

产品说明书

产品简介

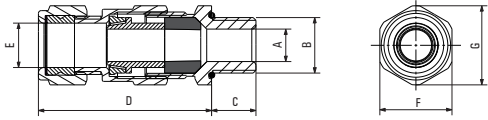
E1W***-WM型号防爆电缆接头，适于石油化工危险区域，可用在户外。该型号为铠装接头，用于铠装电缆的压接。该接头在电缆外护层和内护层处密封。

产品认证

型号：E1W*

认证	证书号码	防爆标识和类型	标准
CCC	CCC No. 2020322313000069	Ex d IIC, Ex e IIC, Ex tD A21 IP66	GB3836.1-2010, GB3836.2-2010, GB3836.3-2010, GB12476.1-2013, GB12476.5-2013
ATEX	TÜV IT 16 ATEX 059 X	Ex II 2G Ex db IIC Gb; Ex eb IIC Gb Ex tD 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	

产品参数表



格兰尺寸	进线螺纹尺寸(B)		螺柱长度(C)	对边(F)	对角(G)	外部长度(D)	电缆内护套直径(A)		电缆外护套直径(E)		铠装层		最小拧紧扭矩(Nm)	
	标准	可选					最小	最大	最小	最大	W	XZ		
16	M16	1/2"	3/4"	16	24	26.5	56.0	4.5	8.7	8.0	13.5	0.90	0.15-0.35	18
20S	M20	1/2"	3/4"	16	26	28.5	56.5	8	11.7	12.5	16.0	0.90/1.25	0.15-0.35	20
20	M20	1/2"	3/4"	16	30	33.0	56.5	10	14.0	15.0	21.0	0.90/1.25	0.15-0.50	35
25	M25	3/4"	1"	16	38	42.0	58.5	13.5	20.0	20.0	27.5	1.25/1.60	0.15-0.50	45
32	M32	1"	1-1/4"	16	46	51.0	62.5	19.5	26.3	26.0	34.0	1.60/2.00	0.15-0.55	65
40	M40	1-1/4"	1-1/2"	16	55	61.0	73.5	25.5	32.2	30.5	40.5	1.60/2.00	0.20-0.60	80
50S	M50	1-1/2"	2"	16	60	67.0	74.5	31.5	38.2	38.5	46.5	2.00/2.50	0.20-0.60	95
50	M50	2"		16	65	72.0	74.5	37.5	44.1	45.5	53.0	2.00/2.50	0.30-0.80	105
63S	M63	2"	2-1/2"	16	75	83.5	74.5	43.5	50.1	51.5	59.5	2.50	0.30-0.80	130
63	M63	2-1/2"		16	80	88.0	74.5	49.5	56.0	58.0	66.0	2.50	0.30-0.80	130

安装步骤

- 将格兰头拆分为五个部分：接头本体、铠装锥、铠装环、转接螺帽和压紧螺母。
- 根据铠装类型选择适合的铠装环。

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版本：Rev.2

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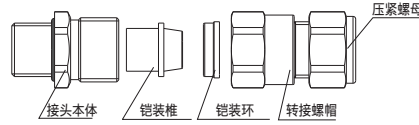
3. 准备好待安装的电缆

A：根据客户使用情况，选择适合的电缆长度

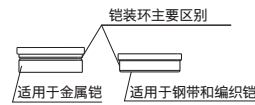
B：剥出的铠装层长度：20mm

- 将电缆接头安放到接线箱上，用手拧紧，然后用扳手继续拧半圈但不可超过箱体最大允许力矩。
- 将准备好的电缆插入格兰，须使电缆内护层穿过铠装锥和铠装环，后将铠装层套在铠装锥的锥体上，并把铠装环套在外护层上，位置如图5所示。
- 拧紧转接螺帽至接头本体上，确保铠装环压紧电缆铠装层与铠装锥上。
- 转动接头后部的压紧螺母，挤压密封圈，直至与电缆外护层充分接触。然后继续旋进1圈半(电缆线径为下限时，最多可转2圈半)。使压紧螺母内的密封圈压紧导线外护层。

1. 拆分格兰头

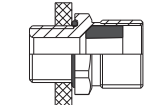


2. 根据铠装类型选择合适的铠装环

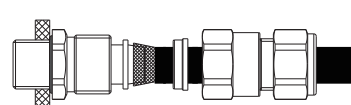


注意：凹槽面须朝向转接螺帽

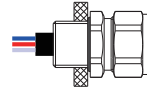
4. 安装接头本体到接线箱上



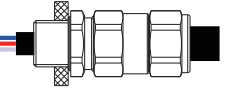
5. 把准备好的电缆插入格兰并把铠装层套在锥体上



6. 拧紧转接螺帽至接头本体上



7. 拧紧压紧螺母至转接螺帽上



安装建议

- 安装工人，必须具有资质的、懂电缆接头安装的电工。
- 不允许电缆带电况下安装。
- 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，锥管螺纹自密封可以满足IP66。
- 公制进线螺纹标准ISO 965-1, ISO 965-3，螺纹公差标准IEC 60079-1，NPT锥管螺纹标准ASME B1.20.1, NPT外螺纹按CI 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}

- 为达到规定的IP等级，接线箱表面与电缆接头接合处，必须是平的，无碎屑；开孔平直且大小适当。
- 接线箱必须有足够的强度承载电缆和电缆接头的装配。
- 当有必要接地时，则应使用接地环。如果要求接线箱接地，接地的平面必须很平整。如果箱体表面喷漆，则需要用一个锯齿状的垫片，刮掉箱体表面的漆从而保证电一体。
- 接头安装后除非检修，不要随便拆卸。如果需要拆卸，安装时重新按照上面的步骤安装。
- 接头零件不可以换用别家设计的零件，不同厂家的部件混用，会导致产品的防爆证书失效。

使用限制

确保安装按下面要求进行：

- 在产品安装、使用和维护时，操作人员必须按照标准IEC EN 60079-14的要求进行。
- 保证设备材料与格兰匹配和现场环境的适用性，以及确保壁厚适合螺母锁紧或与螺纹的啮合与拧紧，是最终用户的责任。
- 接线箱进线螺纹：箱体上的内螺纹必须符合IEC EN 60079-1，装配时，不要损坏了螺纹；检查拧紧的螺纹扣数，保证至少5扣啮合。
- 电缆结构：该接头只能适用于圆形的而且实心致密的电缆，电缆必须延伸到系统的接地回路中。
- Exe增安接线箱：如果A2L**接头安装到非金属增安接线箱上，这些接头必须接地。
- 维修和大修，必须按照标准IEC EN 60079-19进行。

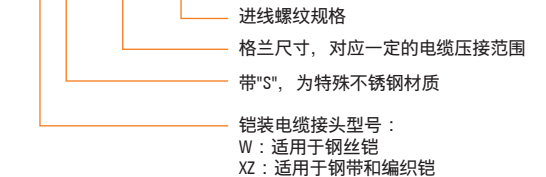
产品标记释义

产品标记含下列含义：

- 电缆接头型号和尺寸规格：

铠装接头型号：

E1* * / * / * -WM



举例：E1WS/20/M20-WM为钢丝铠装不锈钢M20接头，格兰尺寸为20。

产品防爆安全使用条件

- 产品安装，必须按照制造厂家提供的产品说明书进行。
- 使用温度：-50 °C to +120 °C。
- A2L、A2LC和E1系列接头仅适合固定式安装，安装人员必须确保电缆充分夹持和紧固。

Installation Instructions

Brief Description

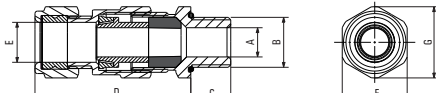
Weidmüller E1W***-WM type cable glands are for outdoor use in the appropriate Hazardous Area with armoured. They seal on the outer jacket and inter jacket.

Certifications

Product Type: E1W*

Approval	Certificate Number	Protection Concept/Type	standards
CCC	CCC No. 2020322313000069	Ex d IIC, Ex e IIC, Ex tD A21 IP66	GB3836.1-2010,GB3836.2-2010, GB3836.3-2010,GB12476.1-2013, GB12476.5-2013
ATEX	TUV IT 16 ATEX 059 X	⊕ II 2G Ex db IIC Gb; Ex eb IIC Gb ⊕ II 1D Ex ta IIC 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 IIC 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	

Data Sheet

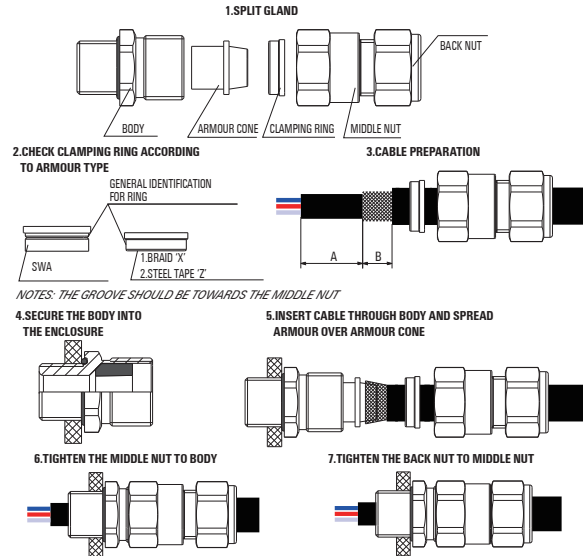


Gland Size	Entry Thread Size(B)		Thread Across Length (C)	Max Across Flat (F)	Max Across Corner (G)	Max Protrusion Length (D)	Cable Inner Sheath(A)		Cable Outer Sheath(E)		Armour Range		Torque Settings (Nm)
	Standard Metric	Optional NPT					Min	Max	Min	Max	W	XZ	
16	M16	1/2" 3/4"	16	24	26.5	56.0	4.5	8.7	8.0	13.5	0.90	0.15-0.35	18
20S	M20	1/2" 3/4"	16	26	28.5	56.5	8	11.7	12.5	16.0	0.90/1.25	0.15-0.35	20
20	M20	1/2" 3/4"	16	30	33.0	56.5	10	14.0	15.0	21.0	0.90/1.25	0.15-0.50	35
25	M25	3/4" 1"	16	38	42.0	58.5	13.5	20.0	20.0	27.5	1.25/1.60	0.15-0.50	45
32	M32	1" 1-1/4"	16	46	51.0	62.5	19.5	26.3	26.0	34.0	1.60/2.00	0.15-0.55	65
40	M40	1-1/4" 1-1/2"	16	55	61.0	73.5	25.5	32.2	30.5	40.5	1.60/2.00	0.20-0.60	80
50S	M50	1-1/2" 2"	16	60	67.0	74.5	31.5	38.2	38.5	46.5	2.00/2.50	0.20-0.60	95
50	M50	2"	16	85	72.0	74.5	37.5	44.1	45.5	53.0	2.00/2.50	0.30-0.80	105
63S	M63	2" 2-1/2"	16	75	83.5	74.5	43.5	50.1	51.5	59.5	2.50	0.30-0.80	130
63	M63	2-1/2"	16	80	88.0	74.5	49.5	56.0	58.0	66.0	2.50	0.30-0.80	130

Step-By-Step Fitting Instructions

- Split the gland to the five parts: Body, Amour Cone, Clamping Ring, Middle Nut and Back Nut.
- Check the clamping ring according to armour type.
- Cable Preparation:
 - A: Strip the outer jacket and armour length to suit installation.
 - B: Expose the armour approx. 20mm long.

- Fit the body of gland to the enclosure. Hand-tighten then use wrench to tighten with another 1/2 turn clockwise. DO NOT EXCEED MAX TORQUE FOR ENCLOSURE.
- Insert the cable through the cable gland, Ensure the inter jacket through the armour cone and the clamping ring. Spread the armour over the armour cone and set the clamping ring on the outer jacket.
- Tighten the middle nut to the body, Ensure the armour be clamped between armour cone and clamping ring.
- Tighten back nut to the entry body. Ensure the seal makes that full contact with the cable sheath. Tighten an extra 1/2 turns (up to 2 1/2 turns for minimum cable). Ensure the outer jacket be clamped by the seal.



Installation Guidance

- Installation should only be carried out by a competent electrician, skilled in cable glands installation.
- No installation should be carried out under live conditions.
- 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.
- 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 and the 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 ^{+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}

- To ensure the stated IP rating is maintained, at the point of interface the surface of the enclosure should be flat, free from debris and rigid with the hole drilled straight and to an appropriate diameter.
- Enclosure will need to be sufficiently strong to support the cable and cable gland assembly.
- A earth tag should be used when it is necessary to provide an earth bond connection. Where an earth contact is required the surface of the enclosure should be sufficiently flat and rigid. With painted enclosures a serrated star washer should be fitted to break through the paint and make a satisfactory earth contact.
- Once installed do not dismantle except for occasional inspection. If necessary, dismantle by reversing the instructions.
- Parts are not interchangeable with any other design. If manufacturers' parts are mixed, certification will be invalidated.

Limitations on Usage

Be sure of your installation complies with the following:

- When assembly, operation and maintenance, the operator shall follow the requirements of IEC EN 60079-14.
- It is the end user's responsibility to ensure the equipment materials are suitable for cable glands and their final installation location, to ensure that wall thickness is suitable for securing or tightening
- Enclosure entry thread: the female thread in the enclosure must comply with IEC EN 60079-1(Ex d) Do not damage threads on assembly. Check that the number of fully engaged threads is at least 5.
- Cable construction: The glands shall only be used with substantially round and compact cables with extruded in the earth circuit of the system.
- Exe enclosure: If A2L** glands are used in a non-metallic increased safety enclosure, they must be included in the earth circuit of the system.
- Repair and overhaul shall comply with IEC EN 60079-19.

Interpretation of Marking

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

- Cable gland type and size :
 - E1* * / * / * -WM
 - Entry thread
 - Gland size with regards to cable acceptance range
 - "S"-body material stainless steel
 - Gland type :
 - W : SWA armour
 - XZ : SWB/STA armour

For example: E1WS/20/M20-WM is stainless steel M20 cable glands for SWA-armored cable, with glands size 20.

Ex Special Conditions for safe use

- The equipment shall be installed according to the instruction manual provided by the manufacturer.
- Service temperature: -50 °C to +120°C.
- The cable glands of all the series A2L, A2LC and E1 shall only be used for fixed installations. The installer shall also ensure that the cable is adequately clamped after installation.