

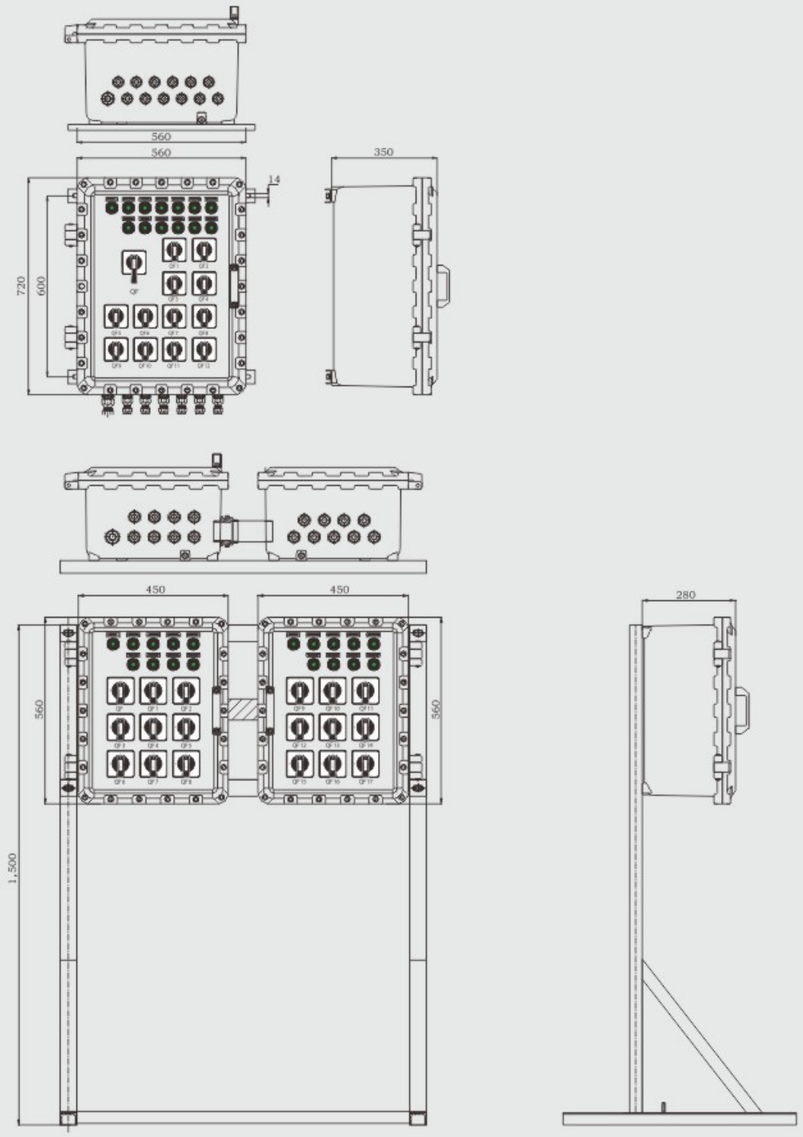


Explosion-proof electric control device MAMX-02

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常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

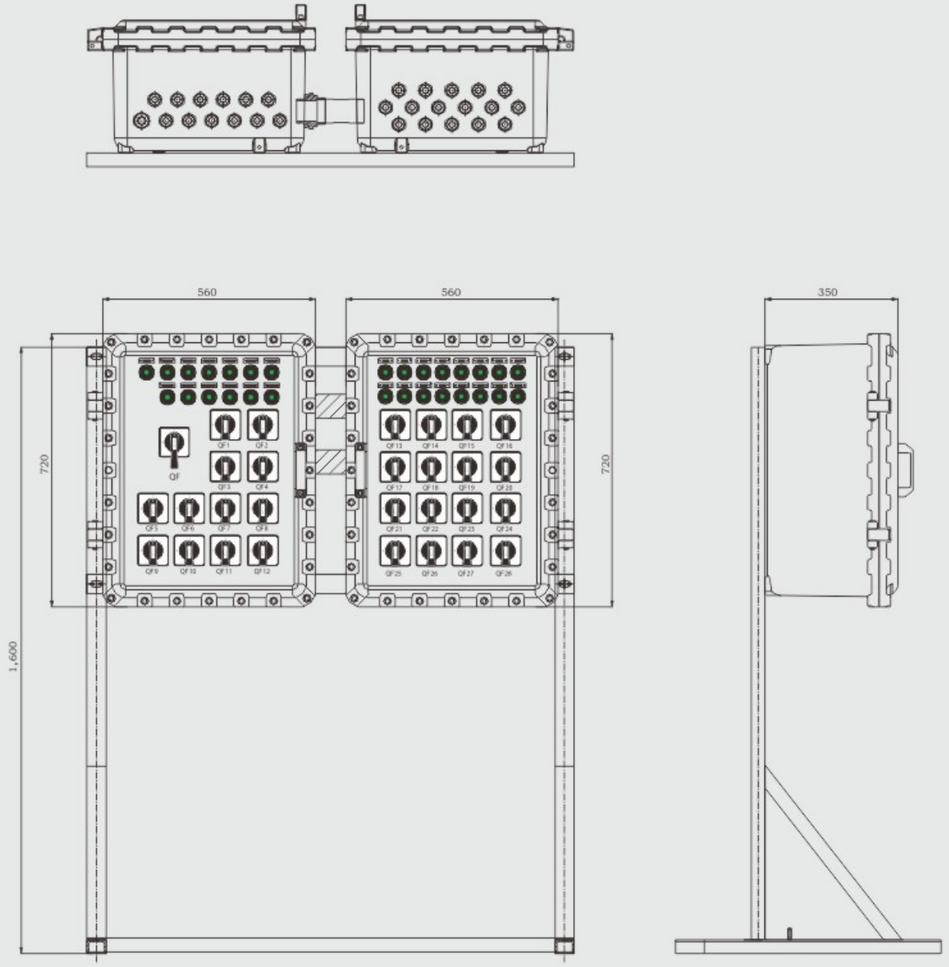
全分割式隔爆配电箱 Full compartmentalized flameproof distribution box



Explosion-proof electric control device MAMX-02

常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

全分割式隔爆配电箱 Full compartmentalized flameproof distribution box

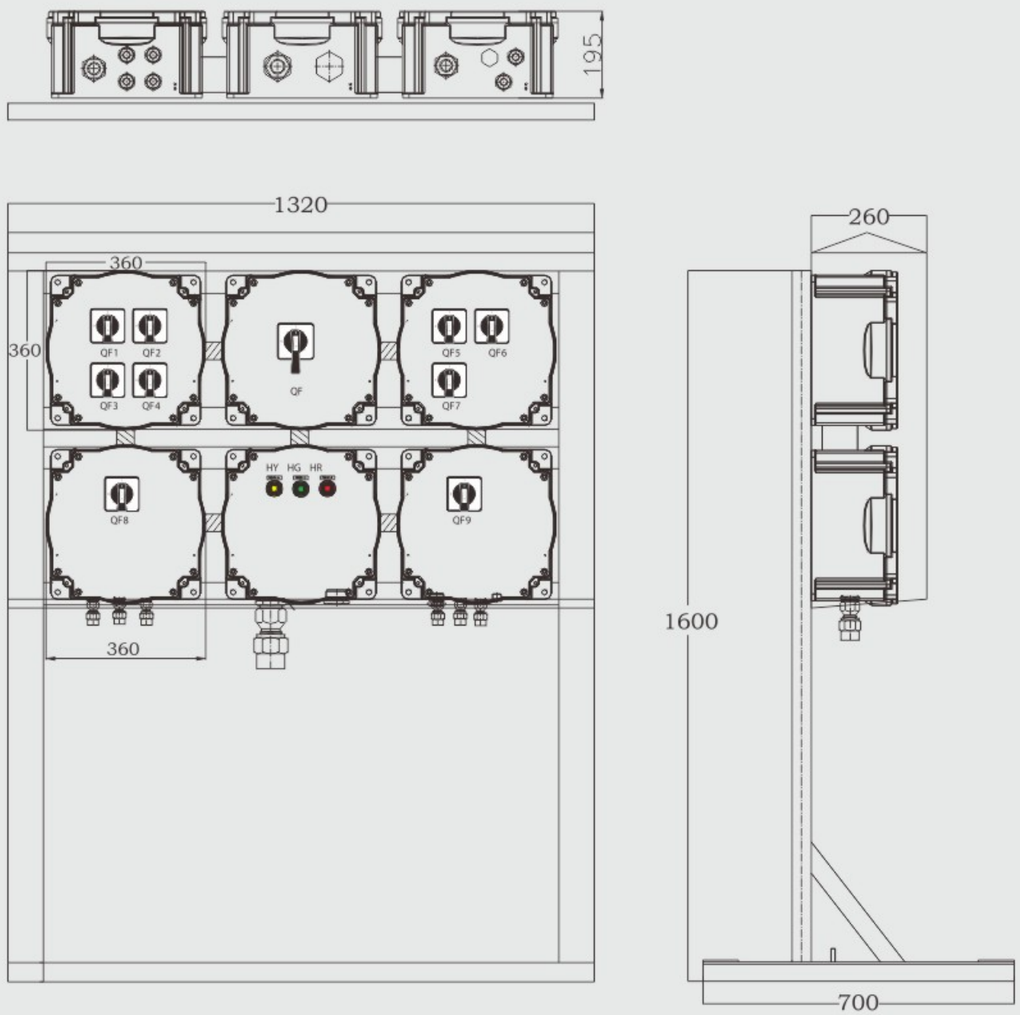


Explosion-proof electric control device MAMX-02

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常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

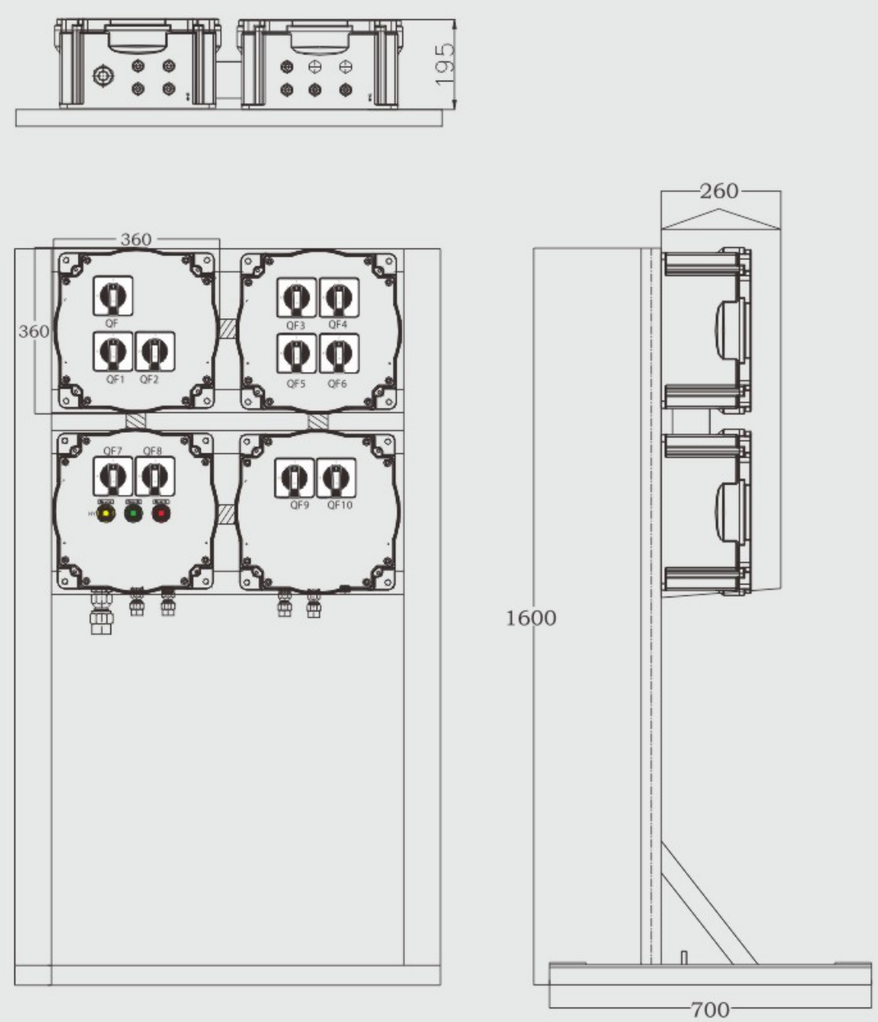
全分割式隔爆配电箱 Full compartmentalized flameproof distribution box



Explosion-proof electric control device MAMX-03

常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

全分割式隔爆配电箱 Full compartmentalized flameproof distribution box

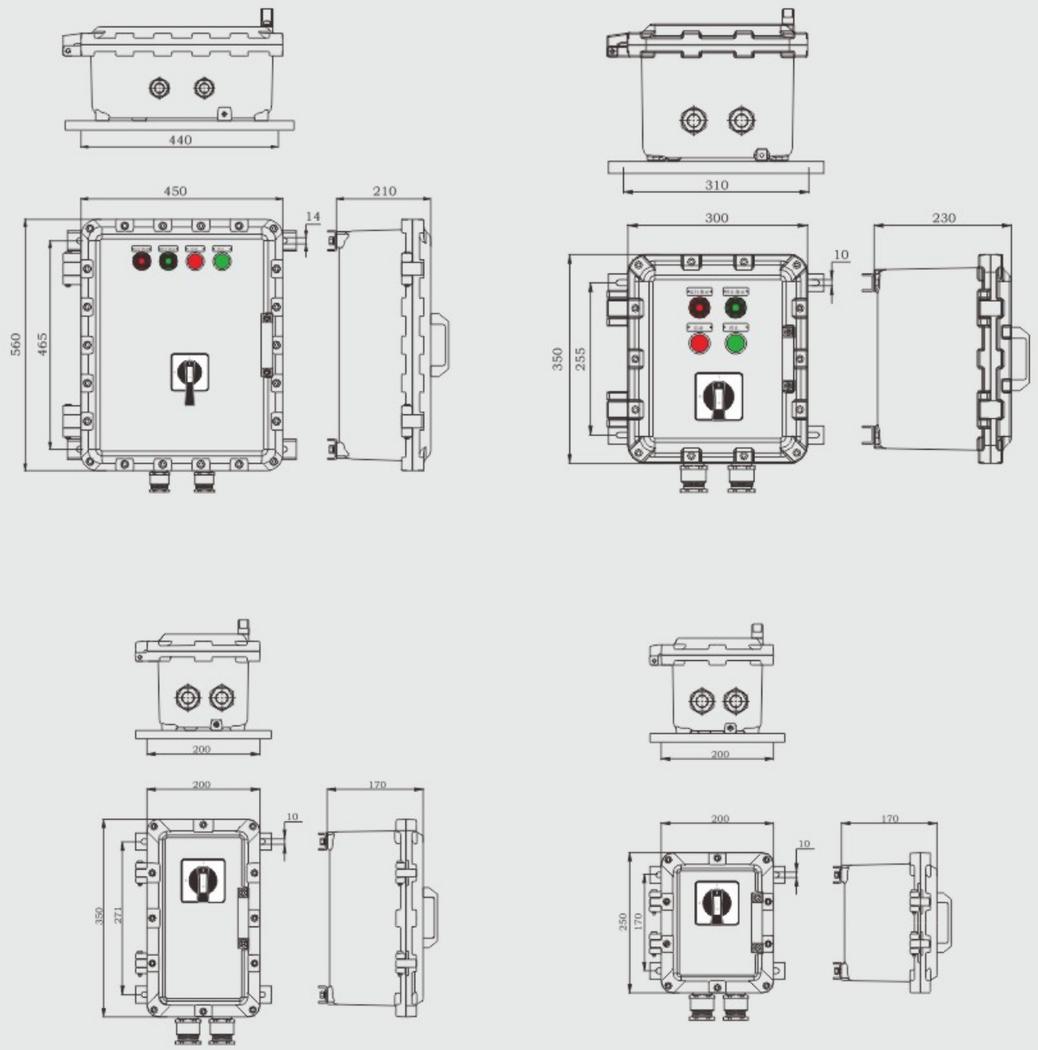


Explosion-proof electric control device MAMX-03

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常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

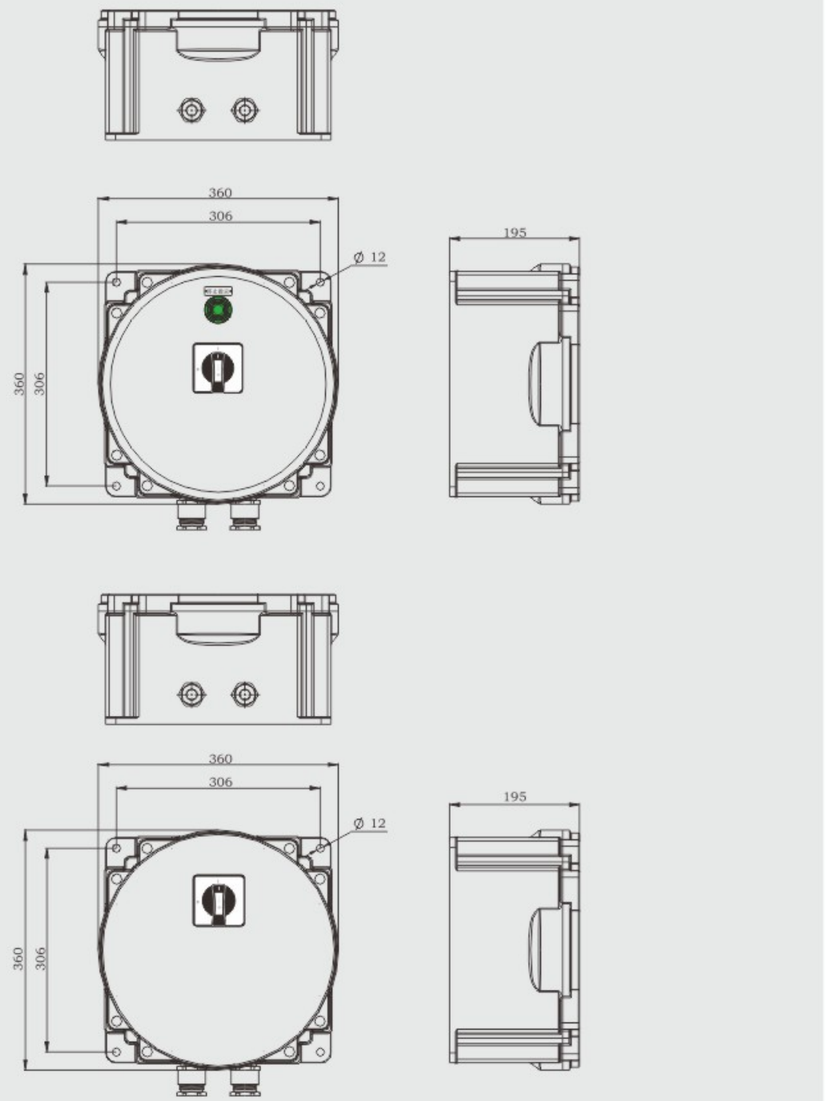
全分割式隔爆配电箱 Full compartmentalized flameproof distribution box



Explosion-proof isolator switch, explosion-proof circuit breaker MAMX-02

常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

全分割式隔爆配电箱 Full compartmentalized flameproof distribution box

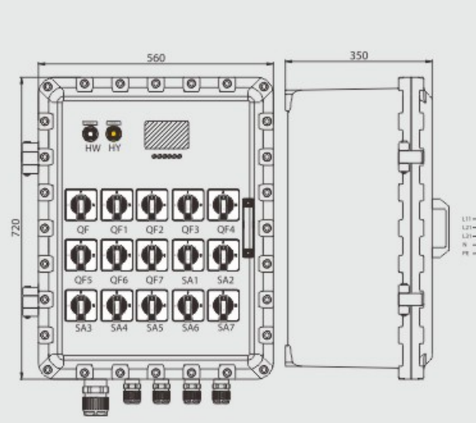


Explosion-proof isolator switch, explosion-proof circuit breaker MAMX-03

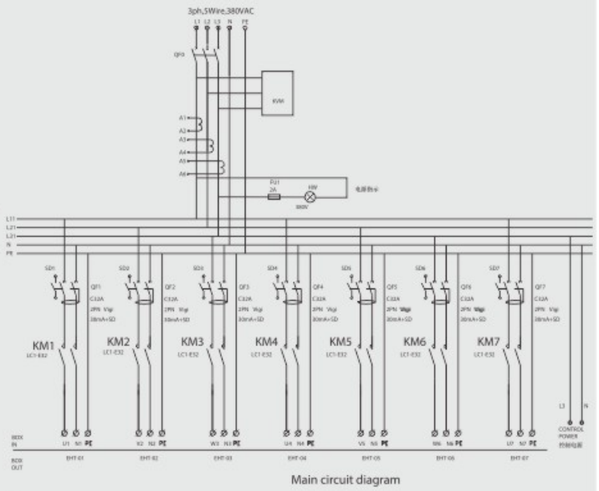
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常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

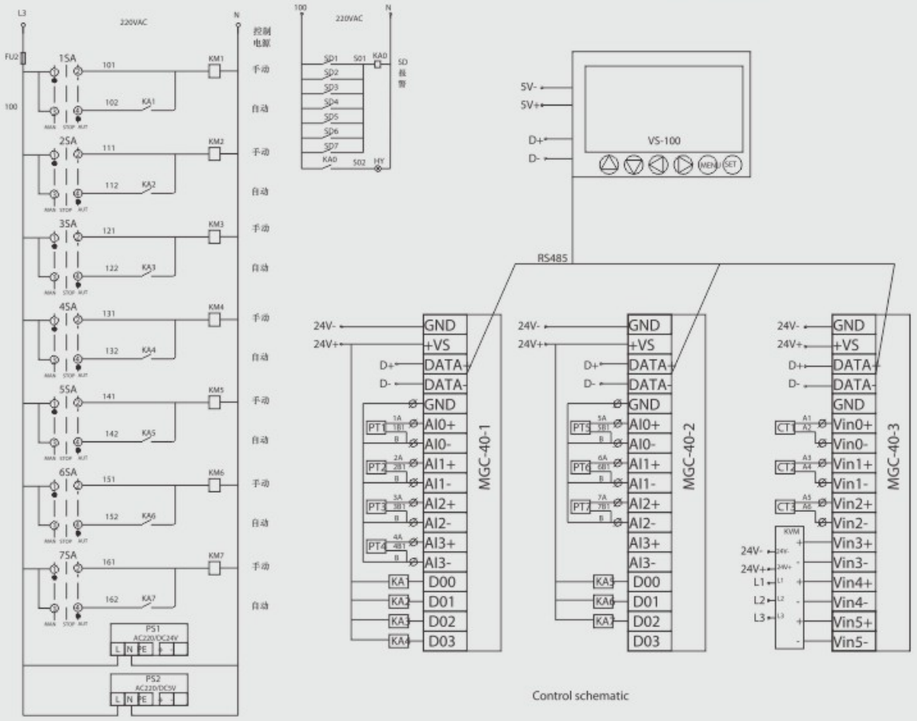
全分割式隔爆配电箱 Full compartmentalized flameproof distribution box



MGC Outline



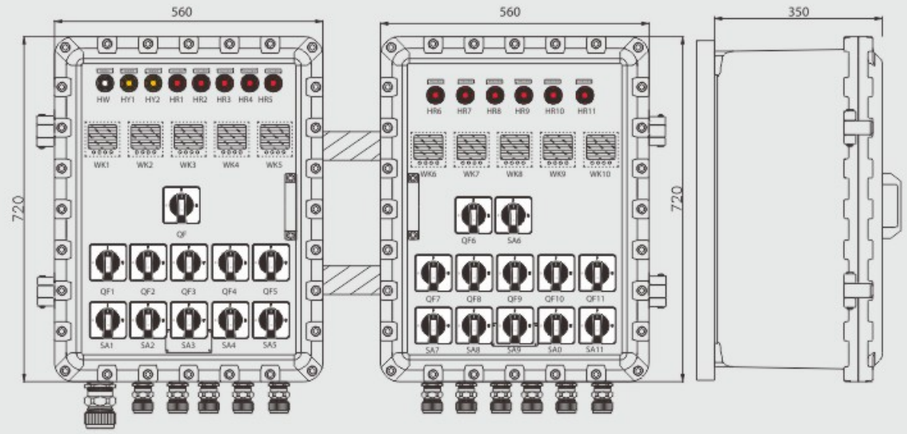
Main circuit diagram

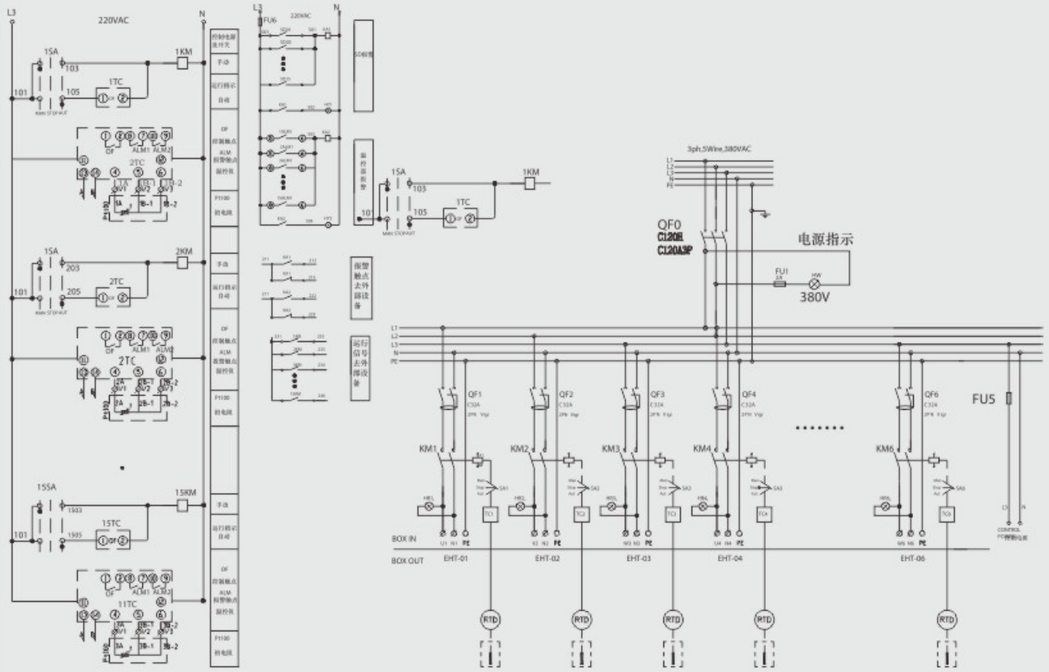


Control schematic

常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

全分割式隔爆配电箱 Full compartmentalized flameproof distribution box

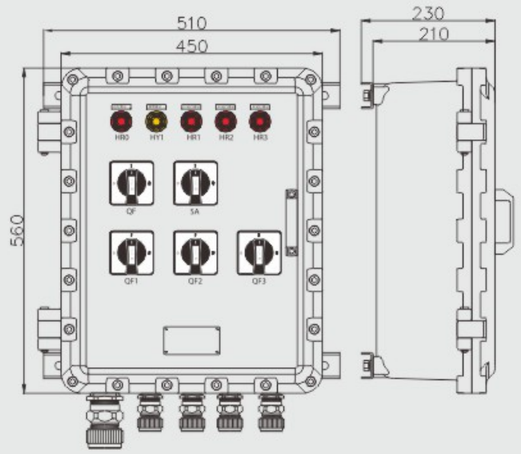


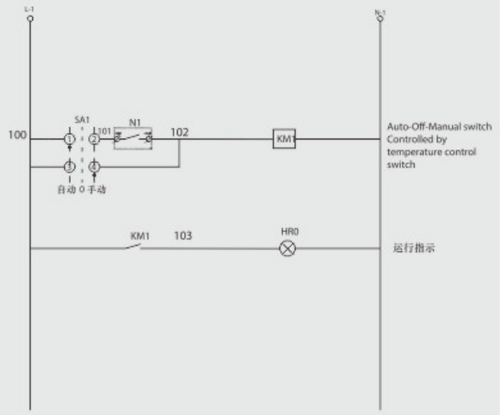


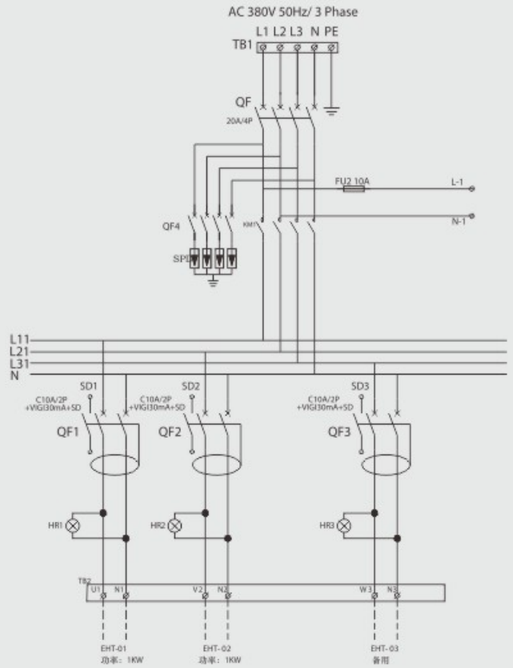
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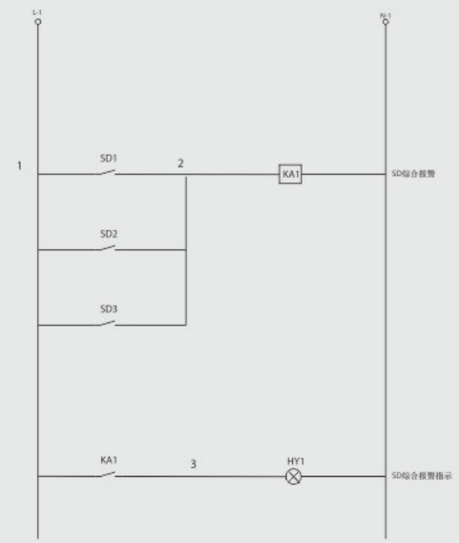
常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

全分割式隔爆配电箱 Full compartmentalized flameproof distribution box



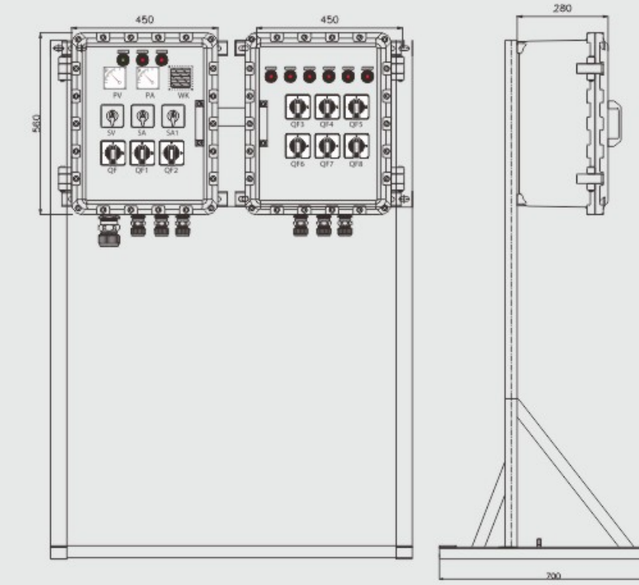


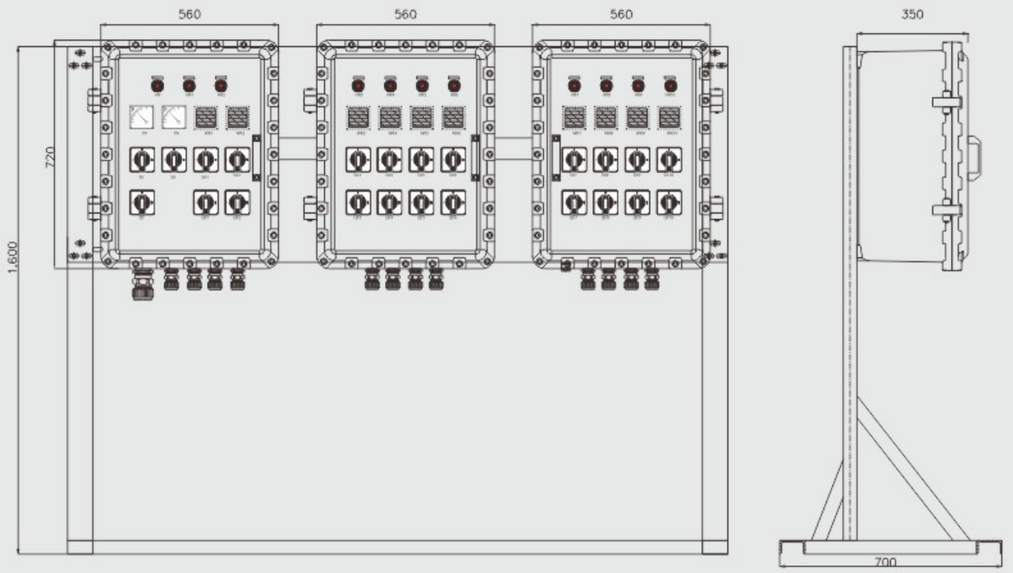




常用产品外形及安装示意图尺寸 Product outline and installation schematic dimensions

全分割式隔爆配电箱 Full compartmentalized flameproof distribution box





防爆操作柱MAMX-04/05系列
Explosion-proof Control Station MAMX-04/05 series

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所；产品用于现场灯具的启停控制。
  Widely used in the start and stop control conversion and display of motors in the work site, electrical parameter display during operation, speed regulation, signal switching, metering display etc.
- 广泛用于工作现场中电机的启停控制转换及显示、运行时的电参数显示、调速、信号切换、仪表计量显示等用途；
  Widely used in the work site in the motor start-stop control conversion and display, operation of the electrical parameters display, speed control, signal switching, instrumentation measurement display and other purposes;
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆等。
  The multi mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable .



型号含义 / Model Identification

MAMX – □ – □ □

□：
04：防爆操作柱
04:Electric control station(IIB+H2)
05：防爆操作柱
05:Electric control station(IIC)

□：
IIB+H2壳体
IIB+H2 Enclosure:
B1:200*250*170
B2:200*300*170
B3:200*350*170
B4:300*350*230
B5:350*450*205
B6:450*560*210
B7:450*560*280
B8:560*720*350
IIC壳体
IIC Enclosure:
C2:161*161*109
C3:360*360*195

□：
W：壳体带密封圈，不带不注（CCC产品）
-D：-43℃~+60℃
-S：-40℃~+60℃
W：The enclosure with sealing ring, not marked if no need (CCC certified)
-D：-43℃~+60℃
-S：-40℃~+60℃

举例:MAMX-04-B2-D，表示防爆操作柱，壳体尺寸为200*300*170mm.环境温度-43℃-+60℃。
For Example:MAMX-04-B2-D represents explosion-proof control station，with enclosure dimension 200*300*170mm and ambient temperature -43℃-+60℃.

通用技术参数 / General Technical Parameters

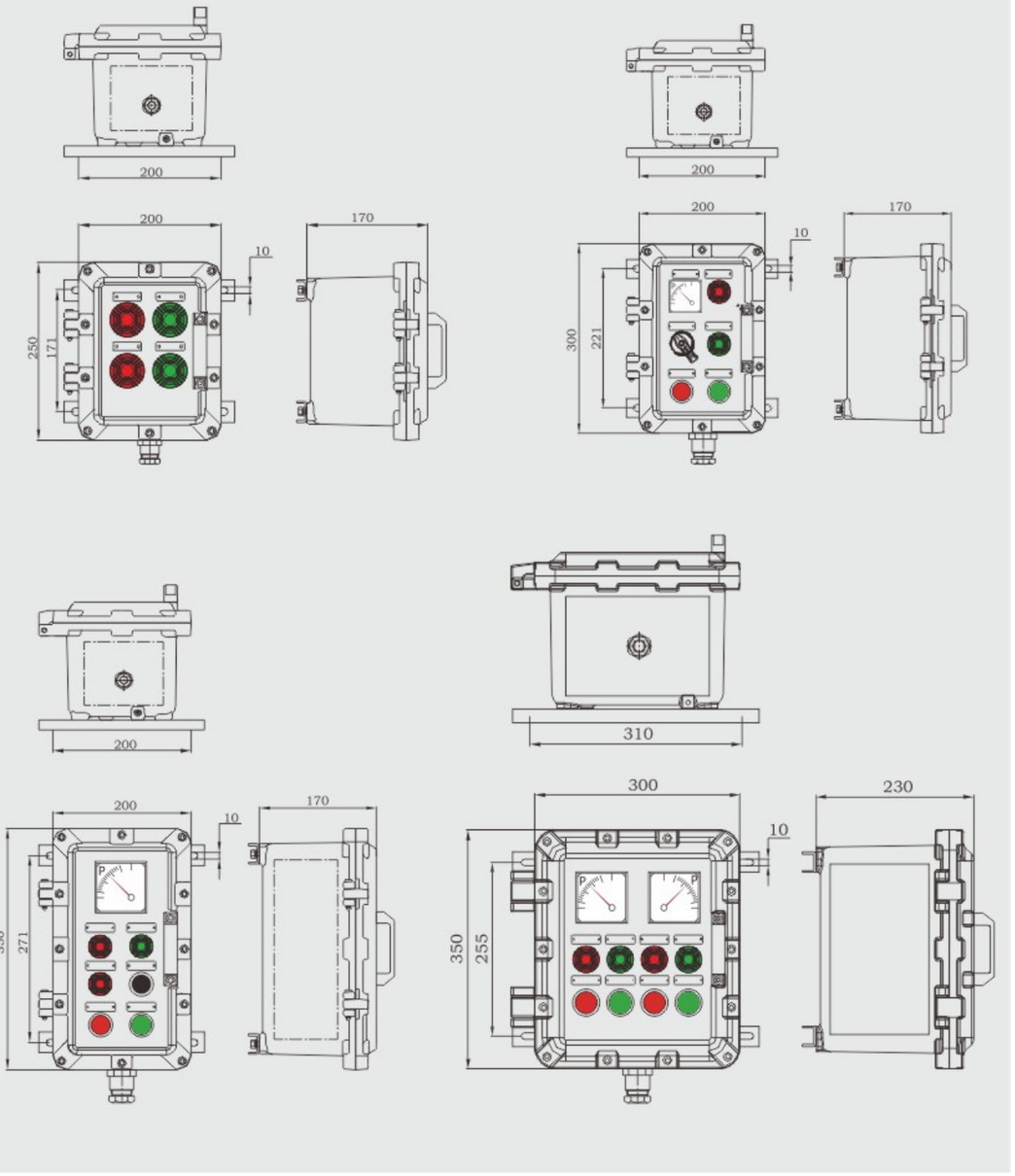
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx	ATEX
	Ex db ⅡB + H_2 T6...T4 Gb Ex db ⅡC T6...T4 Gb Ex tb ⅢC T80℃...T135℃ Db	Ⅱ2G Ex db ⅡB+H_2 T6...T4 Gb Ⅱ2G Ex db ⅡC T6...T4 Gb Ⅱ2D Ex tb ⅢC T80°C,T95°C,135°C,Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
通用电源供应 General power supply	额定电压 Rated voltage：MAX.AC690V 50/60Hz 额定电流 Rated current：MAX.40A	
防护防腐等级 Degree of protection and anti-corrosion level	IP66、WF2	
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel	
保护壳材质 Enclosure material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102	
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating , MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional	
内部安装仪表 Built-in instrument	电流表、电压表等显示仪表。 Different display instruments such as ammeter and voltmeter. 注：以上仪表可显示； Note: Above instruments can be viewed.	
接线端子品牌 Brand of terminals	魏德米勒、菲尼克斯等；Weidmuller、Phoenix etc.	
进出线电缆 Cable entry	铠装电缆、橡胶电缆； Armored cable or rubber cable	



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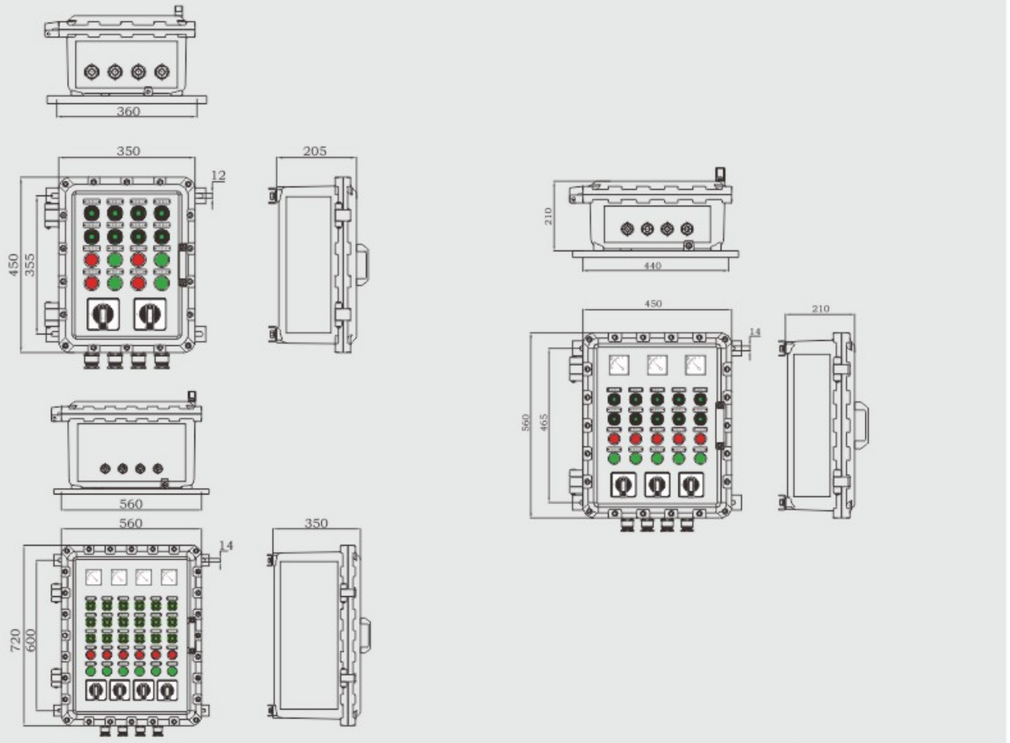
常用产品外形及安装示意图尺寸 Product outline and installation dimensions

防爆操作柱MAMX-04 Explosion-proof Control Station MAMX-04

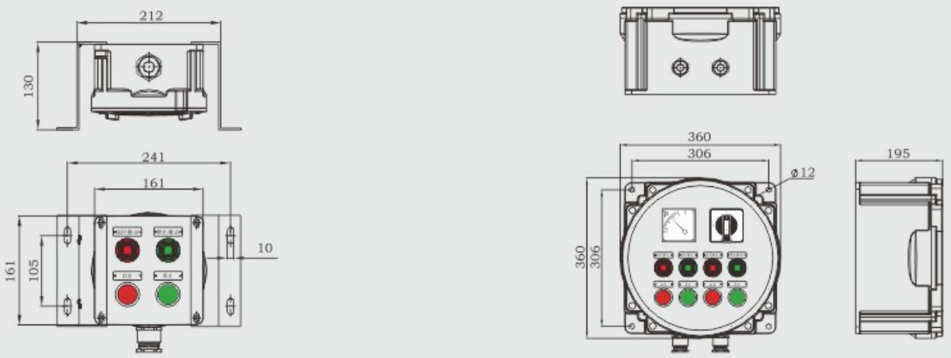


常用产品外形及安装示意图尺寸 Product outline and installation dimensions

防爆操作柱MAMX-04 Explosion-proof Control Station MAMX-04



防爆操作柱MAMX-05 Explosion-proof Control Station MAMX-05



防爆接线箱MAMX-07/08系列
Explosion-proof Junction box MAMX-07/08 series

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所，适用于电器、灯具安装分线用，特别适用于现场伴热系统及大功率电加热器的安装分线。
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas; Suitable for cable distribution when installing electrical appliances and lamps and especially when installing heat tracing systems and high-power electric heaters on site.
- 产品外壳材质为铝合金，不锈钢外露紧固件，外形美观。
  Beautiful appearance: Aluminum alloy enclosure with stainless steel exposed fasteners.
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式，进线采用橡胶电缆、铠装电缆等。
  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable.



型号含义 / Model Identification

MAMX-07/08 - □ - □ - □

□ 07:防爆接线箱 07:Junction box(IIB+H2)
□ 08:防爆接线箱 08:Junction box(IIC)

□ IIB+H2壳体 IIB+H2 Enclosure:
B1:200* 250*170
B2:200*300*170
B3:200*350*170
B4:300*350*230
B5:350*450*205
B6:450*560*210
B7:450*560*280
B8:560* 720*350

□ IIC壳体 IIC Enclosure:
C2:161*161*109
C3:360*360*195

□ W：壳体带密封圈，不带不注（CCC产品）
-D：-43℃~+60℃
-S：-40℃~+60℃

W: The enclosure with sealing ring, not marked if no need (CCC certified)
-D：-43℃~+60℃
-S：-40℃~+60℃

通用技术参数 / General Technical Parameters

	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db ⅡB + H_2 T6...T4 Gb Ex db ⅡC T6...T4 Gb Ex tb ⅢC T80℃...T135℃ Db	Ⅱ2G Ex db ⅡB+H_2 T6...T4 Gb Ⅱ2G Ex db ⅡC T6...T4 Gb Ⅱ2D Ex tb ⅢC T80°C,T95°C,135°C,Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
通用电源供应 General power supply	额定电压 Rated voltage：MAX.AC1250V 50/60Hz 额定电流 Rated current：MAX.1500A	
防护防腐等级 Degree of protection and anti-corrosion level	IP66、WF2	
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel	
保护壳材质 Enclosure material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102	
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating ,MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional	
接线端子品牌 Terminal brands	魏德米勒、菲尼克斯等；Weidmuller、Phoenix etc.	
进出线电缆 Cable entry	铠装电缆、橡胶电缆； Armored cable、Rubber cable	

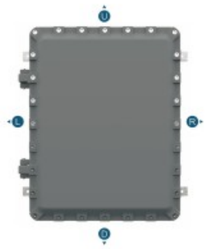


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标准螺纹对照表 Standard thread comparison table

螺纹标准型号 Standard thread version	螺纹规格 Thread size								
ISO7-1	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
ANSI B.20.1 NPT	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	*	*	*
ISO 261/965	M20X1.5	M25X1.5	M32X1.5	M40X1.5	M50X1.5	M63X1.5	M75X1.5	M90X1.5	M110X1.5





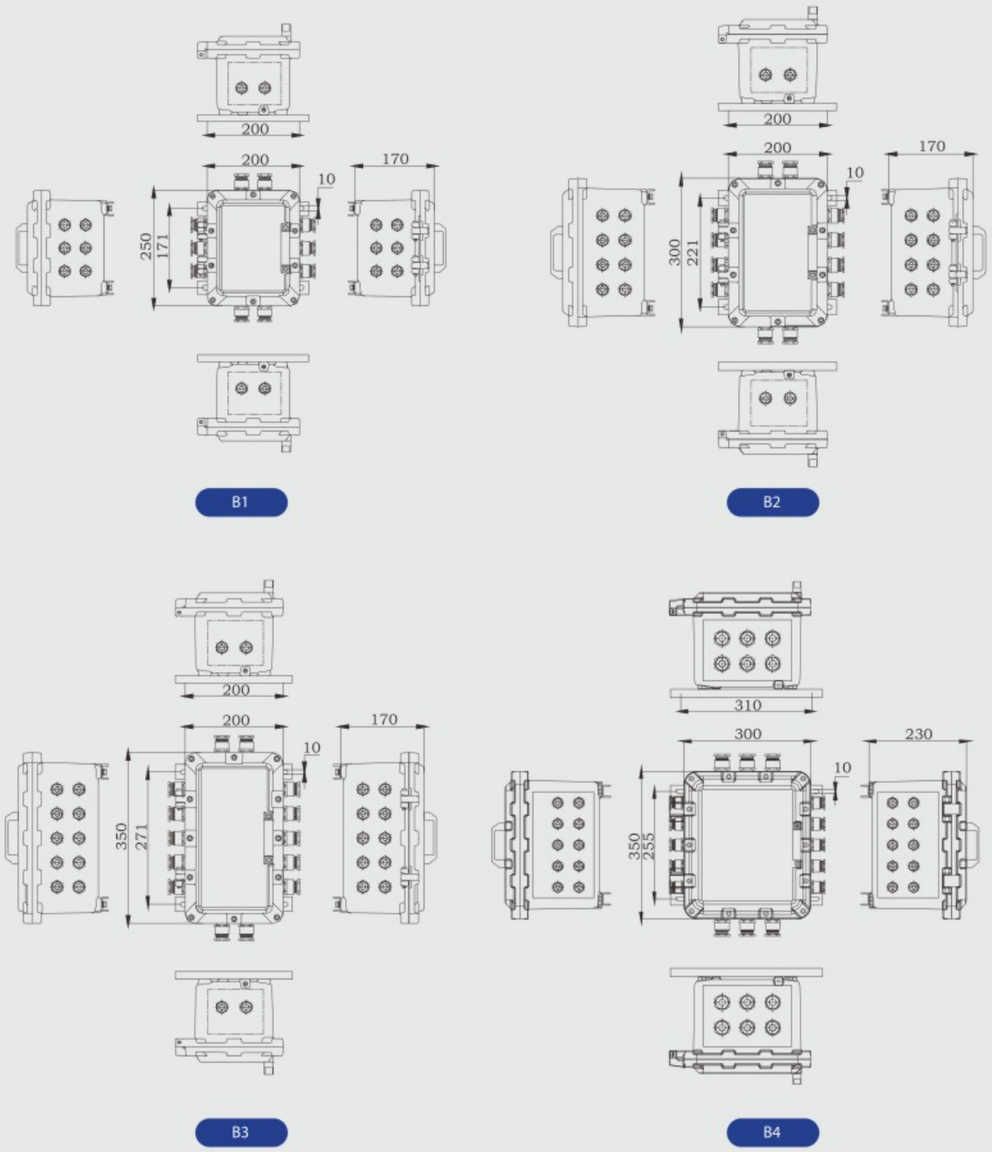
箱体开孔数量参照表 Reference table of holes in box

代号 Version	外形尺寸 Dimension of outside appearance (A*B*C)	方向 Direction (U.L.D.R)	螺纹规格 Thread size								
			1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
			1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	*	*	*
			M20X1.5	M25X1.5	M32X1.5	M40X1.5	M50X1.5	M63X1.5	M75X1.5	M90X1.5	M110X1.5
01	250*200*170	U.D	5	5	2	2	1	1	*	*	*
		L.R	8	7	3	2	2	2	*	*	*
02	300*200*170	U.D	5	5	2	2	1	1	*	*	*
		L.R	10	9	4	3	3	2	*	*	*
03	350*200*170	U.D	5	5	2	2	1	1	*	*	*
		L.R	12	10	6	4	3	3	*	*	*
04	350*300*230	U.D	10	6	4	3	2	1	*	*	*
		L.R	12	8	5	4	3	2	*	*	*
05	450*350*205	U.D	10	7	4	3	2	2	*	*	*
		L.R	14	11	5	4	4	3	*	*	*
06	560*450*210	U.D	14	11	5	4	3	2	*	*	*
		L.R	18	15	7	5	5	3	*	*	*
07	560*450*280	U.D	21	18	10	8	3	2	2	2	1
		L.R	27	24	14	10	5	3	3	2	2
08	720*560*350	U.D	32	28	18	10	8	3	3	2	2
		L.R	48	40	27	14	12	5	4	3	2

说明 Note:以上开孔IIB和IIC 相同。 The above holes are same for IIB and IIC box.

常用产品外形及安装示意图尺寸 Product outline and installation dimensions

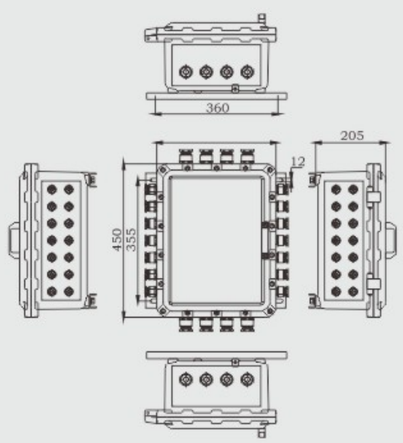
防爆接线箱MAMX-07 Explosion-proof junction box MAMX-07



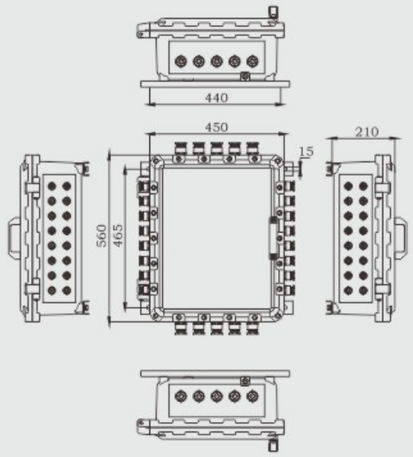
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常用产品外形及安装示意图尺寸 Product outline and installation dimensions

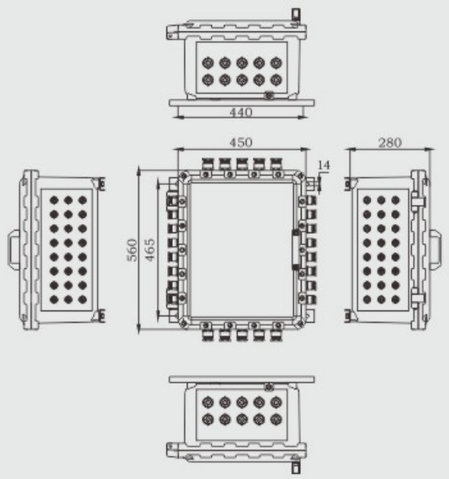
防爆接线箱MAMX-07 Explosion-proof junction box MAMX-07



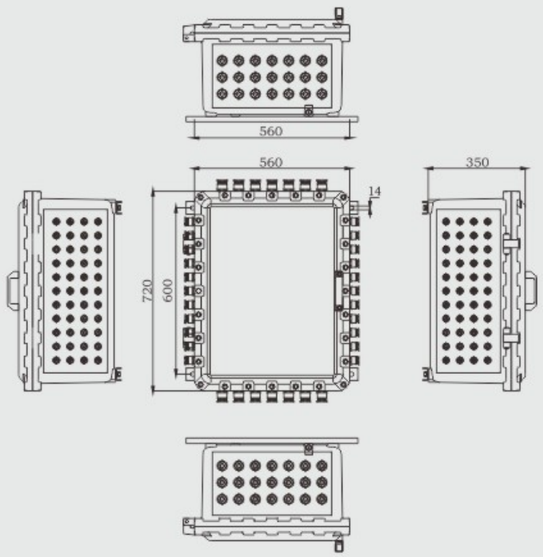
B5



B6



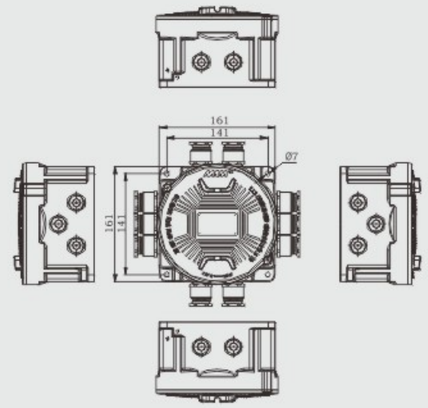
B7



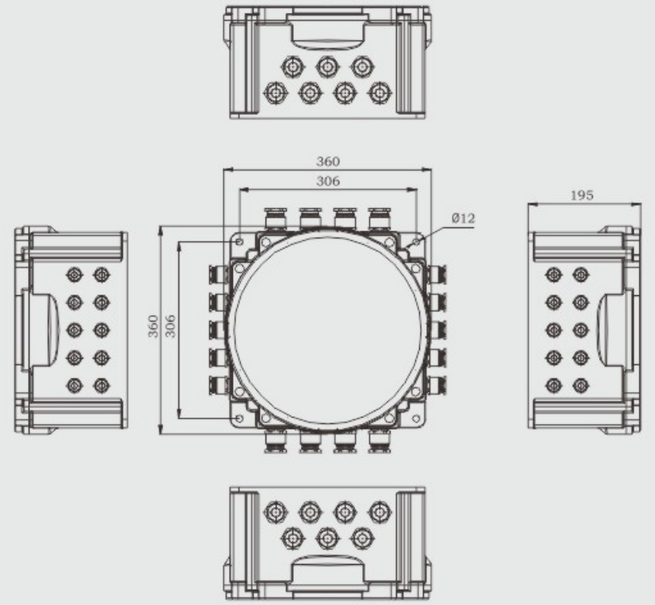
B8

常用产品外形及安装示意图尺寸 Product outline and installation dimensions

防爆接线箱MAMX-08 Explosion-proof junction box MAMX-08



C2



C3

防爆按钮盒MAMX-09系列
Explosion-proof pushbutton box MAMX-09 series

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.
- 广泛用于工作现场中电机的启停控制转换、调速、信号切换等用途；
  Widely used in the start and stop control conversion and speed regulation, signal switching etc.
- 可根据要求选用不同的进线电缆，如橡胶电缆、铠装电缆。
  The cable entries can be selected as per the requirements, such as rubber cable and armored cable..



型号含义 / Model Identification

MAMX-09 – □ □

壳体尺寸代号：
Enclosure Code：
A1:102*92*93 mm
A2:157*105*93mm
A3:212*105*93mm

W：壳体带密封圈（CCC产品）
-D：-43℃~+60℃
-S：-40℃~+60℃

W：The enclosure with sealing ring, (CCC certified)
-D：-43℃~+60℃
-S：-40℃~+60℃

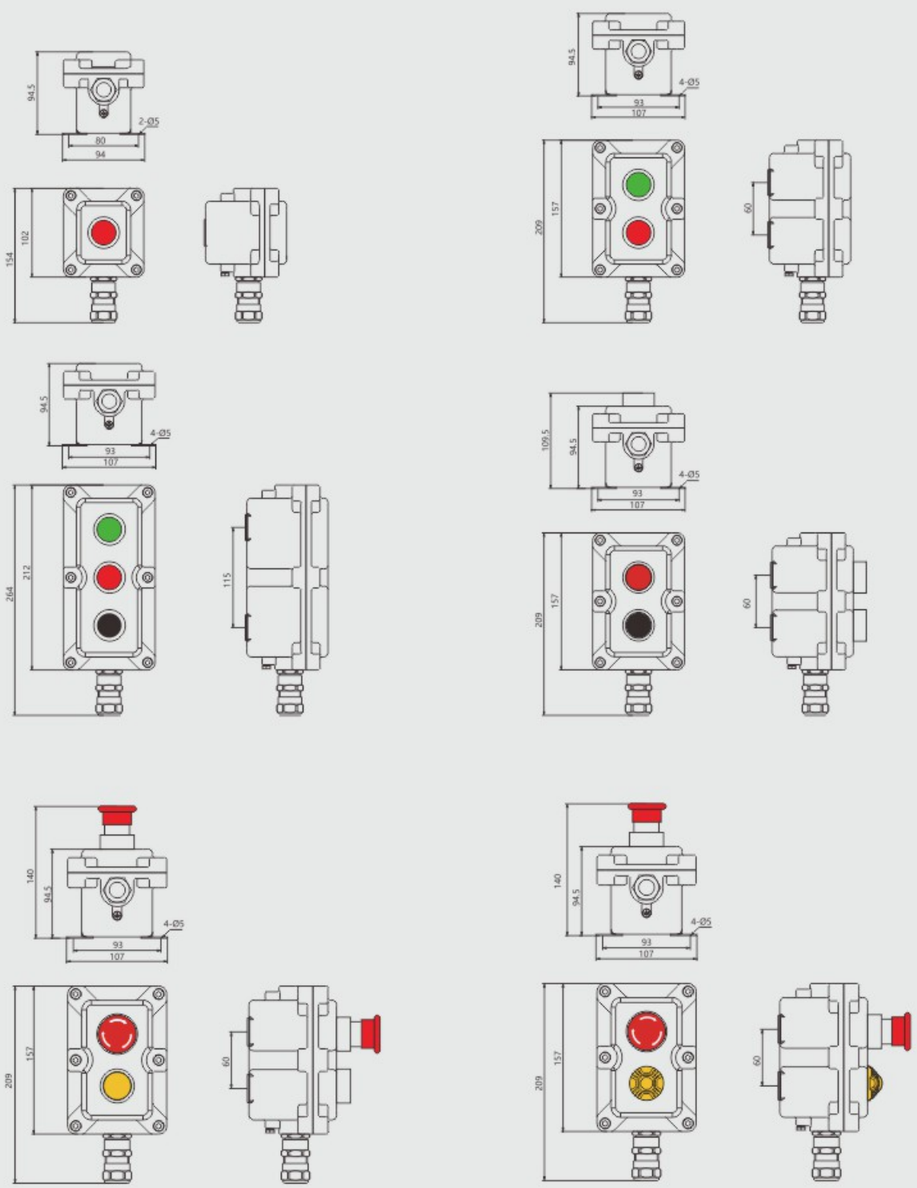
举例:MAMX-09-A1-D ，表示防爆按钮盒，壳体尺寸为102*92*93mm.环境温度-43℃-+60℃。
For Example:MAMX-09-A1-D represents explosion-proof pushbutton box，with enclosure dimension 102*92*93mm and ambient temperature -43℃-+60℃.

通用技术参数 / General Technical Parameters

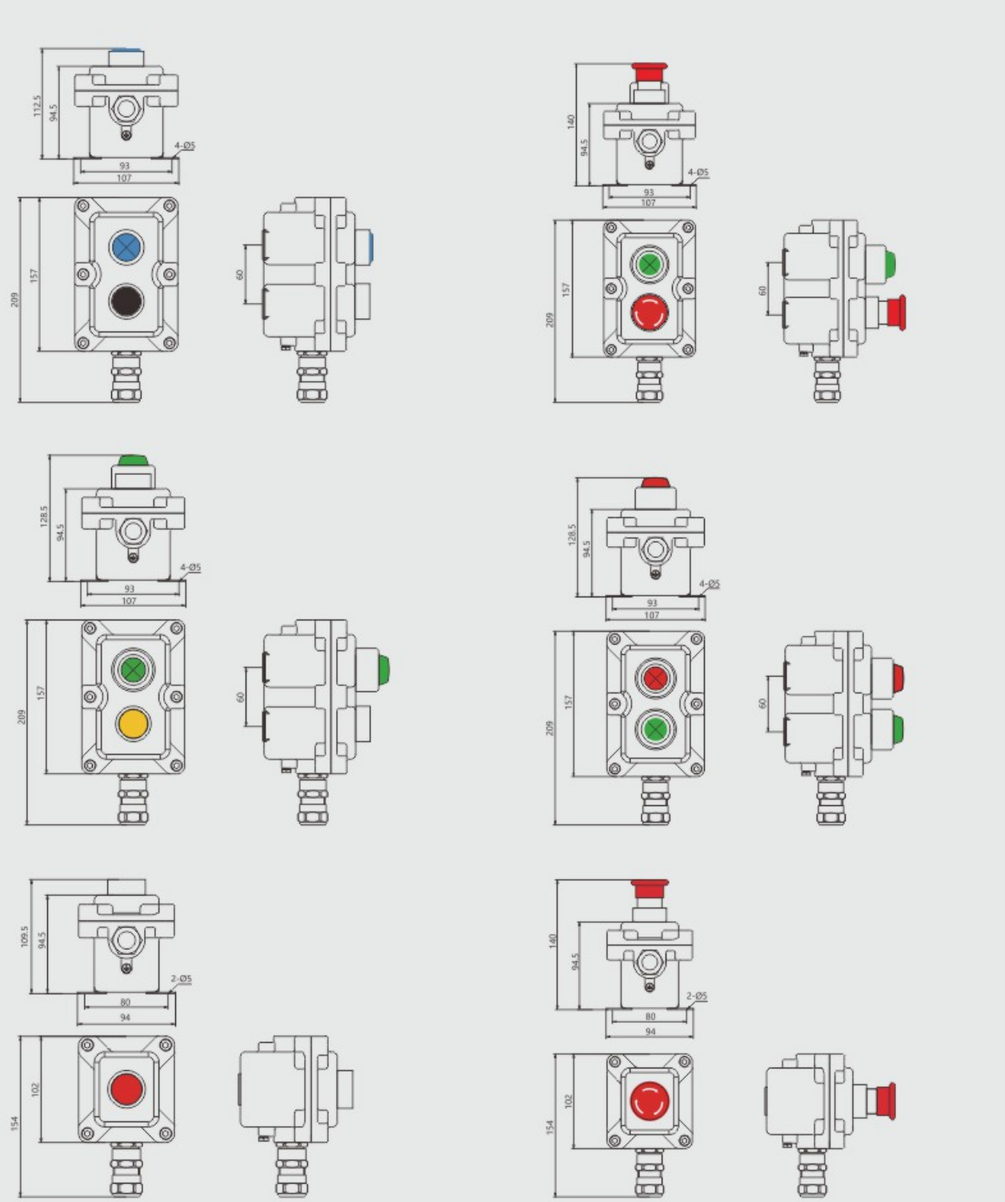
	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db IIB T6 Gb Ex tb IIIC T80°C Db	Ⅱ 2G Ex db IIB T6 Gb Ⅱ 2D Ex tb IIIC T80°C Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
保护壳材质 Enclosure Material	铸铝ZL102 Copper-free Aluminum Alloy ZL102	
保护壳喷涂材料及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating ,MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional	
内装元件 Built-in components	防爆按钮、防爆指示灯、防爆蜂鸣器等 Explosion-proof button, explosion-proof indicator, explosion-proof buzzer etc.	
通用电源供应 General power supply	额定电压 Rated voltage: MAX.AC500V 50/60Hz 额定电流 Rated current: MAX.25A	
防护防腐等级 Degree of protection and anti-corrosion level	IP66、WF2	
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel	
进出线电缆 Cable entry	铠装电缆、橡胶电缆 Armored cable, rubber cable	
开孔尺寸和数量 Cable entry details	Max.2-M20*1.5（NPT1/2）or 2-M25*1.5（NPT3/4）	

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常用产品外形及安装示意图尺寸 Product outline and installation dimensions

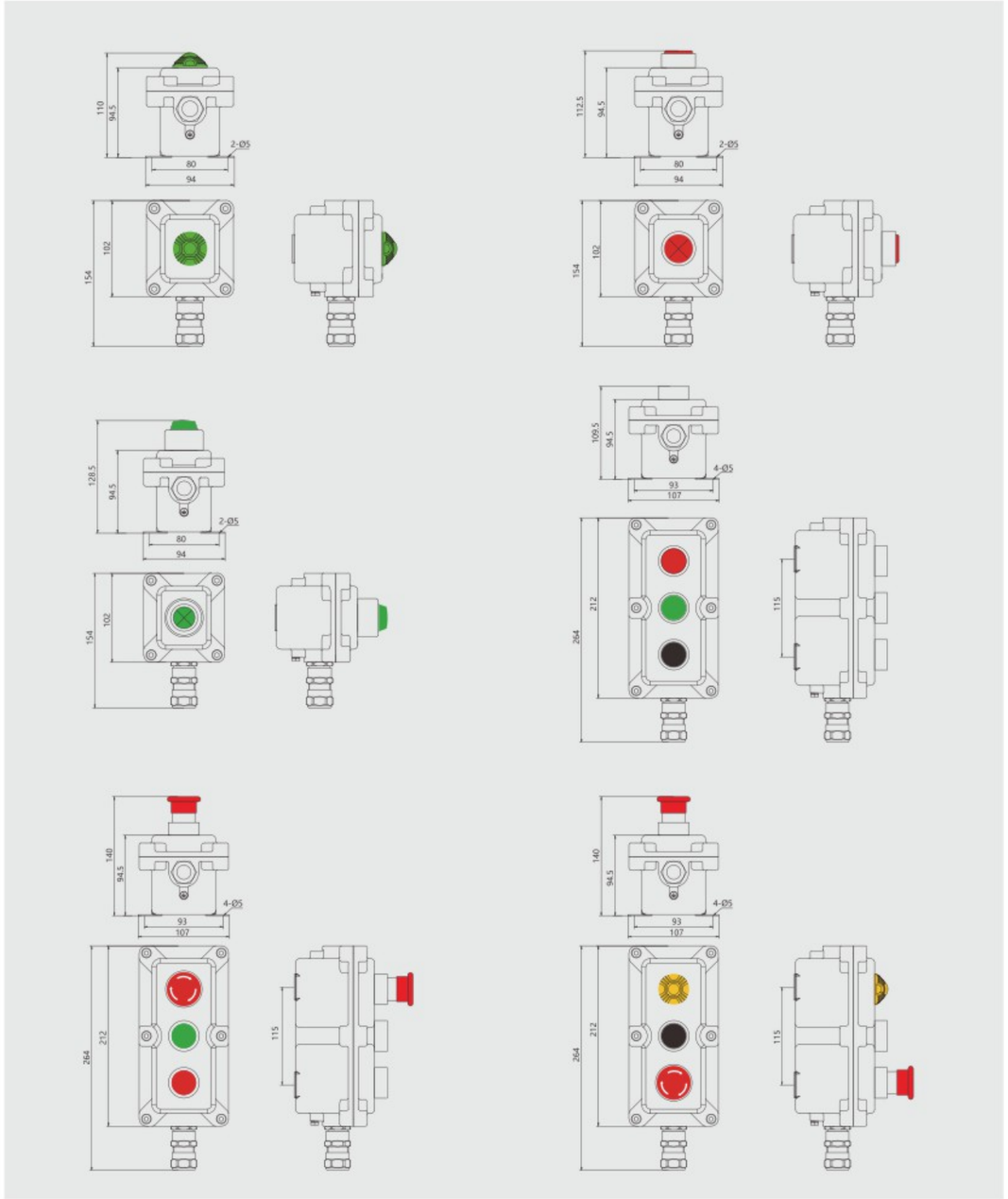


常用产品外形及安装示意图尺寸 Product outline and installation dimensions

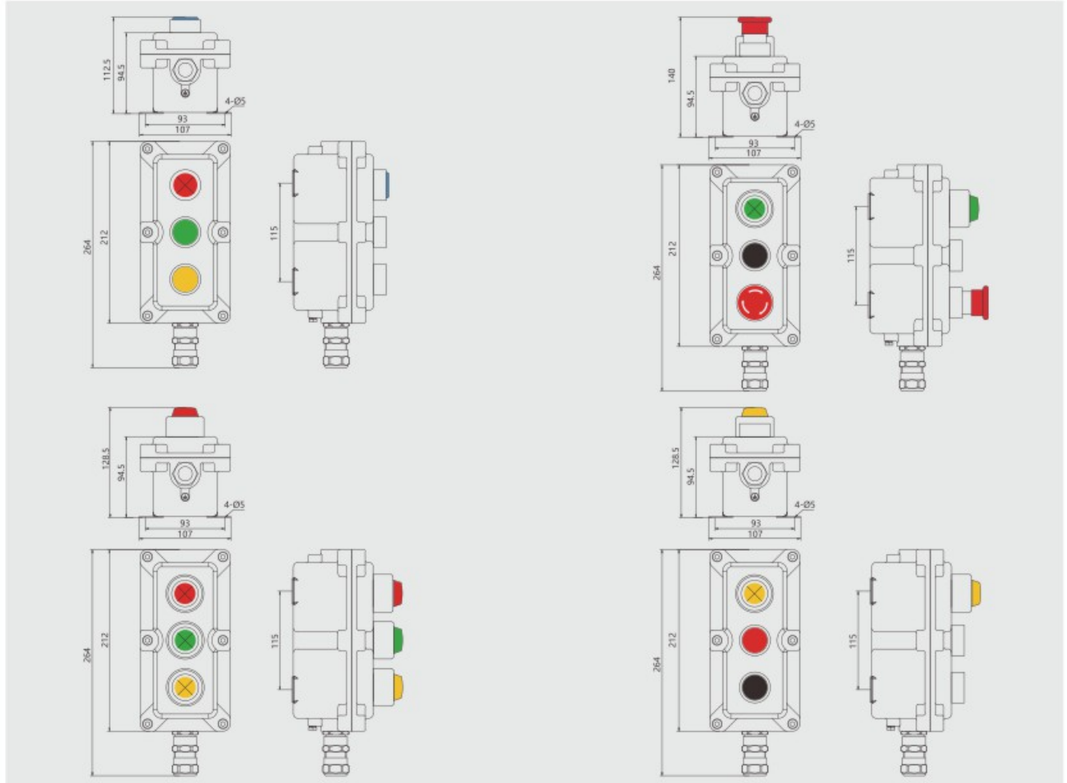


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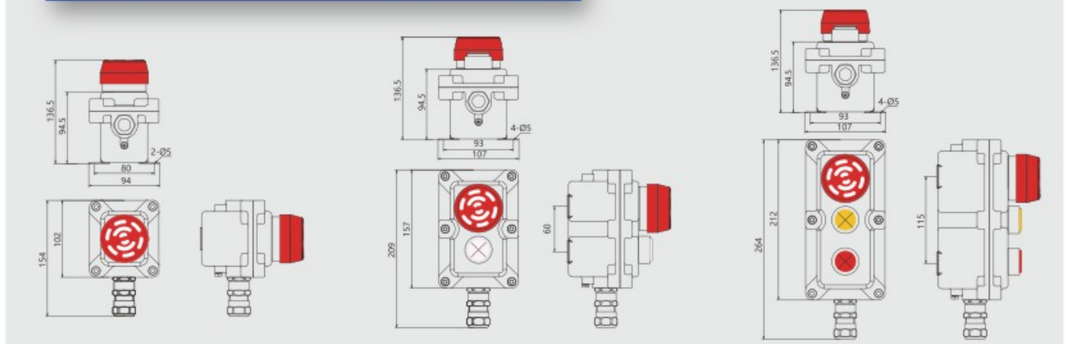
常用产品外形及安装示意图尺寸 Product outline and installation dimensions



常用产品外形及安装示意图尺寸 Product outline and installation dimensions

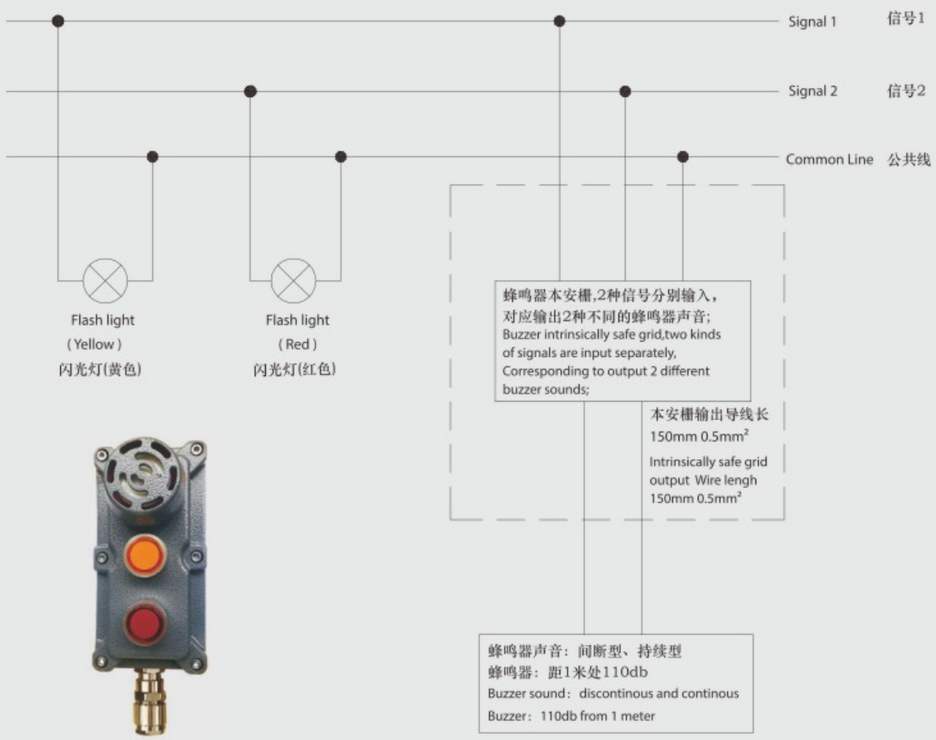


声光报警控制盒外形及功能说明
Outline and function description of sound and light alarm control box



防爆按钮盒MAMX-09系列
Explosion-proof pushbutton box MAMX-09 series

控制原理说明 Control schematic instructions



1.输入信号1、2与公共端电压可为DC24V/36V/110V,AC24V/36V/110V/220V;
2.信号1经本安栅后输出的蜂鸣器为间断型,信号2经本安栅后输出的蜂鸣器为持续型；
3.双色闪光报警灯电压可为DC24V/36V/110V,AC24V/36V/110V/220V;
4.信号1给予双色闪光报警灯为黄色闪烁，信号2给予双色闪光报警灯为红色闪烁；

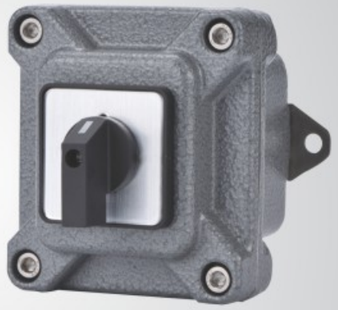
1. Input signal 1, 2 and common terminal voltage can be DC24V/36V/110V, AC24V/36V/110V/220V;
2. The buzzer outputted by the signal 1 through the intrinsically safe grid is intermittent, and the buzzer outputted by the signal 2 via the intrinsically safe grid is continuous;
3. The two-color flashing warning lamp voltage can be DC24V/36V/110V, AC24V/36V/110V/220V;
4. Signal 1 makes the two-color flashing warning light to flash yellow, and signal 2 makes a two-color flashing warning light to flash red;



防爆照明开关MAMX-10系列
Explosion-proof lighting switch MAMX-10 series

MINMILE
Smart Technology

- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.
- 用于现场照明灯具的开关状态控制。
  Widely used in lighting system.
- 可根据要求选用不同的进线电缆，如橡胶电缆、铠装电缆等。
  The cable entries can be selected as per the requirements, such as rubber cable and armored cable.



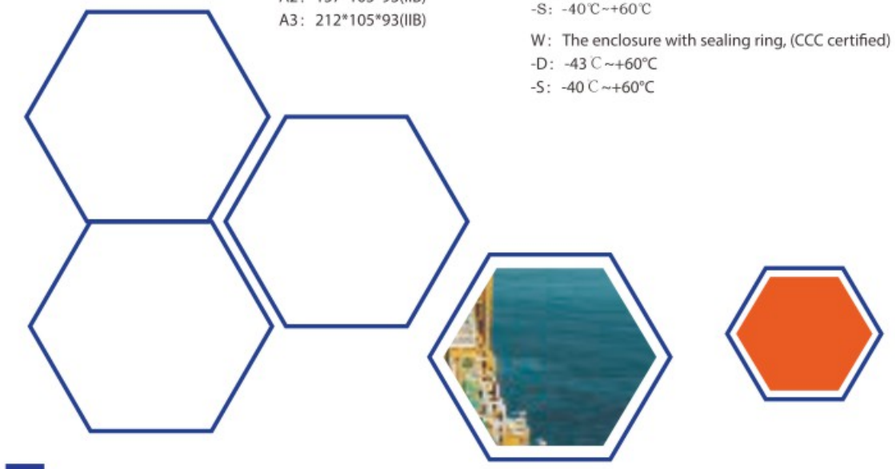
型号含义 / Model Identification

MAMX-10 – □ □

A1：102*92*93 (IIB)
A2：157*105*93(IIB)
A3：212*105*93(IIB)

W：壳体带密封圈（CCC产品）
-D：-43℃~+60℃
-S：-40℃~+60℃

W：The enclosure with sealing ring, (CCC certified)
-D：-43℃~+60℃
-S：-40℃~+60℃

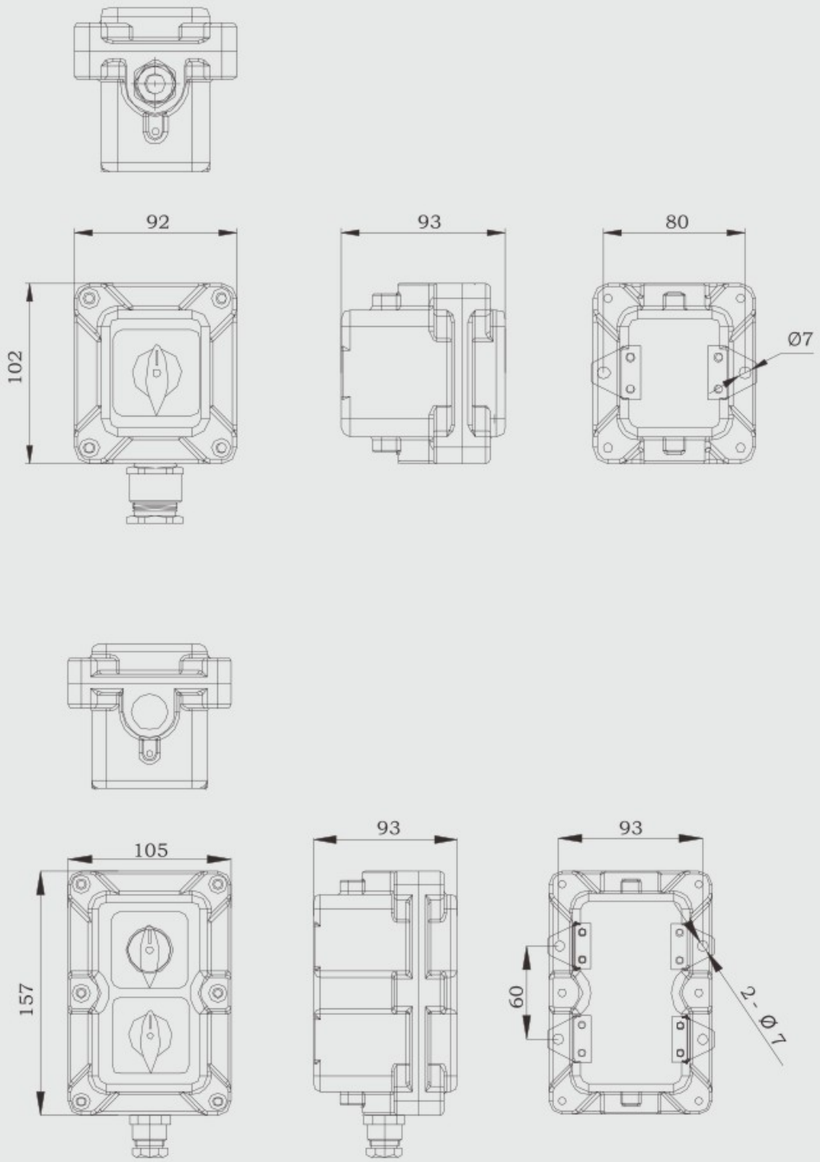


通用技术参数 / General Technical Parameters

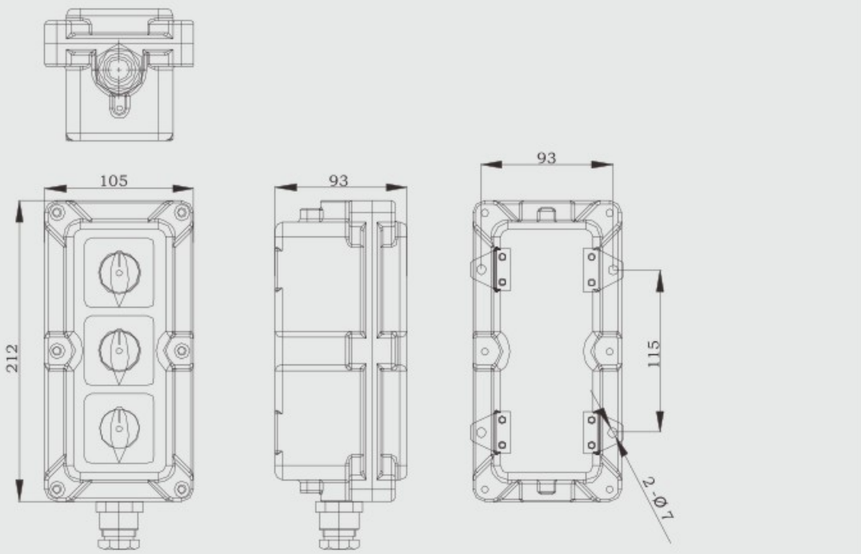
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx Ex db IIB T6 Gb Ex tb IIIC T80°C Db	ATEX Ⅱ 2G Ex db IIB T6 Gb Ⅱ 2D Ex tb IIIC T80°C Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN 60079-1:2014,EN 60079-31:2014	
通用电源供应 General power supply	额定电压 Rated voltage：MAX.AC500V 50/60Hz 额定电流 Rated current：MAX.25A	
保护壳材质 Enclosure Material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102	
保护壳喷涂材料及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating ,MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional	
防护防腐等级 Degree of protection and anti-corrosion level	IP66、WF2	
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel	
内装元件 Built-in components	照明开关 Lighting switch	
进出线电缆 Cable entry	铠装电缆、橡胶电缆 Armored cable, rubber cable	
开孔尺寸和数量 Cable entry details	Max.2-M20*1.5（NPT1/2）or 2-M25*1.5（NPT3/4）	

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● 产品外形及安装示意图尺寸 Product outline and installation dimensions



● 产品外形及安装示意图尺寸 Product outline and installation dimensions





防爆温度控制开关MAMX-12-C2系列
Explosion-proof temperature control switch MAMX-12-C2 series

MINMILE
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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所;
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas;
- 适用于控制危险区域防冻所用的伴热系统，能够对环境温度的变化做出反应，并且可调设定点;
  Can be suit for the heat tracing system for the anti-consolidate in hazardous area, capable for responding to changes in the ambient temperature, with the adjustable set points;
- 本产品可用于控制单个伴热回路，或者作为接触器来开关多个伴热回路的信号控制;
  Can be used to control a single heat tracing circuit or control the multi heat tracing circuits as a contactor;
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、伴热支架式安装，进线采用橡胶电缆、铠装电缆、伴热线等。
  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable and heating cable.



型号含义 / Model Identification

MAMX-12-C2 – V

V：伴热支架式
支架代号，P1=PPS单线支架,S1=不锈钢304，S2=不锈钢316，非伴热支架式不注。

V: Heat tracing bracket type
Bracket code: P1=PPS single-wire bracket; S1=stainless steel 304; S2=stainless steel 316; if non-heat tracing bracket type, no additional marks.

举例：防爆温度控制开关，伴热支架式，支架材质316，则型号为：MAMX-12-C2-V-S2

For example:
if the explosion-proof temperature control switch is heat tracing bracket type with bracket material SS316, the model number is MAMX-12-C2-V-S2



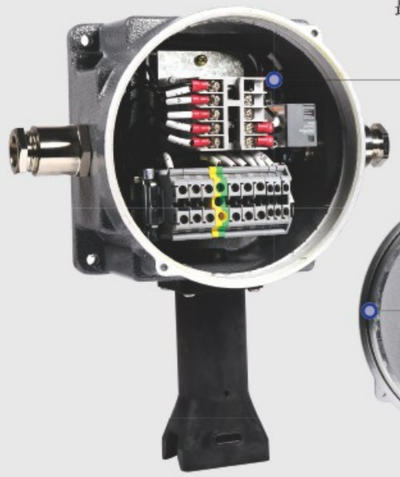
通用技术参数 / General Technical Parameters

	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db IIC T6...T4 Gb Ex tb IIIC T80℃...T135℃ Db	Ⅱ 2G Ex db IIC T6...T4 Gb Ⅱ 2D Ex tb IIIC T80℃,T95℃,135℃,Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
通用电源供应 General power supply	AC125/250/480V时最大40A MAX.40A under AC125/250/480V	
内装元件 Built-in components	固态继电器、欧姆龙温控器、中间继电器、接线端子 Solid Relay, OMRON thermostat, Miniature relay, terminal	
传感器类型 Sensor Type	PT100	
保护壳材质 Enclosure material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102	
保护壳喷涂材料及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating ,MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional	
环境温度范围及防护防腐等级 Ambient temperature and IP rate	-43℃~+60℃、IP66、WF2	
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel	



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产品外形及安装示意图尺寸 Product outline and installation dimensions



最大额定电流可做到40A，满足大部分现场单回路温控开关的需求
The maximum rated current can be 40A, which meets the needs of single-loop temperature control switches in most fields.

采用背面螺纹盖开启接线，便于现场安装维护
Easier on-site installation and maintenance by unscrewing the cover with threads to wire.

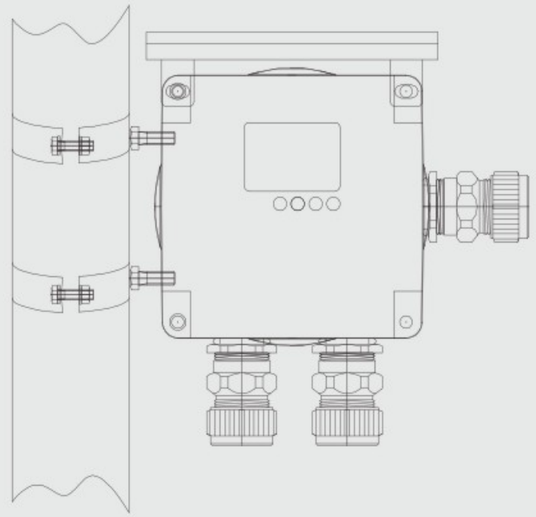


设防爆按键，温控器可在箱面调试
The thermostat can be debugged through explosion-proof buttons on the box surface.

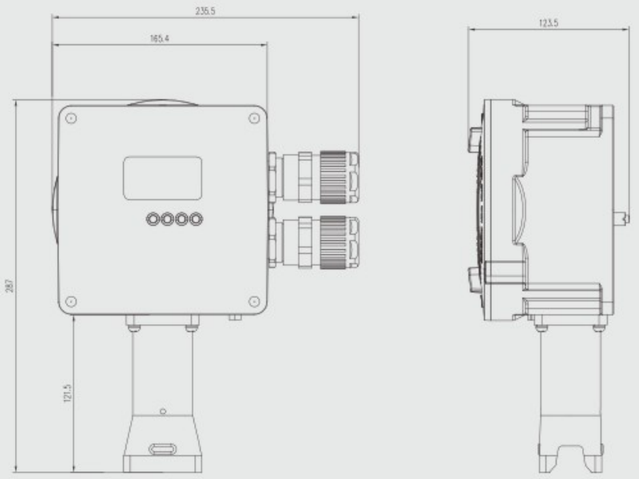
可采用不锈钢或PPS伴热专用支架
Stainless steel or PPS heating brackets can be used.

产品外形及安装示意图尺寸 Product outline and installation dimensions

支柱安装 Pillar mounting



伴热支架式安装 Heat tracing bracket mounting



防爆温度控制开关(毛细管感应)MAMX-12-C2系列
Explosion-proof temperature control switch (capillary induction) MAMX-12-C2 series

MINMILE
Smart Technology

- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所;
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas;
- 适用于控制危险区域防冻所用的伴热系统，能够对环境温度的变化做出反应，并且可调设定点;
  Can be suit for the heat tracing system for the anti-consolidate in hazardous area, capable for responding to changes in the ambient temperature, with the adjustable set points.
- 本产品可用于控制单个伴热回路;
  Can be used to control a single heat tracing circuit ;
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、伴热支架式安装，进线采用橡胶电缆、铠装电缆、伴热线等。
  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable and heating cable.



型号含义 / Model Identification

MAMX-12-C2 — V

V：伴热支架式
支架代号，P1=PPS单线支架，P3=PPS三线支架，S1=不锈钢304，S2=不锈钢316，非伴热支架式不注。

V: Heat tracing bracket type
Bracket code: P1=PPS single-wire bracket; P3=PPS three-wire bracket; S1=stainless steel 304; S2=stainless steel 316; if non-heat tracing bracket type, no additional marks.

举例：防爆毛细管感应，伴热支架式，PPS材质，则型号为：MAMX-12-C2-P

For example:
If the Explosion-proof capillary induction thermostat is heat tracing bracket type PPS material, the model is MAMX-12-C2-P.



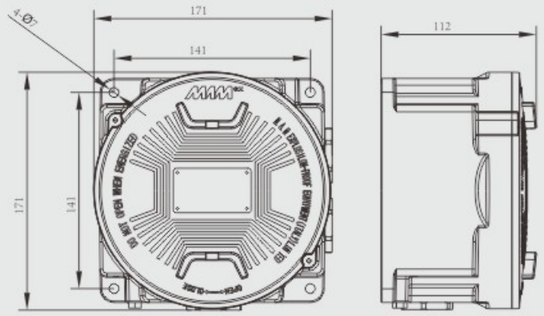
通用技术参数 / General Technical Parameters

	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db IIC T6...T4 Gb Ex tb IIIC T80℃...T135℃ Db	Ⓔx II 2G Ex db IIC T6...T4 Gb Ⓔx II 2D Ex tb IIIC T80℃,T95℃,135℃,Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
通用电源供应 General power supply	AC125/250/480V时最大20A MAX.20A under AC125/250/480V	
内装元件 Built-in components	机械温控开关、接线端子 Mechanical thermostate, terminal	
传感器类型 Sensor Type	固定充液（硅树脂）球泡和毛细管 Fixed Liquid Filled (Silicone) Bulbs and Capillaries	
保护壳材质 Enclosure material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102	
保护壳喷涂材料及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating ,MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional	
环境温度范围及防护防腐等级 Ambient temperature and IP rate	-43℃~+60℃、IP66、WF2	
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel	

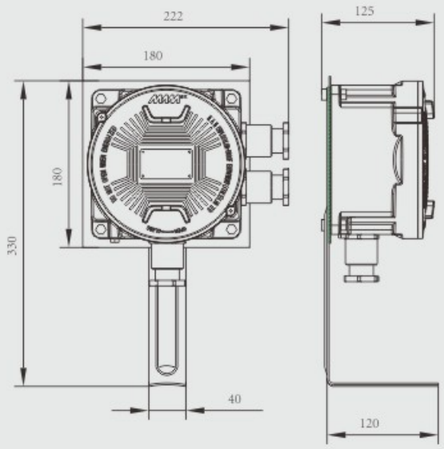
防爆温度控制开关(毛细管感应)MAMX-12-C2系列
Explosion-proof temperature control switch (capillary induction) MAMX-12-C2 series

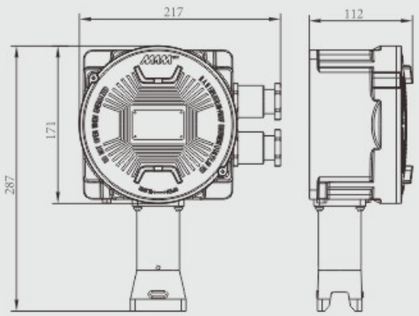
产品外形及安装示意图尺寸 Product outline and installation dimensions

常规壁式安装 Wall mounting



伴热支架式安装 Heat tracing bracket mounting





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防爆AP接入点MAMX-13/14系列
Explosion-proof AP Access Point MAMX-13/14 series

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产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。
Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.

可根据客户需求选用华为、思科、摩托罗拉网关，满足不同客户的需求；
The gateway can be selected from HUAWEI, CISCO and MOTORO - LA to meet the customer requirements.

可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆、网线等。
The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable and network cable.



产品简说 / Product brief description

本产品是一款针对无线局域网技术在危险环境中应用而开发的产品，实现了无线网络信号在工业危险环境的网络全覆盖，特别适用于化工、制药、石油化工及能源等行业的危险品生产、物流、仓储、监控、人员及物联网管理等环节，以及石油天然气开采平台等应用场合，配合使用系列防爆手持终端，为客户提供防爆区域自动识别技术的完整、灵活、高效的整体解决方案。

01

This product is developed for the application of wireless local area network technology in hazardous environment. It realizes the full coverage of wireless network signals in industrial hazardous environment. It is especially suitable for the management of production, logistics, warehousing and monitoring of dangerous goods and management of personnel and Internet of things in chemical, pharmaceutical, petrochemical and energy industries and suitable for applications in oil and gas extraction platforms. In conjunction with the use of a series of explosion-proof handheld terminals, it can provide customers with a complete, flexible and efficient overall solution of automatic identification technology Program.

02

可根据要求选用不同的电缆用于电源进线，如橡胶电缆、铠装电缆、网线（POE接口）。

According to requirements, different incoming cables can be used for power supply, such as rubber cable armored cables, network cables (POE interface).

型号含义 / Model Identification

MAMX — □ — □□ □

□：
13(IIB)
14(IIC)

□□：
B1...B8
C2...C3

□：
W：壳体带密封圈，不带不注（CCC产品）
-D：-43℃~+60℃
-S：-40℃~+60℃
W：The enclosure with sealing ring, (CCC certified)
-D：-43℃~+60℃
-S：-40℃~+60℃

通用技术参数 / General Technical Parameters

	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db ⅡB + H_2 T6...T4 Gb Ex db ⅡC T6...T4 Gb Ex tb ⅢC T80℃...T135℃ Db	Ⅱ2G Ex db ⅡB+H_2 T6...T4 Gb Ⅱ2G Ex db ⅡC T6...T4 Gb Ⅱ2D Ex tb ⅢC T80°C,T95°C,135°C,Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
壳体材质 Enclosure Material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102	
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating , MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional	
额定电压及电流 Rated voltage & current	额定电压 Rated voltage：MAX.AC220V 50/60Hz 额定电流 Rated current：MAX.6A	
内装元件 Built-in components	华为、思科、摩托罗拉等品牌无线接入点，以客户需求为准。 Huawei, Cisco, Motorola and other brands of wireless access points, based on customer demand.	
防护防腐等级 Anti-corrosion level	IP66、WF2	
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel	
进出线电缆 Cable entry	铠装电缆、橡胶电缆、网线 Armored cable, rubber cable，network cable	

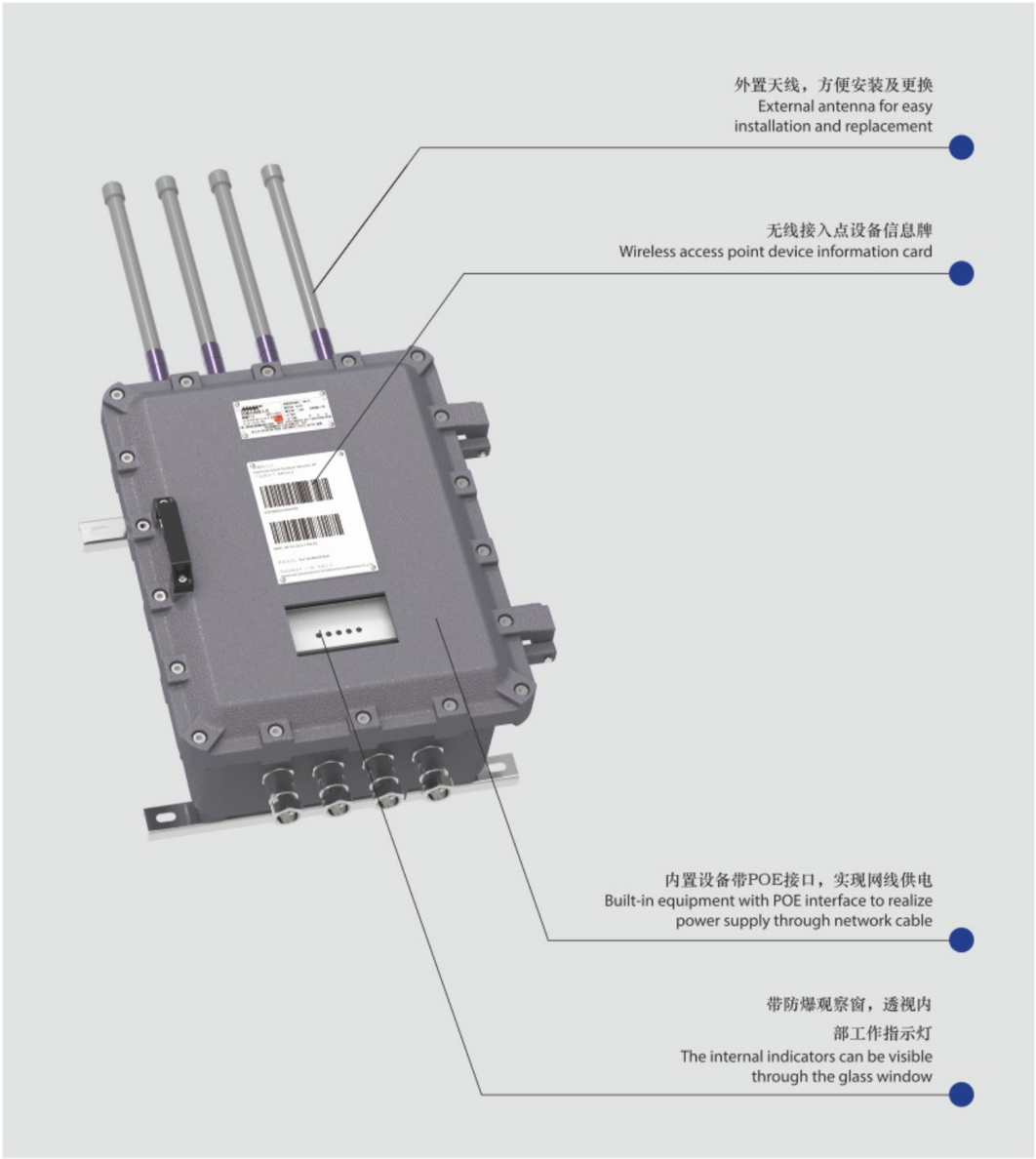
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常用接入点品牌及参数 Common access point brands and parameters

品牌 Brand	HUAWEI	CISCO	MOTOROLA
型号 Model	AP7152DN	Aironet 2800E	AP-7632-680B40
天线 Antenna	双频WLAN天线 4根 Dual frequency WLAN antenna 4pcs	双频WLAN天线 4根 Dual frequency WLAN antenna 4pcs	双频WLAN天线 2根 蓝牙天线 1根 Dual frequency WLAN antenna 2pcs Bluetooth antenna 1pc
发射频率 Emission frequency	双频 Dual frequency 2.4GHz/5.0GHz 802.11a/b/g/n/ ac/ac wave2	双频 Dual frequency 2.4GHz/5.0GHz 802.11a/b/g/n/ac/ac wave2	双频Dual frequency 2.4GHz/5.0GHz 802.11a/b/g/n/ac
最大传输功率 Maximum transmission power	24dBm	23dBm	23dBm
环境温度范围 Ambient temperature	-43℃ ~+55℃	-43℃ ~+55℃	-43℃ ~+55℃
外形尺寸及重量 Dimensions and weight	220mm×220mm×52mm 1.7KG	218mm×218mm×50.8mm 1.6kg	176mm×127mm×31mm 0.6KG
备注 Note	支持5GE上行 Support 5GE uplink		

注：以上品牌及规格为常用参考产品，可以根据用户需求选用合适品牌及规格的产品。
Note: The above brands and specifications are normally used as the referred products. Other proper brands and specifications can be selected according to the customers requirements.

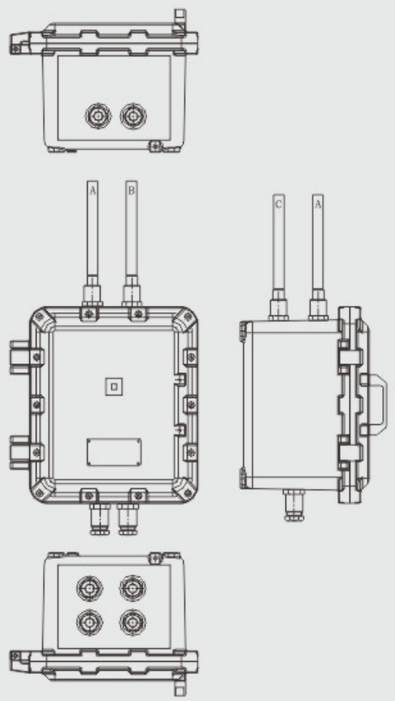
常用产品外形及安装示意图尺寸 Common Product outline and installation dimensions



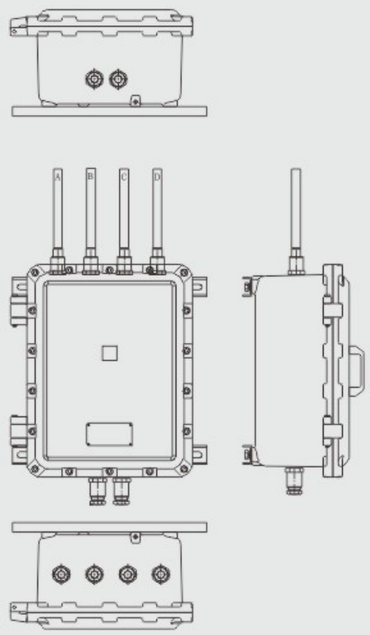
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● 产品外形及安装示意图尺寸 Product outline and installation dimensions

防爆AP接入点 MAMX-13 Explosion-proof Access Point



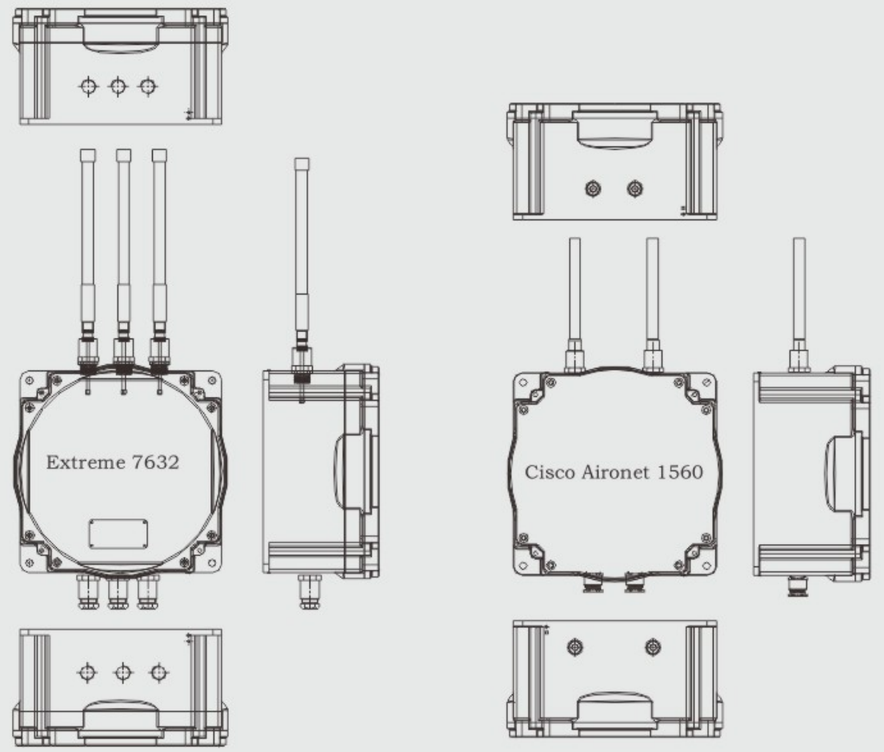
B4



B5

● 产品外形及安装示意图尺寸 Product outline and installation dimensions

防爆AP接入点 MAMX-14 Explosion-proof Access Point



C3

防爆电气控制箱（带呼吸片）MAMX-18系列
Explosion-proof Electrical control box (with respirator) MAMX-18 series

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.
- 适用于内部装阀岛，通气设备等。
  Suit for the built-in valve terminal and breathing apparatus, etc.
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆等。
  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable and armored cable.







型号含义 / Model Identification

MAMX-18 – □

IIB+H2壳体
IIB+H2 Enclosure:

B1:200*250*170
B2:200*300*170
B3:200*350*170
B4:300*350*230
B5:350*450*205
B6:450*560*210
B7:450*560*280
B8:560*720*350

MAMC – □-□

功能代号
- 03-□（配电箱，C5、C6、C7）
- 05-□（操作柱，C5、C6、C7）
- 08-□（接线箱，C5、C6、C7）
- 12-□（温度控制箱，C5、C6、C7）
- 14-□（AP 接入点，C5、C6、C7）
- 16-□（电气控制箱，C5、C6、C7）

防爆电气箱

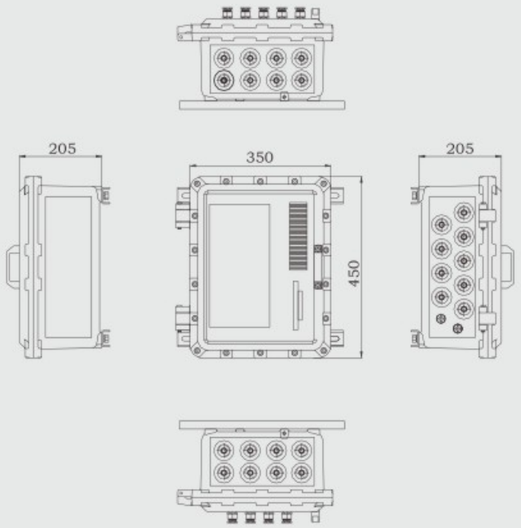
举例:MAMX-18-B2，表示防爆电气控制箱，壳体尺寸为200*300*170mm.
For Example:MAMX-18-B2 represents explosion-proof electric control box，with enclosure dimension 200*300*170mm.

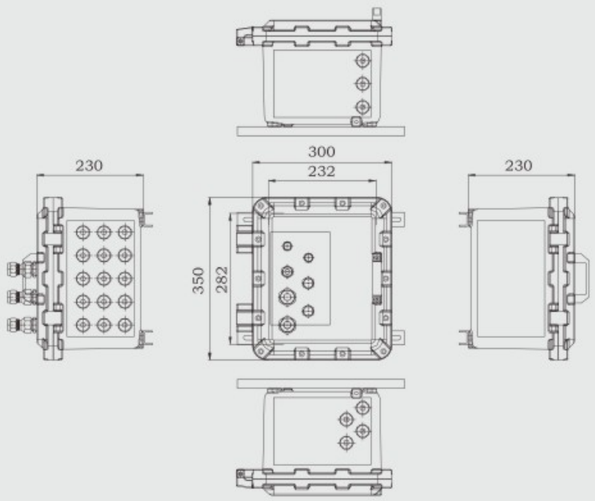
通用技术参数 / General Technical Parameters

爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB Ex db IIB + H_2 T6...T4 Gb Ex tb IIIC T80℃...T135℃ Db
遵循标准 Conformity to standard	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014
通用电源供应 General power supply	额定电压 Rated voltage：MAX.AC690V 50/60Hz 额定电流 Rated current：MAX.630A
防护防腐等级 Anti-corrosion level	IP66、WF2
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel
保护壳材质 Enclosure material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Anti-static powder coating , MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional
内部安装元件 Built–in components	阀岛、隔离开关等电器元件。 Valve terminal, isolator swtich, etc.
内部安装仪表 Built-in instrument	电流表、电压表等显示仪表。 Different display instruments such as ammeter and voltmeter. 注：以上仪表可显示、可操作； Note: Above instruments can be viewed and operated.
接线端子品牌 Brand of terminals	魏德米勒、菲尼克斯等；Weidmuller、Phoenix etc.
进出线电缆 Cable entry	铠装电缆、橡胶电缆； Armored cable、Rubber cable

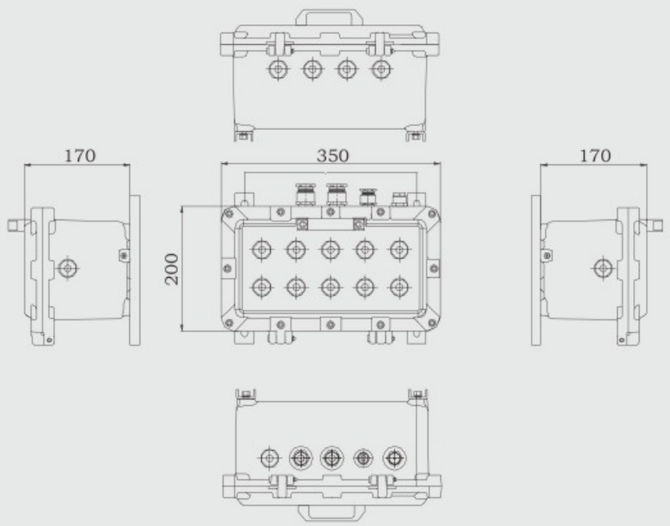
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产品外形及安装示意图尺寸 Product outline and installation dimensions





产品外形及安装示意图尺寸 Product outline and installation dimensions





粉尘防爆（高防护）配电装置MAMX-20系列
Dust explosion-proof (high protection) power distribution device MAMX-20 series

MINMILE
Smart Technology

IEC IECEx EAC

- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。用于照明、动力、检修配电箱。

  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.Used as lighting, power and maintenance distribution boards.

- 适用于控制危险区域的工艺维温和防冻中的电伴热，电伴热进行供电控制，采用不同的仪表、程序控制模块对加热物体的温度调控，满足不同客户的需求；

  Suitable for controlling the temperature maintenance and the power supply of electric heating in the anti-freezing in hazardous area; Adopting different instruments and program control modules to control the temperature of the heating object so as to meet the requirements of different customers;

- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆。

  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable.



型号含义 / Model Identification

MAMX-20 – □ / □

电流 Current

电压 Voltage



通用技术参数 / General Technical Parameters

防爆标志 Explosion-proof mark	GB/IEC: Ex tb IIIC T80°C Db
遵循标准 Conformity to standard	GB/T 3836.1-2021,GB/T 3836.31-2021 IEC60079-0:2017,IEC60079-31:2013
环境温度范围及防护防腐等级 IP degree & Anti-corrosion level	-40℃~+60℃ IP66、WF2
通用电源供应 General power supply	额定电压 Rated voltage: MAX.AC660V 50/60Hz 额定电流 Rated current: MAX.630A
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel
保护壳材质 Enclosure material	工程塑料,铝合金 Q235\SS304\SS316 Sheet steel, engineering plastic, aluminum alloy
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色国际标号：RAL7035 其他颜色可定制 Electrostatic powder coating , International standard color code：RAL7035
内部安装元件 Built–in components 常用元件品牌 Normal components brand: 西门子 Siemens、施耐德 Schneider、ABB	微型断路器、塑壳式断路器、交流接触器、热继电器、电机保护开关、双电源开关、中间继电器、时间继电器、固态继电器、互感器、熔断器、变频器、软启动器 MCB,MCCB,AC contactor,Thermal Relay,MTH,SHK-M,Auxiliary Relay,Time Relay,SSR, PLC,Mutual inductor,FU,Frequency Converter,Soft Starter 注：以上漏电断路器全部实现在箱外自复位，无需开盖复位； Note: Above leakage circuit breaker fully realize self–resetting in outside box, no need to open the cover of box
内部安装仪表 Built-in instrument	程序控制模块、温控仪、电流表、电压表等显示仪表。 Different display instruments such as Program control modules, thermostat, ammeter and voltmeter. 注：以上仪表可显示、可操作； Note: Above instruments can be viewed and operated.
接线端子品牌 Brand of terminals	魏德米勒，菲尼克斯等；Weidmuller，Phoenix；
进出线电缆 Cable entry	铠装电缆、橡胶电缆； Armored cable,Rubber cable

粉尘防爆（高防护）配电装置MAMX-20系列
Dust explosion-proof (high protection) power distribution device MAMX-20 series

产品特点 / Product Features



面板可配置高防护的信号灯、按钮、转换开关、MGC40程序控制器，可快速实现箱面操作

The panel can be equipped with high-protection signal lights, buttons, transfer switches, and MGC40 program controller for quick box surface operation.

配箱面操作开关操作机构，高防护、耐低温，可根据用户现场“挂牌上锁”管理需要配置3把挂锁

The high protection, low temperature resistance box surface operation switch operating mechanism can be configured with 3 padlocks according to the user site management requirements .

外壳材质可根据用户现场环境需要来选择。普通钢板、不锈钢304/316、工程塑料、铝合金

The housing material can be selected according to the needs of the user's site environment. Ordinary steel plate, stainless steel 304/316 and engineering plastic are optional.

配防爆电缆夹紧装置

With high protection cable glands

MINMILE
Smart Technology



防爆电气控制装置MAMC系列
Explosion-proof electrical control device MAMC series

MINMILE
Smart Technology

产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。用于照明、动力、检修配电箱。

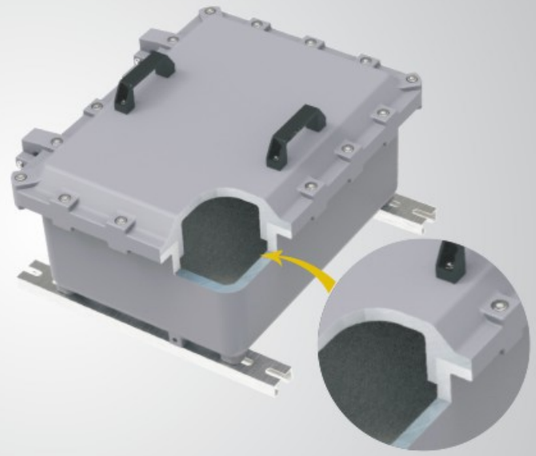
Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.Used as lighting, power and maintenance distribution boards.

适用于控制危险区域的工艺维温和防冻中的电伴热，电伴热进行供电控制，采用不同的仪表、程序控制模块对加热物体的温度调控，满足不同客户的需求；

Suitable for controlling the temperature maintenance and the power supply of electric heating in the anti-freezing in hazardous area; Adopting different instruments and program control modules to control the temperature of the heating object so as to meet the requirements of different customers;

可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆。

The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable.



型号含义 / Model Identification

MAMC – □ – □-□

- 外壳代号 Enclosure code
  - C4:300*350*230
  - C5:350*450*205
  - C6:450*560*210
  - C7:450*560*280
  - C8:560*720*350
- 功能代号
  - 03-□（配电箱, C5、C6、C7）
  - 05-□（操作柱, C5、C6、C7）
  - 08-□（接线箱, C5、C6、C7）
  - 12-□（温度控制箱, C5、C6、C7）
  - 14-□（AP 接入点, C5、C6、C7）
  - 16-□（电气控制箱, C5、C6、C7）
- 防爆电气箱

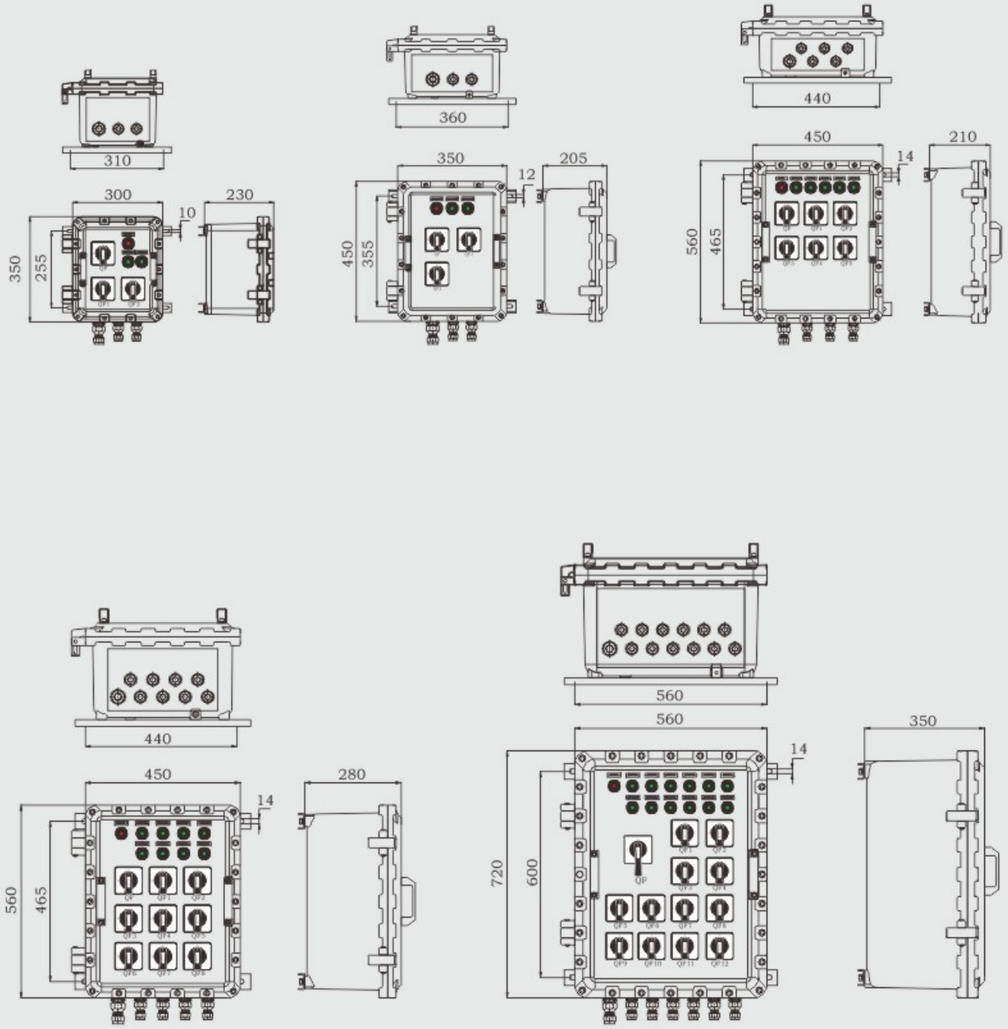
举例:MAMC-03-C7,表示防爆电气控制箱，壳体尺寸为450*560*280mm
For Example:MAMC-03-C7 is an explosion-proof electrical control box with a shell size of 450*560*280mm.

通用技术参数 / General Technical Parameters

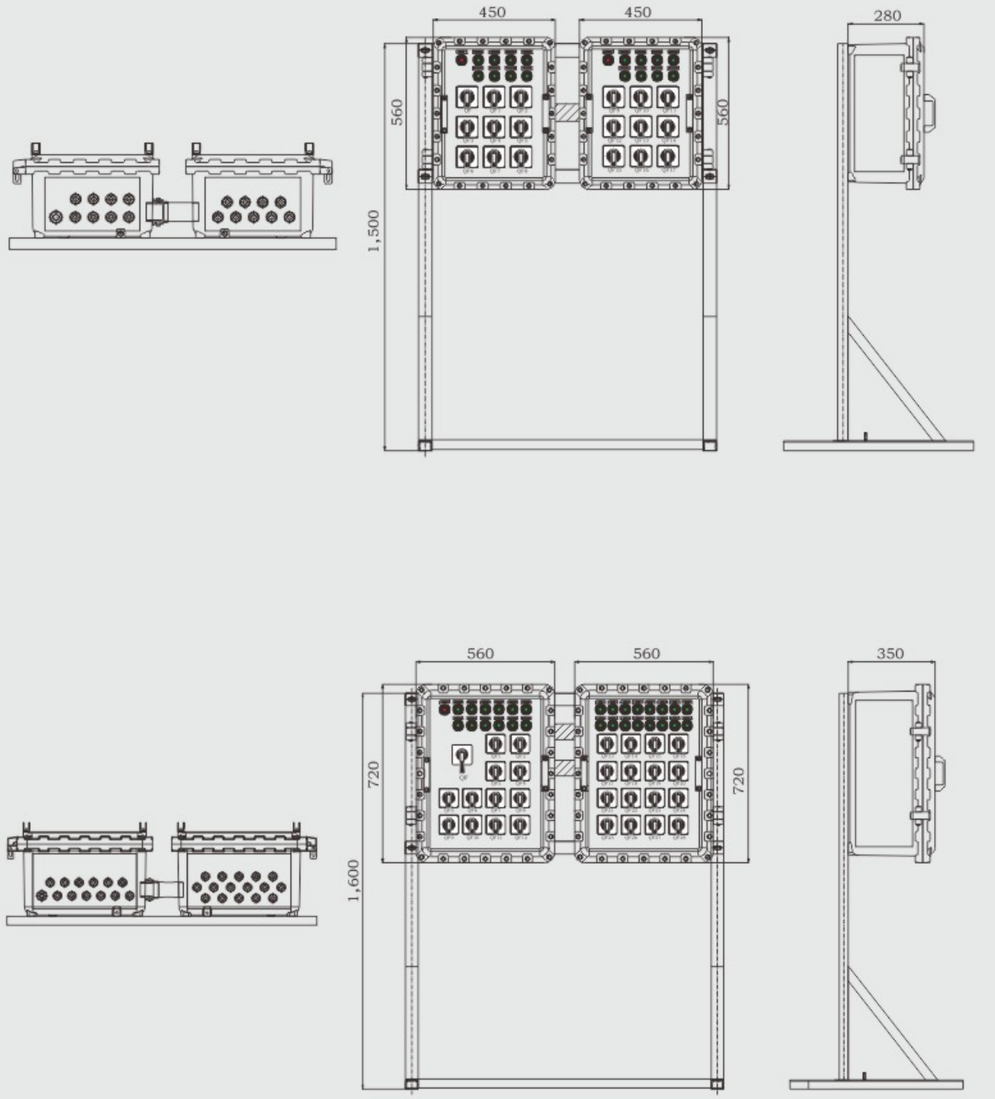
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB Ex db ⅡC T6… T4 Gb Ex tb ⅢC T80℃…T135℃ Db
遵循标准 Conformity to standard	GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021
通用电源供应 General power supply	额定电压 Rated voltage：Max.1000V 额定电流 Rated current：Max.1000A
防护防腐等级、环境温度 IP degree & Anti-corrosion level	IP66、WF2、 -40℃~+60℃
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel
保护壳材质 Enclosure material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating , International standard color code :RAL 7035 optional
内部安装元件 Built-in components 常用元件品牌 Normal components brand: 西门子 Siemens、施耐德 Schneider、ABB	微型断路器、塑壳式断路器、交流接触器、热继电器、电机保护开关、双电源开关、中间继电器、时间继电器、固态继电器、互感器、熔断器、变频器、软启动器等。 MCB,MCCB,AC contactor,Thermal Relay,MTH,SHK-M,Auxiliary Relay,Time Relay,SSR, PLC,Mutual inductor,FU,Frequency Converter,Soft Starter etc. 注：以上漏电断路器全部实现在箱外自复位，无需开盖复位； Note: Above leakage circuit breaker fully realize self-resetting in outside box, no need to open the cover of box
内部安装仪表 Built-in instrument	程序控制模块、温控仪、电流表、电压表等显示仪表。 Different display instruments such as Program control modules, thermostat, ammeter and voltmeter. 注：以上仪表可显示、可操作； Note: Above instruments can be viewed and operated.
接线端子品牌 Brand of terminals	魏德米勒，菲尼克斯等；Weidmuller，Phoenix etc.
进出线电缆 Cable entry	铠装电缆、橡胶电缆； Armored cable, Rubber cable

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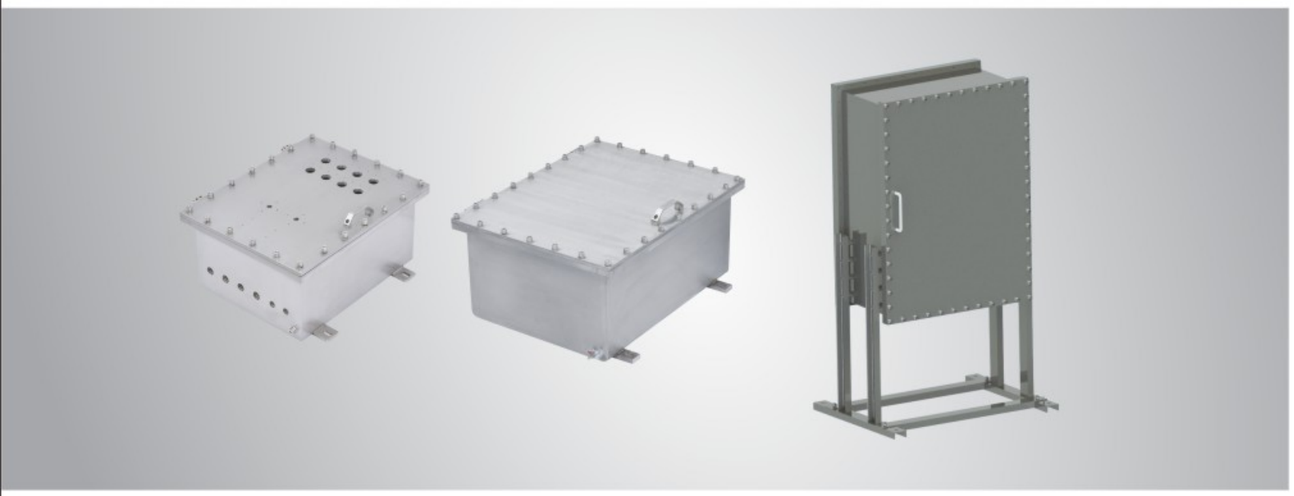
产品外形及安装示意图尺寸 Product outline and installation dimensions



产品外形及安装示意图尺寸 Product outline and installation dimensions



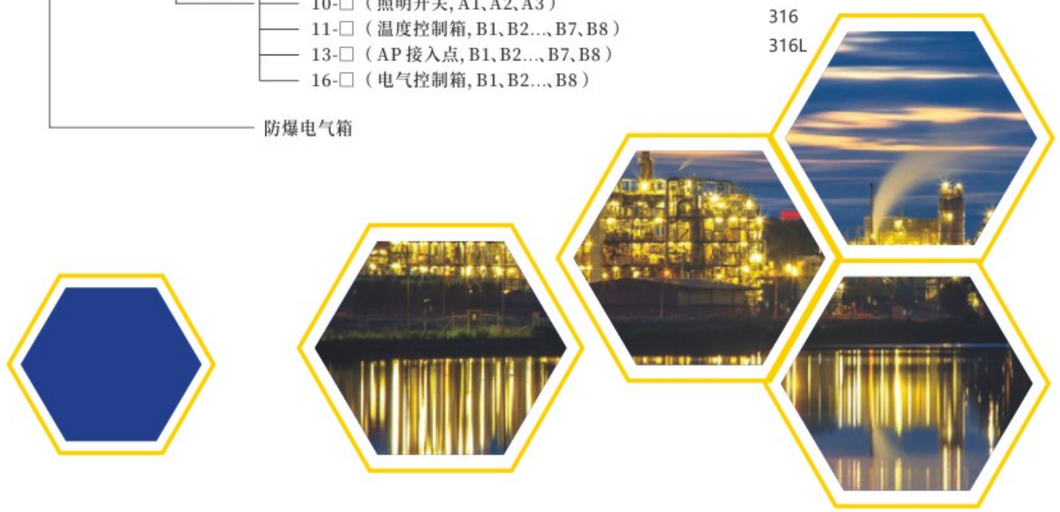
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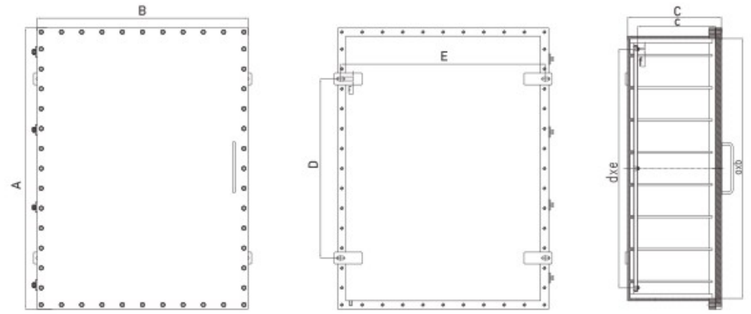
型号含义 / Model Identification

MAMS – □-□ – □ – □ – □

- 防爆电气箱
- 功能代号
  - 02-□（配电箱, B1、B2...、B8）
  - 04-□（操作柱, B1、B2...、B8）
  - 07-□（接线箱, B1、B2...、B8）
  - 09-□（按钮盒, A1、A2、A3）
  - 10-□（照明开关, A1、A2、A3）
  - 11-□（温度控制箱, B1、B2...、B7、B8）
  - 13-□（AP 接入点, B1、B2...、B7、B8）
  - 16-□（电气控制箱, B1、B2...、B8）
- 壳体代码 Enclosure code
- 材质代号 Material code:
  - Q235
  - 304
  - 316
  - 316L
- 材质:Q235/304/316/316L



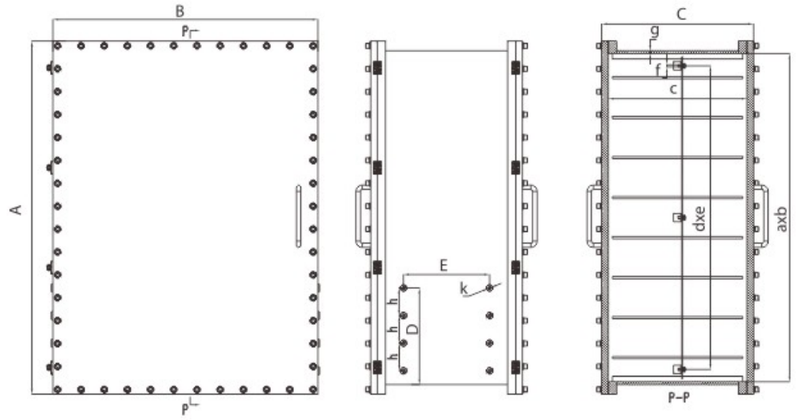
壳体尺寸表 / Enclosure Size Table



主要参数 / Main Parameters

代号 Code	规格型号 Code	外形尺寸 Outline dimensions			内部空间尺寸 Internal dimensions			底板安装孔尺寸及规格 The holes distance and size on mounting plate			安装支架尺寸规格 Mounting bracket dimensions		
		A	B	C	a	b	c	d	e	f	D	E	F
B1	200*250*155	250	200	155	180	130	128	124	90	M6	171	200	10
B2	200*300*155	300	200	155	230	130	128	174	90	M6	221	200	10
B3	200*350*155	350	200	155	280	130	128	224	90	M6	271	200	10
B4	300*350*216	350	300	216	288	238	190	218	148	M6	255	310	10
B5	350*450*185	450	350	185	370	270	158	310	200	M6	355	360	12
B6	450*560*190	560	450	190	480	370	159	390	300	M6	465	440	14
B7	450*560*260	560	450	260	478	368	240	418	294	M6	352	438	13
B8	560*720*325	720	560	325	638	478	309.5	578	398	M6	516	548	13
B9	200*250*180	250	200	180	190	140	148	130	66	M5	128	178	9
B10	200*300*180	300	200	180	240	140	148	180	66	M5	178	178	9
B11	200*350*180	350	200	180	290	140	148	230	66	M5	228	178	9
B12	300*350*240	350	300	240	276	226	206	216	152	M6	188	280	11
B13	350*450*240	450	350	240	376	276	206	316	202	M6	255	329	11
B14	350*450*280	450	350	280	376	276	246	316	202	M6	255	329	11
B15	450*560*240	560	450	240	478	368	200	418	294	M6	352	438	13
B16	450*560*280	560	450	280	478	368	240	418	294	M6	352	438	13
B17	474*674*350	674	474	350	592	392	309.5	532	312	M6	480	462	13
B18	560*720*350	720	560	350	638	478	309.5	578	398	M6	516	548	13
B19	720*980*400	980	720	400	890	630	337.5	800	550	M8	688	692	16
B20	960*1280*450	1280	960	450	1190	870	383.5	1100	790	M8	996	927	16
B21	700*800*300	800	700	300	710	610	238	610	510	M6	595	675	16
B22	700*800*400	800	700	400	710	610	338	610	510	M6	595	675	16
B23	900*1080*380	1080	900	380	990	810	314	896	706	M6	783	875	16
B24	900*1200*400	1200	900	400	1110	810	334	1020	706	M6	765	875	16

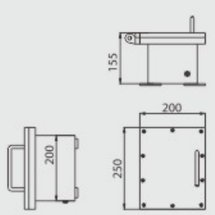
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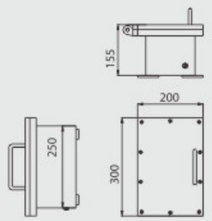
壳体 尺寸表 / Enclosure Size Table

代号 Code	规格型号 Code	外形尺寸 Outline dimensions			内部空间尺寸 Internal dimensions			底板安装孔尺寸及规格 The holes distance and size on mounting plate			安装支架尺寸规格 Mounting bracket dimensions			
		A	B	C	a	b	c	d	e	f	D	E	h	k
B25	560*720*450双面开门	720	560	450	630	470	422	560	390	M8	255	242	70	M12
B26	720*980*500双面开门	980	720	500	890	630	460	800	550	M8	350	280	100	M12
B27	960*1280*550双面开门	1280	960	550	1190	870	502	1100	790	M8	350	312	100	M12
B28	560*720*450双面开门带散热器	720	560	450	630	470	422	560	390	M8	255	242	70	M12
B29	720*980*500双面开门带散热器	980	720	500	890	630	460	800	550	M8	350	280	100	M12
B30	960*1280*550双面开门带散热器	1280	960	550	1190	870	502	1100	790	M8	350	312	100	M12

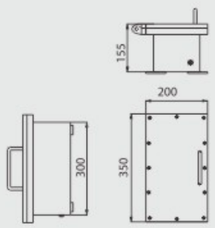
● 产品外形及安装示意图尺寸 Product outline and installation dimensions



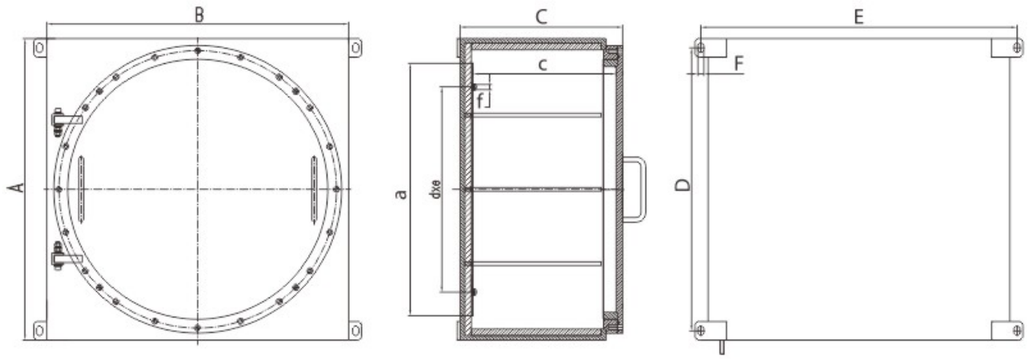
MAMS-**-B1



MAMS-**-B2



MAMS-**-B3



壳体 尺寸表 / Enclosure Size Table

壳体代码 Code	外形尺寸 Outline dimensions			内部空间尺寸 Internal dimensions		底板安装孔尺寸及规格 The holes distance and size on mounting plate			安装支架尺寸规格 Mounting bracket dimensions		
	A	B	C	a	c	d	e	f	D	E	F
C4	220	220	150	φ144	119	91	91	M5	180	245	11
C5	330	330	180	φ229	149	150	150	M5	290	335	11
C6	420	400	200	φ302	162	200	200	M6	380	425	11
C7	420	400	300	φ302	262	200	200	M6	380	425	11
C8	436	436	280	φ362	240	244	244	M6	396	467	13
C9	450	450	200	φ362	160	244	244	M6	410	481	13
C10	450	450	300	φ362	260	244	244	M6	410	481	13
C11	550	550	300	φ439	260	352	222	M6	510	581	13
C12	550	550	350	φ439	310	352	222	M6	510	581	13
C13	650	650	300	φ544	257.5	442	272	M6	610	681	13
C14	650	650	350	φ544	307.5	442	272	M6	610	681	13

防爆配电箱MAMS-02系列
Explosion-proof control device MAMS-02series

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。用于照明、动力、检修配电箱。

  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.Used as lighting, power and maintenance distribution boards.

- 适用于控制危险区域的工艺维温和防冻中的电伴热，电伴热进行供电控制，采用不同的仪表、程序控制模块对加热物体的温度调控，满足不同客户的需求；

  Suitable for controlling the temperature maintenance and the power supply of electric heating in the anti-freezing in hazardous area; Adopting different instruments and program control modules to control the temperature of the heating object so as to meet the requirements of different customers;

- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆。

  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable.



型号含义 / Model Identification

MAMS - □ - □ - □

- MAMS：型号 Model
- □：功能代号 Function code
  02-□（配电箱, B1、B2...、B8）
- □：壳体代码 Enclosure code
- □：材质代号 Material code:
  Q235
  304
  316
  316L

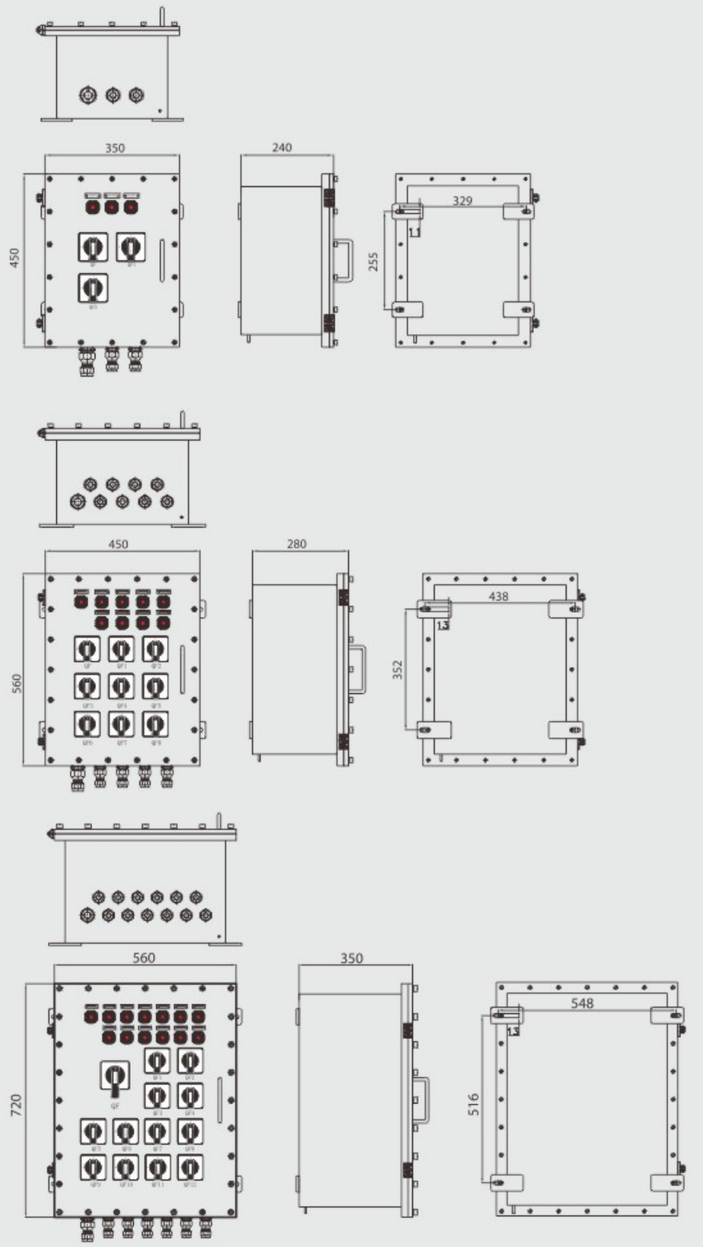
举例:MAMS-02-B2-304，表示防爆电气控制箱，壳体尺寸为200*300*170mm，壳体材质为不锈钢304.
For Example:MAMS-02-B2-304 represents explosion-proof electric control box，with enclosure dimension 200*300*170mm and enclosure material stainless steel 304.

通用技术参数 / General Technical Parameters

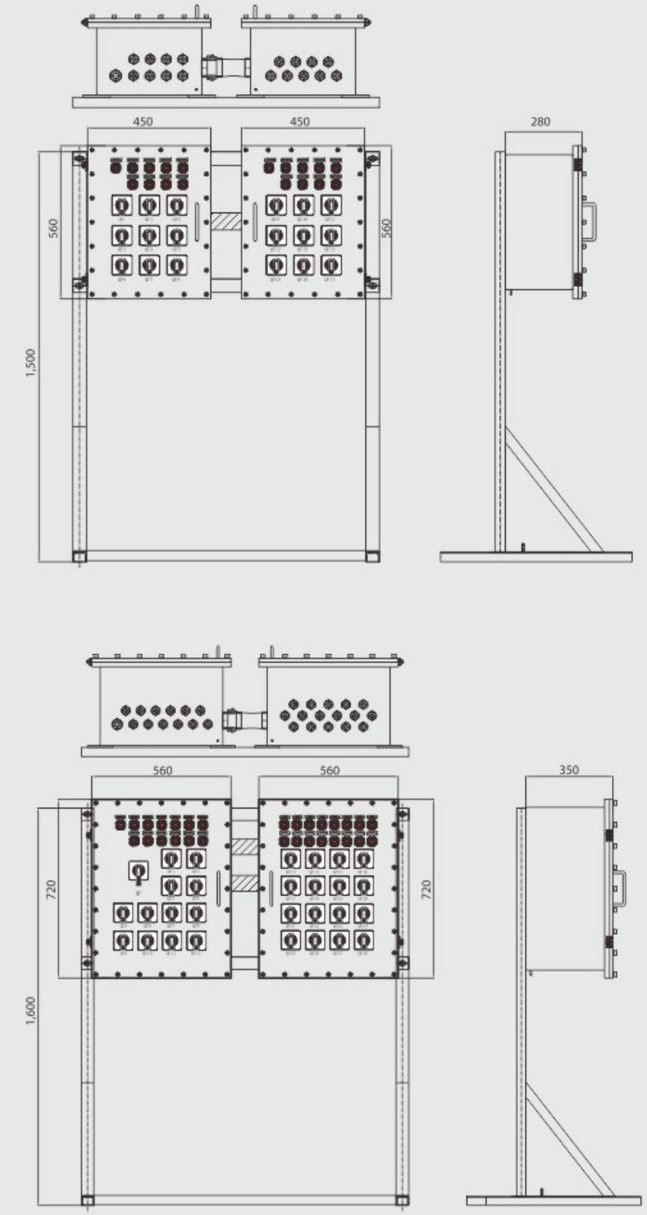
	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体防爆 Ga s explosion protection 粉尘防爆 Dust explosion protection	Ex db ⅡB + H_2 T6...T4 Gb Ex db ⅡC T6...T4 Gb Ex tb ⅢC T80℃...T135℃ Db	Ⓔx Ⅱ2G Ex db ⅡB+H_2 T6...T4 Gb Ⓔx Ⅱ2G Ex db ⅡC T6...T4 Gb Ⓔx Ⅱ2D Ex tb ⅢC T80°C,T95°C,135°C,Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
防护防腐等级、环境温度 IP degree,anti-corrosion level	IP66、WF2、- 43℃~ +60℃	
壳体材质 Enclosure material	Q235、不锈钢:304/316/316L Q235、Stainless steel:304/316/316L	
表面处理 Surface treatment	默认按表面拉丝处理，颜色可定制 Standard:brushed polishing surface Optional: powder coated surface by the customized color	
紧固件材质 Material of exposed fastener	不锈钢304 /316 Stainless steel 304 /316	
内部安装元件 Built- in components: 元件品牌 Components brand: 西门子,施耐德,ABB Siemens, Schn eider, ABB	微型断路器、塑壳式断路器、交流接触器、热继电器、电机保护开关、双电源开关、中间继电器、时间继电器、固态继电器、互感器、熔断器、变频器、软启动器MCB等。 MCB , MCCB, AC contactor, Thermal Relay, MTH,SHK-M, Auxiliary Relay, Time Relay, SSR, PLC, Mutual inductor, FU,Frequency Converter, Soft Starter etc. 注：以上漏电断路器全部实现在箱外自复位，无需开盖复位； Note: Above leakage circuit breaker fully realize self-rest within enclosure without opening the front cover.	
内部安装仪表 Built- in instrument	程序控制模块、 温控仪、 电流表、 电压表等显示仪表。 Different display instruments such as programmable logic controllers, thermostat, ammeter and voltmeter 注：以上仪表可显示、 可操作 Note: Above instruments can be viewed and operated	
接线端子品牌 Brand of terminals	魏德米勒、菲尼克斯等；Weidmuller，Phoenix etc.	
进出线电缆 Cable entry	铠装电缆、橡胶电缆; Armored cable, Rubber cable	

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产品外形及安装示意图尺寸 Product outline and installation dimensions



产品外形及安装示意图尺寸 Product outline and installation dimensions

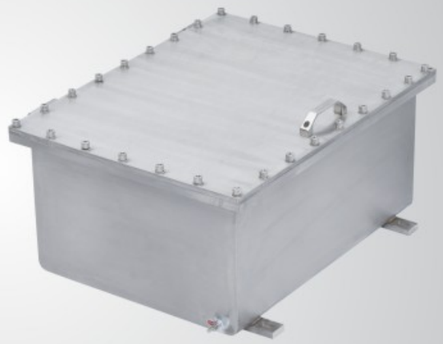


防爆接线箱MAMS-07系列
Explosion-proof Junction box MAMS-07 series

MINMILE
Smart Technology

- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所，适用于电器、安装分线用，特别适用于大功率电加热器的安装分线。
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas; Suitable for cable distribution when installing electrical appliances and especially when installing and high-power electric heaters on site.
- 碳钢和不锈钢，不锈钢外露紧固件，外形美观。
  Beautiful appearance: Aluminum alloy enclosure with stainless steel exposed fasteners.
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式，进线采用橡胶电缆、铠装电缆等。

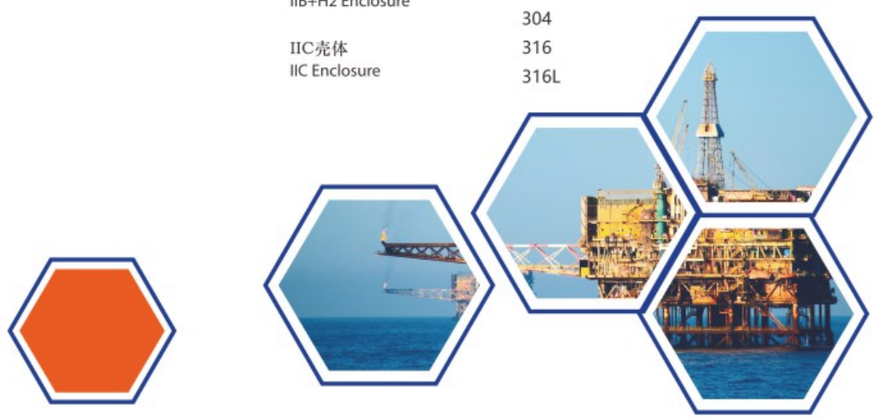
  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable and armored cable.



型号含义 / Model Identification

MAMS - □ - □ - □

- 07-□（接线箱, B1、B2...、B8）
- 壳体代码 Enclosure code
  - IIB+H2壳体 IIB+H2 Enclosure
  - IIC壳体 IIC Enclosure
- 材质代号 Material code:
  - Q235
  - 304
  - 316
  - 316L



通用技术参数 / General Technical Parameters

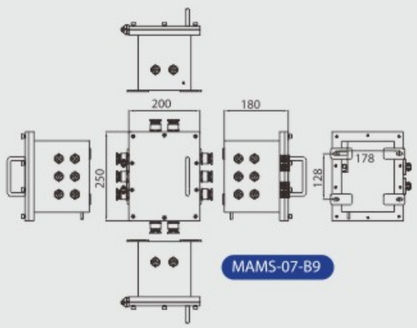
	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db ⅡB + H_2 T6...T4 Gb Ex db ⅡC T6...T4 Gb Ex tb ⅢC T80℃...T135℃ Db	Ⅱ2G Ex db ⅡB+H_2 T6...T4 Gb Ⅱ2G Ex db ⅡC T6...T4 Gb Ⅱ2D Ex tb ⅢC T80°C,T95°C,135°C,Db
遵循标准 Conformity to standard	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
通用电源供应 General power supply	额定电压 Rated voltage：MAX.AC1250V 50/60Hz 额定电流 Rated current：MAX.1500A	
防护防腐等级、环境温度 IP degree & Anti-corrosion level	IP66、WF2、-43℃~+60℃	
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel	
保护壳材质 Enclosure material	Q235、不锈钢:304/316/316L Q235、Stainless steel:304/316/316L	
表面处理 Surface treatment	默认按表面拉丝处理，颜色可定制 Standard:brushed polishing surface Optional: powder coated surface by the customized color	
接线端子品牌 Brand of terminals	魏德米勒、菲尼克斯等；Weidmuller，Phoenix etc.	
进出线电缆 Cable entry	铠装电缆、橡胶电缆; Armored cable, Rubber cable	



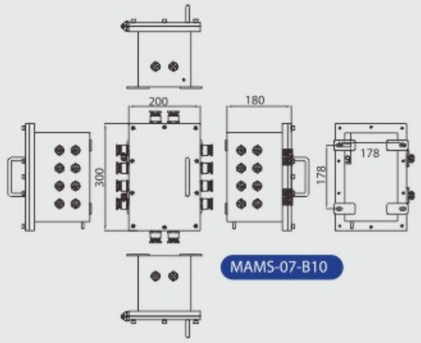
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产品外形及安装示意图尺寸 Product outline and installation dimensions

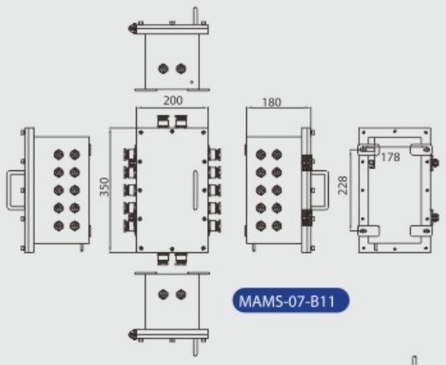
防爆接线箱 Explosion-proof Junction box



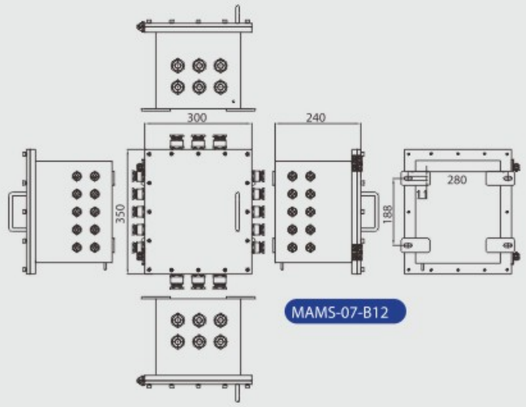
MAMS-07-B9



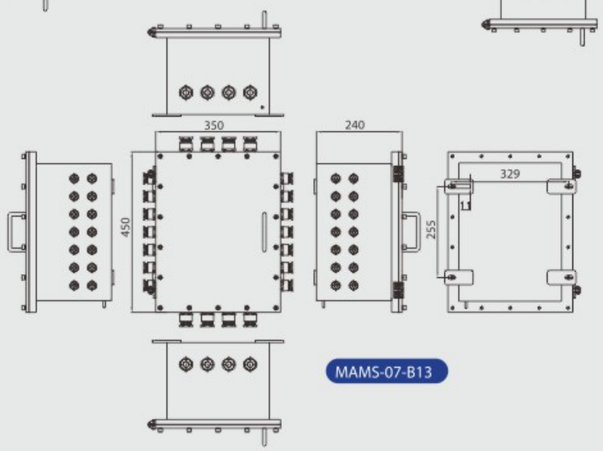
MAMS-07-B10



MAMS-07-B11



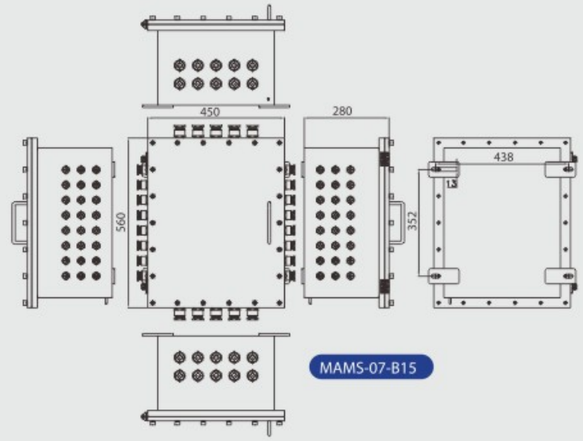
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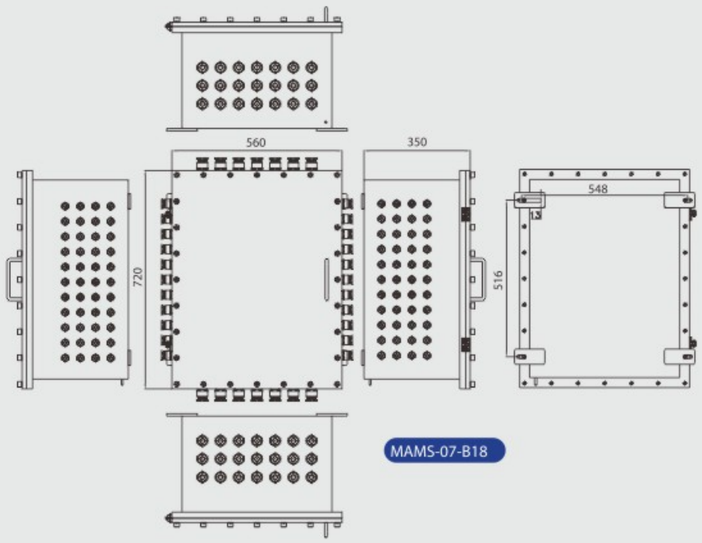
MAMS-07-B13

产品外形及安装示意图尺寸 Product outline and installation dimensions

防爆接线箱 Explosion-proof Junction box



MAMS-07-B15



MAMS-07-B18

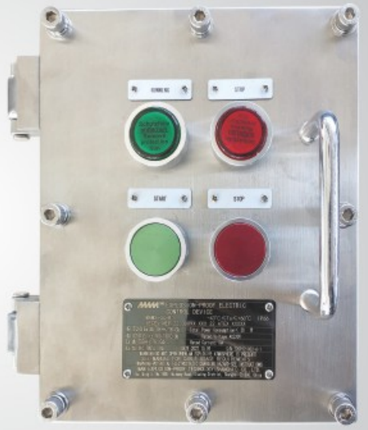
防爆操作柱MAMS-04系列
Explosion-proof control station MAMX-04 series

MINMILE
Smart Technology

- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.

- 广泛用于工作现场中电机的启停控制转换及显示、运行时的电参数显示、调速、信号切换、仪表计量显示等用途；
  Widely used in the start and stop control conversion and display of motors in the work site, electrical parameter display during operation, speed regulation, signal switching, metering display, etc;

- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆等。
  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable and armored cable.



型号含义 / Model Identification

MAMS – □ – □ – □

04-□（操作柱, B1、B2...、B8）

壳体代码 Enclosure code
IIB+H2壳体
IIB+H2 Enclosure

IIC壳体
IIC Enclosure

材质代号 Material code:
Q235
304
316
316L

举例:MAMS-04-B2，表示防爆操作柱，壳体尺寸为200*300*170mm.
For Example:MAMS-04-B2 represents explosion-proof electric control box，with enclosure dimension 200*300*170mm

通用技术参数 / General Technical Parameters

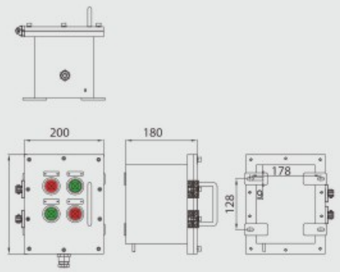
	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db IIB + H_2 T6...T4 Gb Ex db IIC T6...T4 Gb Ex tb IIIC T80℃...T135℃ Db	Ⓔx II 2G Ex db IIB+H_2 T6...T4 Gb Ⓔx II 2G Ex db IIC T6...T4 Gb Ⓔx II 2D Ex tb IIIC T80°C,T95°C,135°C,Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
通用电源供应 General power supply	额定电压 Rated voltage：MAX.AC690V 50/60Hz 额定电流 Rated current：MAX.40A	
防护防腐等级、环境温度 Degree of protection anti-corrosion level	IP66、WF2、-43℃-+60℃	
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel	
保护壳材质 Enclosure material	Q235、不锈钢:304/316/316L Q235、Stainless steel:304/316/316L	
表面处理 Surface treatment	默认按表面拉丝处理，静电喷塑，颜色可定制 Standard:brushed polishing surface Optional: powder coated surface by the customized color	
内部安装仪表 Built-in instrument	电流表、电压表等显示仪表。 Different display instruments such as ammeter and voltmeter. 注：以上仪表可显示； Note: Above instruments can be viewed.	
接线端子品牌 Brand of terminals	魏德米勒、菲尼克斯等；Weidmuller，Phoenix etc.	
进出线电缆 Cable entry	铠装电缆、橡胶电缆; Armored cable, Rubber cable	



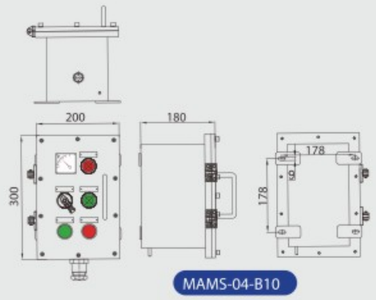
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常用产品外形及安装示意图尺寸 Product outline and installation dimensions

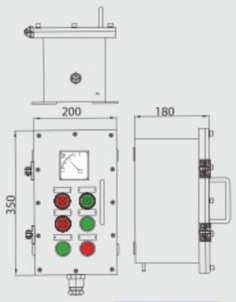
防爆操作柱 Explosion-proof control station



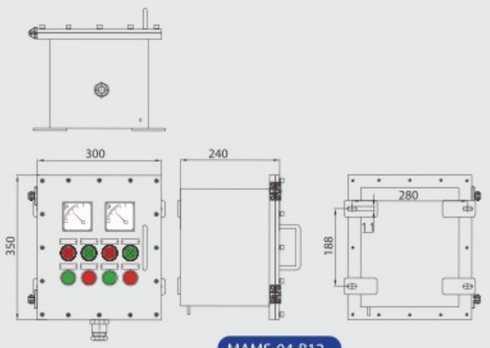
MAMS-04-B9



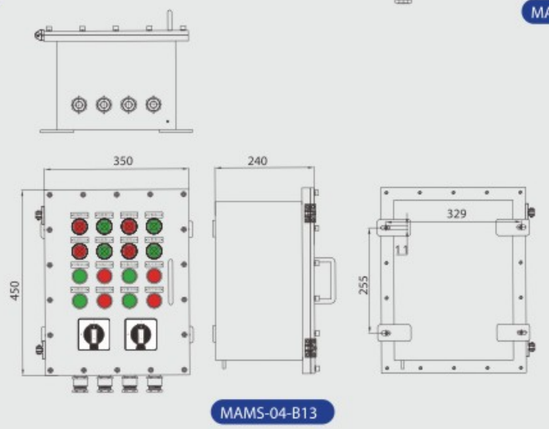
MAMS-04-B10



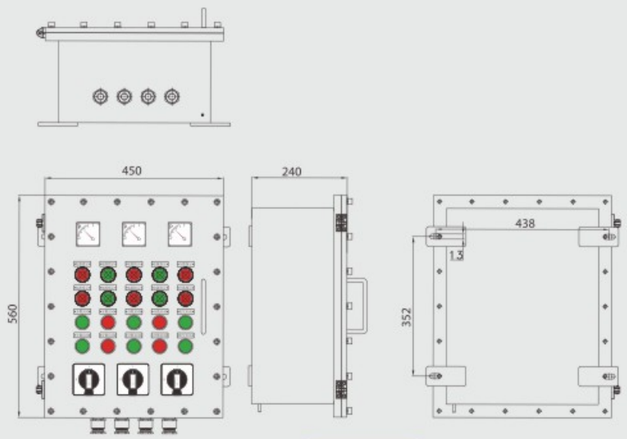
MAMS-04-B11



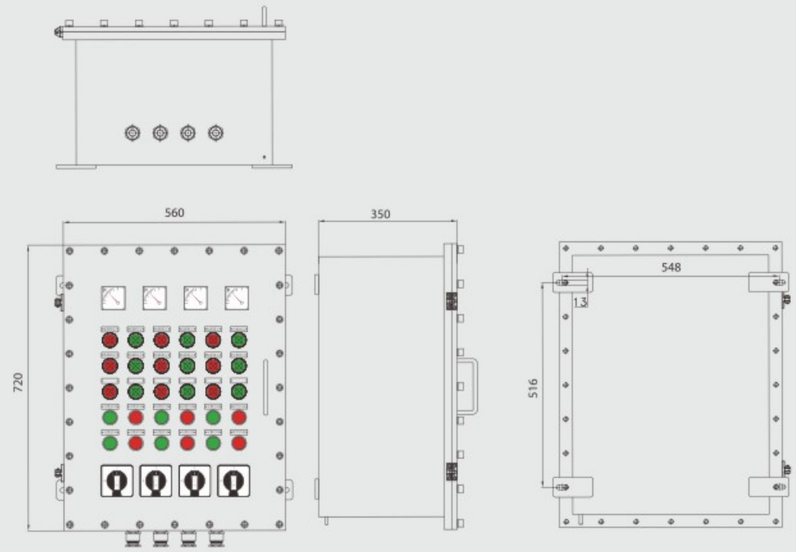
MAMS-04-B12



MAMS-04-B13



MAMS-04-B15



MAMS-04-B18

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.
- 产品内可装PLC控制系统，通过防爆箱面板上鼠标、键盘操作。
  PLC control system can be installed in the product, operated by mouse and keyboard on the panel of explosion-proof box.
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆等。
  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable and armored cable.



型号含义 / Model Identification

MAMC07 – □

壳体代码
Enclosure code:

举例:MAMC07-B2，表示防爆控制器，壳体尺寸为200*300*170mm.
For Example:MAMC07-B2 represents explosion-proof electric control box，with enclosure dimension 200*300*170mm .



通用技术参数 / General Technical Parameters

爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db ib IIB T6 Gb Ex tb IIIC T80℃ Db
遵循标准 Conformity to standards	GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021
通用电源供应 General power supply	额定电压 Rated voltage：MAX.AC220V 50/60Hz 额定电流 Rated current：≤1A
防护防腐等级 IP degree,anti-corrosion level	IP66、WF2
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel
保护壳材质 Enclosure material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating , MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional
内部安装元件 Built–in components	PLC、隔离开关等元件。 PLC, ISOLATOR SWITCH, etc
内部安装仪表 Built-in instrument	电流表、电压表等显示仪表。 Different display instruments such as , ammeter and voltmeter. 注：以上仪表可显示、可操作； Note: Above instruments can be viewed and operated.
接线端子品牌 Terminal brands	魏德米勒、菲尼克斯等；Weidmuller、Phoenix etc.
进出线电缆 Cable entry	铠装电缆、橡胶电缆; Armored cable、Rubber cable

防爆高能点火器Mign-I/Mign-II
Explosion-proof High energy igniter Mign-I/Mign-II

MINMILE
Smart Technology

产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。
Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.

适用于高压设备点火启动。
Suitable for ignition start of high voltage equipment.

可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆等。
The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable and armored cable.



型号含义 / Model Identification

Mign-I/II –

IIB+H2壳体
IIB+H2 Enclosure:

B1:200*250*170
B2:200*300*170
B3:200*350*170
B4:300*350*230
B5:350*450*205
B6:450*560*210
B7:450*560*280
B8:560*720*350

举例:Mign-I/II-B2-D，表示防爆高能点火器，壳体尺寸为200*300*170mm。
For Example:Mign-I/II-B2-D represents explosion-proof electric control box，with enclosure dimension 200*300*170mm .



通用技术参数 / General Technical Parameters

	GB
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db II B+H2 T4 Gb / Ex tD A21 IP66 T135℃ Ex db II B+H2 T6 Gb / Ex tD A21 IP66 T80℃
遵循标准 Conformity to standard	GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021
通用电源供应 General power supply	额定电压 Rated voltage：AC 100~240V　最大输出电压 6000V　Max. voltage 6000V
环境温度 Ambient temperature	-40℃~+60℃
防护防腐等级 IP degree,anti-corrosion level	IP66、WF2
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel
保护壳材质 Enclosure material	铸铝 ZL102 Copper-free Aluminum Alloy, ZL102
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating , MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional
接线端子品牌 Terminal brands	魏德米勒、菲尼克斯等；Weidmuller、Phoenix etc.
进出线电缆 Cable entry	铠装电缆、橡胶电缆; Armored cable、Rubber cable



配电箱（低压成套开关设备）MAMMHIP-系列
Distribution boards/Low-voltage Switchgear Assemblies MAMMHIP- series

MINMILE
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产品用于工业环境中需高防护性能的场所。适用于照明、动力、检修配电箱。

The products are used in industrial environments where high protection performance is required, and are suitable for lighting, power and maintenance distribution boxes.

可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆等。

The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable and armored cable.



型号含义 / Model Identification

MAMMHIP 01/02/03 – A B C (L) **D** – E F G (L) → **H** – I J K (L) **H** –.....– **K** – **L M** – **N**

MAMMHIP01, MAMMHIP02, MAMMHIP03

MAMMHIP01: InA=100~6A, Icw=4kA; Ue=380V, 220V, Ui=400V; 50Hz; IP41-IP20C
MAMMHIP02: InA=400~6A, Icw=10kA; Ue=400V, Ui=500V; 50Hz; IP66.
MAMMHIP03: InA=630~100A, Icw=20kA; Ue=690V, Ui=800V; 50Hz; IP66.

A：回路数 01、02、03.....
B：总开关电流，不带总开关则用000表示 001A…025A…200A …630A…
C：总开关极数 01 02 03 04

A: Number of circuits(01,02,03...)
B: Main switch current(001A..025A...200A..630A..If without main switch,mark 000)
C: Poles' number of main switch(01,02,03,04...)

控制箱的进出线方向
D：下进线
U：上进线
L：左进线
R：右进线

Cable inlet and outlet direction:
D: Down
U: Upper
L: Left
R: Right

E：相同电流的分回路数01、02、03...
F：总开关电流，不带总开关则用000表示 001A...025A...400A ...
G：开关极数: 01 02 03 04

E: Number of branch circuits with same current(01,02,03...)
F: Main switch current(001A..025A...400A..)
G: Poles' number of switch(01,02,03,04...)

分回路的出线方向
D: 下出线
U: 上出线
L: 左出线
R: 右出线

Cable inlet and outlet direction of branch circuits:
D: Down
U: Upper
L: Left
R: Right

IJK同EFG，代表相同电流的分回路

IJK is same with EFG representing Number of branch circuits with same current (01,02,03...)

安装方式
h: 挂式
V: 落地式

Mounting type
h: Hanging type
V: Floor mounting

L用于区别安装环境
IN: 安装于户内
OT: 安装于户外
M用于区别外壳材质
A: 铸铝外壳
C: 钢板焊接
S1: 304不锈钢
S2: 316不锈钢

L Mounting environment
IN: Indoor
OT: Outdoor
M Enclosure material
A: Aluminum alloy
C: Carbon steel
S1: SS304
S2: SS316

内部配置类别
1: 断路器
2: 断路器+交流或断路器+交流+热继电器
3: 除1、2外

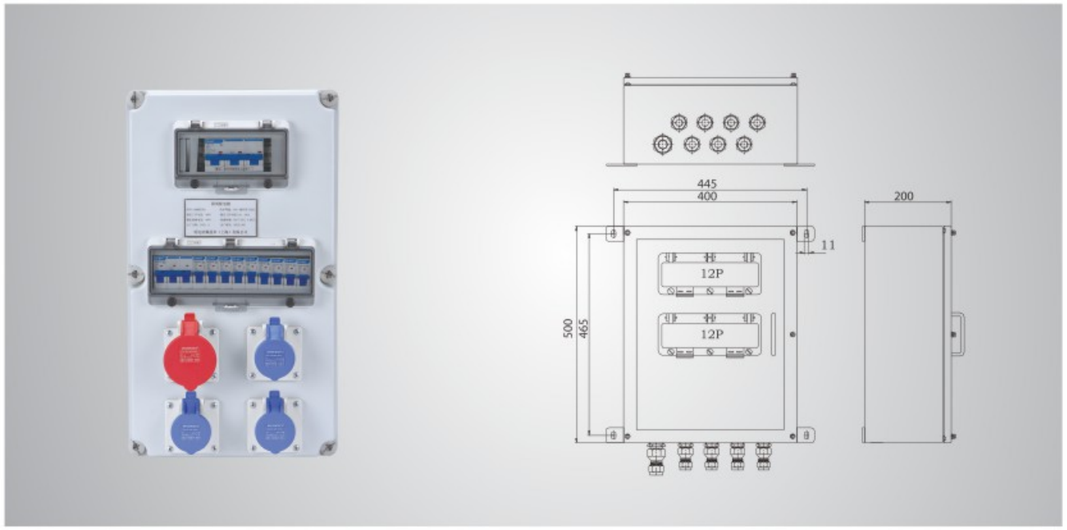
Inner configuration:
1:Circuit breaker
2:Circuit breaker+AC contactor or Circuit breaker+AC contactor+Thermal relay
3:Other configuration

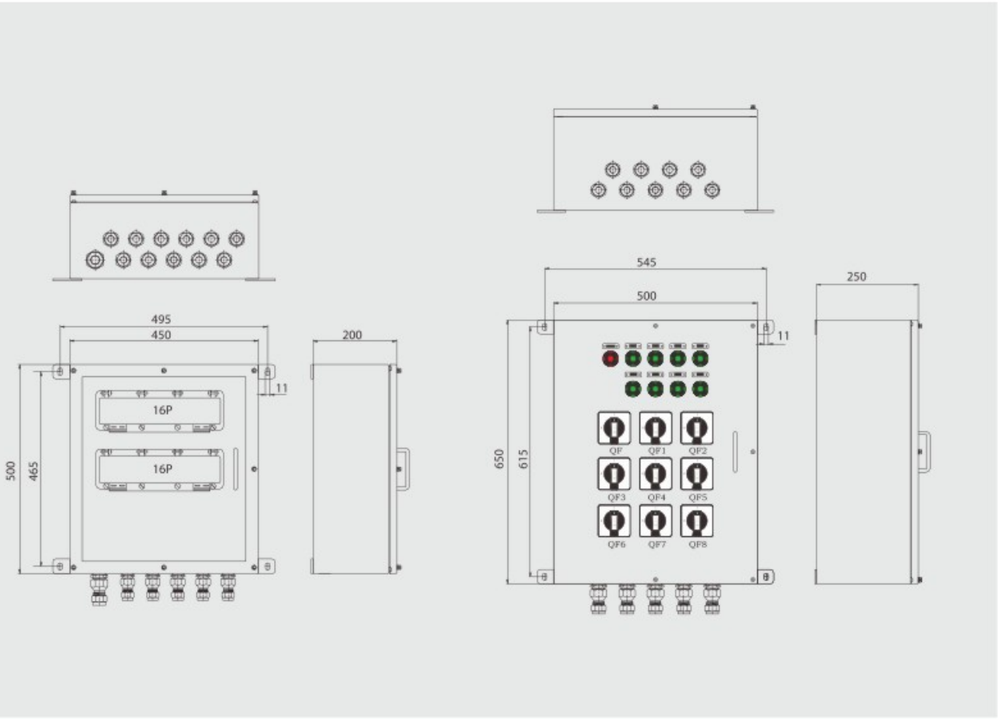
通用技术参数 / General Technical Parameters

防护防腐等级 IP degree,anti-corrosion level	MAMMHIP01： IP41-IP20、WF2. MAMMHIP02: IP66、WF2. MAMMHIP03： IP66、WF2.
遵循标准 Conformity to standards	GB/T 7251.12-2013 GB/T 7251.3-2017
通用电源供应 General power supply	MAMMHIP01 InA=100~6A, Icw=4kA; Ue=380V, 220V, Ui=400V; 50Hz; MAMMHIP02 InA=400~6A, Icw=10kA; Ue=400V, Ui=500V; 50Hz; MAMMHIP03 InA=630~100A, Icw=20kA; Ue=690V, Ui=800V; 50Hz;
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel
保护壳材质 Enclosure material	工程塑料、铝合金、Q235, SS304, SS316 Engineering plastic, aluminum alloy,Sheet steel, Stainless steel
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating , MAM standard color is equal to dark grey RAL7090, light grey RAL 7035 is optional
内部安装元件 Built-in components 常用元件品牌 Normal components brand: 西门子 Siemens、施耐德 Schneider、ABB	微型断路器、塑壳式断路器、交流接触器、热继电器、电机保护开关、双电源开关、中间继电器、时间继电器、固态继电器、互感器、熔断器、变频器、软启动器 MCB,MCCB,AC contactor,Thermal Relay,MTH,SHK-M,Auxiliary Relay,Time Relay,SSR, PLC,Mutual inductor,FU,Frequency Converter,Soft Starter 注：以上漏电断路器全部实现在箱外自复位，无需开盖复位； Note: Above leakage circuit breaker fully realize self-resetting in outside box, no need to open the cover of box
内部安装仪表 Built-in instrument	程序控制模块、温控仪、电流表、电压表等显示仪表。 Different display instruments such as Program control modules, thermostat, ammeter and voltmeter. 注：以上仪表可显示、可操作； Note: Above instruments can be viewed and operated.
接线端子品牌 Terminal brands	魏德米勒、菲尼克斯等；Weidmuller、Phoenix；
进出线电缆 Cable entry	铠装电缆、橡胶电缆； Armored cable、Rubber cable

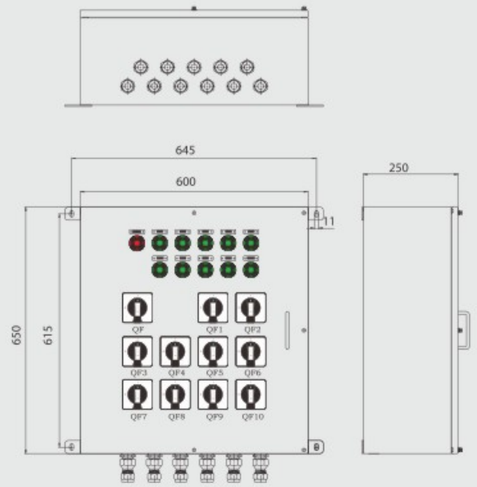
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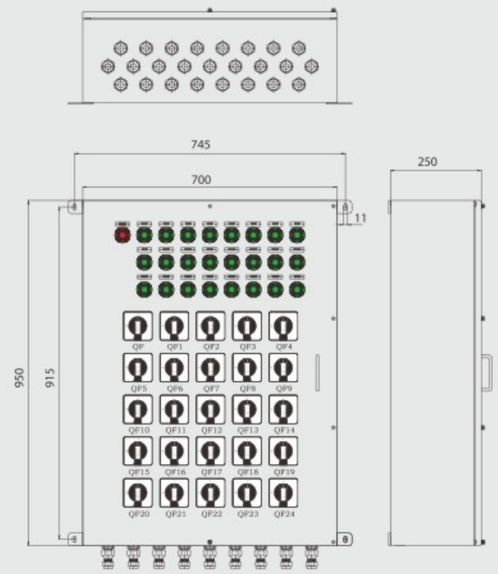
常用产品外形及安装示意图尺寸 Product outline and installation dimensions





常用产品外形及安装示意图尺寸 Product outline and installation dimensions





防爆配电装置MAMD系列
Explosion-proof distribution device MAMD series

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产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。用于照明、动力、检修配电箱。

Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.Used as lighting, power and maintenance distribution boards.

适用于控制危险区域的工艺维温和防冻中的电伴热，电伴热进行供电控制，采用不同的仪表、程序控制模块对加热物体的温度调控，满足不同客户的需求；

Suitable for controlling the temperature maintenance and the power supply of electric heating in the anti-freezing in hazardous area; Adopting different instruments and program control modules to control the temperature of the heating object so as to meet the requirements of different customers;

可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆。

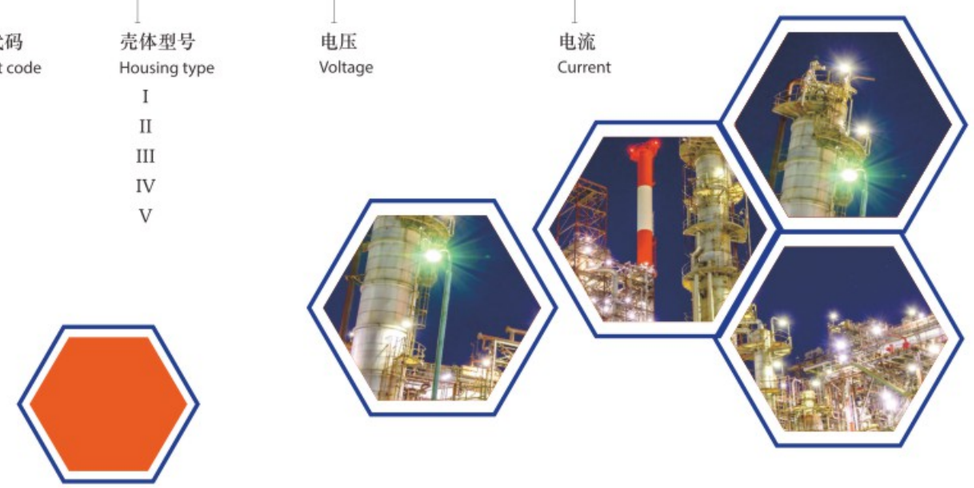
The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable.



型号含义 / Model Identification

MAMD-A – □ – □ / □

产品代码 Product code	壳体型号 Housing type	电压 Voltage	电流 Current
	I		
	II		
	III		
	IV		
	V		



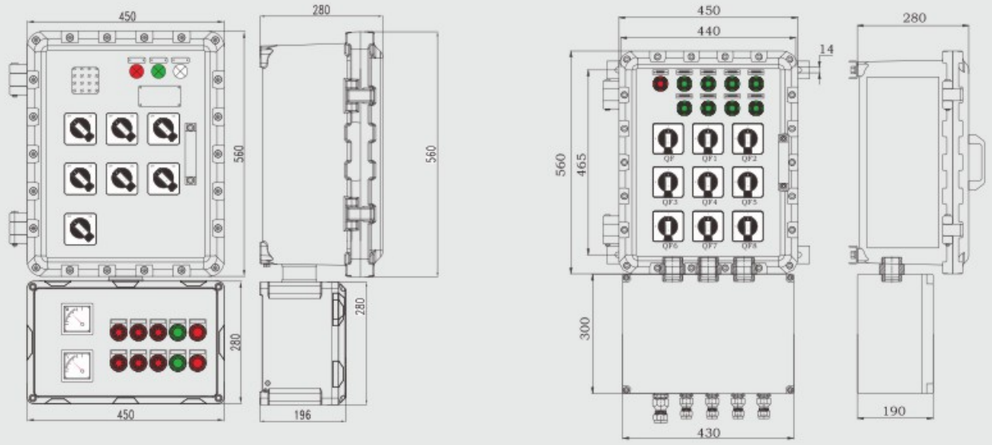
通用技术参数 / General Technical Parameters

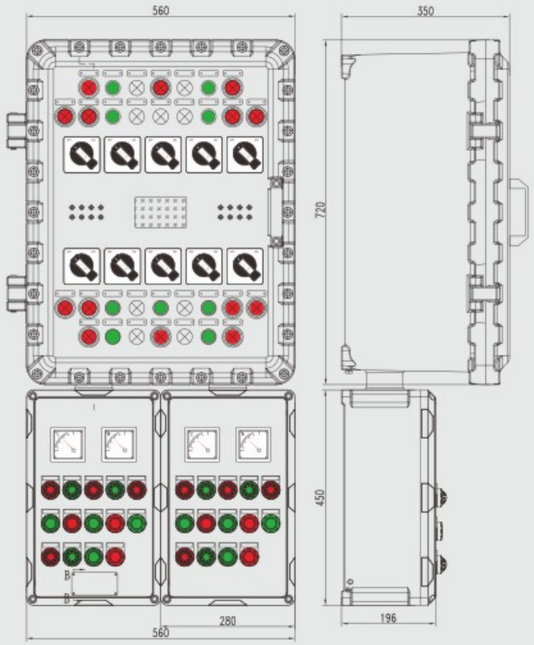
	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db eb IIC T6...T4 Gb Ex db eb IIB+H_2 T6...T4 Gb Ex tb IIIC T80℃...T135℃ Db	Ⅱ 2G Ex db eb IIC T6...T4 Gb Ⅱ 2G Ex db eb IIB+H_2 T6...T4 Gb Ⅱ 2D Ex tb IIIC T80°C,T95°C,T135°C,Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021,GB/T3836.3-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013,IEC60079-7：2017 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
通用电源供应 General power supply	Max.AC1500V 50/60Hz Max.630A	
防护防腐等级、环境温度 IP degree,anti-corrosion level	IP66、WF2、-43°C~+60°C	
外露紧固件材质 The material of exposed fastener	SS304/SS316 不锈钢 SS304/SS316 Stainless steel	
保护壳材质 Enclosure material	铸铝 ZL102 、Q235、SS304、SS316 Copper-free Aluminum Alloy ZL102	
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色（明迈色）近似RAL7090，可定制 Electrostatic powder coating ,MAM standard color is equal to dark grey RAL7090, light grey RAL 7090 is optional	
内部安装元件 Built-in components 常用元件品牌 Normal components brand: 西门子 Siemens、施耐德 Schneider、ABB	微型断路器、塑壳式断路器、交流接触器、热继电器、电机保护开关、双电源开关、中间继电器、时间继电器、固态继电器、互感器、熔断器、变频器、软启动器等。 MCB,MCCB,AC contactor,Thermal Relay,MTH,SHK-M,Auxiliary Relay,Time Relay,SSR, PLC,Mutual inductor,FU,Frequency Converter,Soft Starter etc. 注:以上漏电断路器全部实现在箱外自复位，无需开盖复位; Note: Above leakage circuit breaker fully realize self-resetting in outside box, no need to open the cover of box	
内部安装仪表 Built-in instrument	程序控制模块、温控仪、电流表、电压表等显示仪表。 Different display instruments such as Program control modules, thermostat, ammeter and voltmeter. 注:以上仪表可显示、可操作; Note: Above instruments can be viewed and operated.	
接线端子品牌 Brand of terminals	魏德米勒、菲尼克斯等；Weidmuller、Phoenix etc.	
进出线电缆 Cable entry	铠装电缆、橡胶电缆; Armored cable、Rubber cable	

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常用产品外形及安装示意图尺寸 Product appearance and installation schematic dimension

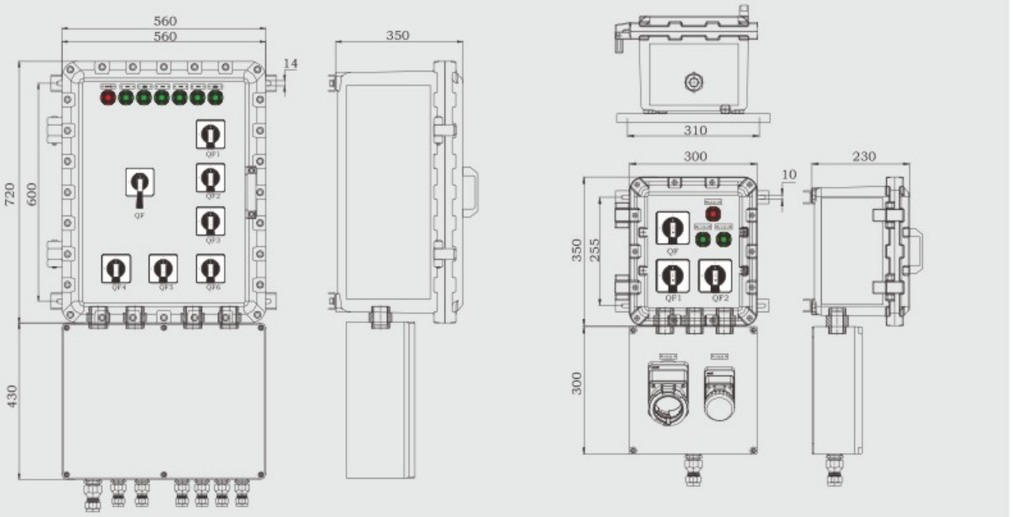
常用方案外形示意图 Schematic diagram of common scheme





常用产品外形及安装示意图尺寸 Product appearance and installation schematic dimension

常用方案外形示意图 Schematic diagram of common scheme





正压型防爆控制柜MAMP-系列
Explosion-proof pressurized control cabinet MAMP -series

MINMILE
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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所；
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas;
- 适用于危险区域大功率电加热器的控制及一些需要现场触摸调节显示的设备；
  Suitable for control of high-power electric heaters in hazardous areas and some equipment that requires on-site touch adjustment display;
- 可根据要求选用不同的安装方式,如挂式、落地式、琴台式。
  Different installation methods are optional, such as hanging, floor-standing, piano table type.



型号含义 / Model Identification

MAMP □ – □

□ 06：pz
07：pz(环境监控系统，带空调)
08：px/pz
06：pz
07：pz
(Environmental monitoring system with air conditioning)
08：px/pz

□ 安装方式
h=挂式
v=落地式
p=琴台式
Mounting type
h:Hanging
v:Free standing
p:Piano table type



通用技术参数 / General Technical Parameters

爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	06：Ex db eb ib mb pzc IIC T4 Gc 07：Ex db eb pzc IIC T4 Gc/Ex pzc tb IIIC T135℃ Dc 08：Ex db eb pxb IIC T4 Gb/Ex db eb pzc IIC T4 Gb Ex pxb tb IIIC T135℃ Db/Ex pzc tb IIIC T135℃ Db
遵循标准 Conformity to standards	GB/T 3836.1-2021, GB/T 3836.2-2021, GB/T 3836.3-2021, GB/T 3836.5-2021, GB/T 3836.31-2021, GB/T 3836.4-2021 IEC60079-0:2017，IEC60079-1:2014，IEC60079-2:2014，IEC60079-7:2017，IEC60079-31:2022，IEC60079-11：2023
气源压力 Air pressure	0.2~0.8 Mpa
工作压力 Work pressure	200-600Pa
气体种类 Gas type	惰性气体、洁净的压缩空气、氮气 Inert gas, clean compressed air, nitrogen
进气方式 Intake mode	补偿式、通风式 Compensation type, ventilation type
箱体结构型式 Box structure type	挂式、落地式（左右、上下、一体结构）、琴台式 Hanging type, floor type (left and right, up and down, integrated structure), piano table type
环境温度范围及防护防腐等级 Ambient Temp. IP and Anti-corrosion rate	-40℃~+60℃、IP54/IP66、WF2
保护壳材质 Protective enclosure material	Q235/SS304/SS316
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel
电气参数 Electrical parameter	最高额定电压1500V,最大额定电流1500A，50/60Hz Maximum rated voltage 1500V, maximum rated current 1500A,50/60Hz

产品工作原理 Product working principle

▲ 通过将用户所有的电器元件装在一个充满正压力的洁净介质的主腔体内，使主腔体内气压高于外界气压，将点燃源和爆炸性气体混合物有效隔离，从而实现防爆的目的。

▲ By installing all the electrical components of the user in a main cavity filled with positive pressure clean medium, the air pressure in the main cavity is higher than the external air pressure, so as to effectively isolate the ignition source and the explosive gas mixture, thereby achieving explosion-proof purpose.

正压型防爆控制柜MAMP-系列
Explosion-proof pressurized control cabinet MAMP -series

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▲ 按照进气方式的不同分为：正压补偿式、正压通风式。

补偿式：间断性供气，正压腔体密封性非常好，耗气量也非常小，一般用于配置需要触摸的非防爆触摸屏较多；

通风式：需要连续供气，可随时带走正压腔体内装元件产生的热量，散热性能好，适用于内装发热量较大的元件，如：大功率变频器、可控硅、大电流断路器、接触器等；

▲ There are two intake types: positive pressure compensation type and positive pressure ventilation type.

Compensation type: intermittent gas supply, positive pressure chamber sealing is very good, gas consumption is also very small, generally used to configure non-explosion-proof touch screens that need to be touched;

Ventilation type: continuous gas supply is required, which can take away the heat generated by the components installed in the positive pressure chamber at any time. The heat dissipation performance is good, and it is suitable for components with large heat generation inside, such as: high-power inverter, thyristor, high current circuit breaker , contactors, etc.;



▲ 根据外壳危险区域转变程度，一般分为2类

1.将正压外壳从防爆危险区域1区降低至非危险区域；

2.将正压外壳从防爆危险区域2区降低至非危险区域；

▲ According to the degree of transition of the dangerous area of the outer casing, it is generally divided into 2 categories.

1. Lower the explosion-proof hazardous Zone 1 to a non-hazardous zone for the positive pressure housing;

2. Lower the explosion-proof hazardous Zone 2 to the non-hazardous zone for the positive pressure housing;



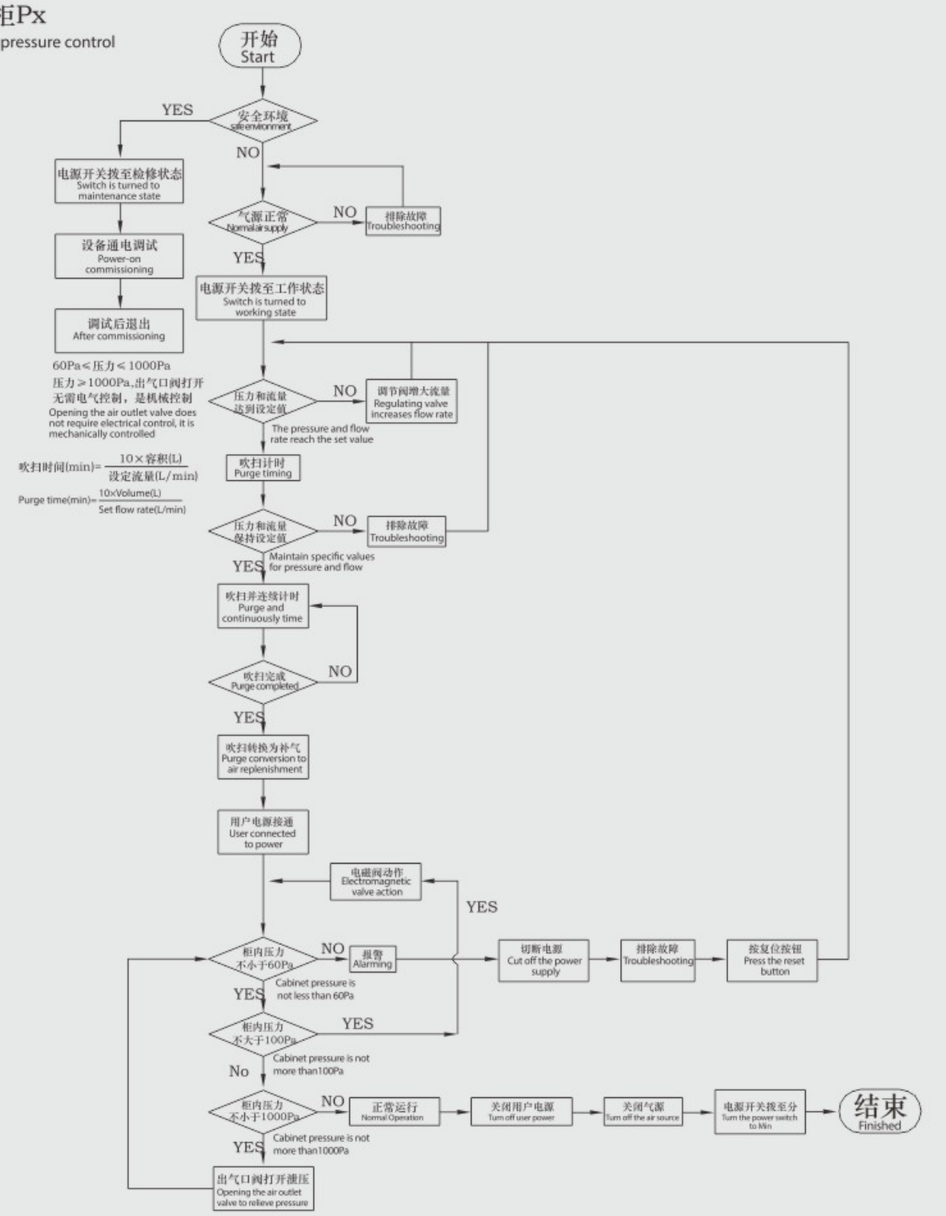
技术要求 Technical Requirements

▲ 按下正压起动按钮，且正压室内压力大于60Pa，开始正压吹扫计时，计时结束后，自动给正压室送电。进入正常工作阶段。吹扫过程中，若压力低于60Pa，停止吹扫，并应重新吹扫。正常工作阶段，若压力小于60Pa，报警指示灯亮。注：用户应提供0.2-0.8MPa干燥气源。

▲ Press the positive pressure start button. When the pressure in the positive pressure chamber is greater than 60Pa, power supplied automatically to the positive pressure chamber. Positive pressure chamber enters the normal working stage. It should be re-purged during the purge. In the normal working stage, if the pressure is less than 60Pa, the user should provide0.2-0.8Mpa dry air.

正压系统气路控制原理 Principle of air path control for positive pressure system

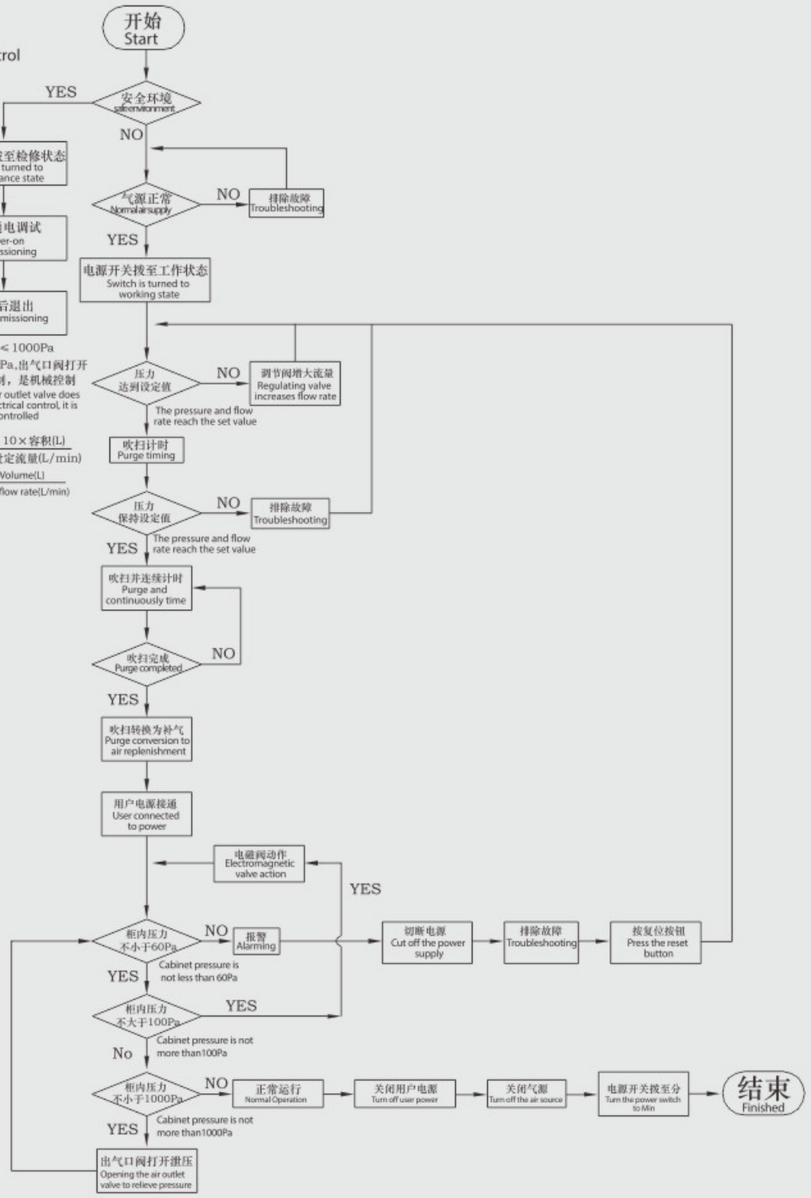
正压柜Px
Positive pressure control cabinet



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正压系统气路控制原理 Principle of air path control for positive pressure system

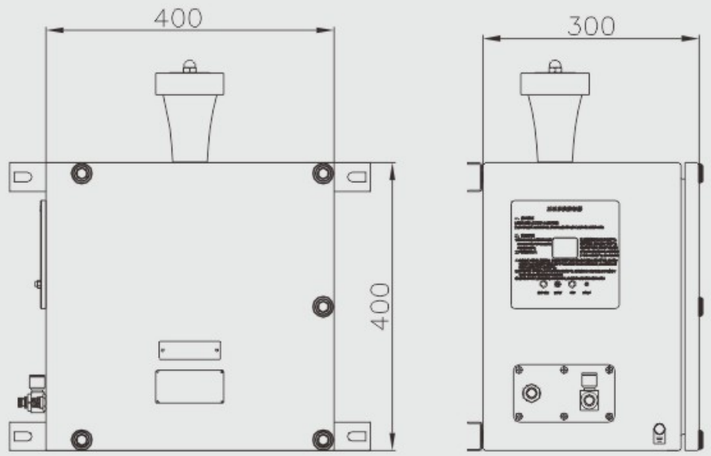
正压柜Pz
Positive pressure control cabinet



产品外形及安装示意图 Product appearance and installation schematic

正压柜体尺寸	正压柜Pz	正压柜Px
400x400x300	Ex db eb ib mb pzc IIC T4 Gc	
400x600x300		
600x600x350	Ex db eb ib mb pzc IIC T4 Gc Ex db eb pzc IIC T4 Gb Ex pzc tb IIIC T135℃ Db	Ex db eb pxb IIC T4 Gb Ex pxb tb IIIC T135℃ Db
600x800x350		
800x1000x350		
800x1200x400		
800x1200x600		
800x1600x600		
800x2000x600		
1000x1800x600		
1000x2000x600		
1200x2000x600		
1000x2000x800		
1200x2000x800		
1400x2000x800		
1400x2200x800		

■ 正压柜体尺寸 Cabinet dimension

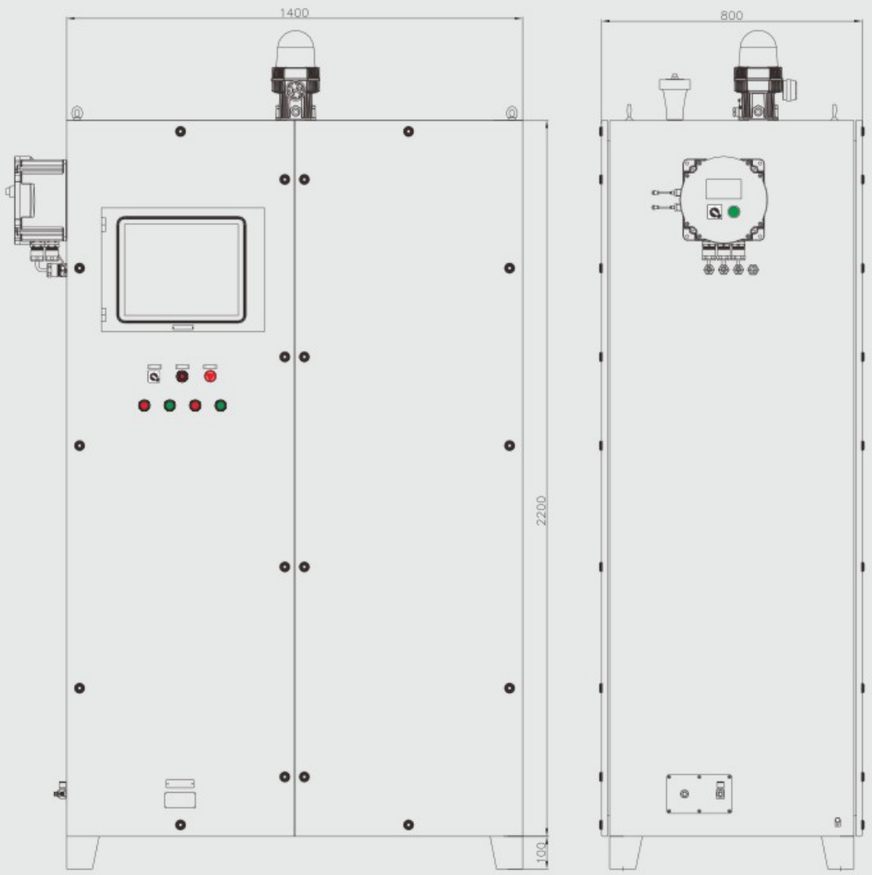


■ 正压柜Pz Positive pressure control cabinet

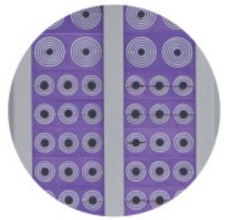
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产品外形及安装示意图 Product appearance and installation schematic

正压柜px







▶ 可配置模块式电缆/管道贯穿密封装置，用于代替防爆进出线格兰。

Modular cable/pipe penetration seals can be configured to replace explosion-proof inlet and outlet cable gland.





▶ 机箱冷却器/Case cooler





▶ 利用热空气在柜内顶部所以我们把排气阀也放在顶部的原理，柜内压力超过1000pa,阀门自动打开散热。

Using the principle of hot air at the top of the cabinet so we put the exhaust valve on the top, the pressure in the cabinet exceeds 1000pa, the valve automatically opens to dissipate heat.





▶ 空调降温/Air conditioning cooling

防爆接线箱MAMJB04-G系列
Explosion-proof terminal box MAMJB04-GSeries

MINMILE
Smart Technology

- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所，适用于电器、灯具安装分线用，特别适用于现场伴热系统及大功率电加热器的安装分线。
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas, Particularly suitable for on-site heating system installation distribution.
- 产品外壳材质为玻璃不饱和增强聚酯树脂（GRP），表面抗静电（表面绝缘电阻$10^8\Omega$），防强腐蚀，不锈钢外露紧固件，外形美观。
  Beautiful appearance made of anti-corrosion glass reinforced plastic(GRP) material, surface resistance less than $^8\Omega$ and fixed with stainless steel exposed fastener.
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、伴热支架式安装，进线采用橡胶电缆、铠装电缆、伴热线等。
  Different installation methods such as hanging and embedded, heat tracing bracket installation and different incoming cables such as rubber cable, armored cable and heating cable.



型号含义 / Model Identification

防爆接线箱（e型） Explosion-proof junction box (e type)

MAMJB04-G	- A	- B	- CD	- CD	-	- E	- F
代表增安型防爆接线箱，玻璃不饱和增强聚酯树脂 Stands for increased safety explosion-proof junction box made of GRP	A: 代表端子数量 A: Terminal Quantity	B: 端子电流，如果多种电流混合，用0表示。 B: Terminal current (If different current mixed, write 0)	C：代表接线箱的进线方向 D=下进线 U=上进线 L=左进线 R=右进线 D：代表所配电缆密封格兰的数量及规格。 C: Cable incoming direction D=Down U=Upper L=Left R=Right D: Relevant cable gland quantity and specification	C：代表接线箱的出线方向 D=下进线 U=上进线 L=左进线 R=右进线 D：代表所配电缆密封格兰的数量及规格。 C: Cable incoming direction D=Down U=Upper L=Left R=Right D: Relevant cable gland quantity and specification	E:代表箱体外形代号（01\02\03\04\05\06\07.....） E: Profile code (01\02\03\04\05\06\07.....)	F:伴热支架式，支架代号 P1=PPS单孔支架 P3=PPS三孔支架 S1=不锈钢304 S2=不锈钢316 非伴热支架式不注。 F: heat tracing bracket type, bracket code P1 = Single-core bracket P3=Three-core bracket S1 = stainless steel 304 S2 = stainless steel 316 no remarks required for non-heat tracing bracket type.

举例：防爆接线箱，外壳材质工程塑料，采用26节魏德米勒的20A的端子，上进3个M25,右出2个M20，箱体外形代号05，伴热支架式，支架材质304，则型号为：MAMJB04-G-26-20-UM25-RM20-05

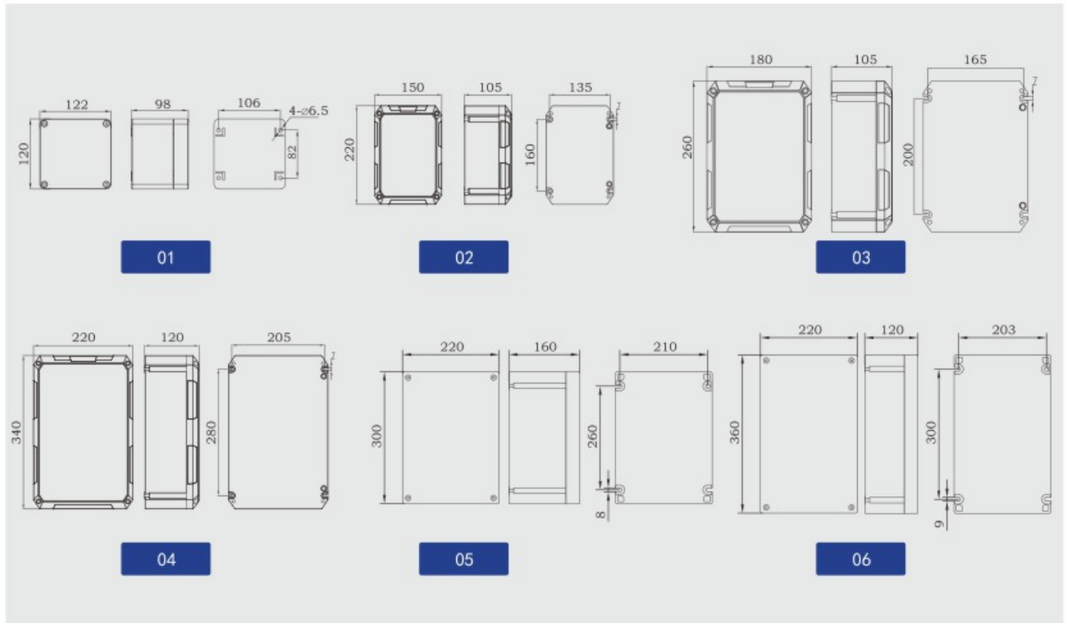
Explosion-proof junction box, engineering plastic, increased safety type, using 26 pcs of Weidmüller 20A terminals, up incoming 3xM25, right outgoing 2xM20, enclosure profile code 05, with heat tracing bracket type, bracket material 304, the model number is:

MAMJB04-G-26-20-UM25-RM20-05-S1

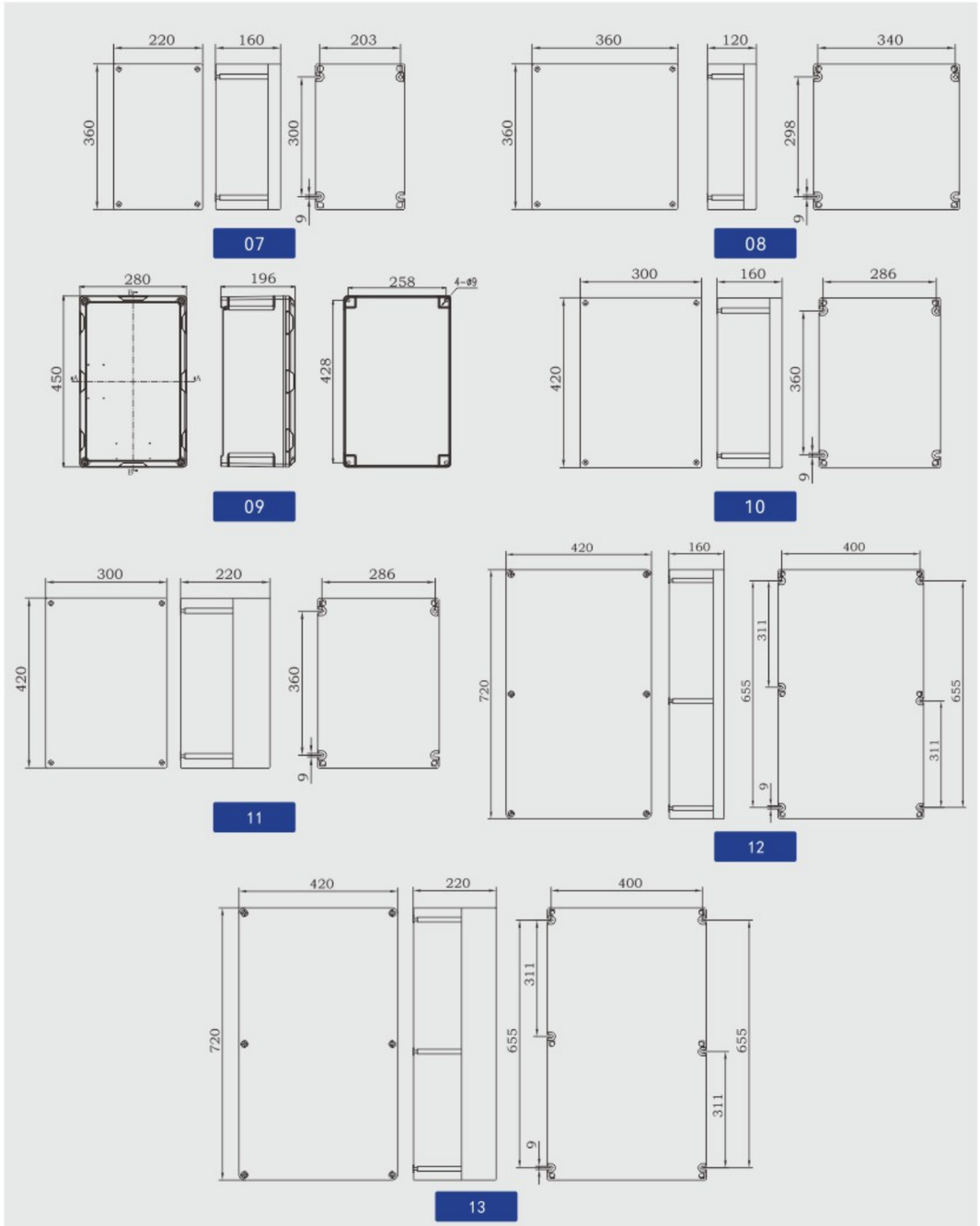
通用技术参数 / General Technical Parameters

	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex eb IIC T6…T4 Gb, Ex tb IIIC T80˚C Db	Ⅱ2G Ex eb ⅡC T6…T4 Gb Ⅱ2D Ex tb ⅢC T80˚C Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
保护壳材质 Enclosure Material	抗静电玻璃纤维强化聚脂 Anti-static glass fibre reinforced polyester (GRP)	
环境温度范围及防护防腐等级 Ambient Temp. IP and Anti-corrosion rate	-40℃~+55℃ , IP66、WF2	
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel	
通用电源供应 General power supply	MAX.AC1100V,DC1500V MAX.1100A	

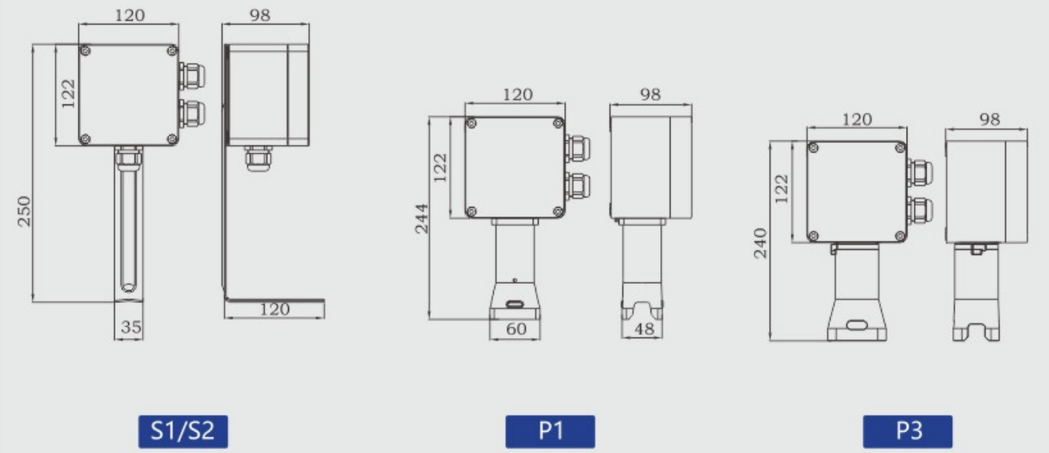
● 产品外形及安装示意图尺寸 Product appearance and installation schematic dimensions



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● 伴热支架式安装尺寸及说明 Profile and installation dimension





防爆接线箱MAMJB04-S系列
Explosion-proof terminal box MAMJB04-S Series

MINMILE
Smart Technology

- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所，适用于电器、灯具安装分线用，特别适用于现场伴热系统安装分线。
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas, Particularly suitable for on-site heating system installation distribution.
- 产品外壳材质为不锈钢，不锈钢外露紧固件，外形美观。
  Beautiful appearance with stainless steel material enclosure and exposed fastener.
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、伴热支架式安装，进线采用橡胶电缆、铠装电缆、伴热线等。
  Different installation methods such as hanging and embedded, heat tracing bracket installation and different incoming cables such as rubber cable, armored cable and heating cable.



型号含义 / Model Identification

防爆接线箱（e型） Exe explosion-proof junction box (e type)

MAMJB04-S - A - B - CD - CD-CD - ..... - E - F

	A	B	C	C	E	F
MAMJB04-S 代表增安型防爆接线箱，不锈钢材质	A: 代表端子数量	B: 端子电流，如果多种电流混合，用0表示。	C：代表接线箱的进出线方向 D=下进线 U=上进线 L=左进线 R=右进线 D：代表所配电缆密封格兰的数量及规格。	C：代表接线箱的进出线方向 D=下进线 U=上进线 L=左进线 R=右进线 D：代表所配电缆密封格兰的数量及规格。	E:代表箱体外形代号 (01\02\03\04 \05\06\07.....)	F:伴热支架式，支架代号 P1=PPS单孔支架 P3=PPS三孔支架 S1=不锈钢304 S2=不锈钢316 非伴热支架式不注。
MAMJB04-B Stands for increased safety explosion-proof junction box made of stainless steel	A: Terminal Quantity	B: Terminal current (If different current mixed, write 0)	C: Cable incoming direction D=Down U=Upper L=Left R=Right D: Relevant cable gland quantity and specification	C: Cable incoming direction D=Down U=Upper L=Left R=Right D: Relevant cable gland quantity and specification	E: Profile code (01\02\03\04 \05\06\07.....)	F: heat tracing bracket type, bracket code P1 = Single-core bracket P3=Three-core bracket S1 = stainless steel 304 S2 = stainless steel 316 no remarks required for non-heat tracing bracket type.

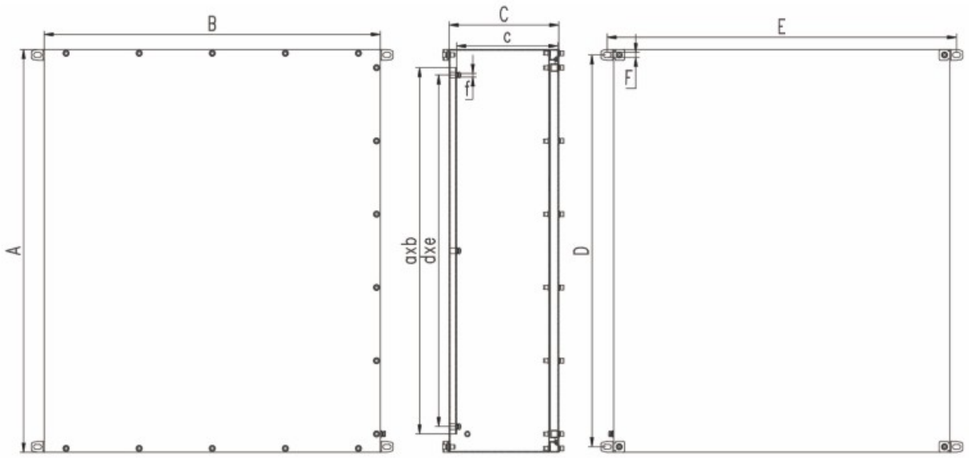
举例：防爆接线箱，外壳材质不锈钢304，增安型，采用26节魏德米勒的20A的端子，上进3个M25,右出2个M20，箱体外形代号05，伴热支架式，支架材质304，则型号为：MAMJB04-S-26-20-UM25-RM20-05-S1

For example: explosion-proof junction box, stainless steel 304 housing material, increased safety type, using 26 Weidmüller 20A terminals, 3xM25 holes on the top, 2xM20 holes on the right , enclosure shape code 05, with heat bracket type, bracket material SS304, the model number is MAMJB04-S-26-20-UM25-RM20-05-S1.

通用技术参数 / General Technical Parameters

	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex eb IIC T6...T4 Gb, Ex tb IIIC T80℃ Db	Ex II 2G Ex eb IIC T6...T4 Gb Ex II 2D Ex tb IIIC T80°C Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
保护壳材质 Enclosure Material	Q235、SS304、SS316、SS316L	
环境温度范围及防护防腐等级 Ambient Temp. IP and Anti-corrosion rate	-40°C~+55°C、IP66、WF2	
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel	
通用电源供应 General power supply	MAX.AC1100V,DC1500V MAX.1100A	

● 产品外形及安装示意图尺寸 Product appearance and installation schematic dimension



防爆接线箱MAMJB04-S系列
Explosion-proof terminal box MAMJB04-S Series

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代码 Code	规格型号 Version	外形尺寸 Appearance dimensions			底板尺寸 Mouting plate size			底板安装孔尺寸及规格 Bottom installing holes dimensions			安装支架尺寸规格 Installing bracket dimensions		
		A	B	C	a	b	c	d	e	f	D	E	F
01	150×150×80	150	150	80	90	90	59.5	70	70	M5	120	186	11
02	150×150×110	150	150	110	90	90	89.5	70	70	M5	120	186	11
03	200×200×120	200	200	120	130	130	99	100	100	M5	170	236	11
04	200×300×150	200	300	150	130	230	129	100	200	M5	170	336	11
05	200×300×200	200	300	200	130	230	179	100	200	M5	170	336	11
06	250×350×150	250	350	150	170	270	125	140	240	M6	220	386	11
07	250×350×200	250	350	200	170	270	175	140	240	M6	220	386	11
08	280×280×150	280	280	150	200	200	125	170	170	M6	250	316	11
09	280×280×200	280	280	200	200	200	175	170	170	M6	250	316	11
10	300×300×120	300	300	120	220	220	95	190	190	M6	270	336	11
11	300×450×150	300	450	150	220	370	125	190	340	M6	270	476	11
12	300×450×200	300	350	200	220	370	175	190	340	M6	270	476	11
13	300×560×150	300	560	150	220	480	125	190	450	M6	270	586	11
14	300×560×200	300	560	200	220	480	175	190	450	M6	270	586	11
15	350×350×150	350	350	150	270	270	125	240	240	M6	320	386	11
16	350×350×200	350	350	200	270	270	175	240	240	M6	320	386	11
17	350×700×150	350	700	150	270	620	124	240	590	M6	320	726	11
18	350×700×200	350	700	200	270	620	174	240	590	M6	320	726	11
19	380×380×120	380	380	120	300	300	95	270	270	M6	350	416	11
20	440×440×150	440	440	150	360	360	125	330	330	M6	410	476	11
21	450×450×150	450	450	150	370	370	125	340	340	M6	420	486	11
22	450×450×200	450	450	200	370	370	175	340	340	M6	420	486	11
23	450×560×150	450	560	150	360	470	124	330	440	M6	420	596	11
24	450×560×200	450	560	200	360	470	174	330	440	M6	420	596	11
25	500×500×150	500	500	150	410	410	124	380	380	M6	470	536	11
26	500×500×200	500	500	200	410	410	174	380	380	M6	470	536	11
27	560×700×200	560	700	200	470	610	174	440	580	M6	530	736	11
28	560×700×300	560	700	300	470	610	274	440	580	M6	530	736	11
29	700×900×200	700	900	200	608	808	174	568	768	M8	670	936	11
30	700×900×300	700	900	300	608	808	274	568	768	M8	670	936	11
31	740×560×150	740	560	150	660	480	123.5	620	440	M6	710	596	11
32	740×560×200	740	560	200	660	480	173.5	620	440	M6	710	596	11
33	920×740×200	920	740	200	820	640	174	780	600	M8	890	776	13
34	920×740×300	920	740	300	820	640	274	780	600	M8	890	776	13
35	1100×920×200	1100	920	200	1000	820	173.5	960	780	M8	1070	956	13
36	1100×920×300	1100	920	300	1000	820	273.5	960	780	M8	1070	956	13



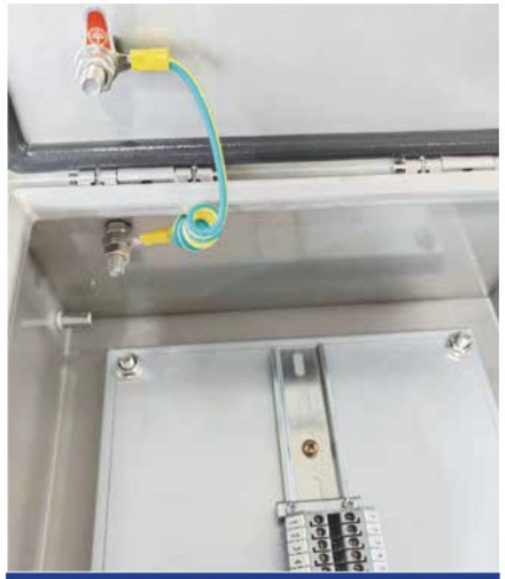
不锈钢表面拉丝处理 Stainless steel brushed surface



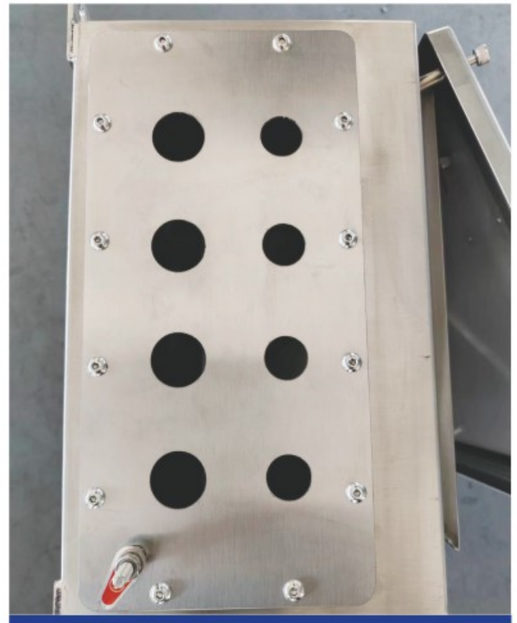
配不锈钢转锁 Stainless steel triangle lock



带不锈钢外接地 Stainless steel external grounding screws



体与盖采用接地线连接内置品牌接线端子，采用导轨式安装
Lid and body connected by grounding cable, built-in with famous brand of terminals installed on rail

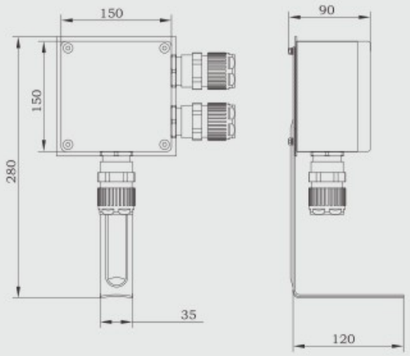


可拆卸式格兰安装板 Removable cable gland plate

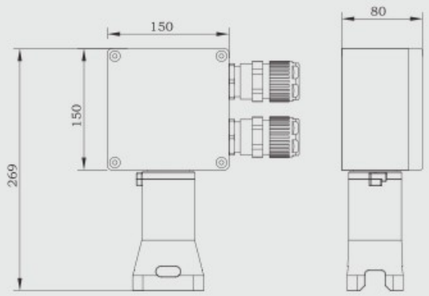
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伴热支架安装 Heat tracing bracket installation

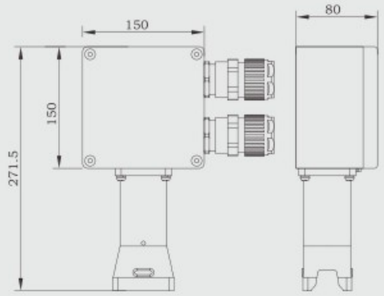




S1/S2

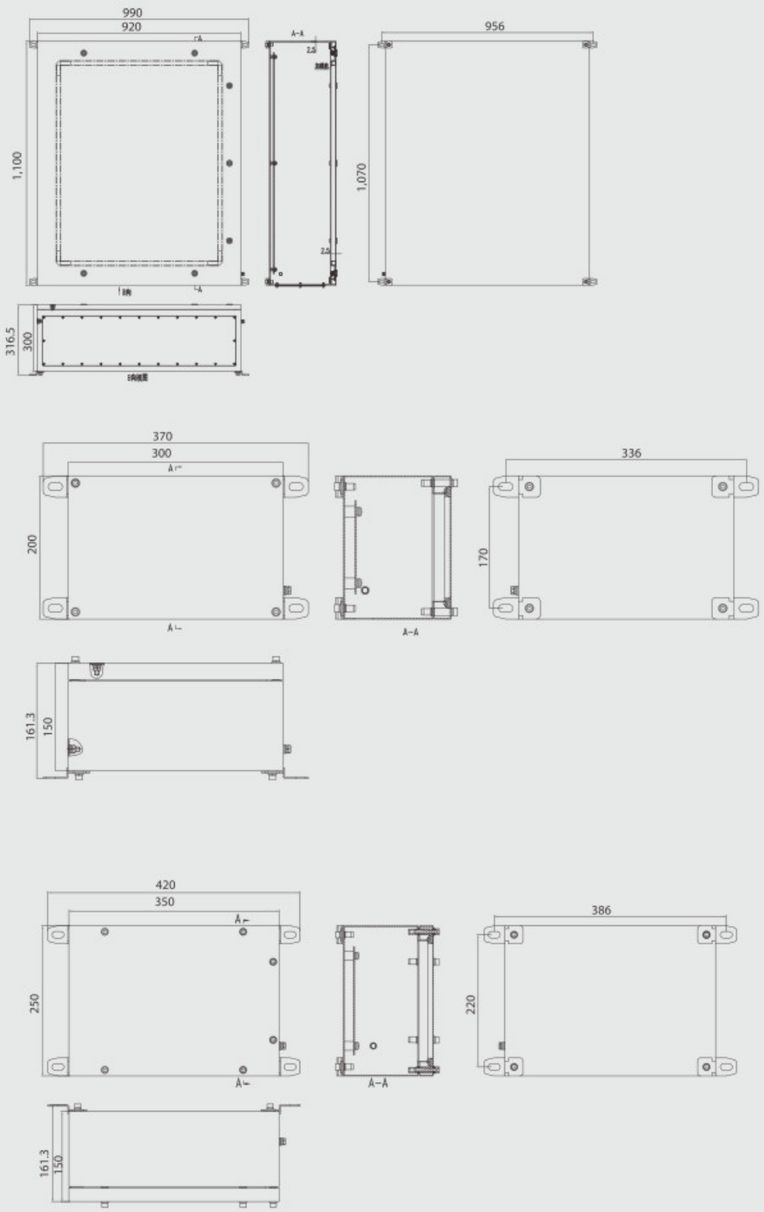


P1



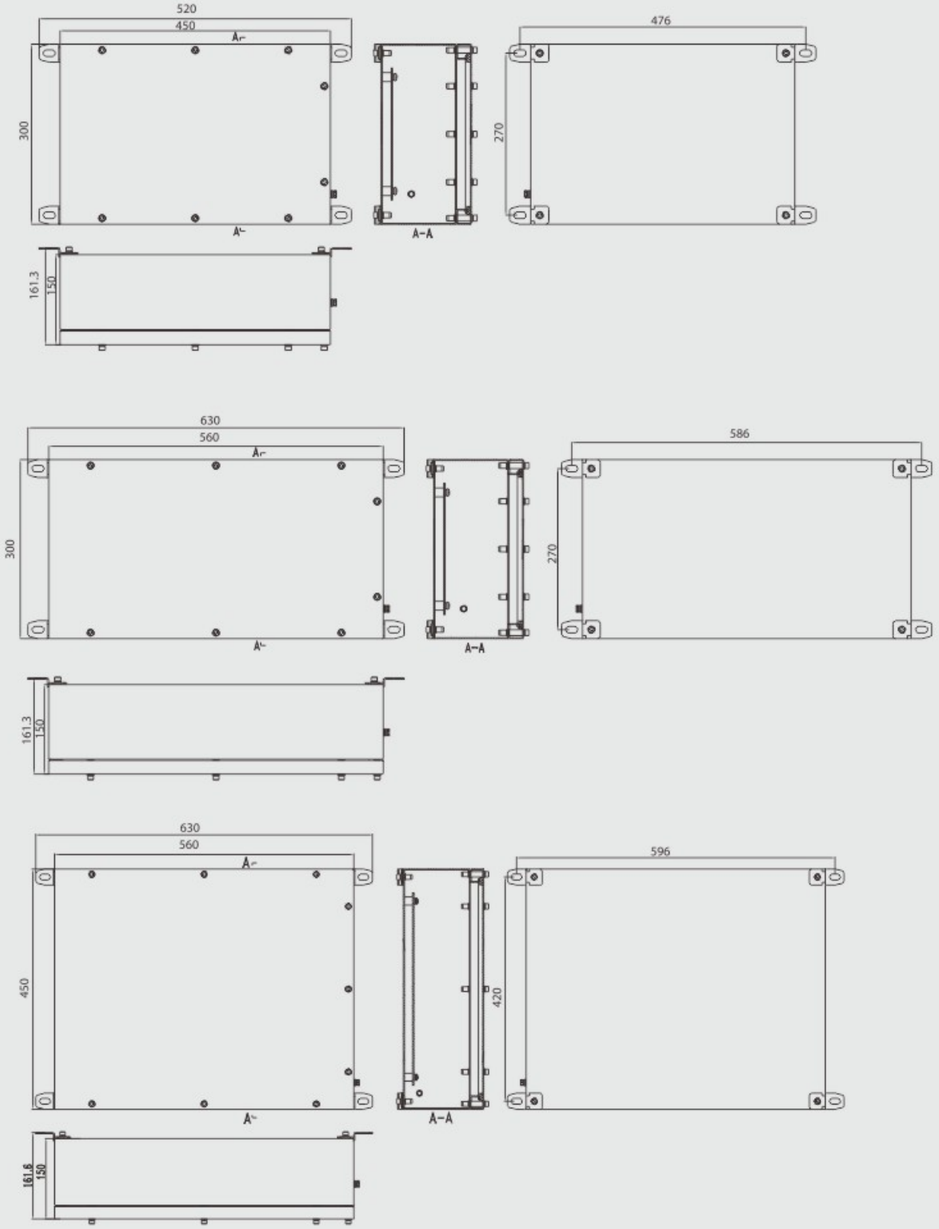
P3

产品外形及安装示意图尺寸 Product appearance and installation schematic dimension

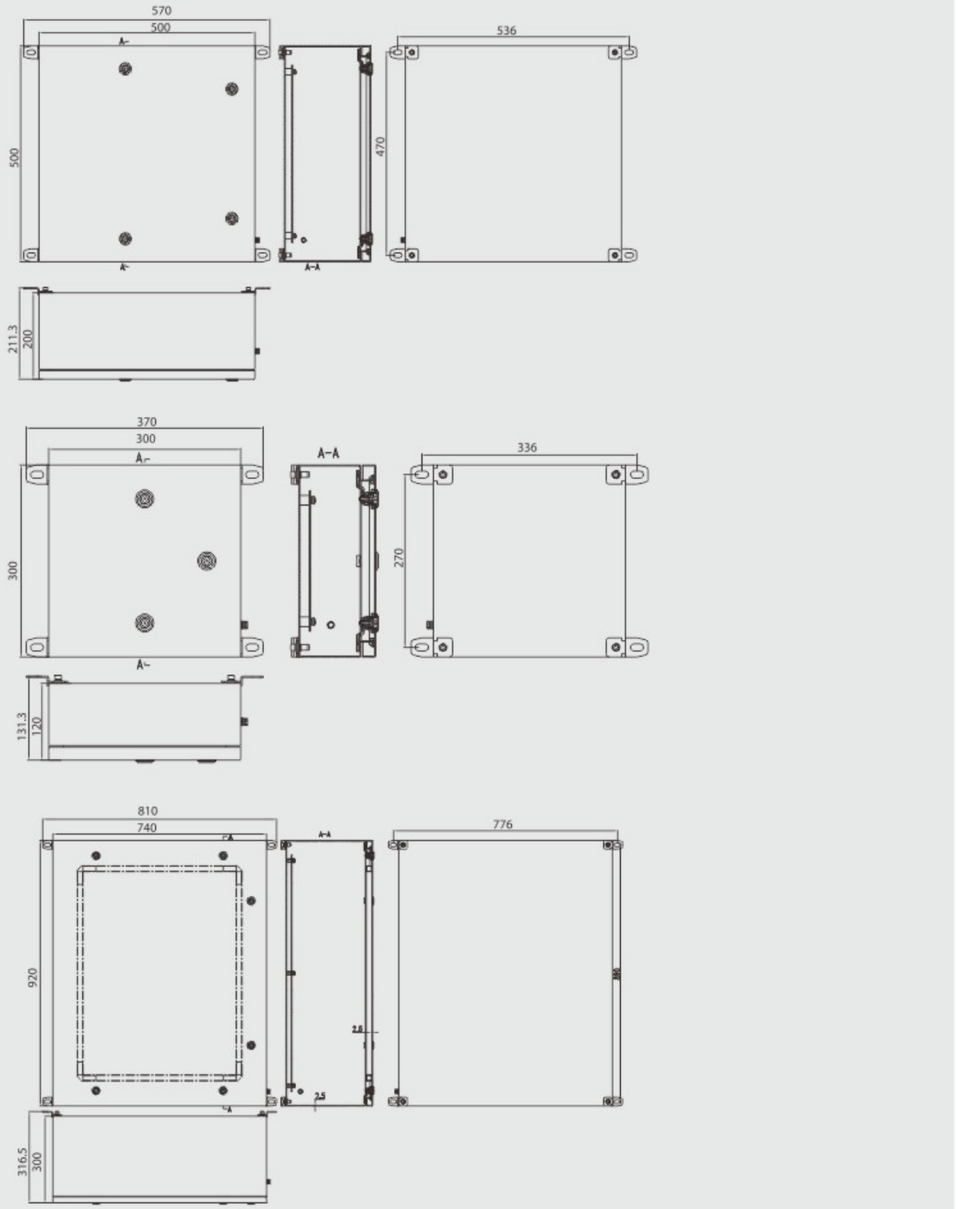


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产品外形及安装示意图尺寸 Product appearance and installation schematic dimension



产品外形及安装示意图尺寸 Product appearance and installation schematic dimension



防爆接线箱MAMJB04-A系列
Explosion-proof terminal box MAMJB04-A Series

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所，适用于电器、灯具安装分线用，特别适用于现场伴热系统安装分线。
  Widely used in chemical, refining, oil exploitation, offshore oil platforms, oil tankers, military and other dangerous places; Suitable for the cable distribution of electrical appliances and lamps and especially for on-site heat tracing system.
- 产品外壳材质为铝合金，不锈钢外露紧固件，外形美观。
  Good appearance with aluminum alloy enclosure and stainless steel exposed fasteners.
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、伴热支架式安装，进线采用橡胶电缆、铠装电缆、伴热线等。
  Different mounting methods such as hanging type, embedded, and heat tracing bracket type installation; Different incoming cables such as rubber cable, armored cable and heating cable.



型号含义 / Model Identification

防爆接线箱（e型） Exe Explosion-proof junction box

MAMJB04-A - A - B - CD - CD - ..... - E - F

MAMJB04-A 代表增安型防爆接线箱，铝合金材质. MAMJB04-C Exe Aluminum alloy explosion-proof junction box	A: 代表端子数量 A: Terminal Quantity	B: 端子电流，如果多种电流混合，用0表示； B: Terminal current (If different current mixed, write 0)	C：代表接线箱的出线方向 D=下进线 U=上进线 L=左进线 R=右进线 D：代表所配电缆密封格兰的数量及规格。 C: Cable incoming direction D=Down U=Upper L=Left R=Right D: Relevant cable gland quantity and specification	C：代表接线箱的进线方向 D=下进线 U=上进线 L=左进线 R=右进线 D：代表所配电缆密封格兰的数量及规格。 C: Cable incoming direction D=Down U=Upper L=Left R=Right D: Relevant cable gland quantity and specification	E:代表箱体外形代号（01\02\03\04\05\06\07.....） E: Profile code (01\02\03\04\05\06\07.....)	F:伴热支架式，支架代号 P1=PPS单孔支架 P3=PPS三孔支架 S1=不锈钢304 S2=不锈钢316 非伴热支架式不注。 F: heat tracing bracket type, bracket code P1 = Single-core bracket P3=Three-core bracket S1 = stainless steel 304 S2 = stainless steel 316 no remarks required for non-heat tracing bracket type.

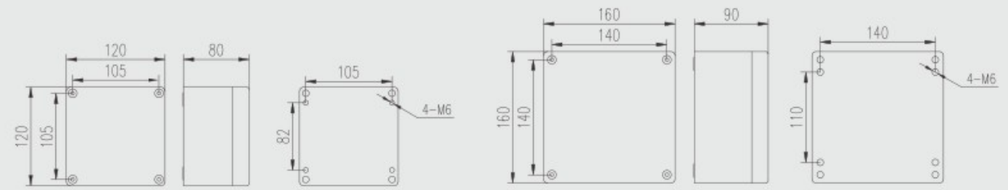
举例：防爆接线箱，外壳材质铝合金，增安型，采用26节魏德米勒的20A的端子，上进3个M25,右出2个M20，箱体外形代号05，伴热支架式，支架材质304，则型号为：MAMJB04-A-26-20-UM25-RM20-05-S1

Explosion-proof junction box, aluminum alloy enclosure, increased safety type, using 26 pcs of Weidmüller 20A terminals, up incoming 3xM25, right outgoing 2 xM20, enclosure profile code 05, with heat tracing bracket type, bracket material 304, the model number is:
MAMJB04-A-26-20-UM25-RM20-05-S1

通用技术参数 / General Technical Parameters

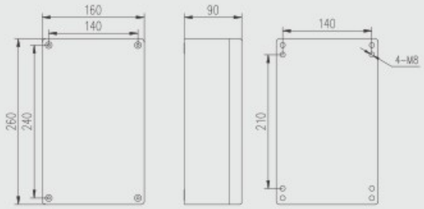
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx	ATEX
	Ex eb IIC T6…T4 Gb, Ex tb IIIC T80°C Db	Ex II 2G Ex eb IIC T6…T4 Gb Ex II 2D Ex tb IIIC T80°C Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
保护壳材质 Enclosure Material	铸铝 ZL102 Copper-free Aluminum Alloy ZL102	
环境温度范围及防护防腐等级 Ambient Temp. IP and Anti-corrosion rate	-40°C~+55°C ,IP66、WP2	
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel	
额定电压及电流 Rated voltage and current	AC220~240V, AC380V, AC415V, AC500V, AC690V 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A, 80A, 100A, 125A, 160A, 200A, 227A	

● 产品外形及安装示意图尺寸 Profile and installation dimension

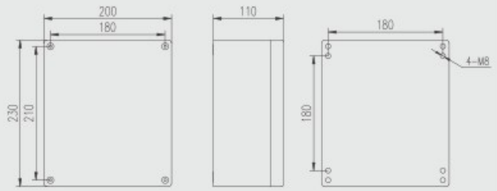


01 02

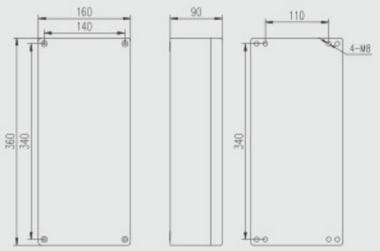
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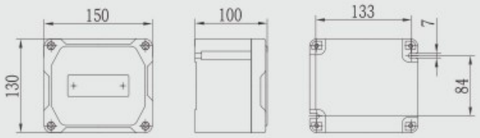
03



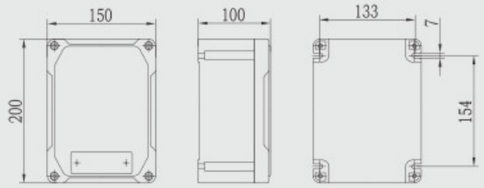
04



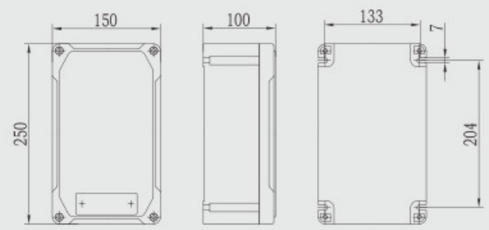
05



06



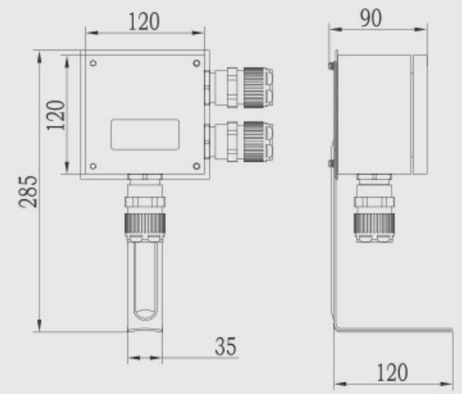
07



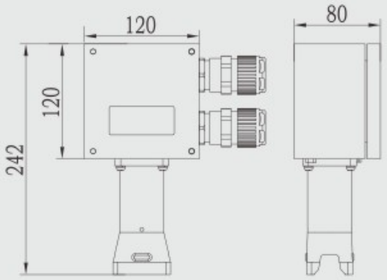
08

● 伴热支架式 Heat tracing bracket type

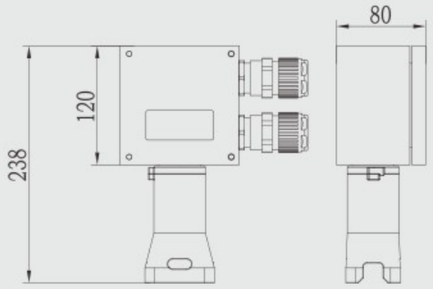




S1/S2



P1



P3

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所，适用于电器、灯具安装分线用。
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas; Suitable for cable distribution when installing electrical appliances and lamps.
- 产品外壳材质为铝合金，不锈钢外露紧固件，外形美观。
  Beautiful appearance: Aluminum alloy enclosure with stainless steel exposed fasteners.
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、伴热支架式安装，进线采用橡塑电缆、铠装电缆、伴热线等。
  Different installation methods such as hanging, embedded, heat tracing bracket installation and different incoming cables such as rubber cable、armored cable and heating cable.



MAMX-06-C1



MAMJB05



CT压接端子
CT Crimp terminal



导轨式端子RA/RB
Rail terminal



型号含义 / Model Identification

MAMX-06 – C1 □ – □ – □

- C1 壳体尺寸代码 Enclosure code: 108*108*75 （ⅡC）
- □ W：壳体带密封圈(CCC产品) W： The enclosure with sealing ring, (CCC certified)
  -D: -43℃~+60℃
  -S: -40℃~+60℃
- □ 代号：见表1 Code name: see Table 1
- □ R1: 四脚接线座 R1:CT crimp terminal
  R2: 导轨式端子 R2:Rail Terminal

MAMJB05 – □ – □ – □

- □ 螺纹规格 Thread
  M20...M115
  G1/2...G4
  NPT1/2...NPT4
- □ S1: 二通平 S1:180° Two way
  S2: 直角二通 S2:90° Two way
  S3: 三通 S3:Three way
  S4: 四通 S4:Four way
- □ R1: 四脚接线座 R1:CT crimp terminal
  R2: 导轨式端子 R2:Rail Terminal

● 表1 Table 1

代号 Code No.	通头规格/重量 Through hole specification/weight		直通型通头规格/重量 Straight through hole specification/weight		螺纹规格 Threads specification	
A		0.82		0.62	M25×1.5	M20×1.5
					NPT3/4"	NPT1/2"
B		0.88		0.68	M25×1.5	M20×1.5
					NPT3/4"	NPT1/2"
C		0.94		0.74	M25×1.5	M20×1.5
					NPT3/4"	NPT1/2"
D		1.0		0.8	M25×1.5	M20×1.5
					NPT3/4"	NPT1/2"
E		0.88		0.68	M25×1.5	M20×1.5
					NPT3/4"	NPT1/2"
F		1.1		0.9	M25×1.5	M20×1.5
					NPT3/4"	NPT1/2"

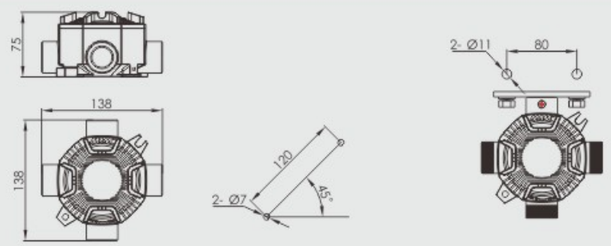
通用技术参数 / General Technical Parameters

	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex db IIC T6 Gb Ex tb IIIC T80℃ Db	Ⅱ2G Ex db ⅡC T6 Gb Ⅱ2D Ex tb ⅢC T80°C Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014	
保护壳材质 Enclosure Material	铸铝合金ZL102 Copper-free Aluminum Alloy ZL102	
环境温度范围及防护防腐等级 Ambient Temp. IP and Anti-corrosion rate	-43℃~+60℃，IP66、WF2	
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel	
通用电源供应 General power supply	MAX.500V 10A，16A，32A	

● 产品外形及安装示意图尺寸 Product appearance and installation schematic dimensions

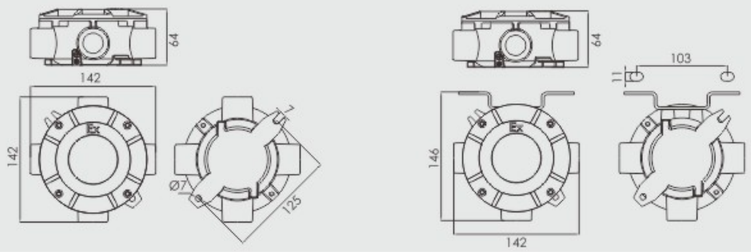
外形及尺寸图 Appearance and Dimension Drawing

MAMX-06-C1W



外形及尺寸图 Appearance and Dimension Drawing

MAMJB05



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防爆控制箱(操作柱)MAMC01-S系列
Explosion-proof control box MAMC01-S series

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所；
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.
- 广泛用于工作现场中电机的启停控制转换及显示、运行时的电参数显示、调速、信号切换、仪表计量显示等用途；
  Widely used in the start and stop control conversion and display of motors in the work site, electrical parameter display during operation, speed regulation, signal switching, metering display, etc ;
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆等。
  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable.



型号含义 / Model Identification

MAMC01-S -A b B c D b K e - □ - □

b	c	b	e	□	□
表示防爆按钮数代码，可为1-64，不装不注。 Pushbutton quantity:1-64.	表示防爆电表数代码，可为1~20，不装不注。 Ammeter quantity. 1-20.	表示防爆指示灯数代码，可为1-64，不装不注。 Indicator quantity. 1-64.	表示防爆转换开关数代码，可为1~20，不装不注。 Swicth quantity.:1-20.	h:挂式 v:立式 h: Hanging type v: Vertical	格兰数量和规格 Gran quantity and specifications

Remarks:If quantity is zero,no need remark.

举例：防爆控制箱，内装2个信号灯，1个电流表，4个按钮，下进2个M25格兰，挂式安装，则型号为：MAMC01-S-A4B1D2h2M25*1.5

For example: If the explosion-proof control box is with engineering plastic enclosure , built-in 2 signal lights, 1pc of ammeter, 4pcs of buttons, 2pcs of M25 cable glands in hanging installation, the model is MAMC01-S-A4B1D2h2M25*1.5.

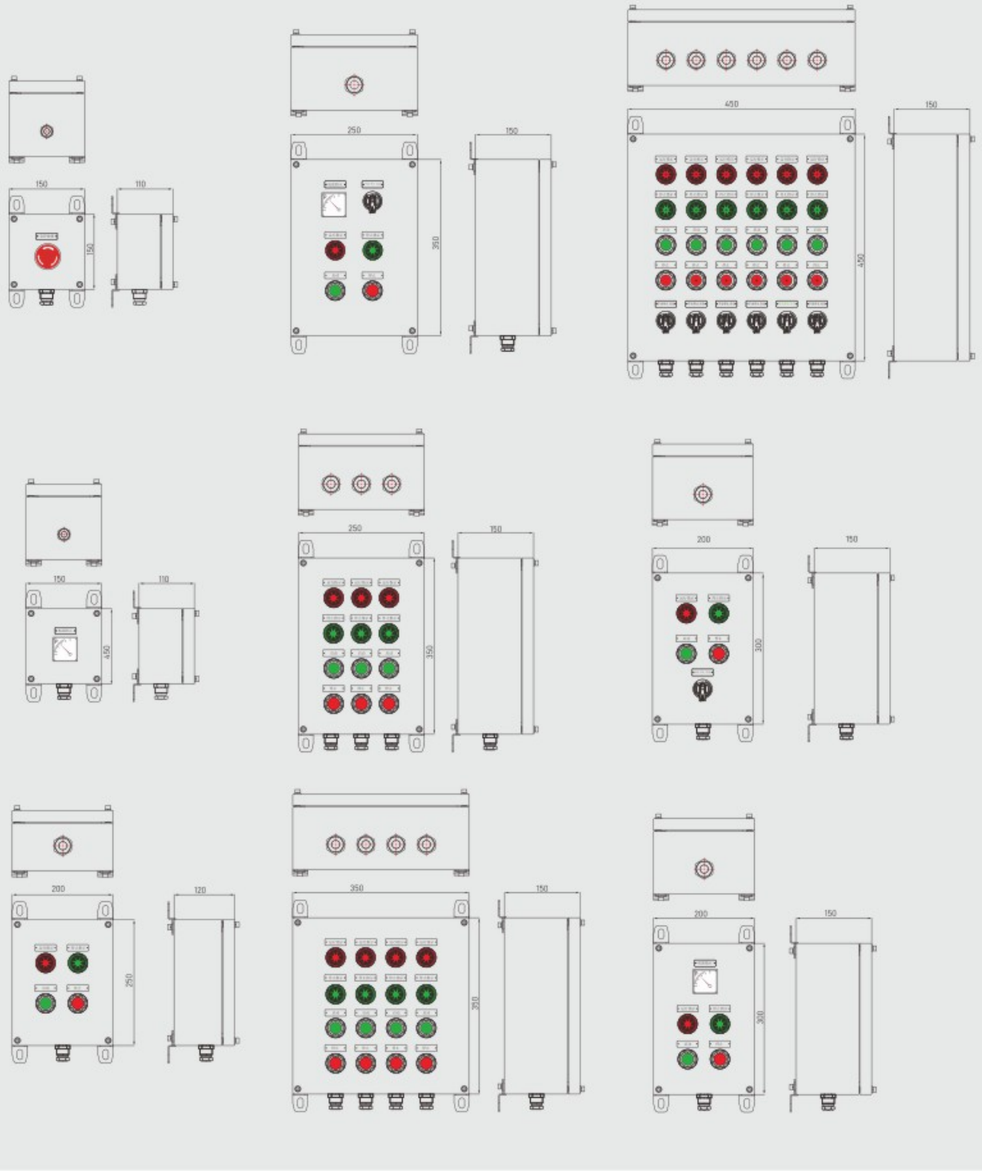
通用技术参数 / General Technical Parameters

爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex eb mb IIC T6 Gb, Ex db eb IIC T6 Gb,Ex eb IIC T6 Gb, Ex eb ib mb IIC T6 Gb,Ex db eb ib mb IIC T6 Gb, Ex tb IIIC T80℃ Db
遵循标准 Conformity to standards	GB/T3836.1-2021,GB/T3836.2-2021,GB/T3836.3-2021,GB/T3836.4-2021, GB/T 3836.9-2021,GB/T 3836.31-2021
保护壳材质 Enclosure Material	不锈钢304/316、Q235 stainless steel 304/316、Q235
通用电源供应 General power supply	Max.AC415V 50/60Hz Max.40A
内装元件 Built-in components	防爆按钮、防爆仪表（电流表、电压表、转速表）、防爆指示灯、防爆转换开关等. Explosion-proof button, explosion-proof instrument (current meter, voltmeter, tachometer), explosion-proof indicator, explosion-proof selector switch.
环境温度范围及防护防腐等级 Ambient temperature and IP rate anti-corrosion level	-40℃~+50℃，IP66、WF2
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel
防爆接线端子品牌 Ex Terminal brand	魏德米勒、菲尼克斯 Weidmuller, Phoenix
进出线电缆 Cable entry	铠装电缆、橡胶电缆; Armored cable、Rubber cable

防爆控制箱(操作柱)MAMC01-S系列
Explosion-proof control box MAMC01-S series

常用产品外形及安装示意图尺寸 Product outline and installation dimensions

不锈钢外壳 Stainless steel enclosure





防爆控制箱(操作柱)MAMC01-G系列
Explosion-proof control box MAMC01-G series

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所；
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.
- 广泛用于工作现场中电机的启停控制转换及显示、运行时的电参数显示、调速、信号切换、仪表计量显示等用途；
  Widely used in the start and stop control conversion and display of motors in the work site, electrical parameter display during operation, speed regulation, signal switching, metering display, etc ;
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆等。
  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable, armored cable.



型号含义 / Model Identification

MAMC01-G – A b B c D b K e – □ – □

A b	B c	D b	K e	□	□
表示防爆按钮数代码，可为l~64，不装不注。	表示防爆电表数代码，可为1~20，不装不注。	表示防爆指示灯数代码，可为1~64，不装不注。	表示防爆转换开关数代码，可为1~20，不装不注。	h:挂式 v:立式	格兰数量和规格
Pushbutton quantity:1-64.	Ammeter quantity. 1-20.	Indicator quantity. 1-64.	Swicth quantity.:1-20.	h: Hanging type v: Vertical	Gran quantity and specifications

Remarks:If quantity is zero,no need remark.

举例：防爆控制箱，内装2个信号灯，1个电流表，4个按钮，下进2个M25格兰，挂式安装，则型号为：MAMC01-G-A4B1D2h2M25*1.5

For example: If the explosion-proof control box is with engineering plastic enclosure , built-in 2 signal lights, 1pc of ammeter, 4pcs of buttons, 2pcs of M25 cable glands in hanging installation, the model is MAMC01-G-A4B1D2h2M25*1.5.

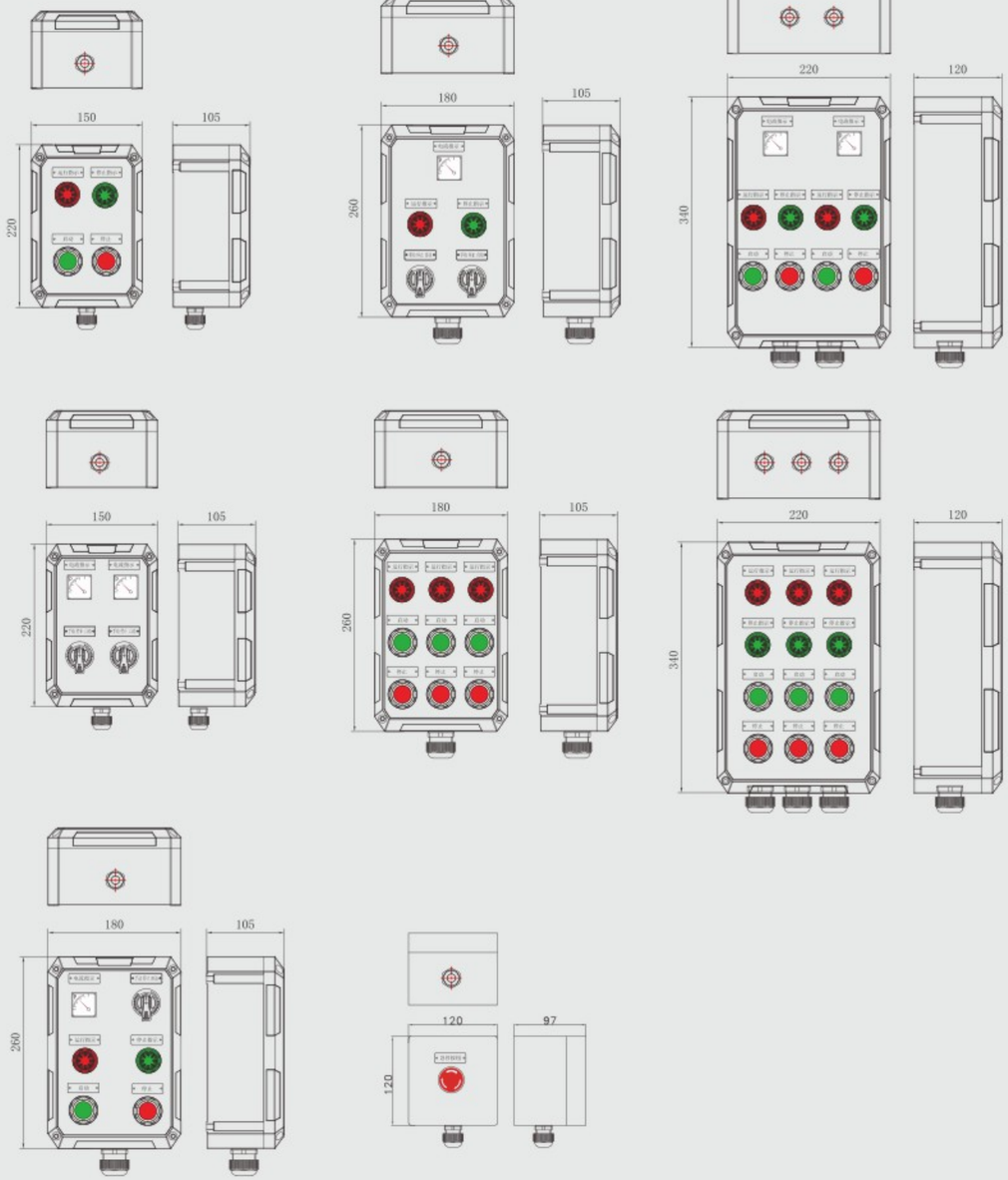
通用技术参数 / General Technical Parameters

爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex eb mb IIC T6 Gb, Ex db eb IIC T6 Gb,Ex eb IIC T6 Gb, Ex eb ib mb IIC T6 Gb,Ex db eb ib mb IIC T6 Gb, Ex tb IIIC T80℃ Db
遵循标准 Conformity to standards	GB/T3836.1-2021,GB/T3836.2-2021,GB/T3836.3-2021,GB/T3836.4-2021, GB/T 3836.9-2021,GB/T 3836.31-2021
保护壳材质 Enclosure Material	抗静电玻璃纤维强化聚脂 GRP Anti-static glass fibre reinforced polyester (GRP)
通用电源供应 General power supply	MAX.AC415V 50/60Hz MAX.40A
内装元件 Built-in components	防爆按钮、防爆仪表（电流表、电压表、转速表）、防爆指示灯、防爆转换开关、防爆电位器、防爆蜂鸣器 Explosion-proof button, explosion-proof instrument (current meter, voltmeter, tachometer), explosion-proof indicator, explosion-proof selector switch, explosion-proof potentiometer, explosion-proof buzzer.
环境温度范围及防护防腐等级 Ambient temperature and IP rate	-40℃~+50℃，IP66、WF2
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel
防爆接线端子品牌 Ex Terminal brand	魏德米勒、菲尼克斯 Weidmuller, Phoenix
进出线电缆 Cable entry	铠装电缆、橡胶电缆; Armored cable、Rubber cable

防爆控制箱(操作柱)MAMC01-G系列
Explosion-proof control box MAMC01-G series

● 常用产品外形及安装示意图尺寸 Product outline and installation dimensions

GRP外壳 GRP enclosure



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防爆控制箱(操作柱)MAMC01-A系列
Explosion-proof control box MAMC01-A series

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- 产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所；
  Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.
- 广泛用于工作现场中电机的启停控制转换及显示、运行时的电参数显示、调速、信号切换、仪表计量显示等用途；
  Widely used in the start and stop control conversion and display of motors in the work site, electrical parameter display during operation, speed regulation, signal switching, metering display, etc ;
- 可根据要求选用不同的安装方式及不同的进线电缆，如挂式、落地式安装，进线采用橡胶电缆、铠装电缆等。
  The various mounting types and cable entries are available as per customers requirements, such as hanging mounting and stand floor mounting.The cable entries can be suit for rubber cable and armored cable.



型号含义 / Model Identification

MAMC01-A – A b B c D b K e – □ – □

A b	B c	D b	K e	□	□
表示防爆按钮数代码，可为1~64，不装不注。	表示防爆电表数代码，可为1~20，不装不注。	表示防爆指示灯数代码，可为1~64，不装不注。	表示防爆转换开关数代码，可为1~20，不装不注。	h:挂式 v:立式	格兰数量和规格
Pushbutton quantity:1-64.	Ammeter quantity. 1-20.	Indicator quantity. 1-64.	Swicth quantity.:1-20.	h: Hanging type v: Vertical	Gran quantity and specifications

Remarks:If quantity is zero,no need remark.

举例：防爆控制箱，内装2个信号灯，1个电流表，4个按钮，下进2个M25格兰，挂式安装，则型号为：MAMC01-A-A4B1D2h2M25*1.5

For example: If the explosion-proof control box is with engineering plastic enclosure , built-in 2 signal lights, 1pc of ammeter, 4pcs of buttons, 2pcs of M25 cable glands in hanging installation, the model is MAMC01-A-A4B1D2h2M25*1.5.

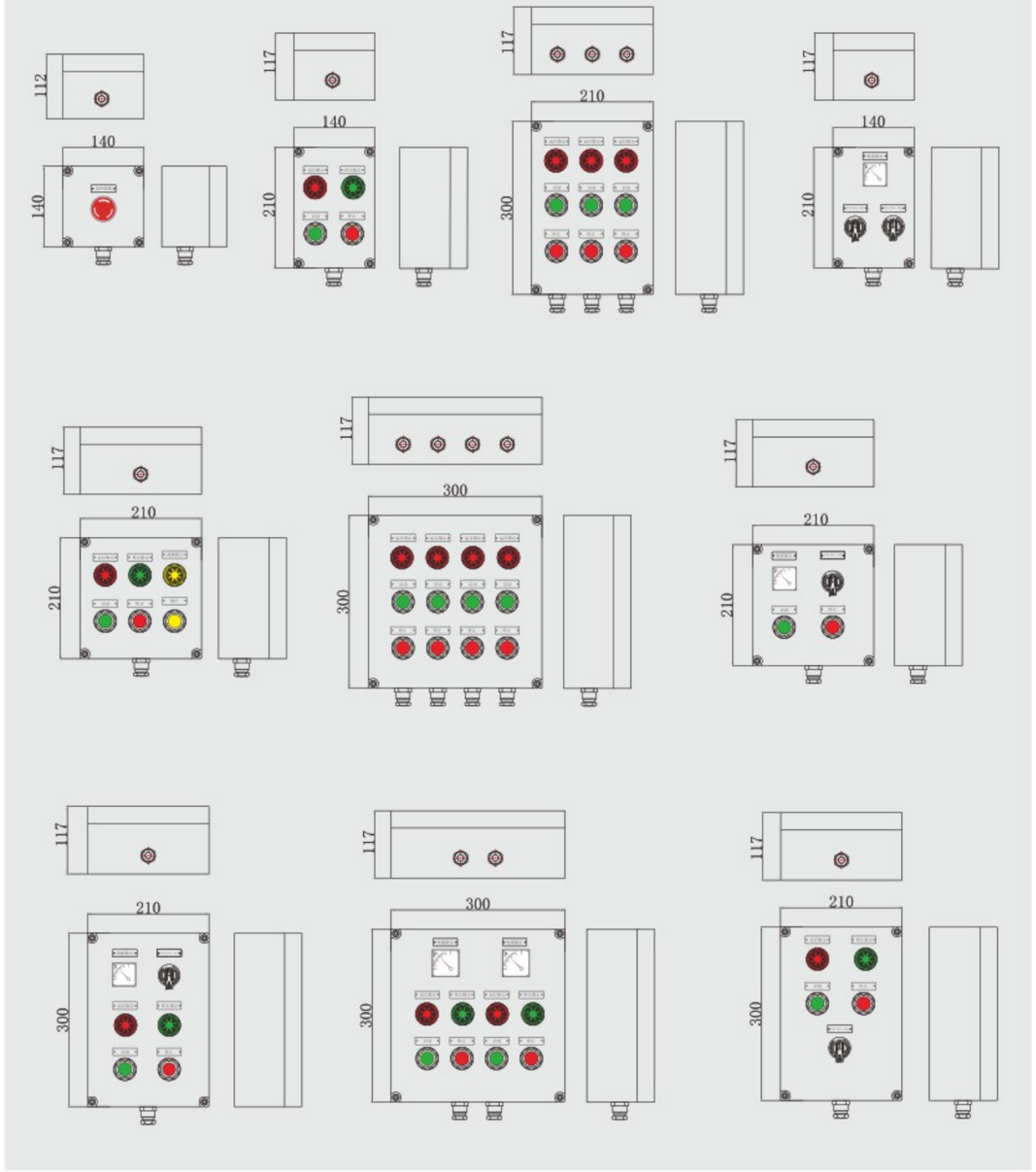
通用技术参数 / General Technical Parameters

爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex eb mb IIC T6 Gb, Ex db eb IIC T6 Gb,Ex eb IIC T6 Gb, Ex eb ib mb IIC T6 Gb,Ex db eb ib mb IIC T6 Gb, Ex tb IIIC T80℃ Db
遵循标准 Conformity to standards	GB/T3836.1-2021,GB/T3836.2-2021,GB/T3836.3-2021,GB/T3836.4-2021, GB/T 3836.9-2021,GB/T 3836.31-2021
保护壳材质 Enclosure Material	铸铝ZL102 Copper-free Aluminum Alloy ZL102
通用电源供应 General power supply	MAX.AC415V 50/60Hz MAX.40A
保护壳喷涂材质及颜色 Powder coated and color	静电喷涂，颜色厂家标准颜色(明迈色)近似RAL7090，可定制 Electrostatic powder coating ,MAM standard color is equal to dark grey RAL7090 light grey RAL7090 is optional
内装元件 Built-in components	防爆按钮、防爆仪表（电流表、电压表、转速表）、防爆指示灯、防爆转换开关、防爆电位器、防爆蜂鸣器 Explosion-proof button, explosion-proof instrument (current meter, voltmeter, tachometer), explosion-proof indicator, explosion-proof selector switch, explosion-proof potentiometer, explosion-proof buzzer.
环境温度范围及防护防腐等级 Ambient temperature use, IP degree, anti-corrosion level	-40℃~+50℃，IP66、WF2
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel
防爆接线端子品牌 Ex Terminal brand	魏德米勒、菲尼克斯 Weidmuller, Phoenix
进出线电缆 Cable entry	铠装电缆、橡胶电缆; Armored cable、Rubber cable

防爆控制箱(操作柱)MAMC01-A系列
Explosion-proof control box MAMC01-A series

● 常用产品外形及安装示意图尺寸 Product outline and installation dimensions

铝合金外壳 Aluminum alloy enclosure



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防爆尾灯MTE-S系列
Explosion-proof end seal kits MTE-S series

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Smart Technology

- 产品适用于危险区域，与工业并联伴热线一起使用；
  Can be used in other hazardous area, using together with industry parallel heat tapes;
- 产品异常坚固耐用，由厚度为4mm的坚固的模塑件压制而成；
  The product is exceptionally rugged and is made of solid moulding parts with a thickness of 4 mm.
- 尾端信号灯使用超高亮度的红色LED光源，长寿命、低能耗、绿色环保，且在几乎任何角度都有出色的可见度；
  The lighted end seal kit use super bright red LED lamp source, long life, low cost, environment friendly, all of angle is visual;
- 采用结实耐用的工业级电子控制设备，且密封性能好，有效防潮；
  Use durable industry electric control device, with good sealing performance, damp proof;
- 伴热带进线。
  Heating cable wiring.



型号含义 / Model Identification

MTE
尾端装置，不带信号灯。
End seal kits without light

MTE-S
尾端信号灯
Lighted end seal kit
MTE-S-I型
MTE-S-III型

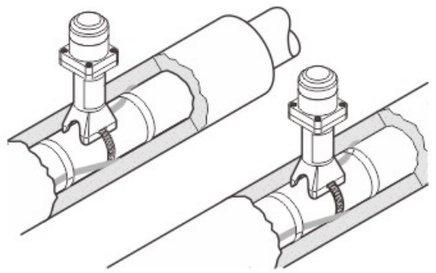


通用技术参数 / General Technical Parameters

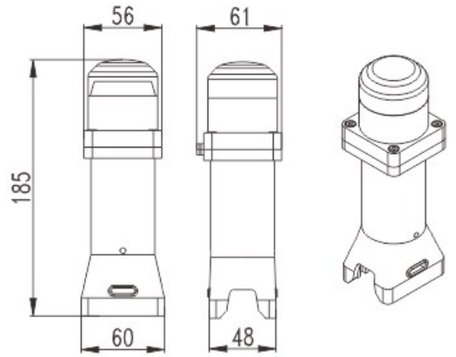
	GB/IECEx	ATEX
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	Ex eb IIC T6...T4 Gb, Ex tb IIIC T80°C Db	Ⅱ 2G Ex eb IIC T6...T4 Gb, Ⅱ 2D Ex tb IIIC T80°C Db
防护防腐等级 Degree of protection	IP66、WF2	
遵循标准 Conformity to standards	GB 3836.1-2010 GB3836.2-2010 GB3836.3-2010 GB12476.1-2013 GB12476.5-2013 IEC 60079-0:2011, IEC60079-1:2007, IEC60079-7:2006, IEC60079-31:2008	
保护壳材质 Enclosure Material	PPS	
透明罩 Transparent cover	高强度PC罩，抗7J冲击 high strength PC,stands 7J impact	
外露紧固件材料 The material of Exposed fastener	SS304/SS316 不锈钢 SS304/SS316 stainless steel	
光源及灯具功率 Light source and lighting power	LED光源，功率：≤2W LED light source, power: less than 2W	
额定电压范围 Rated voltage range	AC/ 177~265V 50/60HZ 其他电压范围请注明 Other voltages can be customized	
保护壳耐冲击性 Enclosure impact resistance	≥ 7J	
外壳抗紫外线稳定性 The enclosure stability of anti-UV	1000小时后无降解 No degradation after 1000 hours	
使用环境温度 Ambient temperature	-45°C-+55°C	
安装所需工具 Install required tools	MTE:电缆刀、钢丝钳、螺丝刀 MTE-S:电缆刀，钢丝钳、螺丝刀、压接工具、尖嘴钳 MTE: cable knives, combination pliers, screwdriver, MTE – S:cable knife, wire cutter, screw knife, crimping tool, long nose pliers.	
产品净重 Product net weight	0.3Kg	
允许电伴热带最大尺寸 Applicable heating cable size range	5.5*15.4mm 7.6*14mm	

产品安装示意图 Installation reference

■ 尾端被安装在管道上，并穿过保温层。
The tail end installed on tube, and go through insulating layer.



产品外形尺寸图 Dimension drawing



防爆防腐插销MOLT01
Explosion-proof plug and sockets MOLT01

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- 高强度玻璃纤维不饱和聚酯树脂模压外壳，具有抗静电、耐腐蚀、抗冲击、热稳定性好等性能，外形美观；
  High-strength glass fiber unsaturated polyester resin molded enclosure, anti-static, corrosion resistance, impact resistance, good thermal stability, beautiful appearance etc;
- 具有可靠的联锁功能，即只有插座腔内的开关分断后插头才能拔出，只有插头插入腔内，开关才可闭合；
  It has a reliable interlocking function, that is, the plug can only be pulled out after the switch in the socket cavity is powered off, and the switch can be closed only when the plug is inserted into the cavity;
- 插头接触性能可靠，使用寿命长，插座内的插套有--个弹性的百叶式簧套，使插头既有自我清洁的特性，又保证了小的接触电阻和低温升，同时也将所要的插拔力降到了最低，百叶式簧套的设计保证了插头和插座功能的正常发挥和永久的自清洁效果，解决了插接装置在使用中受周围环境的影响(如湿度，尘埃等)，确保了插接装置的电传输性能；
  The plug has reliable contact performance and long service life. The plug sleeve in the socket has an elastic shutter-type spring sleeve, which makes the plug self-cleaning and ensures smallcontact resistance and low temperature rise. At the same time, the required plug-in and pull-out force is reduced to a minimum. The design of the louvered spring sleeve ensures the normal function of the plug and socket and the permanent self-cleaningeffect. It solves the problem that the plug-in device is affected by the surrounding environment (such as humidity, dust, etc.)during use and ensures the electrical transmission performance of the plug-in device;
- 插座设有挂锁,不使用时可锁定，插座无法打开。
  The socket is equipped with a padlock, which can be locked when not in use, so that the socket cannot be opened.



型号含义 / Model Identification

MOLT 01 — □ / □ / □ □

- 01 产品代号 Product code
- □ 额定电压 Rated voltage
- □ 额定电流 Rated current
- □ 芯数(3-5芯) Poles(3-5 poles)
- □ T-插头 Z-插座 M-面板式插座 T-Plug Z-Socket M-Panel socket

适用范围 Scope of application

* 1区、2区ⅡA~Ⅱ C类爆炸性气体环境，和或21区、22区可燃性粉尘场所；
* 强腐蚀气体环境；
* 温度组别:T1~T6；
* 用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。

* Intended to be used in Zone 1,Zone 2, IIA, IIB, IIC explosive gas atmospheres and Zone 21, Zone 22 explosive dust atmospheres
* Strong corrosive gas environment ;
* Temperature group:T1-T6;
* Used in hazardous areas such as chemical industry, oil refining, oil exploration, offshore oil platforms, oil tankers, and military industry.

通用技术参数 / General Technical Parameters

防爆标志 Ex-markings	防护等级 IP Rate	电缆入口/电缆外径 Threads and cable diameter	插头电缆外径(mm) Plug cable diameter	防腐等级 Anti-corrosion rate
Ex db eb IIC T4 Gb; Ex tb IIIC T80℃ Db	IP66	16A:M25×1.5/Φ8~Φ14mm	16A/3: Φ7~Φ16mm 16A/4(5): Φ9~Φ19mm	WF2
Ex db eb IIC T4 Gb; Ex tb IIIC T80℃ Db	IP66	32A:M40×1.5/Φ18~Φ26mm	32A: Φ12~Φ28mm	
Ex db eb IIC T4 Gb; Ex tb IIIC T80℃ Db	IP66	63A:M50×1.5/Φ19~Φ36mm	63A: Φ19~Φ28mm	
Ex db eb IIC T4 Gb; Ex tb IIIC T80℃ Db	IP66	125A:M63×1.5/Φ37~Φ44mm	125A: Φ34~Φ53mm	

备注：插座上标配塑料格兰，订货前请与我司人员确认。
Note: Socket standard with plastic cable gland, please confirm with MAM before ordering.

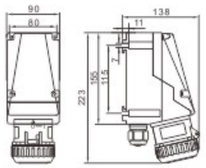


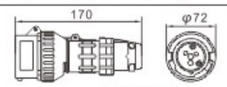
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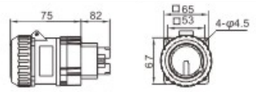
■ 产品图样（16A/3极） Product picture(16A/3 poles)

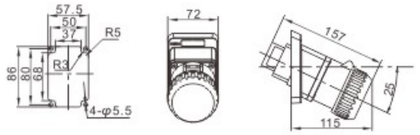
MOLT01-16/3	时钟h和电压 Schematic diagram and voltage
	 h4 110~130V 1P+N+PE 黄色 Yellow
	 h6 200~250V 1P+N+PE 蓝色 Blue
	插接装置接线图（16A/3极） Connector wiring diagram (16A/3 poles)  1P+N+PE

■ 外形尺寸（16A/3极） Overall dimension(16A/3 poles)


壁式插座 Wall socket


插头 plug


面板式插座 Panel socket

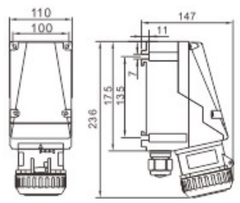


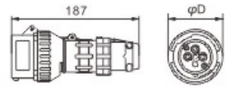
■ 产品图样（16A/4极） Product picture(16A/4 poles)

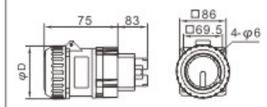
MOLT01-16/4	时钟h和电压 Schematic diagram and voltage
	 h9 220~250V 3P+PE 蓝色 Blue
	 h6 380~415V 3P+PE 红色 Red
	 h7 480~500V 3P+PE 黑色 Black
	 h5 600~690V 3P+PE 黑色 Black

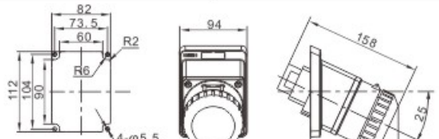
■ 外形尺寸[16A/4(5)极] Outline dimension 16A/4(5)poles

极数	φD(mm)
3P+ ⏚	76.5
3P+N+⏚	84


壁式插座 Wall mounting socket


插头 plug


面板式插座 Panel mounting socket


开孔图 Hole opening drawing

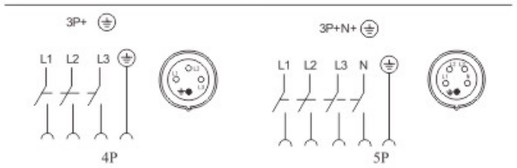
带25°C插座 With 25°C socket

■ 产品图样（16A/5极） Product picture(16A/5 poles)

MOLT01-16/5	时钟h和电压 Schematic diagram and voltage
	 h9 220~250V 3P+N+PE 蓝色 Blue
	 h6 380~415V 3P+N+PE 红色 Red
	 h7 480~500V 3P+N+PE 黑色 Black
	 h5 600~690V 3P+N+PE 黑色 Black

■ 插接装置接线图[16A/4(5)极]

Wiring diagram (16A/4（5）poles)



■ 产品图样（32A/4极） Product picture(32A/4 poles)

MOLT01-32/4	时钟h和电压 Schematic diagram and voltage
	 h9 220~250V 3P+PE 蓝色 Blue
	 h6 380~415V 3P+PE 红色 Red
	 h7 480~500V 3P+PE 黑色 Black
	 h5 600~690V 3P+PE 黑色 Black

■ 产品图样（32A/5极） Product picture(32A/5 poles)

MOLT01-32/5	时钟h和电压 Schematic diagram and voltage
	 h9 220~250V 3P+N+PE 蓝色 Blue
	 h6 380~415V 3P+N+PE 红色 Red
	h7 480~500V 3P+N+PE 黑色 Black
	h5 600~690V 3P+N+PE 黑色 Black

■ 外形尺寸及插接装置接线图[32A/4(5)极] Outline and wiring diagram 32A/4(5)Poles

极数 Poles	φ D(mm)
3P+ ⏚	95
3P+N+⏚	100

壁式插座 Wall mounting socket

插头 plug

面板式插座 Panel mounting socket

开孔图 Hole opening drawing

带25°C插座 With 25°C socket

防爆防腐插销MOLT01
Explosion-proof plug and sockets MOLT01

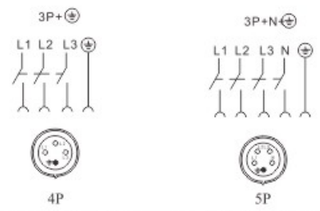
■ 产品图样（63A/4极） Product picture(63A/4 poles)

MOLT01-63/4	时钟h和电压 Schematic diagram and voltage
 插座	h9 220~250V 3P+PE 蓝色 Blue
	h6 380~415V 3P+PE 红色 Red
 插头	h7 480~500V 3P+PE 黑色 Black
	h5 600~690V 3P+PE 黑色 Black

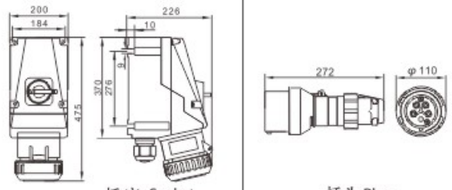
■ 产品图样（63A/5极） Product picture(63A/5 poles)

MOLT01-63/5	时钟h和电压 Schematic diagram and voltage
 插座	h9 220~250V 3P+N+PE 蓝色 Blue
	h6 380~415V 3P+N+PE 红色 Red
 插头	h7 480~500V 3P+N+PE 黑色 Black
	h5 600~690V 3P+N+PE 黑色 Black

■ 插接装置接线图 [63A/4(5)极]
Wiring diagram 63A/4(5)poles



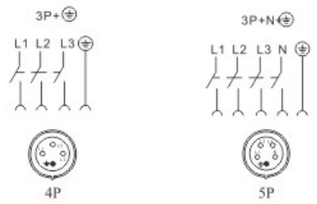
■ 外形尺寸 [63A/4(5)极] Outline dimension 63A/4(5)poles



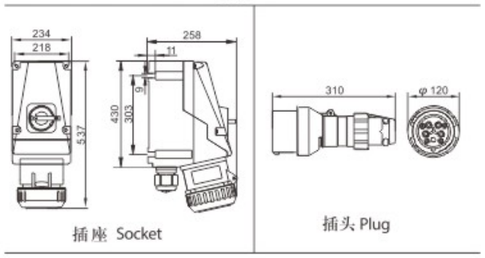
■ 产品图样 [125A/4(5)极] Product picture(125A/4(5) poles)

MOLT01-125/4	时钟h和电压 Schematic diagram and voltage
 墙壁插座	h9 220~250V 3P+PE 蓝色 Blue
	h6 380~415V 3P+PE 红色 Red
 插头 plug	h7 480~500V 3P+PE 黑色 Black
	h5 600~690V 3P+PE 黑色 Black
MOLT01-125/5	时钟h和电压 Schematic diagram and voltage
	h6 220/380V 240/450V 3P+N+PE 红色 Red

■ 插接装置接线图 [125A/4(5)极]
Wiring diagram (125A/4（5） poles)



■ 外形尺寸 [125A-4(5)极]
Outline dimension 125A/-4(5)poles



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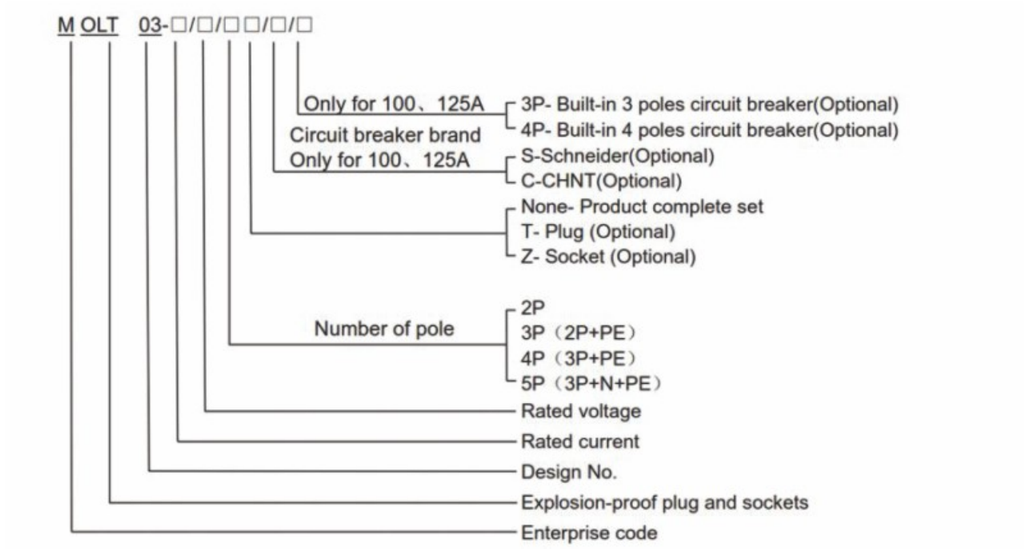
防爆防腐插销MOLT03
Explosion-proof plug and sockets MOLT03

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- 铝合金外壳，压铸成型，表面高压静电喷塑，不锈钢外露紧固件；
  Die casting aluminum alloy enclosure, surface high-voltage electrostatic spraying, stainless steel exposed fasteners;
- 内装分断隔离开关且实现机械连锁，确保插头插拔时不带电；
  The built-in disconnecting and isolating switch realizes mechanical interlocking to ensure that the plug is not charged when plugging in or out;
- 插座与插头设有联锁装置，只有插座内的开关分断后才能拔出插头，插入插头后通电；
  The socket and plug are equipped with an interlocking device. The plug can only be pulled out after the switch in the socket is turned off. The plug can be powered on after being inserted;
- 钢管/电缆布线；
  Steel pipe/cable wiring;
- 插接装置为全隔爆型，同时适用于粉尘防爆；
  The plug-in device is fully flameproof type and suitable for dust explosion-proof;
- 插头主要由外壳与插座对应的插杆、插杆支架、接线托架及进线装置等组成；
  The plug is mainly composed of a housing and a plug corresponding to the socket, a plug bracket, a wiring bracket and a cable entry device;
- 插座主要由外壳、插接用的插座和联锁机构及电缆引入装置等组成；
  The socket is mainly composed of an enclosure, a socket for plugging, an interlocking mechanism, and a cable introduction device;
- 产品设置时序功能，对于不同的工作电压设置不同的指示颜色，防止不同规格的插头与插座误插拔。
  The product is equipped with a timing function that sets different indicator colors for different working voltages to prevent plugs and sockets of different specifications from being plugged or unplugged accidentally.



Model Identification



适用范围 Scope of application

* 1区、2区ⅡA、ⅡB、ⅡC类爆炸性气体环境，和/或21区、22区爆炸性粉尘场所；
  Intended to be used in Zone 1,Zone 2, IIA, IIB, IIC explosive gas atmospheres and Zone 21, Zone 22 explosive dust atmospheres
* 温度组别: T1~T6； Temperature Group: T1~T6； * 环境温度: -60~+55℃； Ambient temperature: -60~+55℃； * 户内、户外(IP66)； Indoor and outdoor(IP66)
* 用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。
  Used in hazardous areas such as chemical industry, oil refining, oil exploration, offshore oil platforms, oil tankers, and military industry.



体盖采用隔爆螺纹式固定，便于安装，拆卸
The body and lid is fixed with flameproof threads for easy installation and disassembly.



指示牌为不锈钢，标识清晰、美观
The sign is made of stainless steel, with clear and beautiful markings.



不同工作电压设置不同指示颜色
Different working voltage settings, different indicator colors.



不同工作电压设置不同指示颜色
Different working voltage settings, different indicator colors.

通用技术参数 / General Technical Parameters

防爆标志 Ex-markings	防护等级 IP Rate	插座电缆入口螺纹 Socket Threads	插头电缆入口螺纹 Plug Threads	防腐等级 Anti-corrosion rate
Ex db IIC T6 Gb; Ex tb IIIC T80℃ Db	IP66	16A/3:M25*1.5 16A/4(5):M32*1.5	16A/3:M25*1.5 16A/4(5):M32*1.5	WF2
Ex db IIC T6 Gb; Ex tb IIIC T80℃ Db	IP66	32A:M32*1.5	32A:M32*1.5	
Ex db IIC T6 Gb; Ex tb IIIC T80℃ Db	IP66	63A:M40*1.5	63A:M50*1.5	
Ex db IIC T6 Gb; Ex tb IIIC T80℃ Db	IP66	125A:M50*1.5	125A:M50*1.5	

备注：产品常规不配格兰，订购前请与我司人员确认。
Note: Product without cable gland, please confirm with MAM before ordering.

防爆防腐插销MOLT03
Explosion-proof plug and sockets MOLT03

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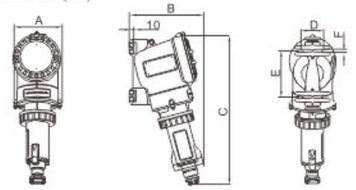
■ 主要技术参数 Main technical parameters

型号规格 Model	防爆标志 Ex-markings	额定电流(A) Rated current	额定电压(V) Rated voltage	极数 Poles	时钟图 Schematic diagram	h	颜色 Color	进出线口螺纹 Threads
MOLT03	Ex db Ⅱ C T6 Gb Ex tb ⅢC T80℃Db	16	DC24	2P		-	Purple	插头 Plug: 1- M25×1.5 插座 Socket: 2- M25×1.5
			DC36			-	White	
			100~130	2P+PE		4	Yellow	
			200~250			6	Blue	
			DC24			12	Purple	
			DC36			12	White	
			100~130	3P+PE		4	Yellow	
			200~250			9	Blue	
			380~415			6	Red	
			480~500			7	Black	
			600~690			5	Black	
			100~130	3P+N+PE		4	Yellow	插头 Plug: 1- M32×1. 5 插座 Socket: 2-M32×1. 5
			200~250			9	Blue	
			380~415			6	Red	
			480~500			7	Black	
			600~690			5	Black	
MOLT03		32	200~250	2P+PE		6	Blue	插头 Plug: 1- M32×1. 5 插座 Socket: 2-M32×1. 5
			200~250	3P+PE		9	Blue	
			380~415			6	Red	
			480~500			7	Black	
			600~690			5	Black	
			200~250	3P+N+PE		9	Blue	
			380~415			6	Red	
			480~500			7	Black	
			600~690			5	Black	
MOLT03		63	200~250	3P+PE		9	Blue	插头 Plug: 1- M50×1.5 插座 Socket: 2-M40×1. 5
			380~415			6	Red	
			480~500			7	Black	
			600~690			5	Black	
			380~415	3P+N+PE		6	Red	
			480~500			7	Black	
			600~690			5	Black	
MOLT03		125	200~250	3P+PE		9	Blue	插头 Plug: 1- M50×1.5 插座 Socket: 2-M50×1.5
			380~415			6	Red	
			480~500			7	Black	
			600~690			5	Black	
			380~415	3P+N+PE		6	Red	
			480~500			7	Black	
			600~690			5	Black	

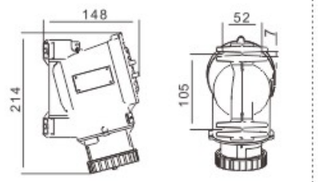
■ 外形及安装尺寸 Outline and installation dimension

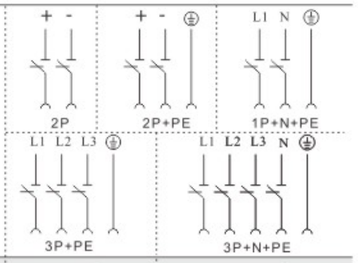
尺寸(mm) / 型号规格	A	B	C	D	E	F
MOLT03	106	164	350	52	105	7
MOLT03	126	195	400	77	140	9
MOLT03	187	238	485	87	180	13
MOLT03	360	256	710	328	315	/

● MOLT03-16 (32)

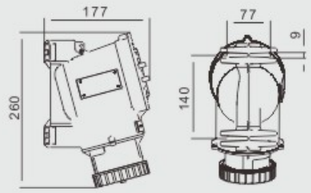


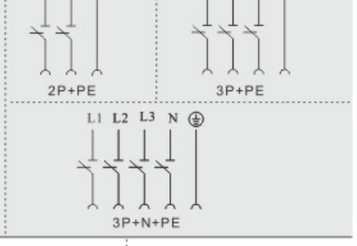
● MOLT03-16/3 (16/2 、16/4)



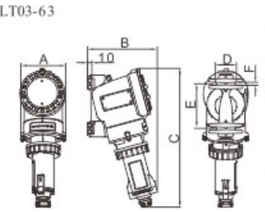


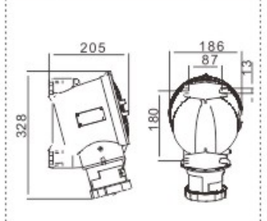
● MOLT03-16/5 (32/3 、32/4、32/5)

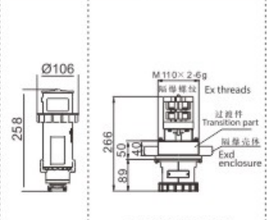


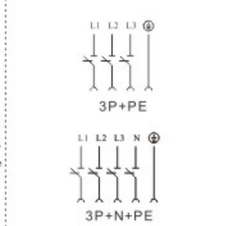


● MOLT03-63

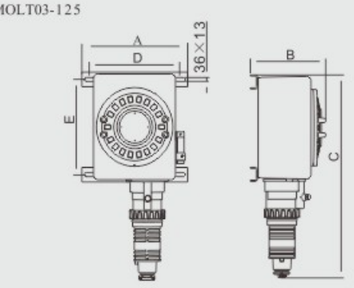


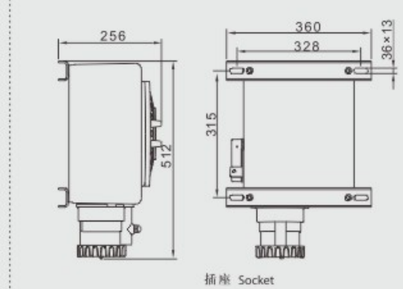


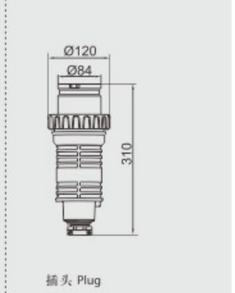




● MOLT03-125







防爆指示灯(塑料)MEC-0601系列
Explosion-proof indicators MEC-0601 Series



型号含义 / Model Identification

MEC-0601 – A – B

A：颜色

颜色 Color	红 Red 白 White	绿 Green 蓝 Blue	黄 Yellow 双色 Two colors
代码 Code	R W	G B	Y S
图示 Diagrams			

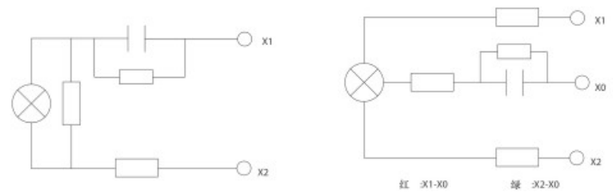
注：双色可以根据用户需求选择，带频闪功能。
Note:Double colors with strobe function can be selected according to needs of users.

B：电压
电压直接注明，如AC220，DC24，AC380…..
B: Voltage(Voltage can be indicated directly such as AC220，DC24，AC380…..)

举例:防爆指示灯，白色，电压交流220V，则型号为： MEC-0601-W-AC220
For example: Explosion-proof indicator with white color and voltage AC220V, the model is MEC-0601-W-AC220.

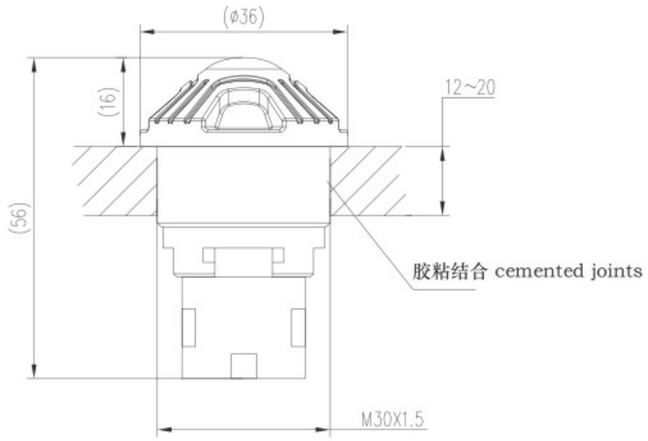
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通用技术参数 / General Technical Parameters

配套使用主体及说明 Applicable equipment and description	产品用于隔爆箱（Ex db）信号指示用，产品为Ex元件认证，不能单独使用。 Used for the indication of the explosion-proof box (Ex db); Certified for Ex components and cannot be used alone;
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx：Ex db IIC Gb Ex tb IIIC Db ATEX：Ex II 2 G Ex db IIC Gb II 2 Ex tb IIIC Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014
保护壳材质 Enclosure Material	外壳、透明罩 Enclosure and transparent cover：PC
额定电压及功率 Rated voltage and power	电压 Voltage:AC220-240V，AC380V，DC220V，AC/DC110V，DC12V，DC24V，DC48V， 其他电压需定制 Other voltages can be customized 功率 Power：＜0.5W
抗干扰电压 Anti-interference voltage	50V:AC/DC110V 110V:AC/DC220V、AC/DC380V
工作温度范围及防护防腐等级 Service Temp. IP and Anti-corrosion rate	-60℃~+100℃ , IP66、WF2
重量 weight(kg)	0.03
接线线径 Wiring diameter	0.5~2.5 mm²
接线示意图 Wiring schematic diagram	 单色指示灯 Single color indicator 双色指示灯 Double color indicator

防爆指示灯(塑料)MEC-0601系列
Explosion-proof indicators MEC-0601 Series

安装示意图 Product appearance and installation schematic



产品特点说明 Product Features

注：专用指示灯元件型号设定为CP0502，具体参数选型同MEC-0602。

Note: The model of the dedicated indicator element is set to CP0602. The specific parameter selection is the same as MEC-0602.

高透光率PC罩，特种耐低温耐爆材料，实现隔爆。
High light transmittance PC cover, special low-temperature resistant and explosion-proof material

专用指示灯元件CP0502，可以根据要求选用不同的电压、颜色及双色频
Dedicated indicator element CP0502, different voltage, color and dual color strobe are available according to requirements



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防爆指示灯(金属)MEC-0602系列
Explosion-proof indicators MEC-0602 Series

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型号含义 / Model Identification

MEC-0602 — A — B — C

A：颜色

颜色 Color	红 Red 白 White	绿 Green 蓝 Blue	黄 Yellow 双色 Two colors
代码 Code	R W	G B	Y S
图示 Diagrams			

注：双色可以根据用户需求选择，带频闪功能。
Note:Double colors with strobe function can be selected according to needs of users.

B：电压
电压直接注明，
如AC220，DC24，AC380……

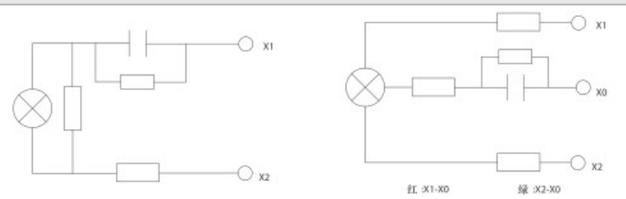
B: Voltage(Voltage can be indicated directly such as AC220，DC24，AC380…..)

C：螺纹
M30：标准，可不注明
M32：可选，直接注明
M20：可选

C：Threads
M30：Standard, no need indication
M32：Optional, indicate M32
M20：Optional, indicate M20

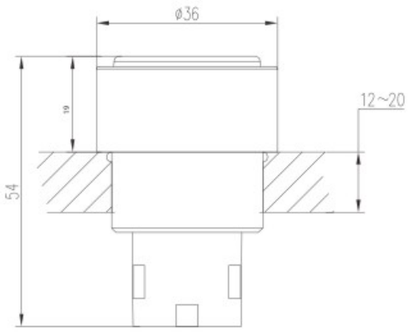
举例:防爆指示灯，白色，电压交流220V，则型号为：MEC-0602-W-AC220
For example: Explosion-proof indicator with white color and voltage AC220V, the model is MEC-0602-W-AC220.

通用技术参数 / General Technical Parameters

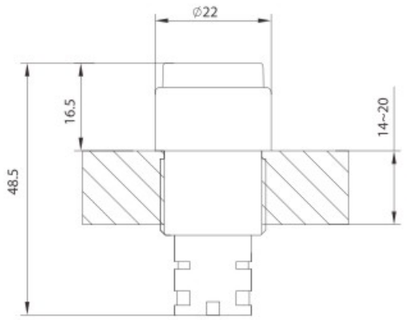
配套使用主体及说明 Applicable equipment and description	产品用于隔爆箱（Ex db）信号指示用，产品为Ex元件认证，不能单独使用。 Used for the indication of the explosion-proof box (Ex db); Certified for Ex components and cannot be used alone;
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx：Ex db IIC Gb Ex tb IIIC Db ATEX: Ex II 2 G Ex db IIC Gb II 2D Ex tb IIIC Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014
保护壳材质 Enclosure Material	外壳：铝合金，透明罩：PC Enclosure:Aluminum alloy,Transparent cover:PC
额定电压及功率 Rated voltage & current	电压 Voltage:AC220-240V，AC380V，DC220V，AC/DC110V，DC12V，DC24V，DC48V，其他电压需定制 Other voltages can be customized 功率 Power：＜0.5W
抗干扰电压 Anti-interference voltage	50V:AC/DC110V 110V:AC/DC220V、AC/DC380V
工作温度范围及防护防腐等级 Service Temp. IP and Anti-corrosion rate	-60°C~+100°C , IP66、WF2 (标配硅胶密封圈Equipped with silicone sealing rings)
重量 weight(kg)	0.06
接线线径 Wiring diameter	0.5~2.5 mm^2
接线示意图 Wiring schematic diagram	 单色指示灯 Single color indicator 双色指示灯 Double color indicator

防爆指示灯(金属)MEC-0602系列
Explosion-proof indicators MEC-0602 Series

安装示意图 Product appearance and installation schematic



M30



M20

产品特点说明 Product Features

注：专用指示灯元件型号设定为CP0501，具体参数选型同MEC-0602。

Note: The model of the dedicated indicator element is set to CP0501. The specific parameter selection is the same as MEC-0602.

高透光率PC罩，内置钢化玻璃透明罩，实现隔爆。
High light transmittance PC cover, built-in toughened glass transparent cover to achieve flameproof function.

专用指示灯元件CP0501，可以根据要求选用不同的电压、颜色及双色频
Dedicated indicator element CP0501, different voltage, color and two-color strobe are available according to requirements.



铝合金外壳防腐处理，采用隔爆结构。
Anti-corrosion treatment of aluminum alloy enclosure, using flameproof structure

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型号含义 / Model Identification

MEC-0701 — A — B — C

A：颜色 Color

颜色 Color	红 Red	绿 Green	黄 Yellow
	白 White	蓝 Blue	黑 Black
代码 Code	R	G	Y
	W	B	K
图示 Diagrams			

B：触点 contactor



一常开
One normally open：MA115-O
一常闭
One normally close：MA115-C

触点 Contactor	一常开 One normally open	一常闭 One Normally close	一常开 一常闭 One normally open and One Normally close	二常开 Two normally open	二常闭 Two normally close
代码 Code	O	C	OC	OO	CC
触点图 Diagrams	1 2	1 2	3 4 1 2	3 4 1 2	3 4 1 2

C：螺纹
M30：标准，可不注明
M32：可选，直接注明

C：Threads
M30：Standard, no need indication
M32：Optional, indicate M32

注 Note

1、一套按钮最多可以有4副触点，可以根据用户要求配置；
2、代码O、C为英文OPEN、CLOSE的第一个字母；
3、多副触点根据代码组合标示。

1. One button can have maximum 4 contactors, which can be configured according to user requirements;
2. The codes O and C are the first letters of OPEN and CLOSE;
3. Multiple contactors are marked according to the code combination.

举例1：防爆平钮，黄色，2常开+1常闭，那型号就为：MEC-0701-Y-OOC
举例2：防爆平钮，黑色，2常开+2常闭，那型号就为：MEC-0701-K-OOCC
举例3：防爆平钮，绿色，1常开+1常闭，那型号就为：MEC-0701-G-OC

Example 1: Explosion-proof button, yellow,2 normally open +1 normally close, the model is MEC-0701-Y-OOC.
Example 2: Explosion-proof button, black,2 normally open +2 normally close, the model is MEC-0701-K-OOCC.
Example 3: Explosion-proof button, green,1 normally open +1 normally close, the model is MEC-0701-G-OC.

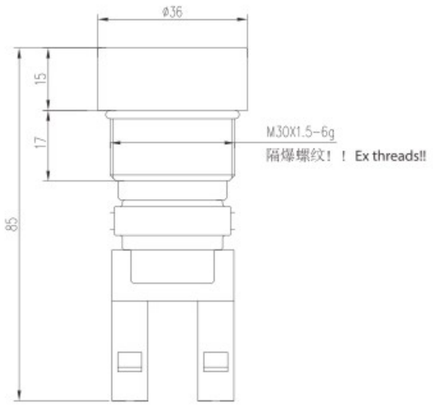
通用技术参数 / General Technical Parameters

配套使用主体及说明 Applicable equipment and description	产品用于隔爆箱（Ex db），产品为Ex元件认证，不能单独使用。 Used for explosion-proof box (Ex db); Certified for Ex components and cannot be used alone;
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx：Ex db IIC Gb Ex tb IIIC Db ATEX: Ex II 2 G Ex db IIC Gb II 2D Ex tb IIIC Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014
保护壳材质 Enclosure Material	铝合金 Aluminum alloy
额定电压/额定电流 Rated voltage /Rated current	DC 660V，AC 440V，10A/4A
机械寿命 Mechanical life	10万次 100,000times
工作温度范围及防护防腐等级 Service Temp. IP and Anti-corrosion rate	-60°C~+100°C , IP66、WF2 （标配硅胶密封圈Equipped with silicone sealing rings）
重量 weight(kg)	0.14
接线线径 Wiring diameter	0.5~2.5 mm^2



防爆控制按钮MEC-0701系列
Explosion-proof control pushbutton MEC-0701 Series

安装示意图 Product appearance and installation schematic



产品特点说明 Product Features

铝合金外壳，铝合金按片（保证低温不会变形）
Aluminum alloy enclosure, aluminum alloy sheet (guaranteed no deformation at low temperature)



锌合金连接件，保证低温不会变形脱落
Zinc alloy connector to ensure no deformation and fall-off at low temperature

最多可以有4副触点，根据需要组合。
Up to 4 contactors, which can be combined as required.

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型号含义 / Model Identification

MEC-0702 — A — B — C

A：功能型按钮头 Functional button heads

B：触点 contactor

C：螺纹
M30：标准，可不注明
M32：可选，直接注明

C：Threads
M30：Standard, no need indication
M32：Optional, indicate M32

一常开
One normally open：MA115-O
一常闭
One normally close：MA115-C

▲ 蘑菇头系列 Mushroom head series

功能名称 Function	急停旋转复位 turn-to-release emergency type	急停拉拔式 push and pull emergency type	急停自复位 spring-return emergency type	急停自锁 stop self-lock emergency type
代码 Code	M1	M2	M3	M4
图示 Diagrams				

▲ 带钥匙系列 Switch with key series

功能名称 Function	蘑菇头带钥匙急停按钮 Mushroom key-operated emergency type
代码 Code	K1
图示 Diagrams	

▲ 旋转开关系列 Rotary switch series

功能名称 Function	两档带钥匙旋钮 Two position key-operated rotary type	两档旋钮 Two position rotary type
代码 Code	K2	H2
图示 Diagrams		

触点 Contactor	一常开 One normally open	一常闭 One Normally close	一常开 一常闭 One normally open and One Normally close	二常开 Two normally open	二常闭 Two normally close
代码 Code	O	C	OC	OO	CC
触点图 Diagrams					

注 Note

1、一套按钮最多可以有4副触点，可以根据用户要求配置；
2、代码O、C为英文OPEN、CLOSE的第一个字母；
3、多副触点根据代码组合标示。

1. One button can have maximum 4 contactors, which can be configured according to user requirements;
2. The codes O and C are the first letters of OPEN and CLOSE;
3. Multiple contacts are marked according to the code combination.

举例1：防爆按钮，蘑菇头急停旋转释放，2常开+2常闭，那型号就为：MEC-0702-M1-OOCC

举例2：防爆按钮，旋钮2档自锁，2常闭，那型号就为：MEC-0702-H2-CC

举例3：防爆按钮，带钥匙2档自锁，1常开+1常闭，那型号就为：MEC-0702-K2-OC

Example 1: Explosion-proof button, mushroom head emergency stop rotation release, 2 normally open + 2 normally close, the model is MEC-0702-M1-OOCC.

Example 2: Explosion-proof button, rotation with 2 positions self-lock, 2 normally close, the model is MEC-0702-H2-CC.

Example 3: Explosion-proof button, 2 positions self lock with key, 1 normally open + 1 normally close, the model is MEC-0702-K2-OC.

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通用技术参数 / General Technical Parameters

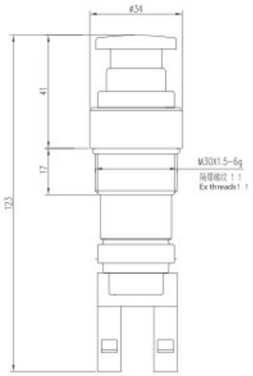
配套使用主体及说明 Applicable equipment and description	产品用于隔爆箱（Ex db），产品为Ex元件认证，不能单独使用。 Used for explosion-proof box (Ex db); Certified for Ex components and cannot be used alone;
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx：Ex db IIC Gb Ex tb IIIC Db ATEX: Ex II 2 G Ex db IIC Gb II 2D Ex tb IIIC Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014
保护壳材质 Enclosure Material	铝合金 Aluminum alloy
功能头材质 Button head material	工程塑料 GRP
额定电压/额定电流 Rated voltage /Rated current	DC 660V， AC 440V； 10A/4A
机械寿命 Mechanical life	10万次 100,000 times
工作温度范围及防护防腐等级 Service Temp. IP and Anti-corrosion rate	-60℃~+100℃ , IP66、WF2 (标配硅胶密封圈Equipped with silicone sealing rings)
重量 weight(kg)	0.16
接线线径 Wiring diameter	0.5~2.5 mm^2



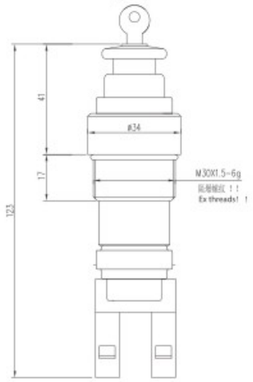
防爆控制按钮MEC-0702系列
Explosion-proof control pushbutton MEC-0702 Series

安装示意图 Product appearance and installation schematic

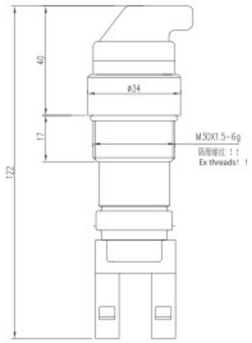
M1,M2, M3, M4
蘑菇头按钮
Mushroom emergency button



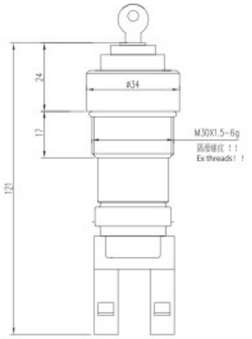
K1
蘑菇头钥匙按钮
Mushroom key-operated emergency button



H2
选择型按钮
Two position rotary switch



K2
选择型钥匙按钮
Two position key-operated rotary switch



产品特点说明 Product Features

功能头根据实际能满足的列出
Function heads are listed according to the actual needs.





锌合金连接件，保证低温不会变形脱落
Zinc alloy connector to ensure no deformation and fall-off at low temperature

最多可以有4副触点，根据需要组合。
Up to 4 contactors, which can be combined as required.



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型号含义 / Model Identification

MEC-0707 — A — B — C —

A：颜色 Color

颜色 Color	红 Red 白 White	绿 Green 蓝 Blue	黄 Yellow
代码 Code	R W	G B	Y
图示 Diagrams			

B：电压（电压直接注明，如AC220，DC24，AC380…..）

B: Voltage (The voltage is directly specified, such as AC220, DC24, AC380…)

C：触点 Contactor



一常开
One normally open：MA115-O
一常闭
One normally close：MA115-C

触点 Contactor	一常开 One normally open	一常闭 One Normally close	一常开 一常闭 One normally open and One Normally close	二常开 Two normally open	二常闭 Two normally close
代码 Code	O	C	OC	OO	CC
触点图 Diagrams	1 2	1 2	3 4 1 2	3 4 1 2	3 4 1 2

C：螺纹
M30：标准，可不注明
M32：可选，直接注明

C：Threads
M30：Standard, no need indication
M32：Optional, indicate M32

注 Note

1、一套按钮最多可以有4副触点，可以根据用户要求配置；
2、代码O、C为英文OPEN、CLOSE的第一个字母；
3、多副触点根据代码组合标示。

1. One button can have maximum 4 contactors, which can be configured according to user requirements;
2. The codes O and C are the first letters of OPEN and CLOSE;
3. Multiple contactors are marked according to the code combination.

举例1：防爆带灯按钮，绿色，AC220V，1常开+1常闭，那型号就为：MEC-0707-G-AC220-OC
举例2：防爆带灯按钮，黄色，DC24V， 2常开+2常闭，那型号就为：MEC-0707-Y-DC24-OOCC

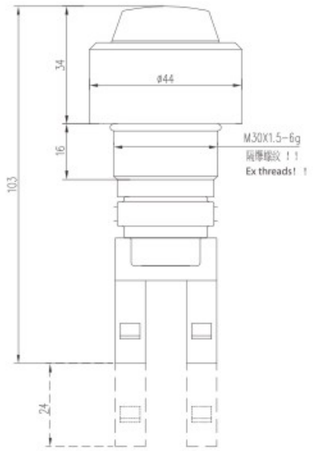
Example 1: Explosion-proof illuminated button, green, AC220V, 1 normally open + 1 normally close, the model is MEC-0707-G-AC220-OC.
Example 2: Explosion-proof illuminated button, yellow, DC24V, 2 normally open + 2 normally close, the model is MEC-0707-Y-DC24-OOCC.

通用技术参数 / General Technical Parameters

配套使用主体及说明 Applicable equipment and description	产品用于隔爆箱（Ex db），产品为Ex元件认证，不能单独使用。 Used for explosion-proof box (Ex db); Certified for Ex components and cannot be used alone;
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx：Ex db IIC Gb Ex tb IIIC Db ATEX: Ex II 2 G Ex db IIC Gb II 2 D Ex tb IIIC Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014
保护壳材质 Enclosure Material	外壳Enclosure：铝合金 aluminum alloy 透明罩Transparent cover：钢化玻璃 Tempered glass+PC
指示灯额定电压 Indicator rated voltage	电压 Voltage:AC220-240V，AC380V，DC220V，AC/DC110V，DC12V，DC24V，DC48V，其他电压需定制 Other voltages can be customized
抗干扰电压 Anti-interference voltage	50V:AC/DC110V 110V:AC/DC220V、AC/DC380V
指示灯额定功率 Indicator rated power	<0.5W
按钮额定电压/额定电流 Button Rated voltage /Rated current	DC 660V， AC 440V； 10A/4A
机械寿命 Mechanical life	≥10万次 100,000 times
工作温度范围及防护防腐等级 Service Temp. IP and Anti-corrosion rate	-60°C~+100°C , IP66、WF2 （标配硅胶密封圈Equipped with silicone sealing rings）
重量 weight(kg)	0.17
接线线径 Wiring diameter	0.5~2.5 mm^2

防爆带灯按钮MEC-0707系列
Explosion-proof illuminated pushbutton MEC-0707 Series

安装示意图 Product appearance and installation schematic



产品特点说明 Product Features

铝合金外壳，内置钢化玻璃透明罩，保证隔爆性能；
Aluminum alloy enclosure with built-in toughened glass transparent cover to ensure flameproof performance;



铝合金连接件，保证低温不会变形脱落
Zinc alloy connector to ensure no deformation and fall-off at low temperature

最多可以有3副触点+1副指示灯，根据需要组合。
Up to 3 contactors + 1 indicator, which can be combined as required.



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防爆控制开关MEC-0801-系列
Explosion-proof control switch MEC-0801-Series

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三挡开关
Three position



MEC-0801a



MEC-0801b

型号含义 / Model Identification

MEC-0801 – A – B – C

按钮头 Button head:
金属头 Metal head:a
塑料头 Plastic head:b

B：触点 contactor



一常开
One normally open：MA115-O
一常闭
One normally close：MA115-C

触点 Contactor	一常开 One normally open	一常闭 One Normally close
代码 Code	O	C
触点图 Diagrams		

C：螺纹
M30：标准，可不注明
M32：可选，直接注明

C：Threads
M30：Standard, no need indication
M32：Optional, indicate M32

注 Note
1、一套按钮最多可以有4副触点，可以根据用户要求配置；
2、代码O、C为英文OPEN、CLOSE的第一个字母；
3、多副触点根据代码组合标示。
1. One button can have maximum 4 contactors, which can be configured according to user requirements;
2. The codes O and C are the first letters of OPEN and CLOSE;
3. Multiple contacts are marked according to the code combination.

举例1：防爆控制开关，金属头，3档，1常开1常闭，则型号为MEC-0801a-OC.
举例2：防爆控制开关，塑料头，3档，2常开，则型号为MEC-0801b-OO.
Example 1:Explosion proof control button, metal head, 3 positions, 1NO ,1NC, the model is MEC-0801a-OC.
Example 2:Explosion proof control button, plastic head, 3 positions, 2NO , the model is MEC-0801b-OO.

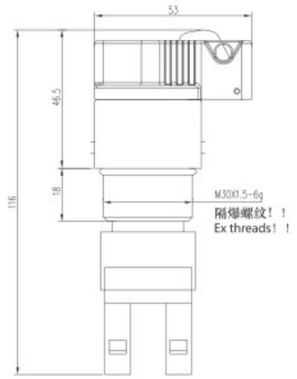
通用技术参数 / General Technical Parameters

配套使用主体及说明 Applicable equipment and description	产品用于隔爆箱（Ex db），产品为Ex元件认证，不能单独使用。 Used for explosion-proof box (Ex db); Certified for Ex components and cannot be used alone;
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx：Ex db IIC Gb Ex tb IIIC Db ATEX: Ex II 2 G Ex db IIC Gb II 2 Ex tb IIIC Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014
保护壳材质 Enclosure Material	铝合金 Aluminum alloy
额定电压/额定电流 Rated voltage /Rated current	DC 660V， AC 440V； 10A/4A
机械寿命 Mechanical life	10万次 100,000times
工作温度范围及防护防腐等级 Service Temp. IP and Anti-corrosion rate	-60°C~+100°C , IP66、WF2
重量 weight(kg)	0.17
接线线径 Wiring diameter	0.5~2.5 mm^2



防爆控制开关MEC-0801-系列
Explosion-proof control switch MEC-0801-Series

安装示意图 Product appearance and installation schematic



产品特点说明 Product Features

1、铝合金外壳，铝合金按片（保证低温不会变形）；
2、可根据现场管理需求配置挂锁实。

1. Aluminum alloy enclosure, aluminum alloy sheet (to ensure no deformation at low temperature);
2.Padlockable per request



铝合金连接件，保证低温不会变形脱落
Zinc alloy connector to ensure no deformation and fall-off at low temperature

最多可以有4副触点，根据需要组合。
Up to 4 contactors, which can be combined as required.



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防爆电位器开关MEC-0802系列
Explosion-proof potentiometer MEC-0802 Series

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型号含义 / Model Identification

MEC-0802 — A — B — C

A：单圈 Single turn=S
多圈 Multi-turn=M

B：阻值 Resistance

C：螺纹
M30：标准，可不注明
M32：可选，直接注明

C：Threads
M30：Standard, no need indication
M32：Optional, indicate M32

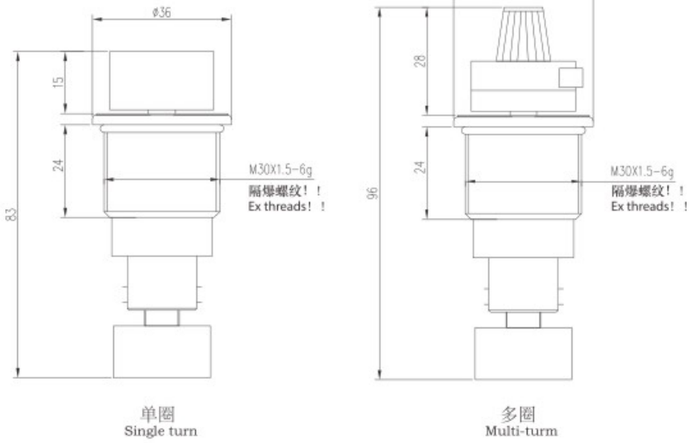
举例：防爆电位器，多圈，100KΩ，则型号为：MEC-0802-M-100KΩ
Example: explosion-proof potentiometer, multi-turn, 100KΩ, the model is MEC-0802-M-100KΩ.

通用技术参数 / General Technical Parameters

配套使用主体及说明 Applicable equipment and description	产品用于隔爆箱（Ex db），产品为Ex元件认证，不能单独使用。 Used for explosion-proof box (Ex db); Certified for Ex components and cannot be used alone;
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx：Ex db IIC Gb Ex tb IIIC Db ATEX: Ex II 2 G Ex db IIC Gb II 2D Ex tb IIIC Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN IEC 60079-1:2014,EN IEC60079-31:2014
保护壳材质 Enclosure Material	铝合金 Aluminum alloy
阻值 Resistance	100Ω、200Ω、500Ω、1KΩ、2KΩ、5KΩ、10KΩ、 20KΩ、50KΩ、100KΩ、250KΩ、500KΩ、1MΩ
工作温度范围及防护防腐等级 Ambient temperature and IP rate	-60℃~+100℃ , IP66、WF2
重量 weight(kg)	0.17
接线线径 Wiring diameter	0.5~2.5 mm^2

防爆电位器开关MEC-0802系列
Explosion-proof potentiometer MEC-0802 Series

安装示意图 Product appearance and installation schematic



单圈
Single turn

多圈
Multi-turm

产品特点说明 Product Features



铝合金外壳，保证低温不会变形；
Aluminum alloy enclosure to ensure no deformation at low temperature;

防爆按键MEC-0901系列
Explosion-proof button MEC-0901 Series

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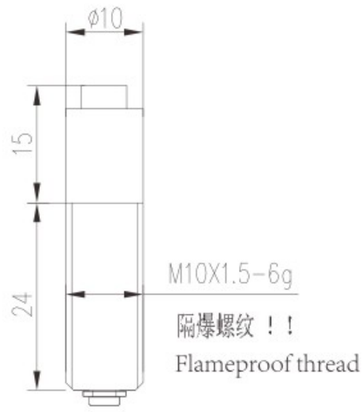


仪表按钮
Instrument button

功能特点
1、隔爆、防腐、防水（304不锈钢材质）
2、有效实现隔爆箱内仪表的调节
3、小巧美观；

Features
1. Flameproof, anti-corrosion, waterproof (304 stainless steel);
2. Effectively realize the adjustment of instruments in the explosion-proof box;
3. Small and beautiful;

安装示意图 Product appearance and installation schematic



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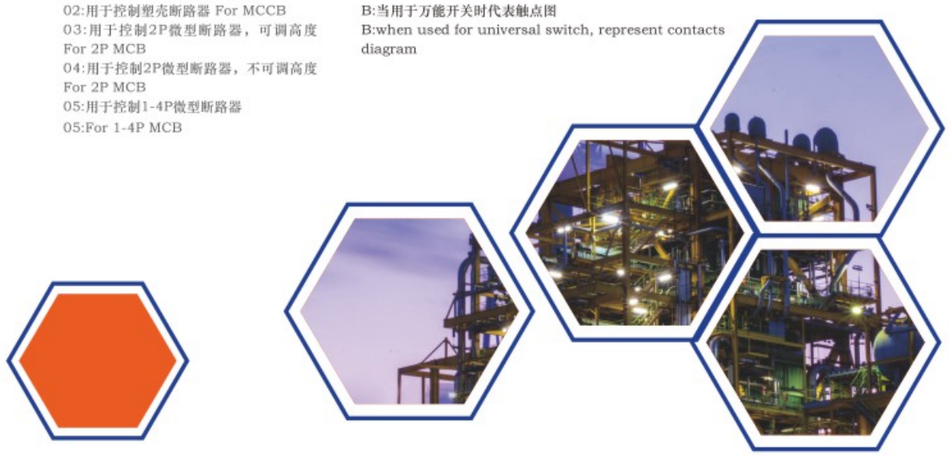
型号含义 / Model Identification

MEC-HD – A – B

A:控制的元件 Controlled components
01:用于控制微型断路器或者万能开关 For MCB or universal switch
02:用于控制塑壳断路器 For MCCB
03:用于控制2P微型断路器，可调高度 For 2P MCB
04:用于控制2P微型断路器，不可调高度 For 2P MCB
05:用于控制1-4P微型断路器 05:For 1-4P MCB

B:当用于控制微型断路器时代表极数1P、2P、3P、4P
B: When used for controlling MCB, represents poles, 1P,2P,3P,4P

B:当用于万能开关时代表触点图
B:when used for universal switch, represent contacts diagram



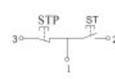
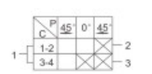
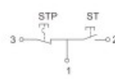
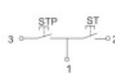
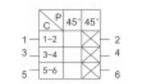
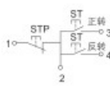
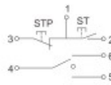
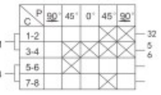
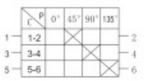
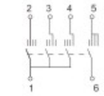
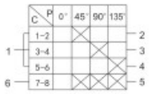
通用技术参数 / General Technical Parameters

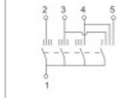
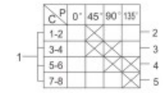
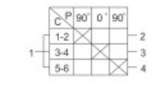
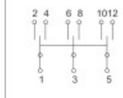
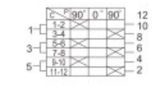
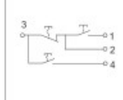
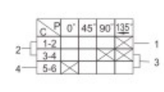
配套使用主体及说明 Applicable equipment and description	产品用于隔爆箱（Ex db），产品为Ex元件认证，不能单独使用。 Used for explosion-proof box (Ex db); Certified for Ex components and cannot be used alone;
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx：Ex db IIC Gb Ex tb IIIC Db ATEX：Ex 2 G Ex db IIC Gb II Ex tb IIIC Db
遵循标准 Conformity to standards	GB：GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.31-2021 IECEx：IEC 60079-0:2017,IEC 60079-1:2014-06,IEC 60079-31:2013 ATEX：EN IEC 60079-0:2018, EN60079-1:2014,EN60079-31:2014,
保护壳材质 Enclosure Material	铝合金 Aluminum alloy
额定功率 Rated power	≤1W
机械寿命 Mechanical life	≥10万次 100,000times
工作温度范围及防护防腐等级 Service Temp. IP and Anti-corrosion rate	-60°C~+100°C , IP66、WF2
重量 weight(kg)	0.17



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MUS01系列转换开关 Universal switch code chart

开关代号 Switch code	面板标识 Panel identification	等效电路 Equivalent circuits	接触图 Chart of contact
A			
B			
C			
D			
E			
F			
G			
H			
I			

开关代号 Switch code	面板标识 Panel identification	等效电路 Equivalent circuits	接触图 Chart of contact
J			
K			
L			
M			
N			
O			
P			
Q			
R			

MUS01系列转换开关 Universal switch code chart

开关代号 Switch code	面板标识 Panel identification	等效电路 Equivalent circuits	接触图 Chart of contact
S			
T			
U			
V			
W			
X			
Y			
Z			

开关代号 Switch code	面板标识 Panel identification	等效电路 Equivalent circuits	接触图 Chart of contact
A1			
B1			
C1			
D1			
E1			

防爆防腐指示灯M0101系列
Explosion-proof and anti-corrosion indicators M0101Series

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型号含义 / Model Identification

M0101 — A — B — C

颜色 color

颜色 Color	红 Red	绿 Green	黄 Yellow
	白 White	蓝 Blue	
代码 Code	R	G	Y
	W	B	
图示 Diagrams	● ○	● ●	●

电压 Voltage

电压代号 Voltage Code	额定电压（V） Rated voltage
01	AC/DC12~36
02	AC/DC48~127
03	AC220~415
04	DC220~250

安装方式 Mounting type
C：盖上安装 Cover mounting
R：导轨安装 Rail mounting

举例1：防爆防腐指示灯，白色，盖上安装，电压AC220V，则型号为 M0101-W-03-C
举例2：防爆防腐指示灯，绿色，导轨安装，电压DC36V， 则型号为 M0101-G-01-R

Example 1: Explosion-proof and anti-corrosion indicator, white, cover mounting, voltage AC220V, the model is M0101-W-03-C.
Example 2: Explosion-proof and anti-corrosion indicator, green, rail mounting, voltage DC36V, the model is M0101-G-01-R.

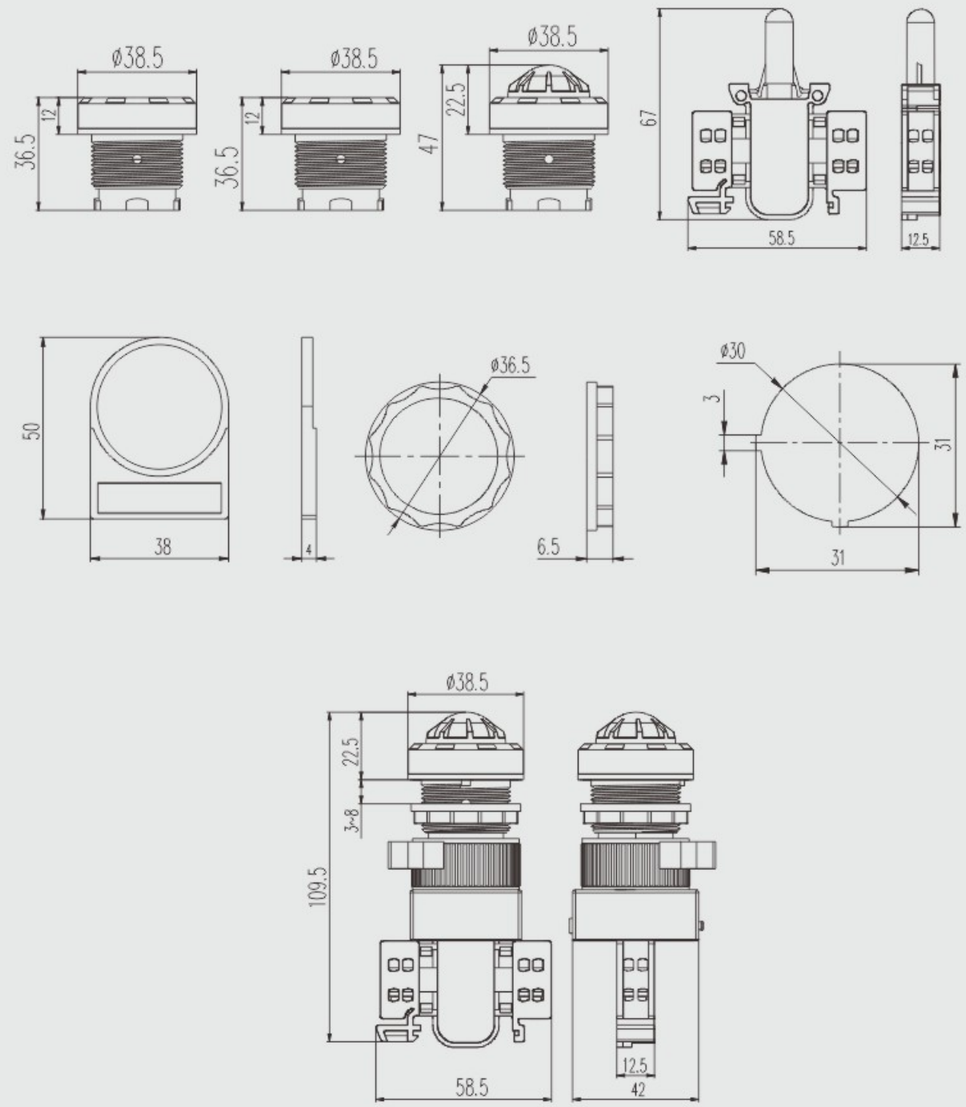
产品图片 Picture	颜色 Color	颜色代号 Color code	电压 Voltage	配件型号 Accessories Model	说明 Description	重量 Weight
		R	01 AC/DC12~36 02 AC/DC48~127 03 AC220~415 04 DC220~250	M0101R - R	完整订购型号为：配件型号-电压代号，举例：黄色指示灯，电压AC220V，导轨式，则订购号M0101R-Y-03. The complete ordering model should be with accessories code plus voltage code.For example,the model for rail mounting AC220V yellow indicator is M0101R-Y-03.	0.05
		G		M0101R - G		
		Y		M0101R - Y		
		W		M0101R - W		
		B		M0101R - B		
		R		M0101C - R		0.07
		G		M0101C - G		
		Y		M0101C - Y		
		W		M0101C - W		
		B		M0101C - B		
		R		M0101H - R	盖装、导轨安装为同一配件 The same accessory for cover mounting and rail mounting.	0.02
		G		M0101H - G		
		Y		M0101H - Y		
		W		M0101H - W		
		B		M0101H - B		
				M0101C1	盖装配件 Cover installation accessories	0.02
				Mlkn01	用于锁紧盖板按钮头 Used to lock the cover mounting button head	0.008
				Msbd01	标识牌 The sign	0.008
				Migr01	导轨式安装专用铝合金导轨 Special aluminum alloy guide rail for guide rail installation	0.05

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通用技术参数 / General Technical Parameters

配套使用主题及说明 Applicable equipment and description	产品用于防爆增安型外壳信号指示用，产品为Ex eb元件认证，不能单独使用。 Used for the indication of the explosion-proof box (Ex eb); Certified as Ex components and can not be used alone;
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx ： Ex db eb IIC Gb ； Ex tb IIIC Db ATEX: Ex II2 G Ex db eb IIC Gb II2 D Ex tb IIIC Db
遵循标准 Conformity to standards	GB：GB3836.1-2021,GB3836.2-2021,GB3836.3-2021,GB12476.1-2021,GB12476.5-2021 IECEx： IEC60079-0:2017, IEC60079-1:2014,IEC60079-7:2015,IEC60079-31:2008 ATEX:EN60079-0:2018, EN60079-1:2014,EN60079-7:2015,EN60079-31:2008
保护壳材质 Enclosure Material	外壳 Enclosure：GRP ，透明罩Transparent cover： PC
额定电压 Rated voltage	AC/DC12~36V AC/DC48~127V AC220~415V DC220~250V
抗干扰电压 Anti-interference voltage	110V ： 抗干扰50V ，220-380V ： 抗干扰110V 110V ： Anti-interference 50V ，220-380V ： Anti-interference 110V
额定功率 Rated power	≤0.5W
环境温度范围及防护防腐等级 Ambient Temp. IP and Anti-corrosion rate	-60℃~+60℃, IP66 、WF2
工作温度 Operating temperature	-60℃~+80℃
接线线径 Wiring diameter	0.5~1.5mm
接线示意图 Wiring schematic diagram	X1 X2

● 安装示意图 Product appearance and installation schematic



常用产品外形及安装示意图尺寸 Product appearance and installation schematic dimension





型号含义 / Model Identification

M0301 — A — B — C

- A：见表1、2、3:型号代号 See form1 、2、3:Model code
- B：安装方式 Mounting type
  C：盖上安装 Cover mounting
  R：导轨安装 Rail mounting
- C：见表4：触点代号 See form 4:contact number

举例1：防爆平钮，黄色，盖装，2常开+1常闭，则型号为： M0301-HY-C-OOC
举例2：防爆急停按钮，导轨式安装，1常开1常闭，则型号为：M0301-EP-R-OC
举例3：防爆旋钮开关，导轨式安装，开关功能代号12，则型号为：M0301-S12-R-OO
举例4：防爆带灯按钮，导轨式安装，2常开，1个信号灯红色AC220V，则型号为：M0301-LR03-R-OO

Example 1: Spring-return control button, yellow, cover mounting, 2NO + 1NC, the model is M0301-HY-C-OOC.
Example 2: Mushroom emergency control button, rail mounting, 1NO+1NC, the model is M0301-EP-R-OC.
Example 3: Rotary control button, rail mounting, switch function code 12, the model is M0301-S12-R-OO.
Example 4: Illuminated button, rail mounting, 2NO, red indicator AC220V, the model is M0301-LR03-R-OO.

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表1 Form1

产品图片 Picture	按钮标识 Button signs	标识代号 Signs code	型号代号 Model code	配件型号 Accessories Model	重量 Weight
  普通平钮 Spring-return control button		R	HR	M0301H-R	0.02
		G	HG	M0301H-G	
		Y	HY	M0301H-Y	
		W	HW	M0301H-W	
		B	HB	M0301H-B	
		S	HS	M0301H-S	
		P	HP	M0301H-P	
	ON	ON	HN	M0301H-N	
	OFF	OFF	HF	M0301H-F	
	STOP	S1	HS1	M0301H-S1	
	START	P1	HP1	M0301H-P1	
	停止	S2	HS2	M0301H-S2	
	启动	P2	HP2	M0301H-P2	
 双联按钮 Double control button		GR	GR	M0301 GR	0.04
		PS	PS	M0301 PS	
 旋转释放紧急按钮 Mushroom turn-to-release emergency control button		RY	EM	M0301 EM	0.03
 急停型自复位按钮 Emergency spring-return control button		RB	ESP	M0301 ESP	0.03
 急停带钥匙按钮 Emergency control button		RB	EK	M0301 EK	0.035

表2 Form2

产品图片 Picture	按钮标识 Button signs	标识代号 Signs code	型号代号 Model code	电压 Voltage	选型型号 Type selection	配件型号 Accessories Model	重量 Weight
 带灯按钮头 Illuminated button head		R	LR	01 AC/DC12~36V 02 AC/DC48~127V 03 AC220~415V 04 DC220~250V	配件型号代号+电压代号举例：红色指示灯，电压AC220V,则选型型号LR03 Accessories model+voltage code, For example, the model for AC220V red indicator is LR03.	M0301 L - R	0.02
		G	LG			M0301 L - G	
		Y	LY			M0301 L - Y	
		W	LW			M0301 L - W	
		B	LB			M0301 L - B	

表3 Form3

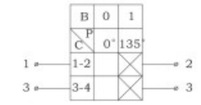
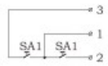
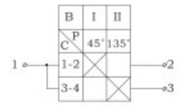
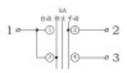
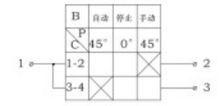
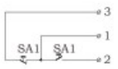
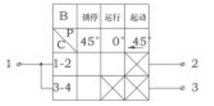
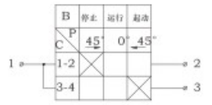
产品图片 Picture	开关功能 Switch function	开关代号 Switch code	型号代号 Model code	配件型号 Accessories Model	重量 Weight
 选择型按钮 Rotary control button	详见下表 See details in below table	11	K11	M0301K - 11	0.03
		12	K12	M0301K - 12	
		13	K13	M0301K - 13	
		14	K14	M0301K - 14	
		15	K15	M0301K - 15	
		16	K16	M0301K - 16	
 选择型按钮 Rotary control button		11	S11	M0301S - 11	0.025
		12	S12	M0301S - 12	
		13	S13	M0301S - 13	
		14	S14	M0301S - 14	
		15	S15	M0301S - 15	
		16	S16	M0301S - 16	
 选择型按钮 Rotary control button		11	SA11	M0301SA-11	0.03
		12	SA12	M0301SA-12	
		13	SA13	M0301SA-13	
		14	SA14	M0301SA-14	
		15	SA15	M0301SA-15	
		16	SA16	M0301SA-16	
 选择型按钮 Rotary control button		11	SC11	M0301SC-11	0.032
		12	SC12	M0301SC-12	
		13	SC13	M0301SC-13	
		14	SC14	M0301SC-14	
		15	SC15	M0301SC-15	
		16	SC16	M0301SC-16	

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● 表4 Form4

产品图片 Picture	触点 Contact	触点代号 Contact Number	配件型号 Accessories Type	说明 Instructions	重量 Weight
	一常开 1NO	O	M0301C-O	特别说明： 1、导轨式安装最多3副触点； 2、盖装的配件单独订购。 Special instructions: 1. Rail installation is limited to 3 pcs of contacts; 2. Please order separately the parts for cover installation.	0.02
	一常闭 1NC	C	M0301C-C		0.02
	一常开一常闭1NO+1NC	OC	M0301C-OC		0.04
	两常开 2NO	OO	M0301C-OO		0.04
	两常闭 2NC	CC	M0301C-CC		0.04
	三常开 3NO	OOO	M0301C-OOO		0.06
	三常闭 3NC	CCC	M0301C-CCC		0.06
	一常开二常闭 1NO+2NC	OCC	M0301C-OCC		0.06
	二常开一常闭 2NO+1NC	OOC	M0301C-OOC		0.08
					0.08
	一常开带灯1NO+Indicator	OL	M0301C-OL	特别说明：1、订购带灯按钮时，请注意需要增加指示灯准确型号； 2、盖装的配件单独订购。 Special instructions: 1. When ordering the button with light, please pay attention to the need to add the accurate model of the indicator light;2. Please order separately the parts for cover installation.	0.04
	一常闭带灯1NC+Indicator	CL	M0301C-CL		0.04
	一常开一常闭带灯1NO+1NC+Indicator	OL	M0301C-OCL		0.04
	两常开带灯2NO+Indicator	OOL	M0301C-OOL		0.06
	两常闭带灯2NC+Indicator	CCL	M0301C-CCL		0.06
			M0101C1	盖装配件（1、2钮） Cover installation accessories （1 or 2 PCS contactors ）	0.02
			M0101C2	盖装配件（3、4钮） Cover installation accessories （3 or 4 PCS contactors ）	0.025
			Mlkn01	用于锁紧盖板按钮头 Used to lock the cover plate button head	0.008
			Msbd01	标识牌 The sign	0.008
			Migr01	导轨式安装专用铝合金导轨Special aluminum alloy guide rail for guide rail installation	0.05

● 表5 Form5

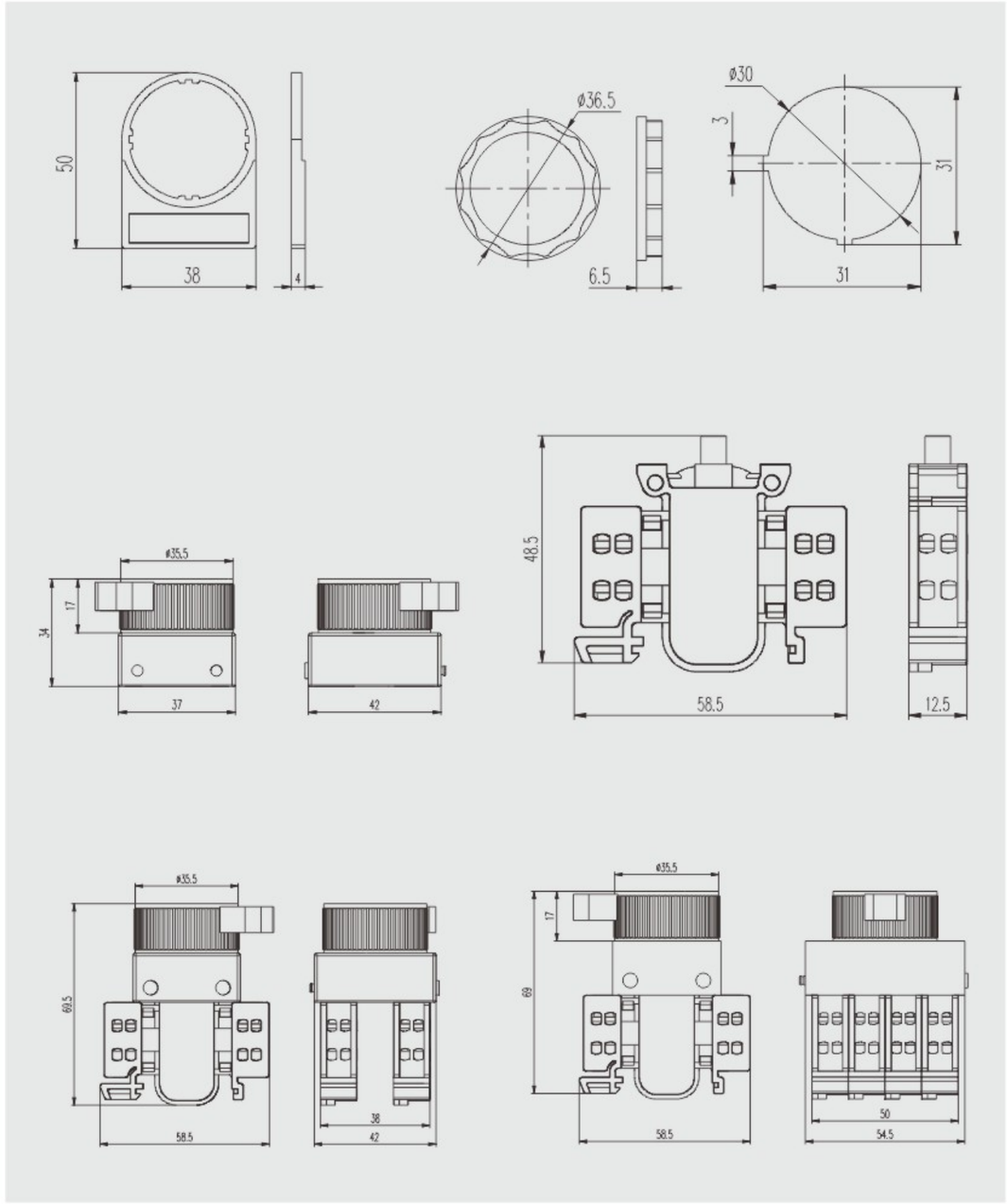
开关功能代号 Switch Function Code	开关接触代号 Switch Contact Code	开关标识 Switch Identification	等效电路 Equivalent Circuit	接线图 Wiring Diagram
11	OO	分OFF 合ON		
12	OO	手动HAND 自动AUTO		
13	OO	手动 停止 自动 HAND STOP AUTO		
14	OC	停止 运行 起动 STOP RUN START		
15	OC	锁停 运行 起动 LOCK-S RUN START		
16	OO	停止 运行 起动 STOP RUN START		

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通用技术参数 / General Technical Parameters

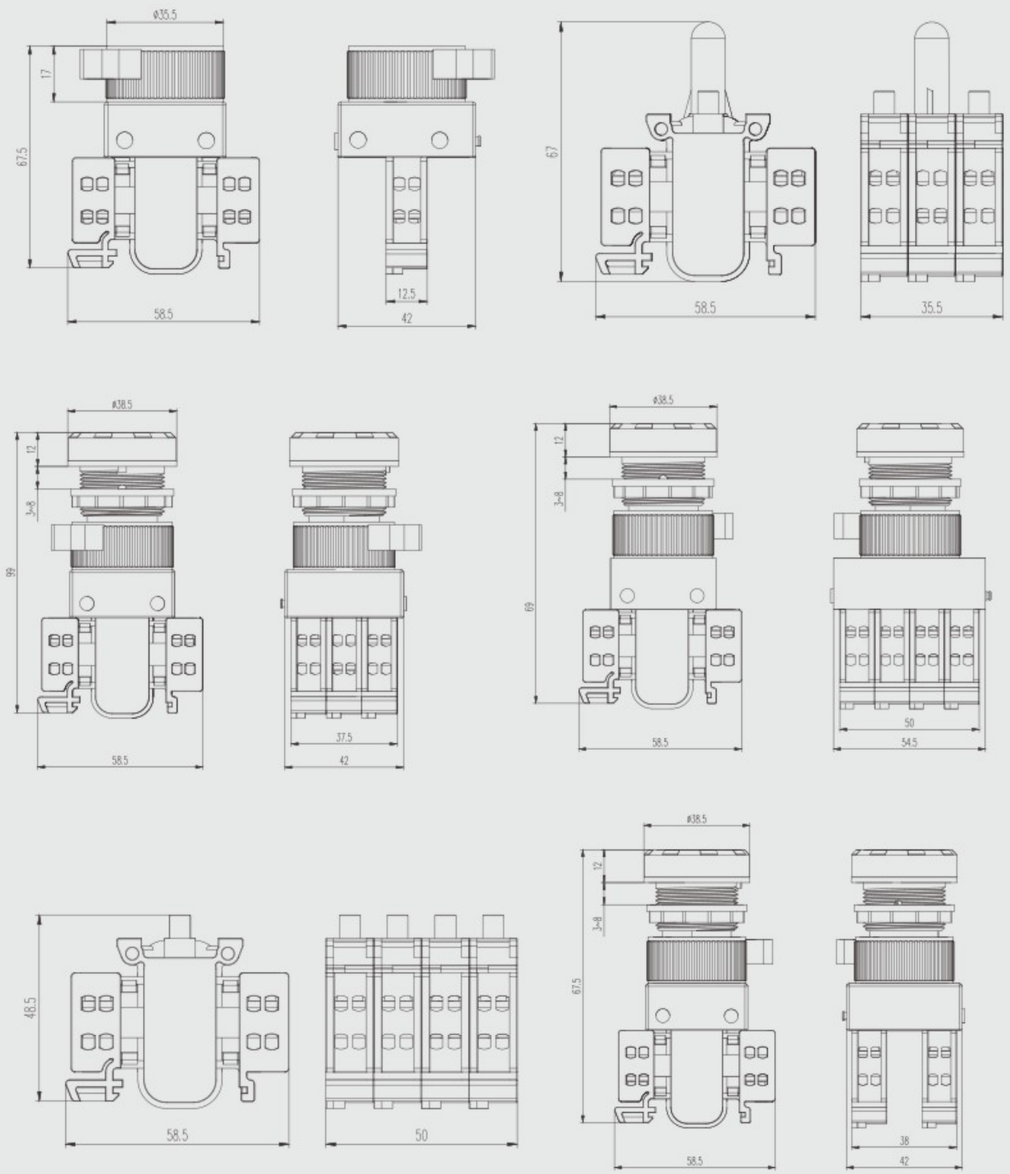
配套使用主题及说明 Applicable equipment and description	产品用于防爆增安型外壳信号指示用，产品为Ex eb元件认证，不能单独使用。 Used for the indication of the explosion-proof box (Ex eb); Certified as Ex components and can not be used alone;
爆炸保护 Explosion protection 气体保护 Gas explosion protection 粉尘保护 Dust explosion protection	GB/IECEx ： Ex db eb IIC Gb ； Ex tb IIIC Db ATEX: Ex II 2 G Ex db eb IIC Gb II2 D Ex tb IIIC Db
遵循标准 Conformity to standards	GB：GB3836.1-2021,GB3836.2-2021,GB3836.3-2021,GB12476.1-2021,GB12476.5-2021 IECEx： IEC60079-0:2017, IEC60079-1:2014,IEC60079-7:2015,IEC60079-31:2008 ATEX:EN60079-0:2018, EN60079-1:2014,EN60079-7:2015,EN60079-31:2008
保护壳材质 Enclosure Material	外壳 Enclosure：GRP ，透明罩 Transparent cover： PC
通用电源供应 General power supply	AC660V ,50/60Hz ，DC440V 6A (带灯按钮 Illuminated button: AC415V/10A;DC250V/6A)
额定功率 Rated power	≤0.5W 带灯按钮 Illuminated button
机械寿命(次) Mechanical Life (Times)	100000 次 Times
环境温度范围及防护防腐等级 Ambient Temp. IP and Anti-corrosion rate	-60℃~+60℃, IP66 、WF2
工作温度 Operating temperature	-60℃~+80℃
接线线径 Wiring diameter	0.5~1.5mm

● 安装示意图 Product appearance and installation schematic

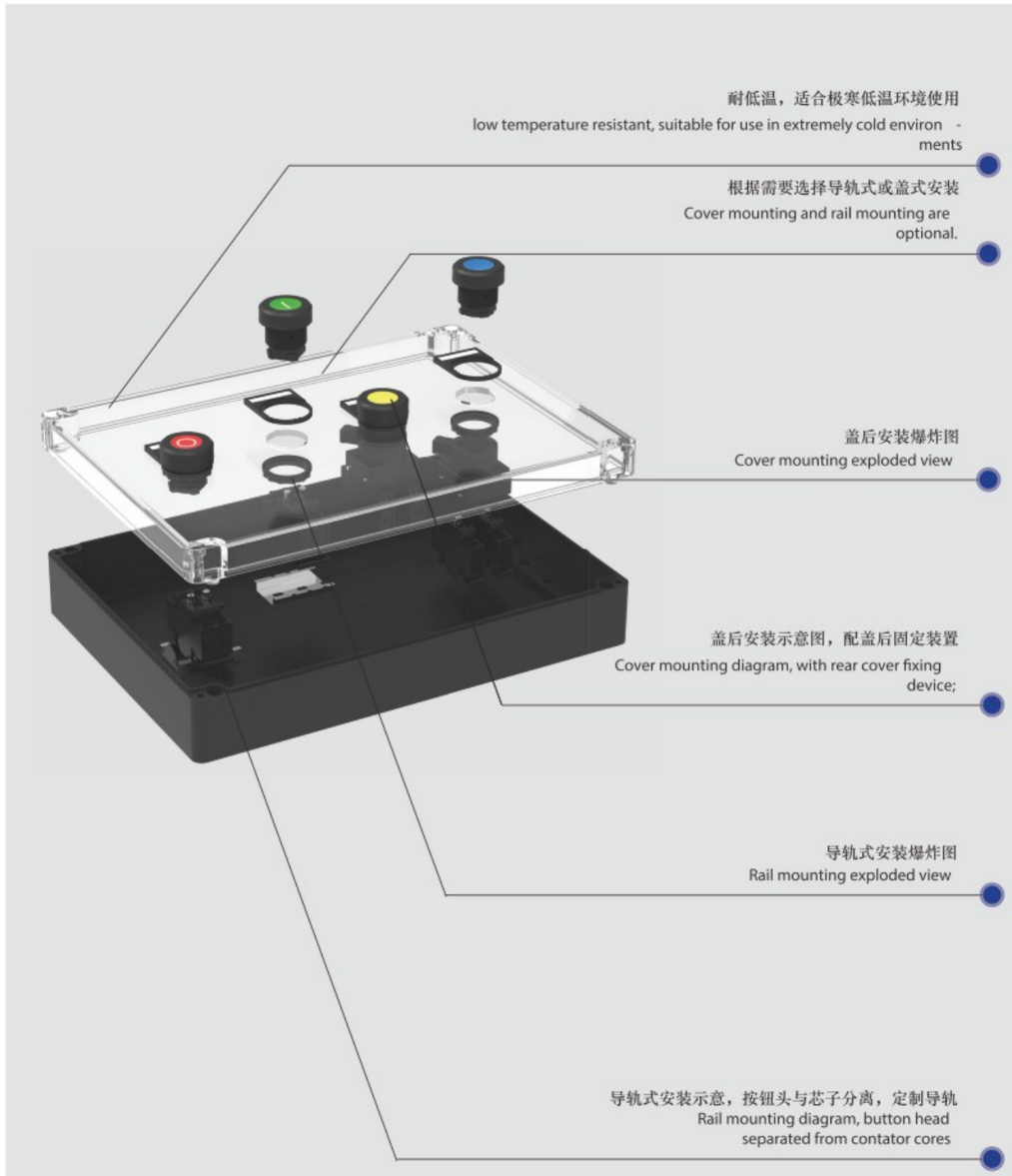


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安装示意图 Product appearance and installation schematic



产品特点说明 Common Product appearance and installation schematic dimension



防爆防腐控制按钮M0301-系列
Explosion-proof and anti-corossion control button M0301- Series

产品特点说明 Common Product appearance and installation schematic dimension



带灯按钮，导轨式安装爆炸图，按钮头与芯子分离，定制导轨
Illuminated button, rail mounting exploded view, button head separated from indicator core, customized rail

3副触点，盖后安装示意图，配盖后固定装置
3 pcs of contactors,cover mounting diagram, with fixing device behind the cover;

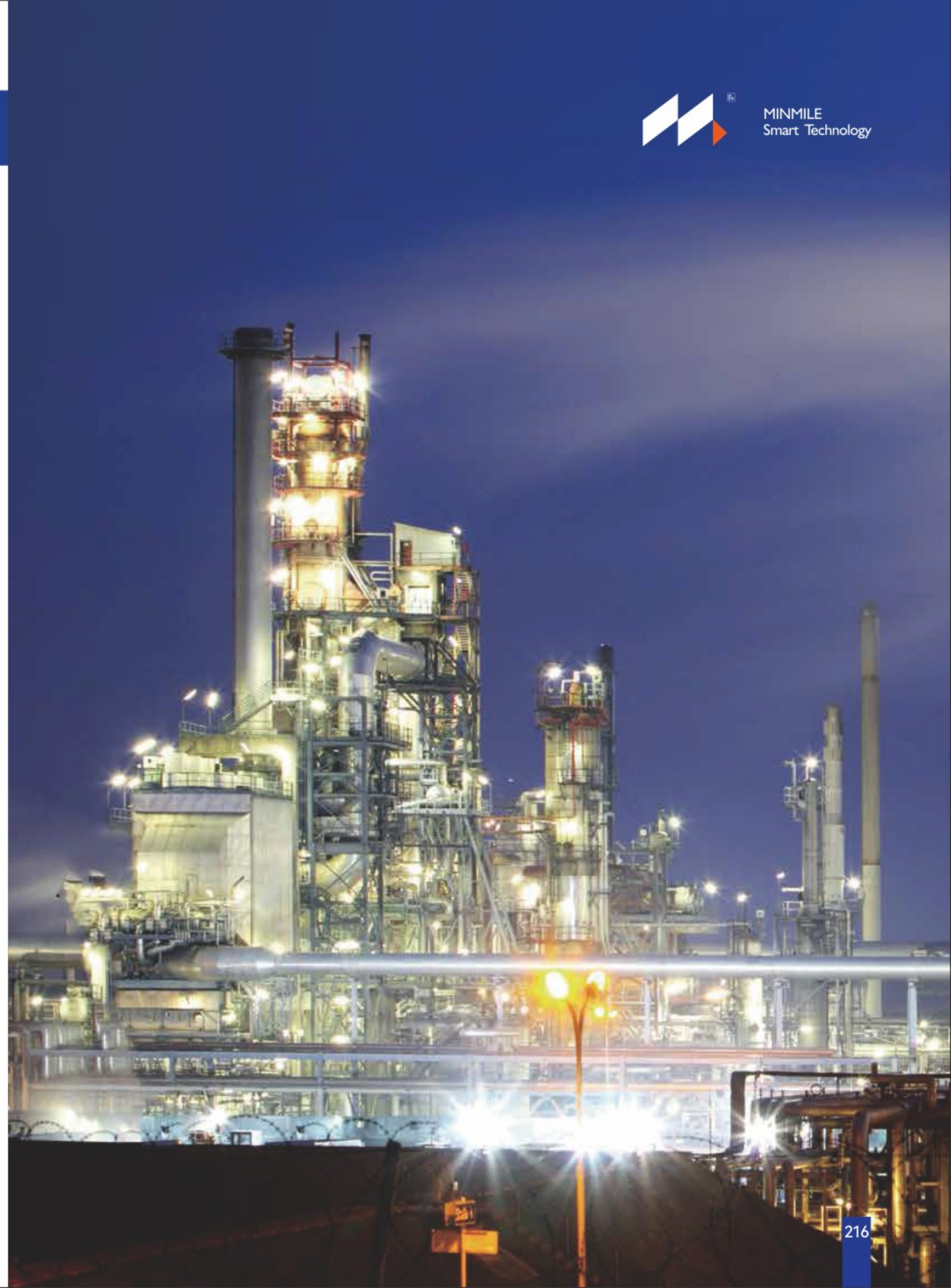
3副触点，盖后安装爆炸图
3pcs of contactors, exploded view for cover mounting

带灯按钮，导轨式安装示意，按钮头与芯子分离，定制导轨
Illuminated button, rail mounting, button head separated from contactor cores, customized rail

带灯按钮，盖后安装示意图，配盖后固定装置；
Illuminated button, cover mounting diagram, with fixing device behind the cover;

带灯按钮，导轨式安装爆炸图
Illuminated button rail mounting exploded view.

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EAC

型号 含义 / Model Identification

MCG[d e] — □□ — □ — □

□：螺纹代号（01-10）
Thread code（01-10）

□：螺纹规格 Thread specification
M：公制螺纹 Metric thread
NPT：锥度螺纹 NPT thread
G：管螺纹 Pipe thread

具体螺纹规格大小参考表格
Please refer to the relevant chart for specific threads size.

A:非铠装、单密封、电缆布线
B(*):非铠装、单密封、钢管布线
C:铠装、双密封、电缆布线
E:铠装、单密封、带填料、电缆布线
F(*):铠装、单密封、带填料、钢管布线
G:非铠装、双密封、电缆布线
.....

A: Unarmored, single seal, cable wiring
B(*): Unarmored, single seal, steel pipe wiring
C: Armored, double seal, cable wiring
E: Armored, single seal, with compound, cable wiring
F (*): Armored, single seal, with compound, steel pipe wiring
G: Unarmored, double seal, cable wiring
.....

材质代号	Material code
C：碳钢	C:Carbon steel
S1:304	S1:304
S2:316	S2:316
S3:316L	S3:316L
B1：黄铜	B1:Brass
B2：黄铜镀镍	B2:Nickel plated brass
P：工程塑料	P:Engineering plastics

■ 注：d: 隔爆型 e：增安型 Remarks: Ex db Ex eb

举例说明：防爆电缆夹紧接头，铠装电缆进线，要求压紧式，隔爆型，双密封，材质选用黄铜镀镍，螺纹采用NPT3/4，则型号为：MCGd-03 NPT3/4-C-B2

For example 1#: If the Explosion-proof cable gland is for armored cable,Exd, clamped type,double sealed, nickel plated brass material, NPT3/4 thread, the product model is MCGd-03NPT3/4-C-B2

■ 举例说明：防爆电缆夹紧接头，非铠装电缆进线，要求压紧式，增安型，材质工程塑料，螺纹采用M25*1.5，则型号为： MCGe-03 M25*1.5-J

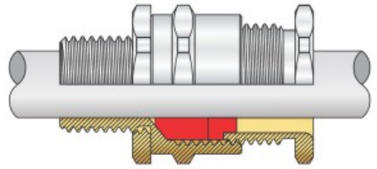
For example 2#: If the Explosion-proof cable gland is for unarmored cable, clamped type, Exe, engineering plastics material, M25*1.5 threads, the products model is MCGe-03 M25*1.5-J.





MCGd-□□-A-□(非铠装、单密封) Unarmoured, Single seal

材质：黄铜镀镍、不锈 (304/316)、碳钢CS
Material: Nickel plated brass, stainless steel(304/316), Carbon steel Q235
适用：非铠装电缆机械夹紧，可配合隔爆型外壳使用。
Application:Unarmored cable mechanical clamping, suitable for use on Exd and Exe enclosure.





产品代号：A Product code: A

螺纹代号 Thread Code	公制螺纹(M) Metric thread	英/美制螺纹(G/NPT) G/NPT Thread	电缆外径(mm) Cable outer diameter(mm)	防爆标志 Ex-marks	防护防腐等级 Protection degree
02s16	M20*1.5	1/2	3. 1～8. 6	Ex db IIC Gb; Ex eb IIC Gb; Ex tb IIIC Db	IP66 WF2
02s	M20*1.5	1/2	6. 1～11. 7		
02	M20*1.5	1/2	6. 5～13. 9		
03s	M25*1.5	3/4	6. 5～13. 9		
03	M25*1.5	3/4	11. 3～19. 9		
04	M32*1.5	1	17. 0～26. 2		
05	M40*1.5	1 1/4	23. 6～32. 1		
06s	M50*1.5	1 1/2	31. 5～38. 2		
06	M50*1.5	1 1/2	35. 8～44. 0		
07S	M63*1.5	2	41. 7～50. 0		
07	M63*1.5	2	47. 5～56. 0		
08	M75*1.5	2 1/2	55. 0～62. 0		
08S	M75*1.5	2 1/2	62. 0～68. 0		
09	M90*2	3	67. 0～79. 0		

MCGd-□□-BI-□(非铠装、单密封) Unarmoured, Single seal

材质：黄铜镀镍、不锈 (304/316)、碳钢CS
Material: Nickel plated brass, stainless steel(304/316), Carbon steel Q235
适用：非铠装电缆机械夹紧，可配合隔爆型外壳使用。
Application:Unarmored cable mechanical clamping, suitable for use on Exd and Exe enclosure.

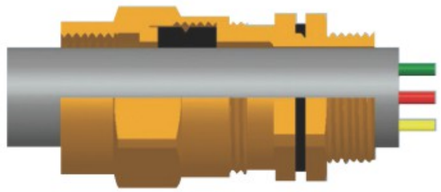


产品代号:BI
Product code: BI

螺纹代号 Thread Code	公制螺纹(M) Metric thread	英/美制螺纹(G/NPT) G/NPT Thread	电缆外径(mm) Cable outer diameter(mm)	防爆标志 Ex-marks	防护防腐等级 Protection degree
01	M20*1.5	1/2	8～10	Ex db IIC Gb; Ex eb IIC Gb; Ex tb IIIC Db	IP66 WF2
02	M25*1.5	3/4	9～14		
03	M32*1.5	1	11～18		
04	M40*1.5	1 1/4	14～23		
05	M50*1.5	1 1/2	17～30		
06	M63*1.5	2	24～38		
07	M75*1.5	2 1/2	30～42		
08	M90*1.5	3	38～55		
09	M100*1.5	4	42～75		

MCGd-□□-BII-□(非铠装、单密封) Unarmoured, Single seal

材质：黄铜镀镍、不锈 (304/316)、碳钢CS
Material: Nickel plated brass, stainless steel(304/316), Carbon steel Q235
适用：非铠装电缆机械夹紧，可配合隔爆型外壳使用。
Application:Unarmored cable mechanical clamping, suitable for use on Exd and Exe enclosure.



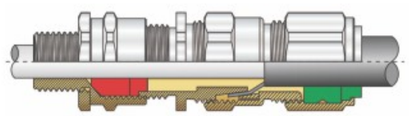


产品代号: BII Product code: BII

螺纹代号 Thread Code	公制螺纹(M) Metric thread	英/美制螺纹(G/NPT) G/NPT Thread	电缆外径(mm) Cable outer diameter(mm)	防爆标志 Ex-marks	防护等级 Protection degree
01	/	/	/	Ex db IIC Gb Ex de IIC Gb Ex tb IIIC Db	IP66
02	M20×1.5	1/2	6~12		
03	M25×1.5	3/4	11~18		
04	M32×1.5	1	17~25		
05	M40×1.5	1 1/4	24~32		
06	M50×1.5	1 1/2	31~39		
07	M63×1.5	2	38~44		
08	M75*1.5	2 1/2	43~54		
09	M90*1.5	3	56~66		
10	M110*1.5	4	72~81		

MCGd-□□-C-□(铠装、双密封) Armored, Double seal

材质：黄铜镀镍、不锈 (304/316)
Material: Nickel plated brass , stainless steel (304/316)
适用：铠装电缆机械夹紧，可配合隔爆型外壳使用。
Application:Armored cable mechanical clamping, suitable for Exd and Exe enclosure.

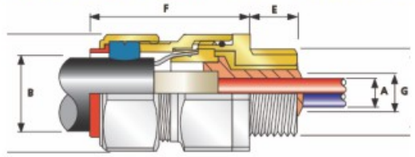




产品代号: C Product code: C

螺纹代号 Thread code	公制螺纹(M) Metric thread	英/美制螺纹(G/NPT) G/NPT Thread	电缆外径(mm) Cable outer diameter(mm) 出线 ΦA Outlet cable ΦA	电缆外径(mm) 进线 ΦB Inlet cable ΦB	防爆标志 Ex-marks	防护防腐等级 Protection degree
02s16	M20×1.5	1/2	3.1~8.6	6.1~13.1	Ex db IIC Gb; Ex eb IIC Gb; Ex tb IIIC Db	IP66 WF2
02S	M20×1.5	1/2	6.1~11.7	9.5~15.9		
02	M20×1.5	1/2	6.5~13.9	12.5~20.9		
03s	M25×1.5	3/4	6.5~13.9	12.5~20.9		
03	M25×1.5	3/4	11.3~19.9	19.9~26.2		
04	M32×1.5	1	17.0~26.2	23.7~33.9		
05	M40×1.5	1 1/4	23.6~32.1	27.9~40.4		
06s	M50×1.5	1 1/2	31.5~38.2	35.2~46.7		
06	M50×1.5	1 1/2	35.8~44.0	40.4~53.0		
07S	M63×1.5	2	41.7~50.0	45.6~59.4		
07	M63×1.5	2	47.5~56.0	54.6~65.8		
08	M75×1.5	2 1/2	55~62	59~72		
08S	M75×1.5	2 1/2	62~68	66.7~78.4		
09	M90×2	3	67~79	76. 2~90.3		

MCGd-□□-E-□(铠装、单密封、带填料、电缆布线) Armored,Single seal，with compound，Cable routing





产品代号: E Product code: E

螺纹代号 Thread code	连接设备的螺纹规格 Thread specification		不锈钢材质 Stainless steel material 剥电缆后过线范围	不锈钢材质 剥电缆前过线范围	不锈钢材质 钢丝mm	黄铜镀镍材质 Brass nickel plated material 剥电缆后过线范围	黄铜镀镍材质 剥电缆前过线范围	黄铜镀镍材质 钢丝mm	防爆标志 Ex-marks	防护等级 Protection degree
02s16	M20×1.5	NPT1/2	≤11.7	6.1-13.1	0.8-1.25	≤11.7	6.1-13.1	0.8-1.25	Ex db IIC Gb; Ex eb IIC Gb; Ex tb IIIC Db	IP66 WF2
02S	M20×1.5	NPT1/2	≤11.7	9.5-15.9	0.8-1.25	≤11.7	9.5-15.9	0.8-1.25		
02	M20×1.5	NPT1/2	≤12.6	12.5-20.9	0.8-1.25	≤12.6	12.5-20.9	0.8-1.25		
03S	M25×1.5	NPT 3/4	≤17.5	14-22	1.25-1.6	≤17.5	14-22	1.25-1.6		
03	M25×1.5	NPT 3/4	≤17.5	18.2-26.2	1.25-1.6	≤17.5	18.2-26.2	1.25-1.6		
04	M32×1.5	NPT 1	≤23.6	23.7-33.9	1.6-2.0	≤23.6	23.7-33.9	1.6-2.0		
05	M40×1.5	NPT 1 1/4	≤30	27.9-40.4	1.6-2.0	≤30	27.9-40.4	1.6-2.0		
06S	M50×1.5	NPT 1 1/2	≤36.6	35.2-46.7	2.0-2.5	≤36.6	35.2-46.7	2.0-2.5		
06	M50×1.5	NPT1 1/2	≤41	40.4-53	2.0-2.5	≤41	40.4-53	2.0-2.5		
07S	M63×1.5	NPT 2	≤47.9	45.6-59.4	2.0-2.5	≤47.9	45.6-59.4	2.0-2.5		
07	M63×1.5	NPT 2	≤53.7	54.6-65.8	2.0-2.5	≤53.7	54.6-65.8	2.0-2.5		
08S	M75×1.5	NPT 2 1/2	≤59.9	59-72	2.0-2.5	≤59.9	59-72	2.0-2.5		
08	M75×1.5	NPT 2 1/2	≤64.2	66.7-78.4	2.5-3.0	≤64.2	66.7-78.4	2.5-3.0		
09	M90×1.5	NPT 3	≤75.3	76.2-90.3	3.15-4.0	≤75.3	76.2-90.3	3.15-4.0		
10	M100×1.5	NPT 4	≤85.6	86.1-101.4	3.15-4.0	≤85.6	86.1-101.4	3.15-4.0		

MCGd-□□-F-□(铠装、填料、钢管布线) Armored, with compound, steel pipe wiring

材质：黄铜镀镍、不锈 (304/316)
Material: Nickel plated brass , stainless steel (304/316)
适用：铠装电缆机械夹紧，可配合隔爆型外壳使用。
Application:Armored cable mechanical clamping, suitable for Exd and Exe enclosure.



产品代号: F Product code: F

螺纹代号 Thread code	公制螺纹(M) Metric thread	英/美制螺纹(G/NPT) G/NPT Thread	不锈钢材质 电缆外径(mm) Stainless steel material(mm) 出线 ΦA Outlet cable ΦA	不锈钢材质 电缆外径(mm) 进线 ΦB Inlet cable ΦB	黄铜镀镍材质 电缆外径(mm) NPB material(mm) 出线 ΦA Outlet cable ΦA	黄铜镀镍材质 电缆外径(mm) 进线 ΦB Inlet cable ΦB	防爆标志 Ex-marks	防护防腐等级 Protection degree
01	M16×1.5	3/8	≤10	7~14	≤5.5	7~16	Ex db IIC Gb; Ex eb IIC Gb; Ex tb IIIC Db	IP66 WF2
02	M20×1.5	1/2	≤11	7~14	≤8	7~16		
03	M25×1.5	3/4	≤16	10~18	≤12	14~20		
04	M32×1.5	1	≤19	13~23	≤16	18~25		
05	M40×1.5	1 1/4	≤25	18~30	≤21	24~33		
06	M50×1.5	1 1/2	≤33	22~38	≤25	31~40		
07	M63×1.5	2	≤44	29~46	≤34	41~50		
08	M75×1.5	2 1/2	≤55	36~57	≤44	50~64		
09	M90×1.5	3	≤68	46~75	≤52	65~76		
10	M100×1.5	4	≤93	62~103	≤72	89~103		

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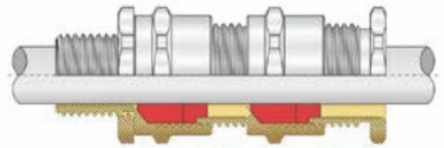
MCGd-□□-G-□(非铠装、双密封) Unarmoured,Double seal

材质：黄铜镀镍、不锈 (304/316)、碳钢CS

Material: Nickel plated brass, stainless steel(304/316), Carbon steel Q235

适用：非铠装电缆机械夹紧，可配合隔爆型外壳使用。

Application:Unarmored cable mechanical clamping, suitable for use on Exd and Exe enclosure.





产品代号:G Product code: G

螺纹代号 Thread Code	公制螺纹(M) Metric thread	英/美制螺纹(G/NPT) G/NPT Thread	电缆外径(mm) Cable outer diameter(mm)	防爆标志 Ex-marks	防护防腐等级 Protection degree
02s16	M20*1.5	1/2	3. 1～8. 6	Ex db IIC Gb; Ex eb IIC Gb; Ex tb IIIC Db	IP66 WF2
02S	M20*1.5	1/2	6. 1～11. 7		
02	M20*1.5	1/2	6. 5～13. 9		
03s	M25*1.5	3/4	6. 5～13. 9		
03	M25*1.5	3/4	11. 3～19. 9		
04	M32*1.5	1	17. 0～26. 2		
05	M40*1.5	1 1/4	23. 6～32. 1		
06s	M50*1.5	1 1/2	31. 5～38. 2		
06	M50*1.5	1 1/2	35. 8～44. 0		
07s	M63*1.5	2	41. 7～50. 0		
07	M63*1.5	2	47. 5～56. 0		
08	M75*1.5	2 1/2	55～62		
08S	M75*1.5	2 1/2	62～68		
09	M90*2	3	67～79		

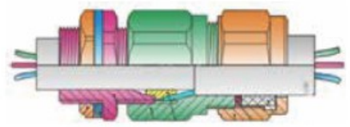
MCGe-□□-H-□(铠装、单密封) Armored, Single seal

材质：黄铜镀镍、不锈 (304/316)、碳钢CS

Material: Nickel plated brass, stainless steel(304/316), Carbon steel Q235

适用：铠装电缆机械夹紧，可配合增安型外壳使用。

Application:Armored cable mechanical clamping, suitable for use on .





产品代号: H Product code: H

螺纹代号 Thread code	公制螺纹(M) Metric thread	英/美制螺纹(G/NPT) G/NPT Thread	不锈钢材质 电缆外径(mm) Stainless steel material(mm)		黄铜镀镍材质 电缆外径(mm) NPB material(mm)		防爆标志 Ex-marks	防护防腐等级 Protection degree
			出线 ΦA Outlet cable ΦA	进线 ΦB Inlet cable ΦB	出线 ΦA Outlet cable ΦA	进线 ΦB Inlet cable ΦB		
01	M16×1.5	3/8	≤10	7～14	≤5.5	7～16	Ex eb IIC Gb; Ex tb IIIC Db	IP66 WF2
02	M20×1.5	1/2	≤11	7～14	≤8	7～16		
03	M25×1.5	3/4	≤16	10～18	≤12	14～20		
04	M32×1.5	1	≤19	13～23	≤16	18～25		
05	M40×1.5	1 1/4	≤25	18～30	≤21	24～33		
06	M50×1.5	1 1/2	≤33	22～38	≤25	31～40		
07	M63×1.5	2	≤44	29～46	≤34	41～50		
08	M75×1.5	2 1/2	≤55	36～57	≤44	50～64		
09	M90×1.5	3	≤68	46～75	≤52	65～76		
10	M100×1.5	4	≤93	62～103	≤72	89～103		

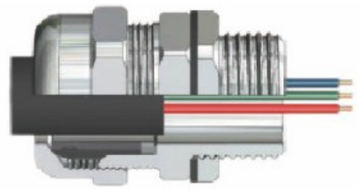
MCGe-□□-I-□(非铠装、单密封) Unarmored, single seal

材质：黄铜镀镍、不锈 (304/316)、碳钢CS

Material: Nickel plated brass , stainless steel (304/316),carbon steel (Q235)

适用：非铠装电缆机械夹紧，可配合增安型外壳使用。

Application:Unarmored cable mechanical clamping, suitable for .





产品代号: I Product code: I

螺纹代号 Thread Code	公制螺纹(M) Metric thread	英/美制螺纹(G/NPT) G/NPT Thread	电缆外径(mm) Cable outer diameter(mm)	防爆标志 Ex-marks	防护防腐等级 Protection degree
02	M20*1.5	1/2	6～12	Ex eb IIC Gb; Ex tb IIIC Db	IP66 WF2
03	M25*1.5	3/4	11～18		
04	M32*1.5	1	17～25		
05	M40*1.5	1 1/4	24～32		
06	M50*1.5	1 1/2	31～39		
07	M63*1.5	2	38～44		
08	M75*1.5	2 1/2	43～54		
09	M90*1.5	3	56～66		
10	M110*1.5	4	72～81		

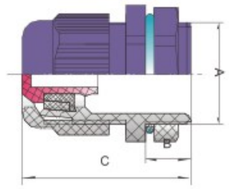
MCGe-□□-J-□(单密封工程塑料格兰) Single seal, GRP material

材质：工程塑料（非铠装、单密封）

Material: Engineering plastics(Unarmored, single seal)

适用：非铠装电缆机械夹紧，可配合增安型外壳使用。

Application:Unarmored cable mechanical clamping, suitable for Exe enclosure.





产品代号:J Product code:J

螺纹代号 Thread Code	螺纹规格(M) Threads	电缆外径(mm) Cable outer diameter(mm)	螺纹规格(G) Threads	电缆外径(mm) Cable outer diameter(mm)	防爆标志 Ex-marks	防护防腐等级 Protection degree
01S	M16×1.5	4～8	G3/8	/	Ex eb IIC Gb; Ex tb IIIC Db	IP66 WF2
01	M16×1.5	6～10	G3/8	/		
02S	M20×1.5	6～12	G1/2	6～10		
02	M20×1.5	6～12	G1/2	6～10		
03S	M25×1.5	8. 5～14	G3/4	8. 5～14		
03	M25×1.5	12. 5～18	G3/4	12.5～18		
04	M32×1.5	18～25	G1	18～25		
05	M40×1.5	24～32	G1 1/4	24～32		
06	M50×1.5	31～41	G1 1/2	31～41		
07S	M63×1.5	35～45	G2	44～51		
07	M63×1.5	44～51	G2	44～51		

型号含义 / Model Identification

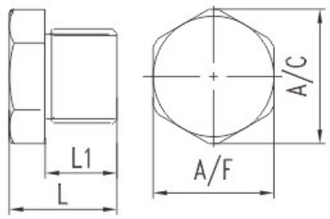
MPLG – a – b

螺纹规格:
M、NPT、G
Thread specification:
M、NPT、G

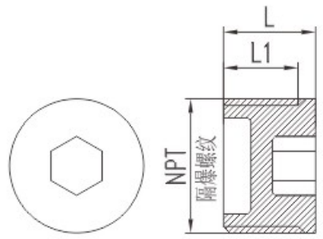
材质Material:
Q235
304
316
黄铜镀镍NPB
铝合金AL

Material:
C(Q235), S1(304),
S2(316), B2
(Brass nickel plated), Z
(aluminum alloy)





用于M螺纹和G螺纹
For M thread and G thread



用于NPT螺纹
For NPT thread

主要技术参数 / Main Technical Parameters

螺纹规格 Threads		L	L1	A/F	A/C	美制螺纹(NPT) NPT Thread	L	L1	防爆标志 Ex-marks	防护等级 IP	工作温度 Operating temperature
公制螺纹(M) Metric thread	英制螺纹(G) G/Thread										
M16X1.5	G3/8	21.0	15.0	22.0	23.5	NPT3/8	18.0	15.0	Ex eb IIC Gb Ex ta IIIC Da (G螺纹) Ex db IIC Gb Ex eb IIC Gb Ex ta IIIC Da (M、NPT螺纹)	IP66	-60°C ~ +100°C
M20X1.5	G1/2	21.0	15.0	26.0	26.0	NPT1/2	20.0	17.0			
M25X1.5	G3/4	21.0	15.0	31.0	33.0	NPT3/4	20.0	17.0			
M32X1.5	G1	22.0	15.0	38.0	39.0	NPT1	25.0	22.0			
M40X1.5	G1 1/4	22.0	15.0	46.0	50.5	NPT1 1/4	25.0	22.0			
M50X1.5	G1 1/2	23.0	15.0	56.0	60.0	NPT1 1/2	27.0	23.0			
M63X1.5	G2	30.0	20.0	70. 0	75.0	NPT2	27.0	23.0			
M75X1.5	G2 1/2	30.0	20.0	82.0	85.0	NPT2 1/2	33.0	29.0			
M90X1.5	G3	30.0	20.0	97.0	100. 0	NPT3	35. 0	31.0			
M100X1.5	G3 1/2	30.0	20.0	107.0	115.0	NPT3 1/2	38.0	34.0			
M115X 1.5	G4	30.0	20.0	122.0	130.0	NPT4	38.0	34.0			

型号含义 / Model Identification

Misb – * – *

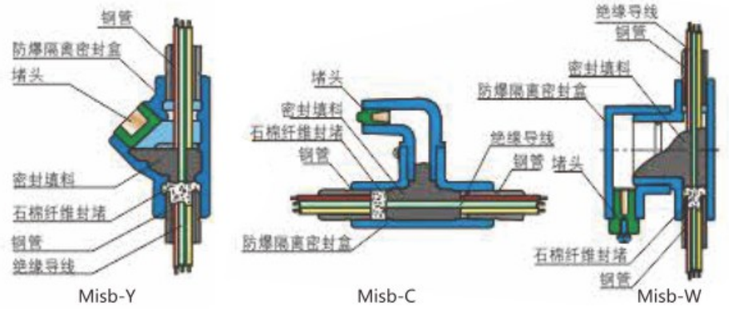
防爆隔离密封盒
Explosion-proof isolation box

Y-立式 Y- Vertical
C-横式 C- horizontal
W-排水式 W- Drain type

螺纹规格:
M、NPT
Thread specification:
M、NPT



● 防爆隔离密封盒和密封填料的使用示图
Explosion-proof isolation sealed box and Use of sealing packing diagram



主要技术参数 / Main Technical Parameters

螺纹规格 Threads	螺纹尺寸 Thread size	Misb-Y		Misb-C		Misb-W		电缆外径(mm) outside diameter of cable	防爆标志 Ex-marks
		A(mm)	B(mm)	A(mm)	B(mm)	A(mm)	B(mm)		
G1/2	M20x1.5	70	52	80	95	80	80	ϕ7~ϕ10	Ex db IIC Gb Ex tb IIIC Db
G3/4	M25x1.5	70	58.5	80	95	85	80	ϕ9~ϕ14	
G1	M32x1.5	90	73.5	90	100	90	85	ϕ12~ϕ18	
G1 1/4	M40x1.5	110	91.5	110	110	110	95	ϕ15~ϕ26	
G1 1/2	M50x1.5	109.5	91.5	118	127	118	109	ϕ18~ϕ30	
G2	M63x1.5	129	110	128	141	128	125	ϕ25~ϕ37	
G2 1/2	M75x1.5	162	135.5	162	166	162	138	ϕ29~ϕ38	
G3	M90x1.5	175	155	168	180	168	152	ϕ30~ϕ51	
G4	M110x 1.5	185	175.5	178	208	178	181	ϕ41~ϕ72	

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型号含义 / Model Identification

MFC — a * b — C — D — E

管通径: Inner diameter
15
20
25
32
40
50
70
80
100

挠性管长度: Flexible conduit length
500
700
1000
（也可以根据要求定制长度）
Other length can be customized

螺纹类型 Thread type
A：两端内螺纹 Female thread
B：两端外螺纹 Male thread
AB：一端内螺纹，一端外螺纹 female and male threads

两端螺纹规格及大小
Thread specification and size

材　质 Material:
S1：304不锈钢 304 stainless steel
S2：316不锈钢 316 stainless steel
R：橡胶钢丝编织 Rubber steel wire braid
G：PVC

举例：
挠性管长度1米，1端内螺纹G3/4，1端外螺纹M32*1.5，采用不锈钢304材质，则型号为 MFC-20*1000-AB-G3/4.M32*1.5-S1
For example: If the flexible conduit is 1 meter long with one end female thread G3/4 and the other end male thread M32*1.5, 304 stainless steel , the model is MFC-20*1000-AB-G3/4.M32*1.5-S1

防爆等级Ex-markings:
M螺纹和NPT螺纹:Ex db IIC Gb;Ex eb IIC Gb;Ex tb IIIC Db
G螺纹:Ex eb IIC Gb;Ex tb IIIC Db

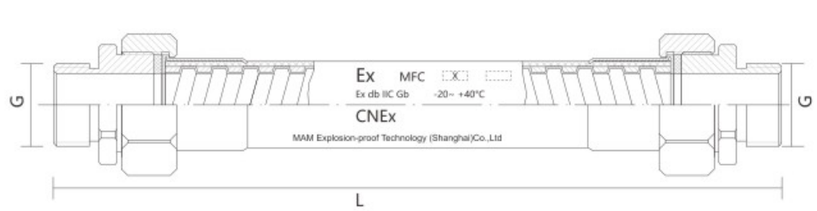
防护防腐等级 Protection degree：IP66 、WF2

产品特点 Product features

* 产品运用于石油采炼、化工医药、军工等爆炸性危险场所，用于防爆电气设备的进出线连接或者钢管布线弯曲难度较大的场所连接使用。
* 可根据现场环境情况选用不同材质的挠管，如不锈钢304/316，橡胶钢丝编织，PVC护套管。

* Widely used in different hazardous locations such as oil refinery, chemical , pharmacy, military, shipping vessel and aerospace;Widely used for cable inlet and outlet connection between explosion-proof equipment and connection in locations where steel pipewiring is difficult in bending.
* To choose different material flexible conduits according to on-site environment, such as stainless steel 304/316, rubber steel wire braid, PVC sheath conduit..





型号规格 Model	管内径（mm）Inner diameter(mm)			接头螺纹（G）Connector thread(G)		长度（mm）Length L(mm)	最小弯曲半径（mm）Minimun bending Radius(mm)
	S1/S2	R	G	公制螺纹(M) Metric thread(M)	英/美制螺纹(G/NPT)G/NPT Thread		
MFC-15*500	14	14	13	M20*1.5	1/2	500	80
MFC-15*700	14	14	13	M20*1.5	1/2	700	80
MFC-15*1000	14	14	13	M20*1.5	1/2	1000	80
MFC-20*500	17	17	19	M25*1.5	3/4	500	110
MFC-20*700	17	17	19	M25*1.5	3/4	700	110
MFC-20*1000	17	17	19	M25*1.5	3/4	1000	110
MFC-25*500	23	23	23	M32*1.5	1	500	145
MFC-25*700	23	23	23	M32*1.5	1	700	145
MFC-25*1000	23	23	23	M32*1.5	1	1000	145
MFC-32*500	30	30	28	M40*1.5	11/4	500	180
MFC-32*700	30	30	28	M40*1.5	11/4	700	180
MFC-32*1000	30	30	28	M40*1.5	11/4	1000	180
MFC-40*500	35	35	32	M50*1.5	11/2	500	210
MFC-40*700	35	35	32	M50*1.5	11/2	700	210
MFC-40*1000	35	35	32	M50*1.5	11/2	1000	210
MFC-50*500	47	47	40	M63*1.5	2	500	250
MFC-50*700	47	47	40	M63*1.5	2	700	250
MFC-50*1000	47	47	40	M63*1.5	2	1000	250
MFC-70*700	59	59	/	M75*1.5	21/2	700	350
MFC-70*1000	59	59	/	M75*1.5	21/2	1000	350
MFC-80*800	72	72	/	M90*1.5	3	700	400
MFC-80*1000	72	72	/	M90*1.5	3	1000	400
MFC-100*700	97	97	/	M115*1.5	4	700	500
MFC-100*1000	97	97	/	M115*1.5	4	1000	500

防爆穿线盒MBs-系列
Explosion-proof Bushing MBs-series

MINMILE
Smart Technology

EAC

产品简说 / Product Brief Description

☑产品用于化工、炼油、石油开采、海洋石油平台、油轮、军工等危险场所。
Used in chemical, oil refining, oil exploitation, offshore oil platforms, oil tankers, military and other hazardous areas.

☑产品主要用于电气线路钢管布线的时候钢管与钢管之间连接及管线转弯使用。
The product is mainly used for connection between steel pipe and turning of pipeline during wiring of electric lines and steel pipes.

☑防爆标志 Ex Mark：Ex eb IIC Gb:Ex tb IIIC Db

☑外壳材质 Enclosure Material：ZL102



型号含义 / Model Identification

MBs — A — B

外形代号profile code: 2\3\4\2L\2R\2B\3B\2E

螺纹规格（见下表）
Thread Specification(see the form below)

举例：用户需求2E型，螺纹G3/4，则完整型号为、MBs-2E-G3/4
For example, if the user requires type 2E with thread G3/4, the complete model is MBs-2E-G3/4

选型信息表 Selection information sheet

型号 Model	管内径(mm) Inner diameter	管螺纹(G) Threads	示意图 Schematic diagram	外形尺寸(mm) Dimension L	W	H
MBs-2	Φ15	1/2	A型	110	31	41
	Φ20	3/4		118	36	46
	Φ25	1		145	45	54
	Φ32	1 1/4		170	54	66
	Φ40	1 1/2		176	60	72
	Φ50	2		215	75	85
	Φ70	2 1/2		240	90	111
	Φ80	3		240	102	129
	Φ100	4		246	150	166
MBs-3	Φ15	1/2	B型	110	42	41
	Φ20	3/4		118	48	46
	Φ25	1		145	58	54
	Φ32	1 1/4		170	70	66
	Φ40	1 1/2		176	78	72
	Φ50	2		215	99	85
	Φ70	2 1/2		240	114.5	111
	Φ80	3		240	126.5	129
	Φ100	4		246	181	166

型号 Model	管内径(mm) Inner diameter	管螺纹(G) Threads	示意图 Schematic diagram	外形尺寸(mm) Dimension L	W	H
MBs-4	φ15	1/2	C型	110	54	41
	φ20	3/4		118	60	46
	φ25	1		145	71	54
	φ32	1 1/4		170	86	66
	φ40	1 1/2		176	96	72
	φ50	2		215	124	85
	φ70	2 1/2		240	139	111
	φ80	3		240	151	129
	φ100	4		246	212	166
MBs-2L	φ15	1/2	D型	102	42	41
	φ20	3/4		109	48	46
	φ25	1		135	58	54
	φ32	1 1/4		153	70	66
	φ40	1 1/2		158	78	72
	φ50	2		190	99	85
	φ70	2 1/2		220	110	111
	φ80	3		220	122	129
	φ100	4		273	177	166
MBs-2R	φ15	1/2	E型	102	42	41
	φ20	3/4		109	48	46
	φ25	1		135	58	54
	φ32	1 1/4		153	70	66
	φ40	1 1/2		158	78	72
	φ50	2		190	99	85
	φ70	2 1/2		220	110	111
	φ80	3		220	122	129
	φ100	4		273	177	166
MBs-2B	φ15	1/2	F型	102	31	55
	φ20	3/4		109	36	60
	φ25	1		135	45	69
	φ32	1 1/4		153	54	85
	φ40	1 1/2		158	60	90
	φ50	2		190	75	111
	φ70	2 1/2		220	90	131
	φ80	3		220	102	149
	φ100	4		273	150	193
MBs-3B	φ15	1/2	G型	110	31	55
	φ20	3/4		118	36	60
	φ25	1		145	45	69
	φ32	1 1/4		170	54	85
	φ40	1 1/2		176	60	90
	φ50	2		215	75	111
	φ70	2 1/2		240	90	131
	φ80	3		240	102	149
	φ100	4		273	150	193
MBs-2E	φ15	1/2	H型	71.5	27	43
	φ20	3/4		83	32	49
	φ25	1		104	40	59.5
	φ32	1 1/4		117	49	75
	φ40	1 1/2		133	54	81
	φ50	2		171	67	100
	φ70	2 1/2		208	86	123
	φ80	3		218	100	138
	φ100	4		259	128	168