



PMA Ex-System
ATEX-IECEX approved flexible nonmetallic
cable protection solution for hazardous areas

PMA Ex-System
塑料电缆保护系统通过**ATEX-IECEX**认证
为使用在危险区域提供解决方案



Standards, zone definitions & product markings

标准，区域定义和产品标识

World standards & what they mean

世界标准及其含义

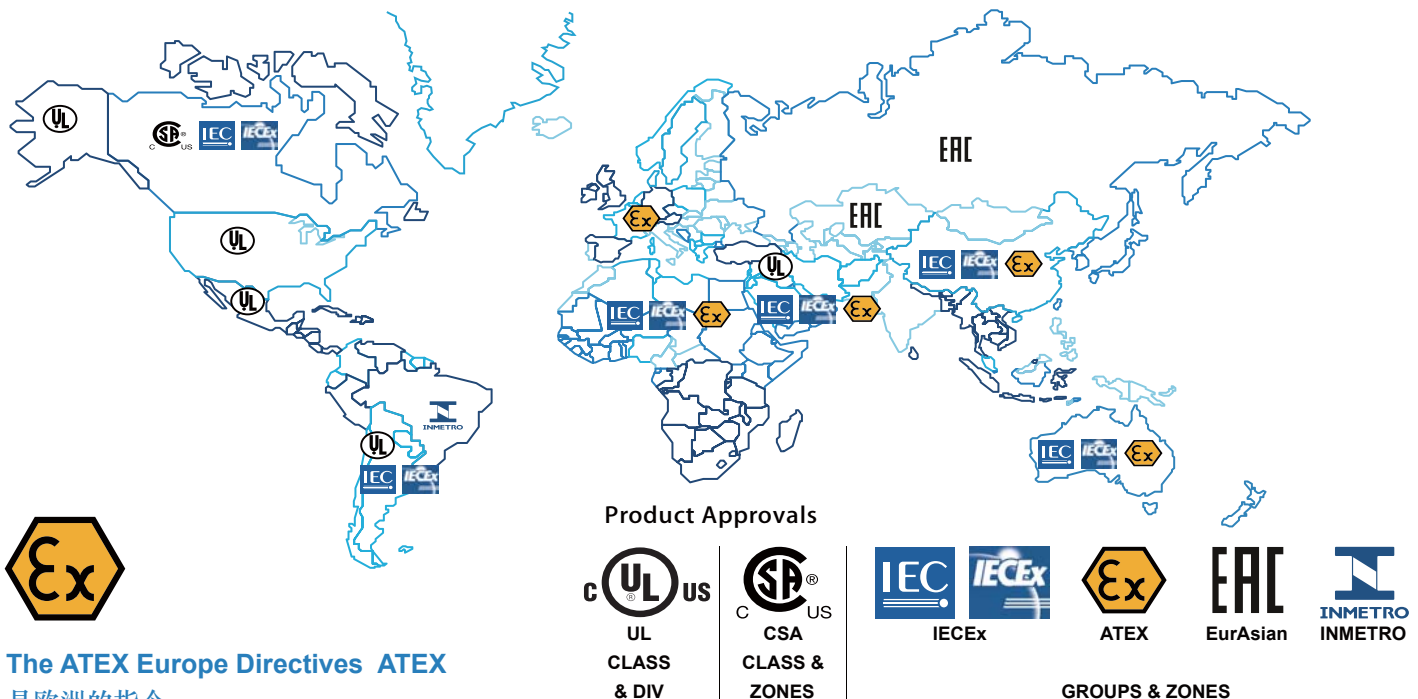
World standards and what they mean. 世界标准及其含义

In this Section we will outline the different Standards used throughout the world and what it means for products specified for use in Hazardous Areas.

在这一章节中，我们将概述涉及到防爆区域内有关全世界不同标准和产品详细说明。

Below is a map of the world which illustrates the Standards that are generally used in these regions.

以下是一张世界地图中总体阐述了相关地区使用的标准。



The ATEX Europe Directives ATEX

是欧洲的指令

ATEX requires employers to eliminate or control risks from dangerous substances and to classify areas where explosive atmospheres may occur into zones, as laid down in regulations. ATEX Directives are designed to protect employees, the public and the environment from accidents owing to explosive atmospheres and since July 1st 2006 all existing sites, as well as new sites, must be fully ATEX compliant. 按照规定，ATEX需要企业去清除或控制来自危险物品带来的危险和分类那些具有爆炸危险的环境为不同区域。设计ATEX指令是为了保护企业员工、公众和环境，避免受到易爆环境所带来的事故。同时自2006年7月1日起现有的和新场所都必须符合ATEX标准。

Directive 2014/34/EU (ATEX 114) applies to equipment suppliers and manufacturers and 99/92/EC (ATEX 137) applies to end users. These directives compliment each other, but have different purposes. ATEX covers both electrical and non-electrical products intended for use in hazardous areas, including mechanical equipment.

2014/34 / EU (ATEX 114) 指令适用于设备供应商和制造商，99/92 / EC (ATEX 137) 适用于最终用户。

这些指令互相补充，但有不同的用途。ATEX涵盖旨在用于危险区域的电气和非电气产品，包括机械设备。

The Directive ATEX 114 came into existence in 2014 and products sold within the European Union designed for use in hazardous areas must have ATEX certification and bear the ATEX marking on the product or on a certificate plate. The obligation is placed upon the manufacturer or supplier of the product and the intention is to facilitate free movement of goods within the EU.

ATEX 114指令于2014年执行，执行后欧盟内部规定在危险区域使用的产品，都必须具有ATEX认证，并且其产品或标牌上标有ATEX标志。此义务由产品的制造商或供应商承担相关责任，其意图是促进货物在欧盟境内的自由流动。

Declaration of Conformance

符合性声明

This has to be issued by the supplier for every order which is to be installed in a hazardous area. This document has to show that the equipment supplied complies with the latest harmonized standard. 制造商必须为每个安装在危险区域内使用的产品发行符合性声明。符合性声明证明该供应的设备符合最新的协调标准。

Standards, zone definitions & product markings

标准，区域定义和产品标识

World standards & what they mean

世界标准及其含义



IECEx (International Scheme)

IECEx (国际体系)

The IECEx scheme is an international certificate of conformance for products used in a hazardous area.

IECEx是一个国际认证体系，它适用于产品在危险区域内应用。

This scheme provides:

该体系提供了：

- a) A single certification of conformity for manufacturers to comply that includes:
一份单一的合格证书给予制造商去符合，它包括：
- b) Testing and assessment of products to a standard including a full test report.
对于产品符合标准的测试和评估，其中包括一个完整的测试报告。
- c) Ongoing surveillance of manufacturers premises.
持续监测制造商的生产区域。
- d) A fast-track process for countries where regulations still require the issuing of national Ex certificates or approvals.
对于一些国家其法规仍然需要Ex证书或批准，这无疑是一个“快速通道”。

This scheme is in the process of being adopted by all the known standards across the world but are all working to various time scales.

该体系将在不同时间范围内被世界各地所有已有标准的国家采用

Electrical materials for use in potentially explosive atmospheres must conform to two major certification standards: IEC/CENELEC and NEC

用于潜在爆炸性环境的电气材料必须符合两个主要的认证标准：IEC / CENELEC和NEC

The IEC (International Electrotechnical Commission) standards are accepted in practically all countries. They are identical to the European CENELEC standards.

几乎所有国家都接受IEC（国际电工委员会）标准。它们与欧洲CENELEC标准相同。

The NEC (National Electrical Code) is mandatory in the United States. The 1996 version, art. 505, takes up the IEC designations for gas, temperature classes for materials and zone definition.

NEC（国家电气规范）在美国是强制性的。1996年版法规505，采用IEC气体标识、材料温度等级和区域定义。

Gases and vapours classification

气体和蒸气分类

Gases are divided into four groups in the NEC (National Electrical Code) and three groups for IEC/CENELEC. The groups display the same hierarchy of classification of gases and vapour (See table on page 10-9).

气体划分为NEC（国家电气规范）四组和IEC / CENELEC三组。各组显示相同的气体 and 蒸汽分类等级（见第10-9页）。

Temperature classification

温度分类

The IEC and the NEC have also defined a temperature classification for material used in zones at risk of explosion (See table on page 10-10).

IEC和NEC还定义了了在爆炸危险区域使用的材料的温度分类（见第10-10页）。

**UL (America) & CSA (Canada)****UL (美国) 和CSA (加拿大)**

The American and Canadian standards are the only ones to have different classifications and locations. ATEX & IECEx work to Groups and Zones whereas the NEC & CEC works to Classes and Divisions, there is no direct comparison between the two. This means that it is imperative that the two standards are not inter-changed within an area.

美国和加拿大的标准是唯一具有不同分类和地点的标准。ATEX和IECEx划分组别和区域，而NEC和CEC划分类别和部门，两者之间没有直接比较。这意味着这是至关重要的一这两个标准在区域内不能互换。

**EurAsian Conformity Mark (Customs Union)****欧亚认证标志 (海关联盟)**

EurAsian Conformity Mark follows similar rules to that of IECEx as far as the breakdown of the zones and other criteria are concerned.

就分类的区域和其他的认证标准而言，欧亚认证标志一直遵循类似于IECEx的规定。

EurAsian Conformity Mark is the standard for the Customs Union which includes the Russian Federation, Kazakhstan and Belarus.

欧亚认证标志是包括俄罗斯联邦，哈萨克斯坦和白俄罗斯在内的关税同盟的标准。



Standards, zone definitions & product markings

标准，区域定义和产品标识

Zone definitions - Onshore gases & vapours

区域定义 - 海岸气体&蒸气

ZONE
0

Zone 0 —
Permanent / Frequent
持续性/频繁程度

Place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is present continuously or for long periods, or frequently.

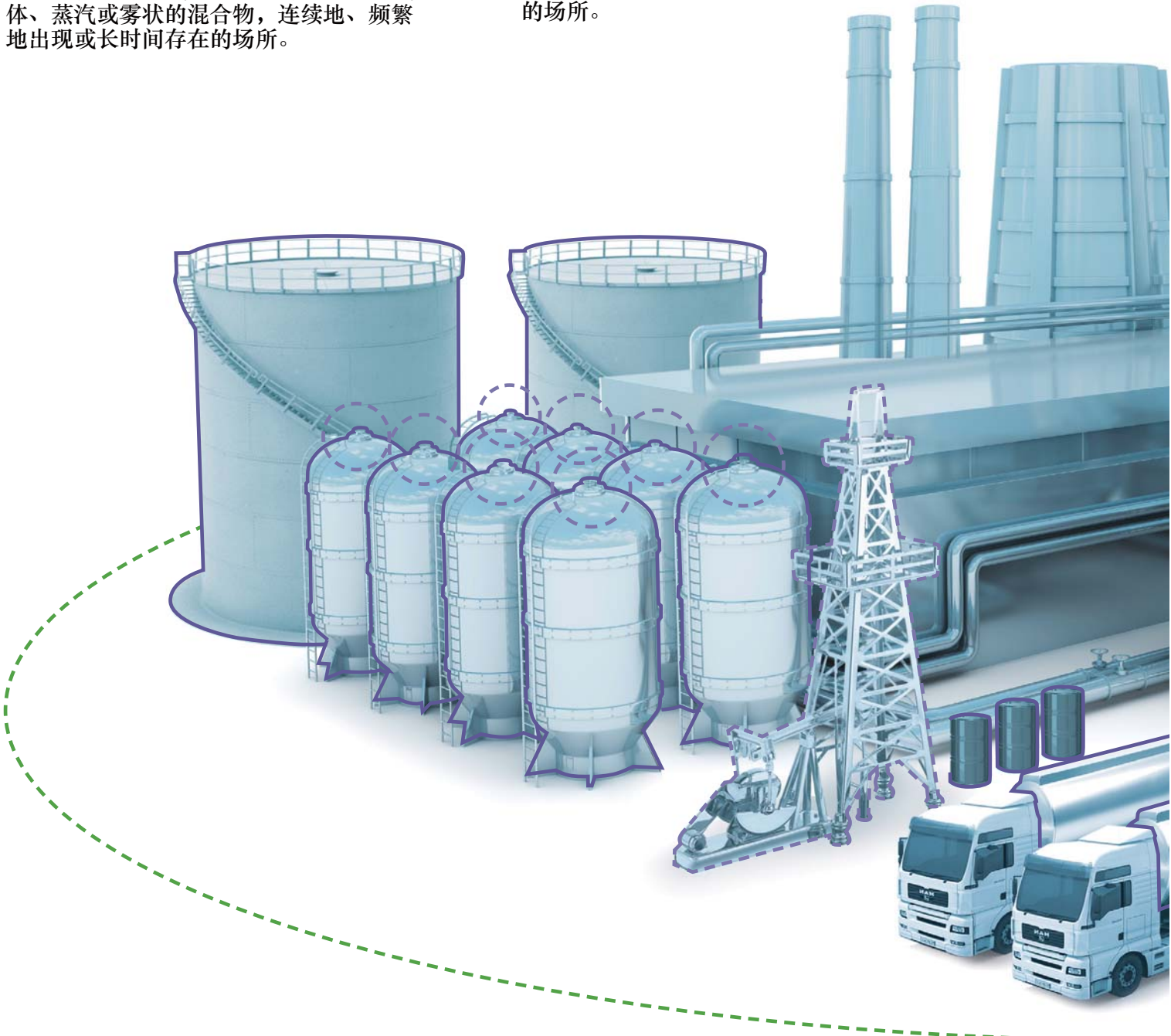
由可燃物质与空气构成的具有爆炸性的气体、蒸汽或雾状的混合物，连续地、频繁地出现或长时间存在的场所。

ZONE
1

Zone 1 — —
Ocassional
偶然地

Site where an atmosphere consisting of a mixture of air and inflammable substances in the form of gas, vapour or mist is likely to arise occasionally during normal operation.

在正常情况下，由可燃物质与空气构成的气体、蒸汽或雾状的混合物偶然地有可能出现的场所。



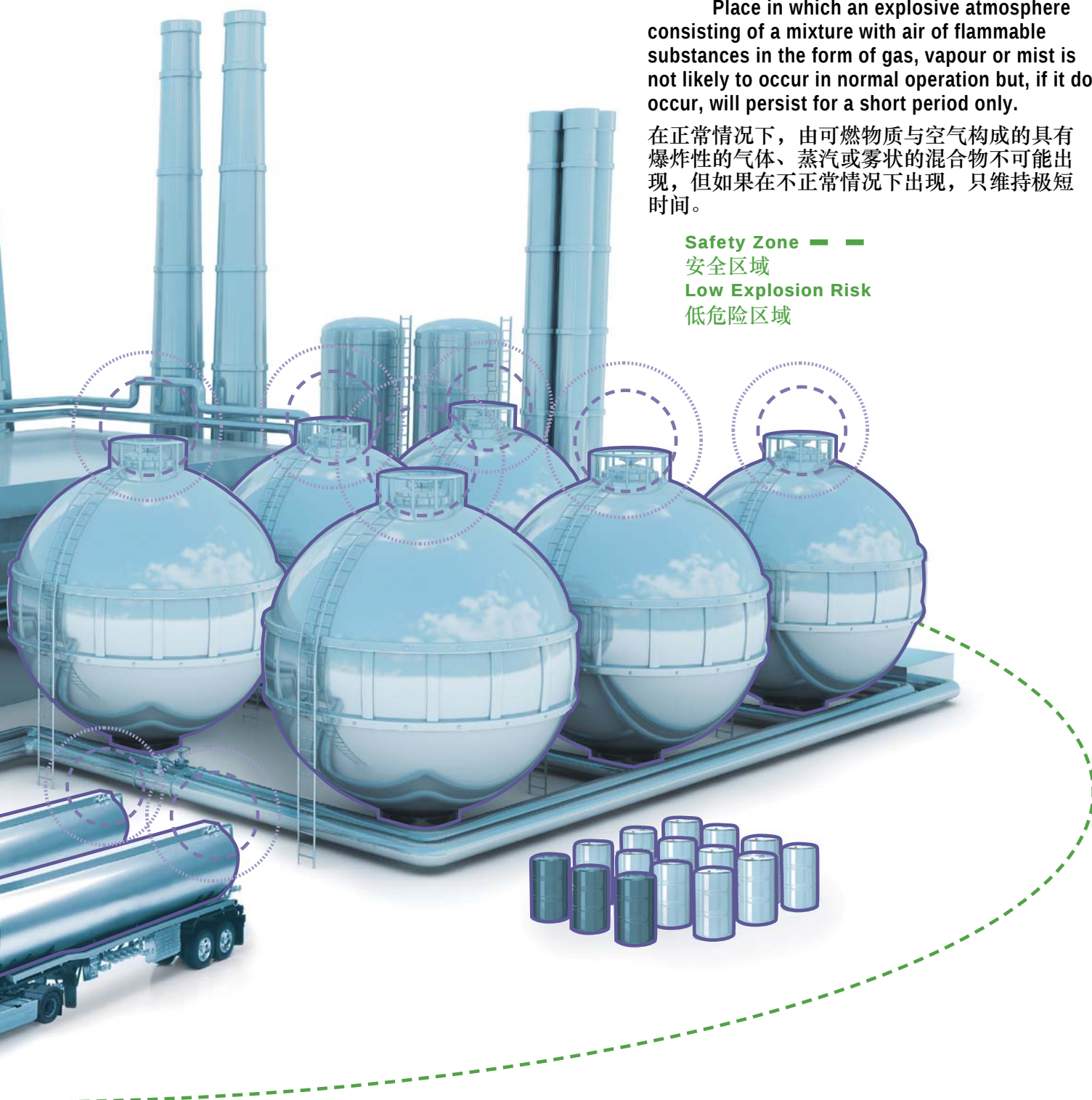
ZONE
2
**Zone 2
 Gas Irregular / Short Duration**

不定时气体（无规律气体）/短时期

Place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

在正常情况下，由可燃物质与空气构成的具有爆炸性的气体、蒸汽或雾状的混合物不可能出现，但如果在不正常情况下出现，只维持极短时间。

Safety Zone — —
 安全区域
Low Explosion Risk
 低危险区域



Standards, zone definitions & product markings

标准，区域定义和产品标识

Zone definitions - Offshore gases & vapours

区域定义 - 离岸气体&蒸气



Zone 0 ———
Permanent / Frequent
持续性/频繁程度

Place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is present continuously or for long periods, or frequently.

由可燃物质与空气构成的具有爆炸性的气体、蒸汽或雾状的混合物，连续地、频繁地出现或长时间存在的场所。

Safety Zone — — —
安全区域
Low Explosion Risk
低危险区域



Zone 1 — — —
Ocassional
偶然地

Site where an atmosphere consisting of a mixture of air and inflammable substances in the form of gas, vapour or mist is likely to arise occasionally during normal operation.

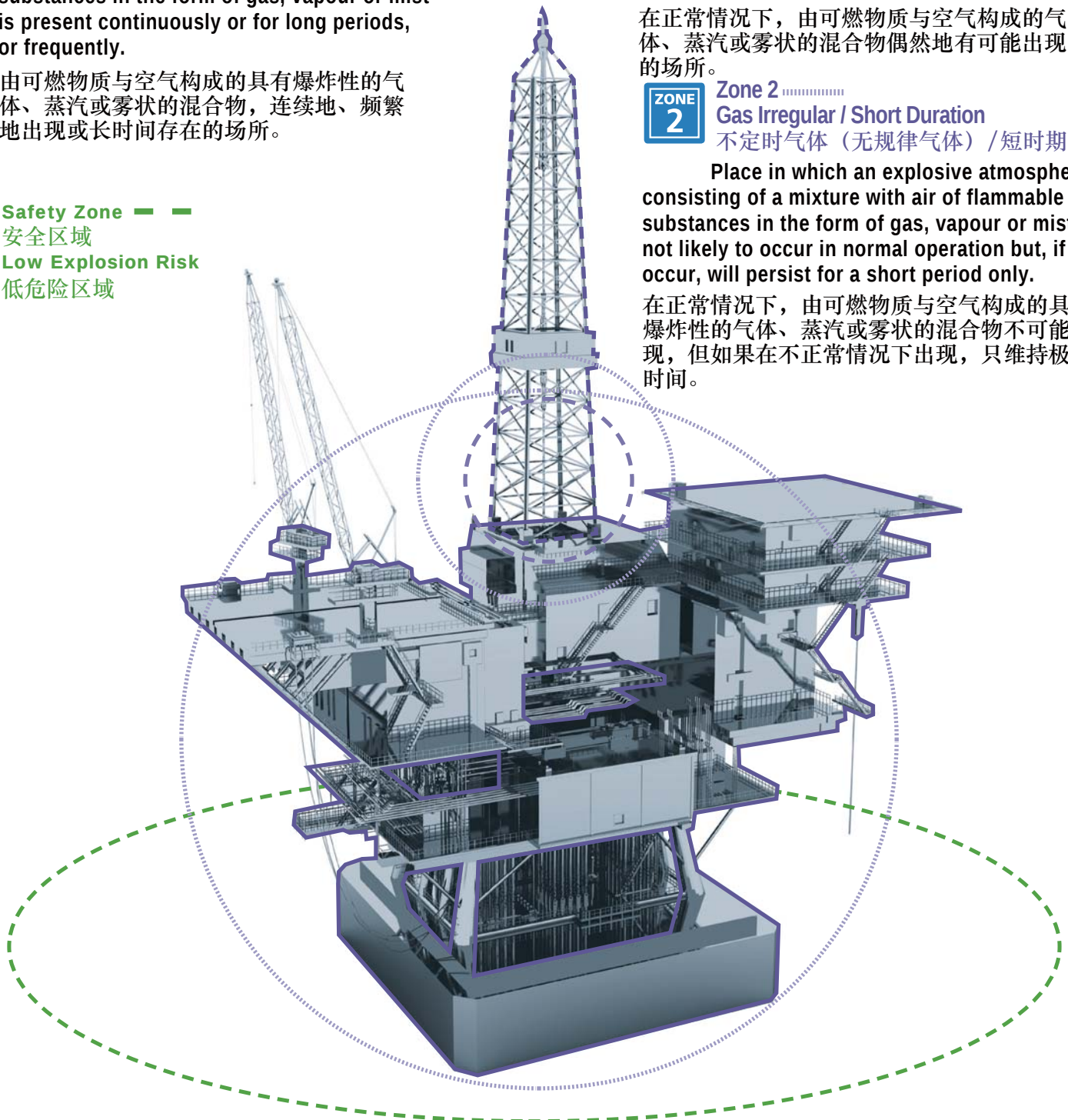
在正常情况下，由可燃物质与空气构成的气体、蒸汽或雾状的混合物偶然地有可能出现的场所。



Zone 2
Gas Irregular / Short Duration
不定时气体（无规律气体）/短时期

Place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

在正常情况下，由可燃物质与空气构成的具有爆炸性的气体、蒸汽或雾状的混合物不可能出现，但如果在不正常情况下出现，只维持极短时间。



Standards, zone definitions & product markings

标准，区域定义和产品标识

Zone definitions - Dust

区域定义 - 粉尘

ZONE 20 **Zone 20** ———
Permanent / Frequent
 持续性/频繁程度

Area in which an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously, or for long periods, or frequently.

易燃性粉尘和空气混合而成具有爆炸性的云状物连续地、频繁地出现或长时间存在的场所。

Safety Zone — —
 安全区域
Low Explosion Risk
 低危险区域

ZONE 21 **Zone 21** — — —
Occasional
 偶然地

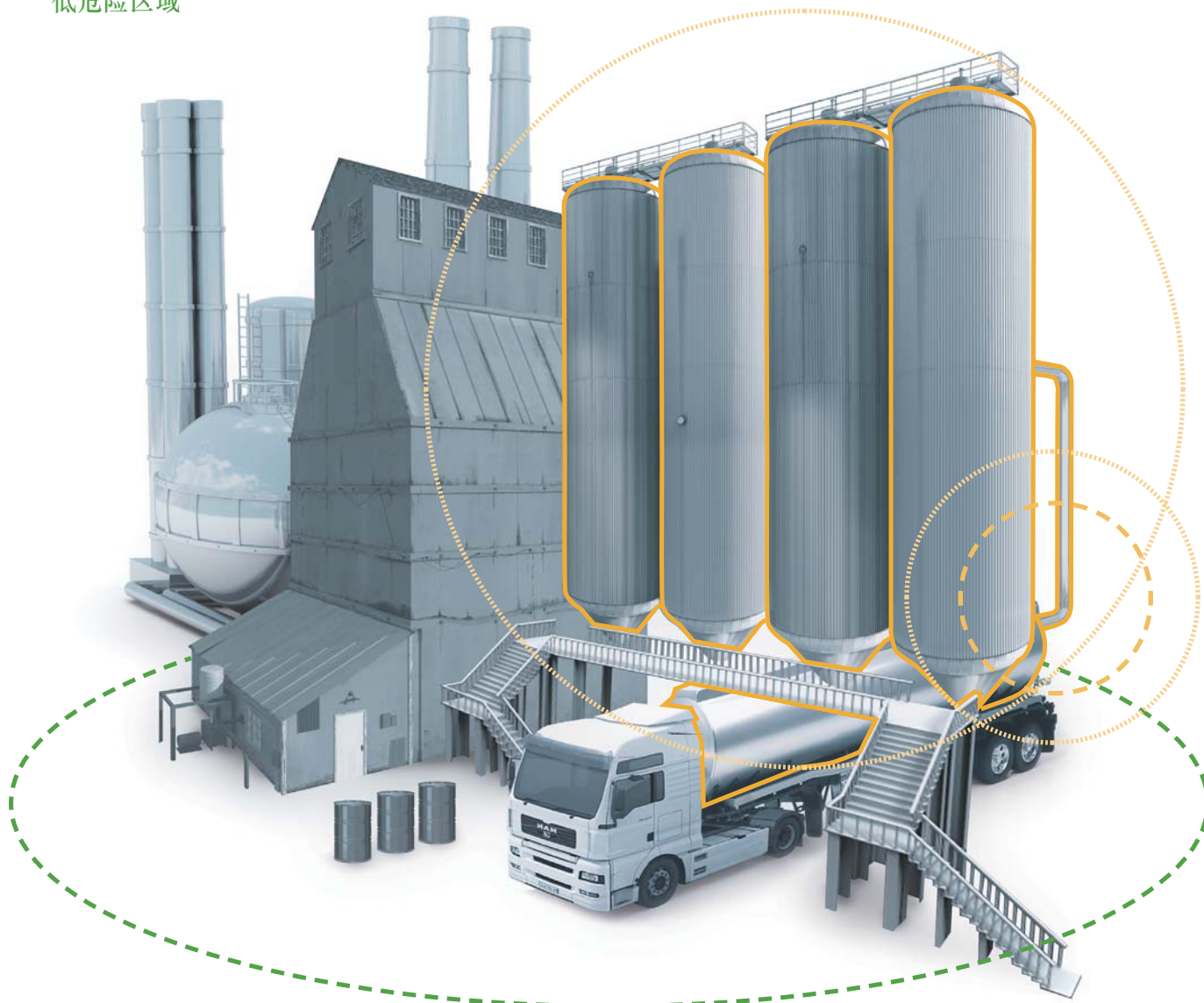
Area in which an explosive atmosphere, in the form of a cloud of combustible dust in air is likely to occur, occasionally, in normal operation, occasionally.

在正常情况下，易燃性粉尘和空气混合而成具有爆炸性的云状物有可能偶然地出现的场所。

ZONE 22 **Zone 22**
Dust Irregular / Short Duration
 无规律粉尘/短时期

Area in which an explosive atmosphere, in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

在正常情况下，易燃性粉尘和空气混合而成具有爆炸性的云状物不会出现，但如果在不正常情况下出现，也只维持极短时间。



Standards, zone definitions & product markings

标准，区域定义和产品标识

Product marking guide

产品标识指引

Classifications of Hazardous Areas 危险区域分类

Classifications of Hazardous Areas 危险区域分类		Description 描述	ATEX		EPL 设备 保护等级	Equipment Usage 设备使用
			Group 描述	Category 种类		
Mining 矿业	Energised 能量 De-energised 切断能量	Persistant risk of methane gas and other dusts 持续甲烷风险和相关粉尘的场所	I	M1	Ma	
			I	M2	Mb	
Gas Environments 气体环境	Zone 0 0 区域	Persistant and continuous presence of gas for frequent or long periods 持续和连续出现或长时间出现的气体	II	1G	Ga	ATEX Equipment Category 1G , ATEX 设备种类 1G Equipment Protection Level Ga 设备防护等级: Ga
	Zone 1 1 区域	Likely occurence of gas presence in normal operation 在正常情况下, 有可能出现气体	II	2G	Gb	ATEX Equipment Category 2G or higher , ATEX 设备种类 2G或更高 ATEX Equipment Category 2G or higher , ATEX 设备种类 2G或更高
	Zone 2 2 区域	Unlikely occurence of gas presence in normal operation, short term persistence if any 在正常情况下, 不可能出现的气体, 如果出现, 也只是极短时间	II	3G	Gc	ATEX Equipment Category 3G , ATEX 设备种类 3G Equipment Protection Level Gc or higher 设备防护等级: Gc或更高
Dust Environments 粉尘环境	Zone 20 20 区域	Persistant and continuous presence of dust for frequent or long periods 持续和连续出现或长时间出现的粉尘	II	1D	Da	AATEX Equipment Category 1D , ATEX 设备种类 1D Equipment Protection Level Da 设备防护等级: Da
	Zone 21 21 区域	Likely occurence of dust presence in normal operation 在正常情况下, 有可能出现的粉尘	II	2D	Db	ATEX Equipment Category 2D or higher , ATEX 设备种类 2D或更高 Equipment Protection Level Db or higher 设备防护等级: Db或更高
	Zone 22 22 区域	Unlikely occurence of dust presence in normal operation, short term persistence if any 在正常情况下, 不可能出现的粉尘, 如果出现, 也只是极短时间	II	3D	Dc	ATEX Equipment Category 3D or higher , ATEX 设备种类 3D或更高 Equipment Protection Level Dc or higher 设备防护等级: Dc或更高

- Zone 0: 
- Zone 1: 
- Zone 2: 
- Zone 20: 
- Zone 21: 
- Zone 22: 

Gas & Dust Groups 气体&粉尘分类

Group			Typical 典型案例	Examples 例如
Mining 矿业	I		Methane (Mining only) 甲烷 (仅矿业)	
Gases 气体		IIA	Propane 丙烷	Ammonia, Methane Gasoline, Butane 氨, 甲烷汽油, 丁烷
		IIB	Ethylene 乙烯	Town gas Acrylonitril 民用燃气丙烯腈
		IIB+H2	Hydrogen 氢	
		IIC	Hydrogen Acetylene 氢乙炔	Carbon disulphide 二硫化碳
Dusts 粉尘		IIIA	Combustable flyings 可燃性飞絮	Wood shaving 木屑 (刨花)
		IIIB	Non-conductive dust 非导电性粉尘	Saw dust, flour 木屑, 粉状物质
		IIIC	Conductive dust 导电性粉尘	Metal dust 金属粉末

Protection Concepts 防护概念

Protection Concepts 防护概念	Primary 基本标准	Type of Protection 防护类型	EN/IEC Standard 标准	Sub Concept 子概念	Gas Zones 气体区域	Dust Zones 粉尘区域
By Enclosure 箱体	Ex d	Flameproof 隔爆型	60079-1	Ex db	1	—
				Ex dc	2	
	Ex t	Dust proof 防尘	60079-31	Ex ta	—	20
				Ex tb		21
				Ex tc		22
By Exclusion 排斥	Ex p	Pressurisation 正压型	60079-2	Ex pxb	1	21 / 22
				Ex pyb	1	
				Ex pzc	2	
	Ex m	Encapsulation 浇封型	60079-18	Ex ma	0	20
				Ex mb	1	21
				Ex mc	2	22
	Ex o	Oil immersion 油浸型	60079-6	Ex ob	1	—
	Ex q	Powder filling 充砂型	60079-5	Ex qb	1	—
	Ex i	Intrinsically safe 本安型	60079-11	Ex ia	0	20
				Ex ib	1	21
				Ex ic	2	22
By Equipment 设备	Ex op	Optical radiation 光辐射型	60079-28	Ex op is	0 / 1 / 2	20 / 21 / 22
				Ex op pr	1 / 2	21 / 22
				Ex op sh	0 / 1 / 2	20 / 21 / 22
	Ex e	Increased safety 增安型	60079-7	Ex eb	1	—
				Ex ec	2	—
	Ex n	Non sparking 无火花型	60079-15	Ex nA	2	—
		Limited energy 限能设备		Ex nL		
		Restricted breathing 限制呼吸设备		Ex nR		
		Enclosed breaking 密封装置		Ex nC		

Temperature Classification 温度组别

Class* 温度组别	Surface Temperature 表面温度 (°C)
T1	450°C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

* Temperature classification is based on the maximum surface temperature of the equipment in normal use
温度组别：是基于在正常使用下，电气设备的最高表面温度。

ATEX-IECEX



Polyamide Cable Protection: 40 years of experience in high quality solutions 聚酰胺电缆保护: 四十余年高质量解决方案的经验

- Products for the protection of cables, wires and hoses against not only mechanical damage but also the influences of UV radiation, weathering and chemicals
产品防护电缆及电线不但免受机械冲击，还防护紫外线照射，气候变化，化学腐蚀等影响。
- Products made of specially modified, load discharging polyamide materials (PA12) for use in explosion endangered zones 1/2 (gas) and 21/22 (dust)
产品由具有电荷释放功能的特殊改良聚酰胺（PA12）材料制成，适用于危险区域1/2（气体）和21/22（粉尘）
- Identical in function to the standard product range PMAFIX/ PMAFLEX (since more than 40 years successfully used in applications as railway, machinery, automation, etc.)
基本功能符合标准的PMAFIX / PMAFLEX产品，（成功应用在铁路、机器设备、自动化领域超过40余年的经验）。
- Sealing system fulfilling IP68
密封系统，防护等级可达IP68。
- System safety: For security reasons re-opening is only possible with the use of a screwdriver
安全设计：出于安全考虑，需要使用螺丝刀拆卸管接头。
- Flexible conduits, excellent for applications with continual reversed bending
软管柔韧性极佳，适用于长期交变弯曲要求的场合。
- Quick and simple installation, reduced total installation systems costs (compared to other explosion-proof cable protection systems)
安装简捷快速，方便经济（比较其他防爆电缆保护系统）。
- No corrosion, long service life
非腐蚀材料，使用寿命长。
- **ATEX/IECEX marking:**
通过ATEX/IECEX认证
CE 1258  **II 2G Ex eb IIC Gb**
II 2D Ex tb IIIC Db
SEV 15 ATEX 0121X, IECEx SEV 15.0009X

Flexible non-metallic nylon conduit systems for hazardous areas
适用于危险区域的柔性非金属尼龙软管
Conduit fittings - Selection guide
软管接头-选型指南



	Non-metallic nylon conduit 非金属尼龙软管	Nylon conduit fittings 尼龙管接头					
Type 类型	XESX Nylon conduit XESX 尼龙软管	NENV Straight fittings NENV 直型管接头	NEIR Straight fittings female thread NEIR 直型，内螺纹	NENZ Straight fittings with strain relief NENZ直型，带消除应力	NEAV 45° elbow fittings NEAV 45°弯头	NEBV 90° curved elbow fittings NEBV 90° 曲线弯头	NEWV 90° elbow fittings NEWV 90°弯头
Approvals 认证体系							
ATEX	•	•	•	•	•	•	•
IEC / IECEx	•	•	•	•	•	•	•
CSA / UL	—	—	—	—	—	—	—
UL	—	—	—	—	—	—	—
EAC Ex	•	•	•	•	—	—	—
INMETRO	•	•	•	•	—	—	—
CNEX	•	•	•	•	—	—	—
Protection Type 防护类型							
Exeb	•	•	•	•	•	•	•
Exd	—	—	—	—	—	—	—
Exde	—	—	—	—	—	—	—
Extb	•	•	•	•	•	•	•
Zones: 区域							
Zone 1	•	•	•	•	•	•	•
Zone 2	•	•	•	•	•	•	•
Zone 21	•	•	•	•	•	•	•
Zone 22	•	•	•	•	•	•	•

Flexible non-metallic nylon conduit systems for hazardous areas

适用于危险区域的柔性非金属尼龙软管

Conduit fittings - Selection guide

软管接头-选型指南



Type 类型	BENRRE Nylon Corrugated conduit to rigid metal pipe connection	BESGR Nylon Splice connector fittings	BEYR Nylon 'Y' piece adapter	BETR Nylon 'T' piece fittings	BEAVR Nylon conduit fittings	BEH Nylon Conduit clip	GMM Hex Locknut
	BENRRE 尼龙软管及钢管之间的连接	BESGR 尼龙软管连接 管接头	BEYR Y型 三通管接头	BETR T型 三通管接头	BEAVR 软管适配器	BEH 软管管夹	GMM 六角形锁紧螺母

Approvals 认证体系

ATEX	•	•	•	•	•	•	—
IEC / IECEx	•	•	•	•	•	•	—
CSA / UL	—	—	—	—	—	—	—
UL	—	—	—	—	—	—	—
EAC Ex	—	—	—	—	—	—	—
INMETRO	—	—	—	—	—	—	—
CNEX	—	—	—	—	—	—	—

Protection Type 防护类型

Exeb	•	•	•	•	•	•	—
Exd	—	—	—	—	—	—	—
Exde	—	—	—	—	—	—	—
Extb	•	•	•	•	•	•	—

Zones: 区域

Zone 1	•	•	•	•	•	•	•
Zone 2	•	•	•	•	•	•	•
Zone 21	•	•	•	•	•	•	•
Zone 22	•	•	•	•	•	•	•

multilayer conduits

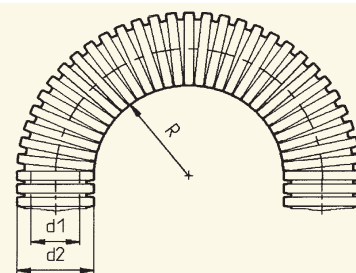
多层软管

The PMA Ex-system conduit is suitable for the protection of cables, wires and hoses against mechanical damage, UV-radiation and weathering in explosion endangered areas classified as zones 1/2 (gas) and 21/22 (dust) according to ATEX / IECEx.

The multilayer conduit offers electrostatic load discharging properties and comes with a range of compatible ATE / IECEx approved fittings and installation accessories.

PMA EX-system 电缆保护系统通过 ATEX / IECEx 认证，适用于危险区域 1/2（气体）21/22（粉尘），可保护电缆及电线免受机械冲击，紫外线照射，气候影响等引起的损伤和损坏。

多层软管和同样通过 ATEX / IECEx 认证的管接头和安装附件配合使用，具有电荷释放特性。



** stat. R = lowest recommended bending radius for static (fixed) installation.

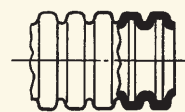
** stat. R = 静态安装最小弯曲半径

*** dyn. R = lowest recommended bending radius for dynamic (flexible) installation.

*** dyn. R = 动态安装最小弯曲半径



Fine profile T
Tight bending radius
细波纹 (T)



Coarse profile G
High pull-out strength
粗波纹 (G)



XESX three layer corrugated conduit, very flexible, medium-duty

For applications with high mechanical loads in explosion endangered areas classified as zones 1/2 and 21/22 (acc. ATEX/IECEx).
For use at very low temperatures.

XESX 三层波纹软管，非常柔软，中壁

适用于列为1/2和21/22（根据ATEX/IECEx）有爆炸危险的区域，可应用于较高机械负荷要求的场合。
可应用于低温场合。

Order No. black / yellow 订货号 黑/黄	Profile 波纹	Fits to conduit size NW 适配软管尺寸 NW	metric 公制	Inside diameter 内径	Outside diameter 外径	stat.** / dyn.*** radius 静态 / 动态 最小弯曲半径	PU meter 包装单位 米
XESX0250	T	10	12	9.2	12.8	25 / 65	50
XESX0350	T	12	16	11.8	15.6	30 / 70	50
XESX0450	G	17	20	15.2	21.1	35 / 85	50
XESX0550	G	23	25	22.0	28.4	40 / 110	50
XESX0650	G	29	32	27.5	34.5	50 / 130	50
XESX0730	G	36	40	35.8	42.4	60 / 180	30
XESX0830	G	48	50	46.8	54.4	70 / 220	30

Profiles-fine (T) ; Profiles-coarse (G) / 细波纹 (T) ; 粗波纹 (G)

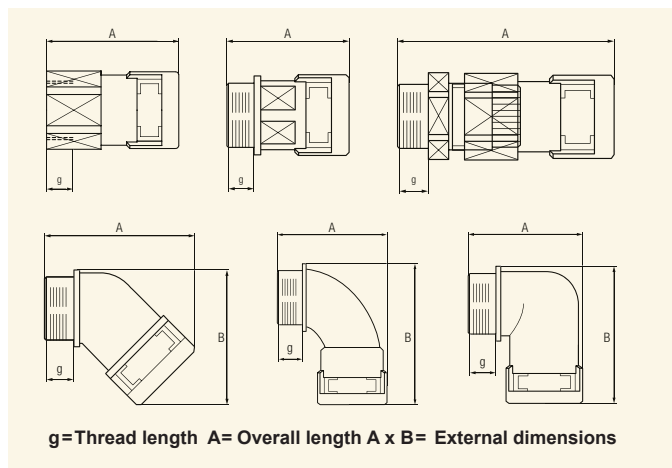
For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.16130
要了解详细技术规格，请索取“技术数据表” DB-Nr.16130

unit = mm
单位 = mm



- Multilayer conduit with dissipative PA12 outer layer, impact resistant HDPE inner layer
- Electrostatically discharging
- Very good UV-resistance
- For indoor and outdoor applications
- Very high mechanical load capacity and low temperature impact strength
- High abrasion resistance
- Free from halogens and cadmium
- Temperature range: -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)

- 外层：耗散聚酰胺12制成
- 内层：耐冲击高密度聚乙烯制成
- 电荷释放
- 非常好的抗紫外线性能
- 适合室内和室外应用
- 非常高的机械负载能力和低温抗冲击强度
- 高耐磨性
- 不含卤素和镉
- 温度范围：-5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)



Connectors

The PMA Ex-System connectors together with PMA Ex-system protection conduits are used for flexible protection of cables, wires and hoses against mechanical damage, UV-radiation and weathering in explosion endangered areas classified as zones 1/2(GAS) and 21/22(DUST) according to ATEX/IECEX.

Connectors are available with ingress protection IP68.



管接头

PMA EX-system 管接头配合软管使用，通过 ATEX/IECEX 认证，适用于危险区域 1/2（气体）21/22（粉尘），可保护电缆及电线免受机械冲击，紫外线照射，气候影响等引起的损伤和损坏。防护等级IP68。



IP68



IP68 static IP67 dynamic

- High sealing through additional seal cap
- For highest dynamic applications
- Fits any type of conduit profile(T and G)
- Excellent pull-out strength
- Re-opening for safety reasons only possible with a screwdriver

IP68 静态系统 IP67 动态系统

- 附加密封圈，高度密封
- 适合最高动态应用
- 适合于任何波纹类型的软管（细波纹和粗波纹）
- 优秀的抗拉能力
- 只可用螺丝刀才可以拆卸，确保安全

IP66/IP68

NENV straight, metric metal thread

For explosion endangered areas classified as zones 1/2 and 21/22 (acc. ATEX / IECEx).

NENV 直型, 金属螺纹, 公制

适用于列为1/2和21/22 (根据ATEX / IECEx) 有爆炸危险的区域。

Order No. black 订货号 黑色	Thread metric 螺纹 公制	Fits to conduit size NW 适配软管尺寸 NW	metric 公制	Thread length 螺纹 长度	Overall length 总 长度
NENV0202	M12 x 1.5	10	12	10.0	40.0
NENV0203	M16 x 1.5	10	12	10.0	40.0
NENV0303	M16 x 1.5	12	16	10.0	43.0
NENV0304	M20 x 1.5	12	16	10.0	43.0
NENV0404	M20 x 1.5	17	20	10.0	51.0
NENV0405	M25 x 1.5	17	20	11.0	52.0
NENV0505	M25 x 1.5	23	25	11.0	54.0
NENV0506	M32 x 1.5	23	25	13.0	56.0
NENV0606	M32 x 1.5	29	32	13.0	57.3
NENV0607	M40 x 1.5	29	32	13.0	57.3
NENV0707	M40 x 1.5	36	40	13.0	71.4
NENV0708	M50 x 1.5	36	40	14.0	72.4
NENV0808	M50 x 1.5	48	50	14.0	72.4
NENV0809	M63 x 1.5	48	50	14.0	72.4

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.33002
要了解详细技术规格, 请索取 "技术数据表" DB-Nr.33002

unit = mm
单位 = mm



NEW / 新

- Made of dissipative PA12, with nickel-plated brass thread
- Prevents electrostatic charging
- For indoor and outdoor applications
- High thread and system connection strengths
- Corrosion resistant
- Easy installation
- Very good chemical properties
- Temperature range: -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)

- 耗散聚酰胺12及黄铜镀镍螺纹制成
- 防静电产生
- 应用于室内和室外
- 高强度的螺纹和系统连接
- 耐腐蚀
- 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)

IP66/IP68

NEIR straight, metric metal female thread

For explosion endangered areas classified as zones 1/2 and 21/22 (acc. ATEX / IECEx).

NEIR 直型, 金属内螺纹, 公制

适用于列为1/2和21/22 (根据ATEX / IECEx) 有爆炸危险的区域。

Order No. black 订货号 黑色	Thread metric 螺纹 公制	Fits to conduit size NW 适配软管尺寸 NW	metric 公制	Thread length 螺纹 长度	Overall length 总 长度
NEIR0303	M16x1.5	12	16	9.0	41.0
NEIR0404	M20x1.5	17	20	10.0	50.0
NEIR0505	M25x1.5	23	25	10.0	56.0
NEIR0606	M32x1.5	29	32	11.0	55.5
NEIR0707	M40x1.5	36	40	13.0	71.0
NEIR0808	M50x1.5	48	50	15.0	73.0

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.36004
要了解详细技术规格, 请索取 "技术数据表" DB-Nr.36004

unit = mm
单位 = mm



NEW / 新

- Made of dissipative PA12, with nickel-plated brass thread
- Prevents electrostatic charging
- For indoor and outdoor applications
- High thread and system connection strengths
- Corrosion resistant
- Easy installation
- Very good chemical properties
- Temperature range: -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)

- 耗散聚酰胺12及黄铜镀镍螺纹制成
- 防静电产生
- 应用于室内和室外
- 高强度的螺纹和系统连接
- 耐腐蚀
- 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)



- Made of dissipative PA12, with nickel-plated brass thread
- Prevents electrostatic charging
- For indoor and outdoor applications
- With integrated strain relief and optimal ingress protection at the cable (up to IP68 / 10 bar)
- High thread and system connection strengths
- Corrosion resistant
- Easy installation
- Very good chemical properties
- **Temperature range:** -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)
- 耗散聚酰胺12及黄铜镀镍螺纹制成
- 防静电产生
- 应用于室内和室外
- 结合消除应力组件，在电缆处提供最适当的保护（最高可达IP68/10巴）
- 高强度的螺纹和系统连接
- 耐腐蚀
- 易于安装
- 非常良好的化学性能
- 温度范围：-5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)

IP66/IP68

NENZ straight with strain relief, metric metal thread

For explosion endangered areas classified as zones 1/2 and 21/22 (acc. ATEX / IECEx).

Furthermore, these connectors can especially be used where damp and dry areas have to be separated.

NENZ 直型，带消除应力，公制 金属螺纹

适用于列为1/2和21/22（根据ATEX / IECEx）有爆炸危险的区域。

此外，这些管接头可被特别用于间隔干湿区域。



Order No. black 订货号 黑色	Order No. fitting * 订货号 接头 *	Thread metric 螺纹 公制	Fits to conduit size NW metric 适配软管尺寸 公制		Cable range 电缆夹紧 范围	Thread length 螺纹 长度	Overall length 总 长度
NENZ0202S/P1	NENZ0202R/P	M12x1.5	10	12	4.0 - 6.5	5.0	48.5
NENZ0202S/P2	NENZ0202R/P	M12x1.5	10	12	5.0 - 8.0	5.0	48.5
NENZ0203S/P1	NENZ0203R/P	M16x1.5	10	12	4.0 - 6.5	6.0	49.5
NENZ0203S/P2	NENZ0203R/P	M16x1.5	10	12	5.0 - 8.0	6.0	49.5
NENZ0203S/P3	NENZ0203R/P	M16x1.5	10	12	6.5 - 9.5	6.0	49.5
NENZ0304S/P1	NENZ0304R/P	M20x1.5	12	16	4.0 - 6.5	6.5	54.0
NENZ0304S/P3	NENZ0304R/P	M20x1.5	12	16	6.5 - 9.5	6.5	54.0
NENZ0304S/P4	NENZ0304R/P	M20x1.5	12	16	7.0 - 10.5	6.5	54.0
NENZ0404S/P3	NENZ0404R/P	M20x1.5	17	20	6.5 - 9.5	6.5	60.0
NENZ0404S/P4	NENZ0404R/P	M20x1.5	17	20	7.0 - 10.5	6.5	60.0
NENZ0404S/P5	NENZ0404R/P	M20x1.5	17	20	9.0 - 13.0	6.5	60.0
NENZ0405S/P5	NENZ0405R/P	M25x1.5	17	20	9.0 - 13.0	7.5	61.5
NENZ0405S/P6	NENZ0405R/P	M25x1.5	17	20	11.5 - 15.5	7.5	61.5
NENZ0505S/P6	NENZ0505R/P	M25x1.5	23	25	11.5 - 15.5	7.5	72.5
NENZ0506S/P4	NENZ0506R/P	M32x1.5	23	25	14.0 - 18.0	8.0	73.0
NENZ0606S/P3	NENZ0606R/P	M32x1.5	29	32	17.0 - 20.5	8.0	73.0
NENZ0606S/P4	NENZ0606R/P	M32x1.5	29	32	20.0 - 25.0	8.0	73.0
NENZ0607S/P5	NENZ0607R/P	M40x1.5	29	32	24.0 - 28.0	8.5	73.0
NENZ0707S/P1	NENZ0707R/P	M40x1.5	36	40	20.0 - 25.0	9.0	87.0
NENZ0707S/P2	NENZ0707R/P	M40x1.5	36	40	24.0 - 28.0	9.0	87.0
NENZ0708S/P3	NENZ0708R/P	M50x1.5	36	40	32.0 - 36.0	10.0	89.5
NENZ0808S/P2	NENZ0808R/P	M50x1.5	48	50	32.0 - 36.0	10.0	92.0
NENZ0808S/P3	NENZ0808R/P	M50x1.5	48	50	36.0 - 40.0	10.0	92.0

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.34012
要了解详细技术规格，请索取“技术数据表”DB-Nr.34012

unit = mm
单位 = mm



- Made of dissipative PA12, with nickel-plated brass thread
- Prevents electrostatic charging
- For indoor and outdoor applications
- With integrated strain relief and optimal ingress protection at the cable (up to IP68 / 10 bar)
- High thread and system connection strengths
- Corrosion resistant
- Easy installation
- Very good chemical properties
- **Temperature range:** -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)
- 耗散聚酰胺12及黄铜镀镍螺纹制成
- 防静电产生
- 应用于室内和室外
- 结合消除应力组件，在电缆处提供最适当的保护（最高可达IP68/10巴）
- 高强度的螺纹和系统连接
- 耐腐蚀
- 易于安装
- 非常良好的化学性能
- 温度范围：-5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)

IP66/IP68

NENZ-L straight with strain relief, metric metal thread

For explosion endangered areas classified as zones 1/2 and 21/22 (acc. ATEX / IECEx).

Furthermore, these connectors can especially be used where damp and dry areas have to be separated.

NENZ-L 直型，带消除应力，公制 金属螺纹

适用于列为1/2和21/22（根据ATEX / IECEx）有爆炸危险的区域。

此外，这些管接头可被特别用于间隔干湿区域。



Order No. black 订货号 黑色	Thread metric 螺纹 公制	Fits to conduit size NW metric 适配软管尺寸 公制		Cable range 电缆夹紧 范围	Thread length 螺纹 长度	Overall length 总 长度
NENZ0202S/P1- L	M12x1.5	10	12	4.0 - 6.5	15.0	66.5
NENZ0203S/P1- L	M16x1.5	10	12	4.0 - 6.5	15.0	58.5
NENZ0304S/P3- L	M20x1.5	12	16	6.5 - 9.5	15.0	62.5
NENZ0404S/P3- L	M20x1.5	17	20	9.0 - 13.0	15.0	68.5
NENZ0606S/P3- L	M32x1.5	29	32	17.0 - 20.5	15.0	91.0

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.34013
要了解详细技术规格，请索取“技术数据表”DB-Nr.34013

unit = mm
单位 = mm

IP66/IP68

NEWV 90° elbow,
metric metal thread

For explosion endangered areas classified as zones
1/2 and 21/22 (acc. ATEX / IECEx).

NEWV 90° 弯头,
金属螺纹, 公制

适用于列为1/2和21/22 (根据ATEX / IECEx)
有爆炸危险的区域。



- Made of dissipative PA12, with nickel-plated brass thread
- Prevents electrostatic charging; For indoor and outdoor applications
- High thread and system connection strengths
- Corrosion resistant; Easy installation
- Very good chemical properties
- Temperature range: -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)

- 耗散聚酰胺12及黄铜镀镍螺纹制成
- 防静电产生; 应用于室内和室外
- 高强度的螺纹和系统连接
- 耐腐蚀; 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)

Order No. black	Thread metric	Fits to conduit size		Thread length	External dimensions
订货号 黑色	螺纹 公制	NW	metric	长度	外部 尺寸
		适配软管尺寸 NW	公制		
NEWV0303	M16x1.5	12	16	10.0	42.0 x 46.5

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.33015
要了解详细技术规格, 请索取 "技术数据表" DB-Nr.33015

unit = mm
单位 = mm

IP66/IP68

NEBV 90° curved elbow,
metric metal thread

For explosion endangered areas classified as zones
1/2 and 21/22 (acc. ATEX / IECEx).

NEBV 90° 曲线 弯头,
金属螺纹, 公制

适用于列为1/2和21/22 (根据ATEX / IECEx) 有爆炸危险的区域。



- Made of dissipative PA12, with nickel-plated brass thread
- Prevents electrostatic charging; For indoor and outdoor applications
- High thread and system connection strengths
- Corrosion resistant; Easy installation
- Very good chemical properties
- Temperature range: -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)

- 耗散聚酰胺12及黄铜镀镍螺纹制成
- 防静电产生; 应用于室内和室外
- 高强度的螺纹和系统连接
- 耐腐蚀; 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)

Order No. black	Thread metric	Fits to conduit size		Thread length	External dimensions
订货号 黑色	螺纹 公制	NW	metric	长度	外部 尺寸
		适配软管尺寸 NW	公制		
NEBV0404	M20x1.5	17	20	10.0	51.0 x 73.0
NEBV0505	M25x1.5	23	25	11.0	62.5 x 85.0
NEBV0606	M32x1.5	29	32	13.0	74.0 x 94.5
NEBV0707	M40x1.5	36	40	13.0	86.5 x 123.0
NEBV0808	M50x1.5	48	50	14.0	100.5 x 135.0
NEBV0809	M63x1.5	48	50	14.0	100.5 x 138.0

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.33035
要了解详细技术规格, 请索取 "技术数据表" DB-Nr.33035

unit = mm
单位 = mm

IP66/IP68

NEAV 45° elbow,
metric metal thread

For explosion endangered areas classified as zones
1/2 and 21/22 (acc. ATEX / IECEx).

NEAV 45° 弯头,
金属螺纹, 公制

适用于列为1/2和21/22 (根据ATEX / IECEx) 有爆炸危险的区域。



- Made of dissipative PA12, with nickel-plated brass thread
- Prevents electrostatic charging; For indoor and outdoor applications
- High thread and system connection strengths
- Corrosion resistant; Easy installation
- Very good chemical properties
- Temperature range: -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)

- 耗散聚酰胺12及黄铜镀镍螺纹制成
- 防静电产生; 应用于室内和室外
- 高强度的螺纹和系统连接
- 耐腐蚀; 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)

Order No. black	Thread metric	Fits to conduit size		Thread length	External dimensions
订货号 黑色	螺纹 公制	NW	metric	长度	外部 尺寸
		适配软管尺寸 NW	公制		
NEAV0303	M16 x 1.5	12	16	10.0	50.5 x 41.5
NEAV0404	M20 x 1.5	17	20	10.0	60.5 x 52.5
NEAV0505	M25 x 1.5	23	25	11.0	69.0 x 61.0
NEAV0606	M32 x 1.5	29	32	13.0	76.5 x 68.5
NEAV0707	M40 x 1.5	36	40	13.0	94.0 x 88.5
NEAV0808	M50 x 1.5	48	50	14.0	102.0 x 101.5
NEAV0809	M63 x 1.5	48	50	14.0	102.0 x 104.5

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.33022
要了解详细技术规格, 请索取 "技术数据表" DB-Nr.33022

unit = mm
单位 = mm



NEW / 新

- Made of dissipative PA12, with stainless steel jubilee clip
- Prevents electrostatic charging
- For indoor and outdoor applications
- High system connection strengths
- Corrosion resistant
- Easy installation
- Very good chemical properties
- Temperature range: -5°C to +85°C (NW10-NW12)
-20°C to +85°C (NW17-NW48)

- 耗散聚酰胺12制成, 夹子由不锈钢制成
- 防静电产生
- 应用于室内和室外
- 高强度的系统连接
- 耐腐蚀
- 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)

IP66/IP68

BENRRE connector to solid metal tube

For explosion endangered areas classified as zones 1/2 and 21/22 (acc. ATEX / IECEx).
Connection part for metal tubes to PMA conduit.

BENRRE 连接钢管的管接头

适用于列为1/2和21/22 (根据ATEX / IECEx) 有爆炸危险的区域。
用于钢管与PMA软管之间的连接。



Order No. black with jubilee clip 订货号 黑色 带连接螺旋夹	Fits to conduit size NW	Fits to metal tube metric	Overall length
BENRRE030324	12	M16	54.0
BENRRE040428	17	M20	65.0
BENRRE050532	23	M25	71.0
BENRRE060644	29	M32	71.0
BENRRE070750	36	M40	90.0
BENRRE080865	48	M50	90.0

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.43030
要了解详细技术规格, 请索取“技术数据表”DB-Nr.43030

unit = mm
单位 = mm



NEW / 新

- Made of dissipative PA12
- Prevents electrostatic charging
- For indoor and outdoor applications
- High system connection strengths
- Easy installation
- Very good chemical properties
- Temperature range: -5°C to +85°C (NW10-NW12)
-20°C to +85°C (NW17-NW48)

- 耗散聚酰胺12制成
- 防静电产生
- 应用于室内和室外
- 高强度的系统连接
- 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)

IP66/IP68

BESGR connection splice

For explosion endangered areas classified as zones 1/2 and 21/22 (acc. ATEX / IECEx).
Connects two PMA conduit pieces.

BESGR 软管连接管接头

适用于列为1/2和21/22 (根据ATEX / IECEx) 有爆炸危险的区域。
用于两根PMA软管之间的连接。



Order No. black 订货号 黑色	Fits to conduit size NW	Fits to metal tube metric	Overall length
BESGR0303	12	16	66.0
BESGR0404	17	20	87.0
BESGR0505	23	25	103.0
BESGR0606	29	32	100.0
BESGR0707	36	40	130.0
BESGR0808	48	50	133.0

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.29090
要了解详细技术规格, 请索取“技术数据表”DB-Nr.29090

unit = mm
单位 = mm

IP66/IP68

HEAK

EMC connector with conical braid

In machine and railway vehicle construction and industry.

HEAK

带锥形夹的屏蔽管接头，公制螺纹

应用于机械制造，铁路机车和工业制造领域。



Order No. black 订货号 黑色	Thread metric 1 公制螺纹 1	2 2	Fits to conduit size NW 适配软管 标称内径	Fits to F.CK 适配 F.CK	Fits to F.CU 适配 F.CU	Inside diameter 内部 直径	Thread length 螺纹 长度	MOQ (PCS) 最小起订量 黑色
# HEAK-M32/25-13	M32 x 1.5	M25 x 1.5	23	20	20	16.8	13.0	待定
# HEAK-M40/32-13	M40 x 1.5	M32 x 1.5	29	20 25*	20	22.4	13.0	待定
# HEAK-M50/40-14	M50 x 1.5	M40 x 1.5	36	30 35*	40	32.4	14.0	待定
# HEAK-M63/63-14	M63 x 1.5	M63 x 1.5	48	35 50	40	43.4	14.0	待定

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.46017
要了解详细技术规格，请索取“技术数据表”DB-Nr.46017

标记为 # 的产品有最小起订量 (MOQ)，待定 = MOQ需与工厂确认

unit = mm
单位 = mm



- Nickel-plated aluminium
- High shielding alternation and low coupling resistance
- Disturbance signals such as electrical signals and magnetic fields will be discharged to the housing / casing
- Compatible with the complete PMAFIX system as well as with standard cable glands
- Allows complete pre-assembly of the cable loom
- Easy and quick installation
- Temperature range: -20°C to +85°C (ATEX)
-50°C to +90°C (General)
- 材料为镀镍铝
- 高屏蔽和低耦合阻抗
- 电信号和磁场等干扰信号将被释放至连接的箱体 / 外壳
- 完全可与PMAFIX系统产品或者标准电缆接头适配使用
- 可以预先布线
- 便于快速安装
- 温度范围: -20°C 至 +85°C (ATEX)
-50°C 至 +90°C (一般要求)

IP66/IP68

BEAVR

conduit adapter

BEAVR

软管适配器



For explosion endangered areas classified as zones 1/2 and 21/22 适用于列为1/2和 21/22 (根据ATEX / IECEx) 有爆炸危险的区域。
(acc. ATEX / IECEx).
For conduit size reduction. 用于减缩软管大小。

Order No. black 订货号 黑色	Input fits to fitting size NW 适配管接头入口尺寸 NW	metric 公制	Output fits to conduit size NW 适配软管尺寸 NW	metric 公制	Overall length 总 长度
BEAVR03/02	12	16	10	12	46.0
BEAVR04/03	17	20	12	16	54.0
BEAVR05/04	23	25	17	20	62.0
BEAVR06/05	29	32	23	25	64.0
BEAVR07/06	36	40	29	32	81.0
BEAVR08/07	48	50	36	40	88.5

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.41040
要了解详细技术规格，请索取“技术数据表”DB-Nr.41040

unit = mm
单位 = mm



- Conduit size reduction
- Made of dissipative PA12
- Prevents electrostatic charging
- For indoor and outdoor applications
- High system connection strengths
- Easy installation
- Very good chemical properties
- Temperature range: -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)
- 软管尺寸减小
- 耗散聚酰胺12制成
- 防静电产生
- 应用于室内和室外
- 高强度的系统连接
- 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)



- Made of dissipative PA12
- Prevents electrostatic charging
- For indoor and outdoor applications
- High system connection strengths
- Easy installation
- Very good chemical properties
- **Temperature range:** -5°C to +85°C (Sizes 02-03)
-20°C to +85°C (Sizes 04-08)

- 耗散聚酰胺12制成
- 防静电产生
- 应用于室内和室外
- 高强度的系统连接
- 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (Sizes 02-03)
-20°C 至 +85°C (Sizes 04-08)

IP66/IP68

BEYR Y piece

For explosion endangered areas classified as zones 1/2 and 21/22 (acc. ATEX / IECEx).

BEYR Y 型三通管接头



适用于列为1/2和21/22 (根据ATEX / IECEx) 有爆炸危险的区域。

Order No. black 订货号 黑色	Input Fits to conduit size NW metric		Output Fits to conduit size NW metric	
	NW	公制	NW	公制
BEYR030202	12	16	10	12
BEYR040303	17	20	12	16
BEYR050404	23	25	17	20
BEYR060505	29	32	23	25
BEYR070606	36	40	29	32
BEYR080707	48	50	36	40

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.29070
要了解详细技术规格, 请索取“技术数据表” DB-Nr.29070

unit = mm
单位 = mm



- Made of dissipative PA12
- Prevents electrostatic charging
- For indoor and outdoor applications
- High system connection strengths
- Easy installation
- Very good chemical properties
- **Temperature range:** -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)

- 耗散聚酰胺12制成
- 防静电产生
- 应用于室内和室外
- 高强度的系统连接
- 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)

IP66/IP68

BETR T piece

For explosion endangered areas classified as zones 1/2 and 21/22 (acc. ATEX / IECEx).

BETR T 型三通管接头



适用于列为1/2和21/22 (根据ATEX / IECEx) 有爆炸危险的区域。

Order No. black 订货号 黑色	Input Fits to conduit size NW metric		Output Fits to conduit size NW metric	
	NW	公制	NW	公制
BETR020202	10	12	10	12
BETR030303	12	16	12	16
BETR040404	17	20	17	20
BETR050505	23	25	23	25
BETR060606	29	32	29	32
BETR070707	36	40	36	40
BETR080808	48	50	48	50

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.29085
要了解详细技术规格, 请索取“技术数据表” DB-Nr.29085

unit = mm
单位 = mm

BEH-0 system support, one-piece

For explosion endangered areas classified as zones 1/2 and 21/22 (acc. ATEX / IECEx).

BEH-0 单个软管固定卡子

适用于列为1/2 和21/22 (根据ATEX / IECEx) 有爆炸危险的区域。



Order No. black 订货号 黑色	Fits to conduit size NW 适配软管尺寸 NW	metric 公制	Dimensions width x height x depth 尺寸 宽度 x 高度 x 深度	Fixing screw 固定螺钉
BEH02	10	12	20.5 x 24.5 x 20.0	1 x M5
BEH03	12	16	24.0 x 27.0 x 20.0	1 x M5
BEH04	17	20	30.0 x 34.0 x 20.0	1 x M6
BEH05	23	25	38.5 x 42.0 x 20.0	1 x M6
BEH06	29	32	45.5 x 48.0 x 20.0	1 x M6
BEH07	36	40	55.5 x 56.0 x 20.0	1 x M6
BEH08	48	50	67.5 x 68.0 x 20.0	1 x M6

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.41001
要了解详细技术规格, 请索取 "技术数据表" DB-Nr.41001

unit = mm
单位 = mm



- Made of dissipative PA12
- Prevents electrostatic charging
- For indoor and outdoor applications
- High system connection strengths
- Easy installation
- Very good chemical properties
- Temperature range: -5°C to +85°C (NW10 - NW12)
-20°C to +85°C (NW17 - NW48)
- 耗散聚酰胺12制成
- 防静电产生
- 应用于室内和室外
- 高强度的系统连接
- 易于安装
- 非常良好的化学性能
- 温度范围: -5°C 至 +85°C (NW10 - NW12)
-20°C 至 +85°C (NW17 - NW48)

MM hexagonal lock nuts, metric, metal

MM 六角形锁紧螺母, 公制螺纹, 金属

Order No. metal 订货号 金属	Fits to thread metric 适配螺纹 公制	Wrench size 对边距	Dimensions height 尺寸 高
GMM-M12	M12 x1.5	15.0	2.8
GMM-M16	M16 x1.5	19.0	2.8
GMM-M20	M20 x1.5	24.0	3.0
GMM-M25	M25 x1.5	30.0	3.5
GMM-M32	M32 x1.5	36.0	4.0
GMM-M40	M40 x1.5	46.0	5.0
GMM-M50	M50 x1.5	60.0	5.0
GMM-M63	M63 x1.5	70.0	6.0

For technical specification in details, please ask for "Technical Data Sheet" DB-Nr.60012
要了解详细技术规格, 请索取 "技术数据表" DB-Nr.60012

unit = mm
单位 = mm



- Nickel-plated brass
- Maximum possible torque
- Safe system connection
- 黄铜镀镍制成
- 最大扭转力矩
- 安全可靠的连接