

Halogen-free fibre optic cables

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In a building, fire can spread along cables from one room to another. If the sheath of the cable contains halogens (e.g. chlorine or fluorine), a burning cable will produce reaction products which are toxic and corrosive, as well as smoke. Therefore we offer cables with a flame-retardant, non-corrosive (halogen-free) sheath (FRNC). These cables will be named as Fire Security Cables. They will be checked according the following standards.

1. Flame retardance

Flame-retardant cables must be self-extinguishing when the source of fire is removed. FRNC-cables from Brugg Cables are equipped with a flame-retardant jacket.

1.1 Test methods

The flame-retardant qualities are determined by two different methods:

- IEC 60332-1 Test on a single vertical cable
- IEC 60332-3 (Cat. C) Test on a cable bundle

2. Smoke density and acid gas corrosiveness

Smoke emission is a major problem in the event of fire where the number of escape routes is limited. The sheath of our optical cables is made of halogen-free material, eliminating the problems of metal corrosion.

2.1 Test methods

The smoke emission characteristics are determined by the following method:

- IEC 61034-2 Emission of smoke. Measurement of smoke density as a function of light transmission in percentage through a 27 m² oven.
- Corrosive gases according to IEC 60754-x

3. Circuit integrity

Cables with circuit integrity allow data transmission over a certain period of time under fire conditions.

3.1 Test methods

- The circuit integrity will be tested according to:
- IEC 60331-25 Circuit integrity for fibre optic cable.

