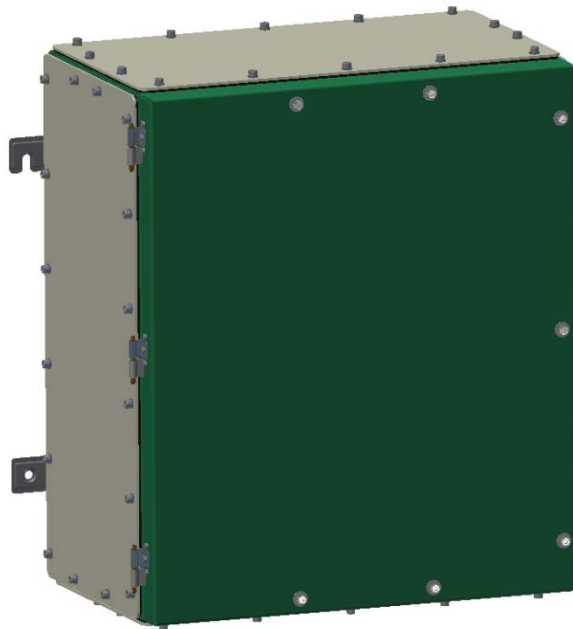




SHOMAL Engineering & Manufacturing Co.

OPERATING INSTRUCTION

SPM SERIES OF STEEL ENCLOSURES (COMPONENT)



SPM SERIES

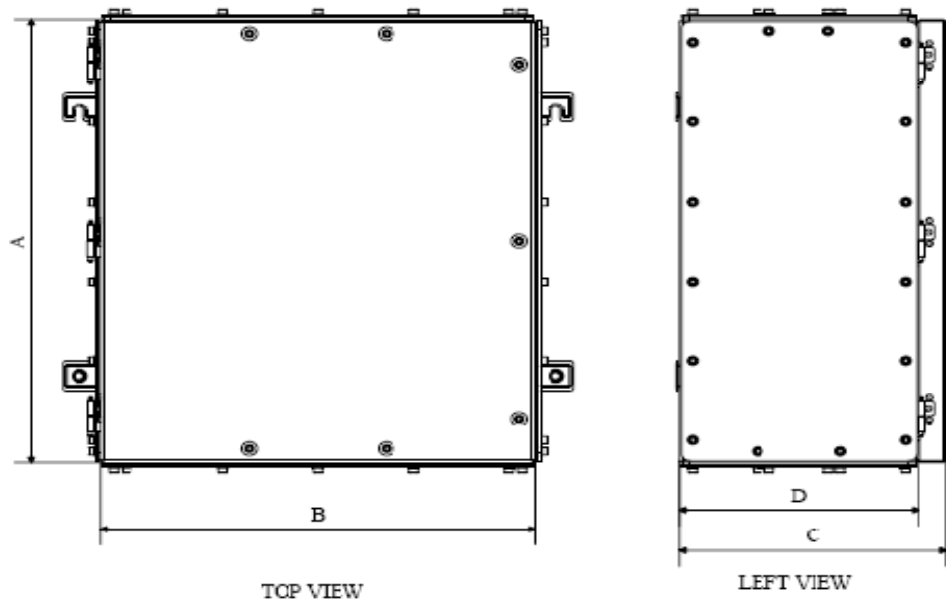
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THIS GUIDE SHOULD BE READ CAREFULLY BEFORE INSTALLATION.
INCORRECT INSTALLATION AND USE OF THE ENCLOSURES CAN INVALIDATE
THE GUARANTEE!

DIMENSIONAL DRAWINGS:

Note: It shall be considered that in "SPM H", $A < B$ and in "SPM V", $A > B$



SPM H TYPE	A	B	C	D
SPM1	120	120	90	
SPM2 14	300	200	153	120
SPM2 20	300	200	213	180
SPM3 14	300	300	153	120
SPM3 20	300	300	213	180
SPM3 30	300	300	313	280
SPM4 14	370	320	153	120
SPM4 20	370	320	213	180
SPM4 30	370	320	313	280
SPM5 14	450	380	153	120
SPM5 20	450	380	213	180
SPM5 30	450	380	313	280
SPM6 14	600	510	153	120
SPM6 20	600	510	213	180
SPM6 30	600	510	313	280
SPM7 14	800	510	153	120
SPM7 20	800	510	213	180
SPM7 30	800	510	313	280
SPM8 14	950	650	153	120
SPM8 20	950	650	213	180
SPM8 30	950	650	313	280
SPM9 14	1250	800	153	120
SPM9 20	1250	800	213	180
SPM9 30	1250	800	313	280

SPM V TYPE	A	B	C	D
SPM1	120	120	90	
SPM2 14	200	300	153	120
SPM2 20	200	300	213	180
SPM3 14	300	300	153	120
SPM3 20	300	300	213	180
SPM3 30	300	300	313	280
SPM4 14	320	370	153	120
SPM4 20	320	370	213	180
SPM4 30	320	370	313	280
SPM5 14	380	450	153	120
SPM5 20	380	450	213	180
SPM5 30	380	450	313	280
SPM6 14	510	600	153	120
SPM6 20	510	600	213	180
SPM6 30	510	600	313	280
SPM7 14	510	800	153	120
SPM7 20	510	800	213	180
SPM7 30	510	800	313	280
SPM8 14	650	950	153	120
SPM8 20	650	950	213	180
SPM8 30	650	950	313	280
SPM9 14	800	1250	153	120
SPM9 20	800	1250	213	180
SPM9 30	800	1250	313	280

IMPORTANT NOTES:

- 1) This guide should be read carefully before installation.
- 2) Incorrect installation and use of the can invalidate the guarantee.

CONFORMITY WITH STANDARDS:

The junction boxes SPM series meet the requirements of the following standards:
 EN 60079-0: 2012, IEC 60079-0: 2011
 EN 60079-7: 2015, IEC 60079-7: 2015
 EN 60079-31: 2014, IEC 60079-31: 2013
 EN 60529: 2013, IEC 60529: 1989 AMD1: 1999, AMD2: 2013
 And directive 94/9/EC: equipment and protective systems intended for use in potentially explosive atmospheres.
 The enclosures have been designed, manufactured and tested according to the *ISO 9001:2015*.



SAFETY INSTRUCTIONS:

The enclosures are not suitable for zone 0 and zone 20 hazardous areas. The temperature class and explosion group marked on the junction boxes shall be observed.
 The apparatus shall not be used in dust layers > 50mm according to IEC 60079-31.
 Modifications to the enclosures or changes of their design are not permitted. They shall be used for intended purpose and in perfect and clean condition.
 For replacement and repair, only genuine *SEMC* spare parts shall be used.
 Repairs that affect the explosion protection may only be carried out by *SEMC* or qualified electrician in compliance with the respective national regulations.
 Prior to taking the enclosures into operation, they shall be checked in accordance with the "taking into operation" of this manual.
 Before the initial operation, any foreign object shall be removed from the enclosures.
 Observe the national safety rules and regulations for prevention of accidents as well as safety instructions included in this operating instruction.

FIELD OF APPLICATION:

CAT II 2G for use in zone 1 or zone 2. Area as defined in *IEC/EN 60079-14*.
 CAT II 2D for use in zone 21 or 22. Area as defined in *IEC/EN 60079-14*.


AMBIENT TEMPERATURE:

-20°C TO +40°C or -30°C TO +55°C

PERMANENT STORAGE TEMPERATURE IN ORIGINAL PACKAGE

-30°C TO +80°C

MARKING:

ATEX Marking	IECEX Marking
 II 2 GD IP66 Ex eb IIC Gb Ex tb IIIC Db Certificate No: TÜV 12 ATEX 7192 U	Ex eb IIC Gb Ex tb IIIC Db IP66 Certificate No: IECEX TUR 13.0011U

TO OPEN THE LID AND GLAND PLATES:

Un-tighten all of M6 gland plates and lid's screws.

Carefully open the gland plates and lid, ensuring the sealing gaskets are not damaged or misplaced.

TO CLOSE THE LID AND GLAND PLATES:

Any foreign object shall be removed from the apparatus.

Check that the sealing gasket is secured inside the lid and undamaged; moreover check out gland plate's gaskets. Make sure that the lid and gland plates are refitted correctly.

Locate and tighten the M6 lid and gland plates screws properly.

WARNING!!!: If the screws are over tightened, the apparatus can be damaged!

ENCLOSURE INSTALLATION FOR SAFE USE:

1. The IP rating of the enclosure must be maintained for the area of use, by the use of correct arrangement of Cable /gland /sealing arrangements and in accordance with the installation codes as detailed in IEC 60079-14, IEC 60079-31, and this operating instruction.

2. The enclosure has Metric clearance/plain entry holes as standard. Alternative clearance holes are available. Provided they are to a recognized standard e.g. BSPP, ET etc. (Parallel threads only).

Plain entry holes must maintain the following:

a) The plain hole shall be no larger than 0.7mm above the major diameter of the entry thread.

b) Glands or stopping plugs shall be secured internally by suitable locknuts, such that they will not be dislodged by a 7Nm impact.

c) The enclosure shall be maintained at IP 66 by a suitable sealing washer under the shoulder of the cable gland.

d) All unused entry holes must be sealed by a suitable stopping plug.. The stopping plug shall be held in place by a locknut and also the IP rating of the junction box shall be maintained for zone of use.

3. When used under dust layers the maximum depth shall be no greater than 50mm.

The apparatus must not be modified without reference to *SEMC Co.*, as this will invalidate certification.

EARTHING:

These enclosures have an integral internal/external earth stud assembly suitable for the largest conductor size used in the box.

In the case of painted boxes, consideration must be given to the removal of paint e.g. under the earth stud on the inside of the box which may lead to corrosion of the enclosure and potential reduction in earth protection. This area following installation must be protected against corrosion.

TAKING INTO OPERATION:

Prior to taking the apparatus into operation, the test specified in the relevant national regulations will have to be carried out.

Apart from that, the correct functioning and installation of the apparatus in accordance with this operating instruction and other applicable regulations will have to be checked.

Incorrect installation and use of the enclosures can invalidate the guarantee.

SPECIAL CONDITIONS FOR SAFE USE:

- Suitable certified cable glands or blanking elements, that sustain the type of protection and IP66, must be used.
- If a breather is equipped, the lower IP rating is used instead.

MAINTENANCE / SERVICING:

The relevant national regulations which apply to the maintenance/servicing of the electrical apparatus in explosive atmosphere shall be observed.

The required maintenance intervals depend on the respective application and will therefore have to be determined by the user dependent on the conditions of use.

When servicing the apparatus, particularly those parts that are decisive for the type of protection against explosion, will have to be checked (e.g. intactness of enclosure, cable glands, efficiency of the cover gaskets).

If during servicing repairs prove to be necessary, the Repair / Overhaul / Modification of this manual will have to be observed.

REPAIR / OVERHAUL / MODIFICATION:

Repairs may only be carried out with genuine **SEMC** spare parts.

Repairs that affect the explosion protection may only be carried out by **SEMC** or a qualified electrician in compliance with the applicable rules.

Modifications to the apparatus or changes of its design are not permitted.

DISPOSAL / RECYCLING

When the enclosures is disposed of, the respective national regulations on waste disposal will have to be observed.