

# Peppers Cable Glands Ltd. Stanhope Road, Camberley, GU15 3BT, UK

## SPMH\*NE Range Stopping Plugs – INSTALLATION INSTRUCTIONS

### Warning

PLEASE STUDY THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION. These products should not be used in any application other than those mentioned here or in our Data Sheets unless Peppers states in writing that the product is suitable for such application. Peppers can take no responsibility for any damage, injury or other consequential loss caused where the products are not installed or used according to these instructions. This leaflet is not intended to give advice on the selection of the products. Further guidance can be found in the standards listed below.

### Brief Description

The Peppers range of Stopping Plugs are intended for indoor or outdoor use in the appropriate hazardous area locations. Stopping Plugs are designed to blank off an unused entry of an enclosure or housing and maintain the environmental protection of the equipment. They give environmental protection to IP66 or IP68 and are suitable for surface applications.

### Installation

All Peppers Stopping Plugs should be installed and tightened to ensure the appropriate IP rating of the installation is maintained. The product should be hand-tightened and then suitably secured with a hex Allen key / wrench to a torque of 5 Nm. For threaded entries the entry thread should be fully engaged prior to tightening.

### Installation Guidance

Point	Advice
1	IEC 60079-10
2	Installation should only be carried out by a competent electrician, skilled in cable gland and electrical installations.
3	Comprehensive details of the compliance standards can be found on the product certificates which are available for download from our website
4	<b>NO INSTALLATION SHOULD BE CARRIED OUT UNDER LIVE CONDITIONS.</b>
5	Threaded entries: the product can be installed directly into threaded entries. Threaded entries should comply with the relevant applicable standards and have a lead-in chamfer to allow for full engagement of the threads. Failure to provide a sufficient lead-in chamfer may lead to ingress sealing issues.
6	Clearance holes: these shall be no larger than 0.7mm above the nominal diameter of the external entry thread. The product should be secured with a Peppers locknut and the threads tightened to ensure the installation is secure. It is recommended that tapered threads are not used in clearance holes.
7	To maintain the Ingress Protection rating of the product, the entry hole must be perpendicular to the surface of the enclosure. The surface should be sufficiently flat and rigid to support the assembly and make the IP joint. The surface must be clean and dry. The product incorporates a thread run out according to general machining techniques and will not have a full form thread for the entire length and as such entry threads should have a suitable lead-in chamfer to ensure a seal is maintained. Further guidance can be found on Peppers website. It is the users/installers responsibility to ensure that the interfaces and threads between the enclosure and stopping plug are suitably sealed with O-rings, sealing washers and/or with thread sealant for the required application. Any thread sealant used shall be suitable for use in hazardous area locations, be suitable for the temperature range at the point of mounting, shall not contain evaporating solvent and cannot cause corrosion at the threaded interface when used for dissimilar materials.
8	Peppers external metric entry threads comply with ISO 965-1 and ISO 965-3. Peppers standard metric thread pitch is 1.5mm for threads up to M75. Peppers external NPT threads are in accordance with ASME B1.20.1 with gauging to clause 8.1. Information on other thread types can be found in the product certificates.
9	If cleaning is required, the stopping plugs can be cleaned with a damp cloth and allowed to dry naturally. Do not clean using a dry cloth.
10	Once installed do not dismantle except for routine inspection. An inspection should be conducted as per IEC 60079-17. After inspection the product should be re-assembled as instructed to ensure the installation is secure.

### Product Ingress Protection

When installed in accordance with these instructions the SPMH\*NE Stopping Plugs have a rating of IP66 & IP68 (100 m for 7 days)

### Limitations on Usage

- Breather Drains are only to be fitted on the bottom surface of the enclosure, aligned vertically with the thread upwards, and at the lowest point to permit proper drainage.
- Products are approved for a temperature range at their point of mounting based upon the interface seal as detailed below:

Seal Option	No Seal	Nitrile O-Ring	Neoprene O-Ring	Silicone O-Ring	Fluorosilicone O-Ring	Viton O-Ring	EPDM O-Ring
Temperature Range	-100°C to +400°C	-30°C to +100°C	-35°C to +95°C	-60°C to +200°C	-55°C to +200°C	-20°C to +180°C	-50°C to +110°C

### Interpretation of Markings


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

Stopping Plug Type & Size, SPMH-a, where a is the thread size of the Stopping Plug.

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### Approvals

Approval	Certificate Number	Protection Concept / Type
ATEX (2014/34/EU) UKCA (SI 2016 No. 1107)	CML 17ATEX3256X CML 21UKEX3045X	 II 1D II 2G Ex eb IIC Gb / Ex ta IIIC Da
IECEX	IECEX CML 17.0145X	Ex eb IIC Gb / Ex ta IIIC Da
EAC	ПРОММАШ ТЕКТ RU C-GB.AЖ58.B.05106	1Ex eb IIC Gb X / Ex ta IIIC Da X
UKRAINE	CU 18.0320 X	II 2G Ex eb IIC Gb / II 1D Ex ta IIIC Da
CCC	2021312313000374	Ex eb IIC Gb / Ex ta IIIC Da IP66 / IP68
CCoE (PESO)	P494321/1	Ex eb IIC Gb / Ex ta IIIC Da
ABS	20-LD1944057-PDA	Specified ABS Rules – See certificate
Lloyd's Register	LR2124442TA	Ex eb IIC Gb / Ex ta IIIC Da
DNV	TAE00004XK	Ex eb IIC Gb / Ex ta IIIC Da

### Conditions for Safe Use

- The SPMH\*NE stopping plugs of sizes M12, M16 and 3/8" are only suitable for use in areas of low risk of mechanical impact.
- Where SPMH\*NE stopping plugs are installed in protection by enclosure (Ex ta) equipment for use in explosive dust atmospheres providing threaded entries, only parallel threads may be used. If used without sealing rings, they may only be fitted into enclosures offering a minimum of 5 full threads, in accordance with IEC 60079-31 clause 5.3.2.
- Where SPMH\*NE stopping plugs are installed in protection by enclosure (Ex ta) equipment for use in explosive dust atmospheres providing plain entries, they shall be fitted with a sealing ring and secured with a locknut, in accordance with IEC 60079-31 clause 5.3.1.
- The SPMH\*NE stopping plugs are suitable for use within an operating temperature range of -25°C to +130°C.
- When fitted in clearance entries, the hole shall have a diameter no greater than 0.7 mm larger than the major diameter of the SPMH\*NE stopping plug thread. The plug shall be held in position within the plain entry with a suitable locknut.
- For sizes M50, M63, M75, 1 1/2", 2" and 2 1/2" – under certain extreme circumstances, exposed SPMH\*NE stopping plugs may store an ignition-capable level of electrostatic charge. Therefore, the user/installer shall implement precautions to prevent the build-up of electrostatic charge, e.g. locate the equipment where a charge-generating mechanism (such as wind-blown dust) is unlikely to be present and clean with a damp cloth.

