FIRE PROTECTION

Running Through Fire

Fire-Rated Coaxial Cables for Public Buildings, Railway and Shipbuilding Locations with Increased Fire Protection Requirements

SSB-Electronic provides special fire-certified cables that are approved for use in buildings with high protection requirements

There are around 300 fire deaths in Germany every year. According to the Central Association of the Electrical Engineering and Electronics Industry Germany, the cause of death in 95 percent of cases in buildings is not direct exposure to flames, but rather smoke inhalation. Fire safety in buildings is becoming more and more important, not least due to numerous legal requirements in fire protection. SSB-Electronic has developed special coaxial cables that are approved and certified for installations in buildings with high fire protection requirements. These coaxial cables reduce the spread of flames and the release of heat in buildings, considerably limiting the emission of smoke and acid gases as well as burning particles during the fire.

Since 1st of July 2017, all cables that are permanently installed in European buildings are subject to the European Construction Products Regulation (CPR). This regulation defines uniform rules for the use of construction products inside buildings and is implemented in all EU member states through the EN 50575 standard. Cables as construction products are assigned to specific fire performance classes based on their reaction to fire. The classification is based on flame spread and heat release; additional criteria include smoke emission, acidity of gases and flaming droplets. Each fire class has special quality control requirements following the corresponding system of Assessment and Verification of Constancy of Performance (AVCP).

The CPR creates a uniform system for the classification, evaluation and certification of construction products for all EU countries. The purpose of the CPR is to increase fire safety in buildings. The use of certified cables extends the time available for evacuation and rescue in case of fire. SSB-Electronic offers flexible and low-loss coaxial cables in different CPR classes, which can be installed in various types of building or areas according to the specific fire protection requirements.

Cables with CPR rating Cca

The coaxial cables of the Ecoflex Plus Heatex and Aircell Heatex product series meet the strict criteria of the Euroclass "Cca" and are suitable for use in public buildings with high fire safety requirements. These products are flame retardant and have only a low flame propagation. Due to this low smoke Heatex cable jacket, the escape routes remain visible in case of fire. These coaxial cables are also free of halogen and contain

no reactive elements such as fluorine, chlorine and bromine. They have low gas acidity and therefore minimize the subsequent damage caused by fire. The Euroclass "Cca" ensures that the cables meet all important classification criteria regarding the spread of flames, heat release, emission of smoke and acid gases as well as burning droplets and comply with all relevant standards.

In detail, the coaxial cables of the new series meet the standards and guidelines for Jacket Material according to DIN EN 50290-2-27 (HD 624.7), Flame Retardant according to IEC 60332-1-2, Corrosivity of Fumes according to IEC 60754-2, Smoke Density according to IEC 61034, RoHS Compliant (Directive 2011/65/EC & 2015/863/EU RoHS 3), Low Smoke Zero Halogen (LSZH) and are UV-resistant.

These cables are verified by special cable test procedures related to their fire protection class Cca in order to meet the strict requirements of the highest system of conformity assessment (AVCP system 1+). For this reason, they are particularly suitable for installation in public buildings and highly populated public facilities and areas, for example in schools, hotels, large stores, office and tower buildings as well as in poorly ventilated areas such as underground car parks. The Ecoflex Plus Heatex cables are available with a 10 mm or 15 mm outer diameter; the Aircell Heatex cables with a 5 mm or 7 mm outer diameter.

Flame Retardant for Railway Applications

The Ecoflex Plus Heatex coaxial cables are manufactured in accordance with the DIN EN 45545-2 standard and are

The coaxial cables from SSB-Electronic reduce the spread of flames and release of heat in buildings, and greatly limit the generation of smoke, corrosive fumes and burning particles

therefore also suitable for use in rail vehicles, as specified in Table 5 of this standard. Depending on the hazard level (HL), which results from the operation category and design category of the rail vehicle, the corresponding requirements for flammability, density and toxicity of fumes of the materials and components used are derived and summarized in sets of requirements. According to DIN EN 45545-2 table 5, the Ecoflex Plus Heatex coaxial cables meet fire protection level R15 for cables and wires for interior applications (component number EL1A) and are suitable for use in rail vehicles with the second highest hazard level, HL 2.

In addition to the Heatex products, SSB-Electronic offers other flame retardant and halogen-free coaxial cables that can be used in environments with lower fire safety requirements – the well-known cable brands Aircell, Ecoflex and Aircom Premium with an FRNC jacket with outer diameters ranging from 5 mm to 15 mm. These FRNC coaxial cables have the approval for the minimum fire protection class and meet basic fire protection requirements (flame retardant and free of halogen). They are therefore suitable for installations in the industrial and private construction sector, if compliance with a higher fire protection class is not required.

Marine Durability

Coaxial cables of the Seatex series for marine and offshore applications are also available. Seatex coaxial cables are intended for use in harsh marine environmental conditions due to their special weather-resistant SHF2 cable jacket and worldwide shipbuilding approval (DNV GL certificate).

The declarations of performance of the certified Heatex coaxial cables can be found on the manufacturer's website, where suitable coaxial connectors of all standards are also available. Upon request, the cables can also be delivered pre-assembled, including a detailed RF measurement report. The customer receives extremely flexible and low-loss, high quality coaxial cables that meet the specific requirements of the particular installation as well as all relevant requirements regarding fire safety.

CONTACT

SSB-Electronic
Lippstadt, Germany
Tel.: +49 2941 933850
sales@ssb-electronic.com
www.ssb-electronic.com