

OPB 911 CP

Overvoltage protection for ASD 535

As of production version 200619

The OPB 911 CP overvoltage protection is an additional module for protecting the ASD 535 aspirating smoke detector against atmospheric overvoltage (lightning).



Fig. 1 OPB 911 CP

Description

The OPB 911 CP overvoltage protection can be built into the ASD 535 for use in exposed areas where there is the risk of atmospheric voltage surges. The proper operation of the OPB 911 CP requires a connection to the equipotential bonding.

The OPB 911 CP is connected upstream of the effective connection terminals of the AMB 35 main board in the ASD. The electrical interfaces of the expansion modules (XLM, RIM, SIM) as well as the DF and DS terminals (AMB 35, terminals 21 to 26) are not protected by the OPB 911 CP.

The OPB 911 CP comprises the following parts:

- OPB printed circuit board **A** with plug connectors for adaptation to the AMB 35, spring-clamp for the equipotential bonding and the electronic protection elements.
- Retainer plate **B** (with edge protection and spacer columns **C**) for fastening the OPB 911 CP onto the AMB 35. The retainer plate and OPB printed circuit board are connected by means of two M3 Torx screws **D**.
- M20 cable screw union with a double-seal grommet and sealing bolt.

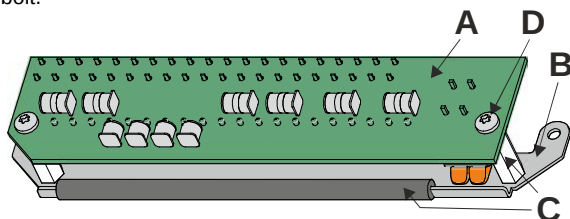


Fig. 2 OPB 911 CP design

Dimensioned drawing

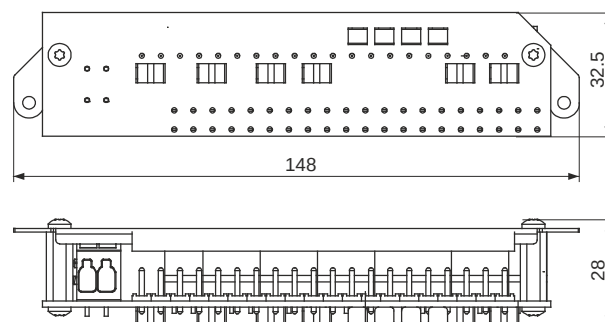


Fig. 3 OPB 911 CP dimensioned drawing

Article numbers and spare parts

Short designation	Article number	
OPB 911 CP overvoltage protection	11-2300038-01-XX	
Technical description	ASD 535	T 131 192
Data sheet	ASD 535	T 131 193

Technical data

Type	OPB 911 CP	
Ambient conditions acc. to IEC 60721-3-3 / EN 60721-3-3	3K5 / 3Z1	class
Extended ambient conditions:		
• OPB 911 CP temperature range	-40 – +60	°C
• max. permitted storage temperature (without condensation)	-40 – +70	°C
• Ambient humidity (transient without condensation)	95	% rel. humidity
• Ambient humidity (continuous)	70	% rel. humidity
Overvoltage requirements acc. to EN 61000-4-5		
• Line to earth	±8	kV
• Line to line	±4	kV
Dimensions (W x H x D)	148 x 32.5 x 28	mm
Weight	49	g

Mounting

Mounting is preferably performed when the ASD is commissioned, i.e. before connecting the electrical installation to the ASD 535. The OPB 911 CP has no terminals; the terminal blocks of the AMB 35 are used for the connection by re-plugging.

Proceed as follows to mount the OPB 911 CP in the ASD 535:

- ① • Remove the OPB printed circuit board **A** from the retainer plate **B** using a **T10 Torx screwdriver** and place the two screws **C** to the side.
- ② • The OPB retainer plate **B** is fastened to the ASD using the two AMB retainer screws **D** left and right of the AMB terminals.
 - Remove all pluggable screw terminals **E** of the AMB and plug onto the OPB at the identical position (terminal number). **Attention:** the terminal blocks must be turned 180°; the connection diagram on the individual terminal block is then mirrored (pay attention to the terminal designation). **Exception:** the two terminal blocks **F** (DF and DS, numbers 21 to 26) are no longer used.
- ③ • The electrical installation **G** on the terminals of the OPB 911 CP is then performed as in the examples in Section 6 of the **"Technical description ASD 535"**.
 - Connect the equipotential bonding to the spring clamp **H** (PE) of the OPB. Conduct it via the supplied double cable screw union **I** to the outside (replace the present cable screw union and sealing grommet). **Important:** if the second bore hole of the double cable screw union is not used, it must be closed with the supplied locking bolt. For proper operation of the OPB 911 CP, the ground conductor (4.0 mm²) must be connected on the equipotential bonding.
- ④ • Afterwards, the OPB printed circuit board **A** is turned down and plugged into the empty plug connectors of the AMB. **Important:** beforehand be sure to check that the black edge protection **K** is correctly seated on the OPB retainer plate.
- Fasten the OPB printed circuit board **A** using the two screws **C** (removed earlier) to the retainer plate **B**.

Connection to existing ASD 535



If mounting is to be on an existing ASD 535 (on an ASD that is already present), loosen the connection wires to the concerned terminal blocks and then reconnect "mirrored" in order to connect the OPB 911 CP.

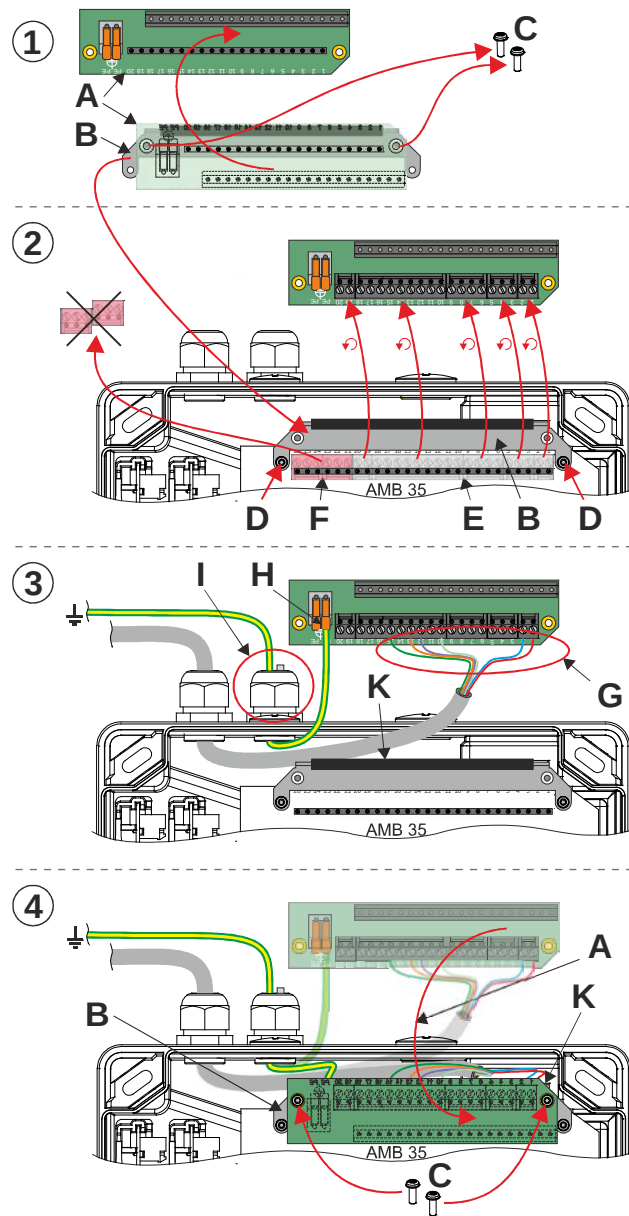


Fig. 4 Mounting the OPB 911 CP