VP***-WM堵头

产品说明书

■ 产品简介

VP***-WM型号防爆堵头，适于石油化工危险区域，可用在户外。用来封堵临时不用的孔，同时保持设备的隔爆和增安的防爆等级。

■ 产品认证

型号：VP*

认证	证书号码	防爆标识和类型	标准
CCC	CCC No. 2020322313000069	Ex db IIC Gb; Ex eb IIC Gb; Ex ta IIIC Da	GB/T 3836.1-2021; GB/T 3836.2-2021; GB/T 3836.3-2021; GB/T 3836.31-2021
ATEX	TÜV IT 16 ATEX 059 X	Ⓔx II 2G Ex db IIC Gb; Ex eb IIC Gb Ⓔx II 1D Ex ta IIIC Da	EN IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-7: 2015/A1: 2018 EN 60079-31:2014
IEC Ex	IECEx TPS 16.0004X	Ex db IIC Gb ; Ex eb IIC Gb; Ex ta IIIC Da	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-7:2017 IEC 60079-31:2013
EAC 认证	RU C-DE.HB07.B.00130/20		
IP防护等级		IP66/68	

■ 选用原则

1. 堵头选型需要符合相关的标准和操作规范。
2. 确保所选产品与安装的设备，具有相同的防爆认证。
3. 确保产品的螺纹制式和尺寸，与所安装的进线孔匹配。
4. 确保所选产品的材质与箱体和电缆接头的材质相适宜，同时满足周围的环境条件。
5. 确保周围环境不超过所选产品的许可温度。
6. 确保所选产品的防护等级，不低于所安装设备的的防护级别。
7. 确保所选产品的抗冲击强度，与所安装设备的强度适宜。

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版本：Rev.3
日期：2022.05

■ 安装说明

1. 堵头安装要符合相关的标准(IEC EN 60079-14)和操作规范。
2. 防爆产品安装，需要由经培训的专业工程师进行。
3. 任何情况下，不允许带电安装。
4. 安装时，要确保没有发生螺牙或密封损坏；表面有镀层的时候，务必小心防止镀层剥离和碎裂。
5. 对IP68的防护等级要求，对平行螺纹，要使用密封垫片或者O型圈；对锥管螺纹如NPT，可使用螺纹胶。确保进线连接处的密封和防护等级是安装方的责任。当进线处是螺纹连接时，椎管螺纹自密封可以满足IP66。
6. 公制进线螺纹标准ISO 965-1,IOS965-3，螺纹公差标准IEC 60079-1。NPT椎管螺纹标准ASME B1.20.1,NPT外螺纹按Cl 3.2检测。当进线孔是通孔时，通孔必须是圆形没有毛刺，公制孔径数值见下表（IEC62444），同时需要使用锁紧老母锁紧。

进线螺纹	M16	M20	M25	M32	M40	M50	M63
通孔尺寸(mm)	Ø16 $^{+0.2}_{+0.0}$	Ø20 $^{+0.2}_{+0.0}$	Ø25 $^{+0.2}_{+0.0}$	Ø32 $^{+0.3}_{+0.0}$	Ø40 $^{+0.3}_{+0.0}$	Ø50 $^{+0.4}_{+0.0}$	Ø63 $^{+0.4}_{+0.0}$

7. 确保IP68的防护等级，安装时平行螺纹至少拧紧8个整牙，锥管螺纹拧合5个整牙(符合IEC EN 60079-1)。并且要确保箱体的安装表面清洁没有灰尘或水汽，同时需要使用密封垫或在槽中放置O-型圈，也可应用非硬化的螺纹胶提高防护性能。
8. 如果是垫片锯齿状，应注意安装方式不能降低IP防护性。
9. 安装扭矩：为确保设备的整体防护性能，请参考以下安装扭矩。

■ 安装扭矩

应该按照下面的推荐扭矩安装，见下表。扭矩值也适用于等同的非公制螺纹。

阳螺纹尺寸	扭矩 (N.m.)
M16 & M20	32.5
M25	47.5
M32	55.0
M40	65.0
M50	80.0
M63	95.0

NPT螺纹	扭矩 (N.m.)
1/2NPT	90
3/4NPT	
1 NPT	113
1 1/4 NPT	
1 1/2	
2 NPT	181
2 1/2 NPT	

■ 日常检查和维护

在对柜体日常维护时(标准 IEC EN60079-19)，所有堵头也需要检查。

■ 注意事项

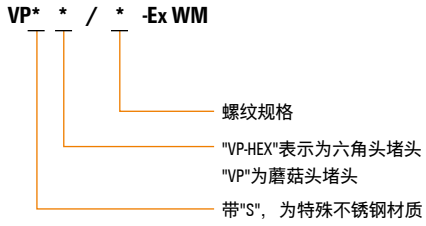
- 增安零部件不能用于隔爆设备。
- 通常时，也可以通过安装合适的密封垫来确保设备的防护等级。
- 堵头应直接安装在临时不用的进线孔上，不能与转接头配合使用。

■ 产品标记释义

产品标记含下列含义:

1.堵头型号规格：

型号说明：



举例：VPS-HEX M20-Ex W 六角不锈钢防爆M20堵头

■ 产品防爆安全使用条件

1. 产品安装，必须按照制造厂家提供的产品说明书进行。
2. 使用温度：-50 °C to +120°C。

VP***-WM Stopping Plug

Installation Instructions

■ Brief Description

Weidmuller VP***-WM stopping plugs are for outdoor use in the appropriate Hazardous Area, providing a method of filling unused entries in Ex equipment while maintaining Flameproof Exd and Increased Safety Exe methods of explosion protection.

■ Certifications

Product Type: VP*

Approval	Certificate Number	Protection Concept/Type	standards
CCC	CCC No. 2020322313000069	Ex db IIC Gb; Ex eb IIC Gb; Ex ta IIIC Da	GB/T 3836.1-2021;GB/T 3836.2-2021; GB/T 3836.3-2021;GB/T 3836.31-2021
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IEC Ex	IECEx TPS 16.0004X	Ex db IIC Gb ; Ex eb IIC Gb; Ex ta IIIC Da	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-7:2017 IEC 60079-31:2013
EAC approval	RU C-DE.HB07.B.00130/20		
Ingress protection		IP66/68	

■ Selection Guide

1. Stopping plugs should be selected in accordance with all relevant Standards and Codes of Practice.
2. Ensure that the product is certified to the same level of protection as the equipment to which it is to be installed.
3. Ensure that the correct thread form and size is selected for entry holes.
4. Ensure that the material the product is manufactured from is suitable to the enclosure material and also to the surrounding environmental conditions.
5. Ensure that surrounding conditions do not exceed the Operating Temperatures stated in the Product Information table.
6. Ensure that the product can maintain the same Ingress Protection levels as the equipment to which it is to be installed.
7. Ensure that the impact resistance of the product is suitable to that of the equipment to which it is to be installed as stated in the Product Information Table.

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■ Installation Instructions

1. All products should be installed in accordance with all relevant Installation Standards(IEC EN 60079-14) and Codes of Practice.
2. Installation of Weidmuller products should only be carried out by an engineer trained in cable gland installation.
3. Under no circumstances should installation be carried out under live conditions.
4. The installer should ensure that no damage occurs to any thread or form of seal during installation. Where component is plated care should be taken to prevent damage or chipping.
5. To maintain ingress protection ratings up to IP68, use IP washers or O-rings for parallel threads. For taper threads use thread sealant. It is the installers responsibility to ensure the IP rating is maintained at the interface. Note: When fitted to a threaded entry, all tapered threads will automatically provide IP66.
6. Metric entry threads comply with ISO 965-1 and ISO 965-3 with a 6g tolerance as required by IEC 60079-1. Types NPT threads are in accordance with ASME B1.20.1 gauging to Cl 3.2 for external threads. When the cable gland with a through-hole （only metric thread） , the hole must be circular, free of burrs andthe diameter according to below table(IEC62444). A suitable locknut shall be used to secure the product.

Entry thread	M16	M20	M25	M32	M40	M50	M63
clearance hole (mm)	Ø16 $^{+0.2}_{+0.0}$	Ø20 $^{+02}_{+0.0}$	Ø25 $^{+0.2}_{+0.0}$	Ø32 $^{+0.3}_{+0.0}$	Ø40 $^{+0.3}_{+0.0}$	Ø50 $^{+0.4}_{+0.0}$	Ø63 $^{+0.4}_{+0.0}$

7. Maintaining IP 68 Rating – In order to maintain such an IP rating the installer should ensure that parallel threads engage to 8 full threads and tapered thread to 5 full threads(IEC EN 60079-1), the surface of the enclosure should also be clean and free from dust or moisture before assembly, and that either the sealing washer is in the correct position or that the 'O' Ring seal is seated in the groove provided. A non-hardening thread sealant may be used to provide protection.
8. If a serrated washer is used it should not be installed in such a way that it may impair any IP Rating.
9. Recommended Installation Torque – In order to maintain the integrity of the enclosure it is important that an installation torque as detailed below be applied.

■ Installation Torque

Components should be installed to the recommended torque values detailed in the following table. Torque values apply to non-metric thread equivalents.

Male Thread Size	Torque (N.m.)
M16 & M20	32.5
M25	47.5
M32	55.0
M40	65.0
M50	80.0
M63	95.0

NPT Thread	Torque (N.m.)
1/2NPT	90
3/4NPT	
1 NPT	113
1 1/4 NPT	
1 1/2	
2 NPT	181
2 1/2 NPT	

■ Routine Checking and Maintenance

All products should be checked during routine maintenance(Standard IEC EN60079-19).

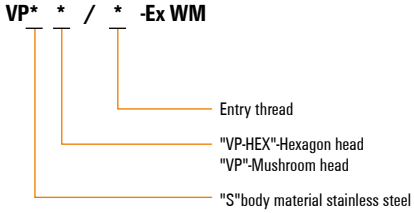
■ Special Notes

- Exe equipment should not be used with Exd equipment.
- In general, a suitable Entry Thread Sealing Washer is also selected and installed, thereby maintaining the integrity of the enclosure or equipment IP rating.
- The stopping plugs should be fitted directly into unused entries of the equipment, and not into an adaptor or reducer.

■ Interpretation of Marking

Markings on the outside of this gland carry the following meanings ：

1.Stopping plugs ：



For example: VPS-HEX M20-Ex W hexagon head stainless steel M20 stopping plugs.

■ Ex Special Conditions for safe use

1. The equipment shall be installed according to the instruction manual provided by the manufacturer.
2. Service temperature: -50 °C to +120°C.