



**Reference:** 13101505  
**Country Ref.:** 2PN303

#### CONTACT

Markets and Products Information  
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## FIRE RESISTANT CONTROL WIRES

FLAMEX® Fire Resistant control wires TYPE EN 50306-2 maintain circuit integrity in case of fire (according to EN 50200 for 120 minutes) and are fire retardant, low smoke and halogenfree satisfying performance requirements of EN 45545-2 HL3. In addition, FLAMEX® cables withstand the tough working conditions of rolling stock (oil, ozone, temperature variations, etc.).

## STANDARDS

**Product** EN 45545-2 (HL3)

**Test** EN 50200; EN 50305; EN 50306; IEC 60331-2

## DESIGN

### 1. Conductor

Flexible stranded tinned copper

### 2. Insulation

Mineral tape as fire barrier

Thin wall halogen-free cross-linked material acc. EN 50306-2

Colour: white

Example of marking: FLAMEX 239 - EDE 2PN299 - TYPE EN 50306-2 - EN 50200 - 300 V - 1x0.5 - M - week/year - batch number

## GUIDE TO USE

- Cabling rules are given in EN 50343 and EN 50355
- Permissible current carrying capacities: values and calculation method are given in EN 50343
- Bending radius:
  - Static use: 5 x outer cable diameter
  - For installation and occasional movements: 10 x outer cable diameter



Conductor flexibility  
Flexible stranded



Halogen free  
EN 60754-1 & EN 60684-2



Rated Voltage U<sub>o</sub>/U<sub>i</sub>  
(Um)  
300 / 300 V



Fire resistant  
-



Flame retardant  
EN 60332-1-2



Fire retardant  
EN IEC 60332-3-25  
(EN50305)



Smoke density  
EN/IEC 61034-2



Gases toxicity  
EN 50305-9.2

**CHARACTERISTICS****Construction characteristics**

Conductor material	Tin plated copper
Conductor flexibility	Flexible stranded
Insulation	Cross-linked compound
Halogen free	EN 60754-1 & EN 60684-2
Insulation colour	White

**Dimensional characteristics**

Conductor cross-section	2.5 mm <sup>2</sup>
Stranding (No./mm)	
Conductor diameter (mm)	2.00
Minimum cable diameter	2.9 mm
Maximum cable diameter	3.3 mm
Approximate weight	27.6 kg/km

**Electrical characteristics**

Rated Voltage U <sub>o</sub> /U (U <sub>m</sub> )	300 / 300 V
Max. DC resistance of the conductor at 20°C	8.21 Ohm/km

**Usage characteristics**

Fire resistant	-
Flame retardant	EN 60332-1-2
Fire retardant	EN IEC 60332-3-25 (EN50305)
Smoke density	EN/IEC 61034-2
Gases toxicity	EN 50305-9.2
Operating temperature, range	-40 ... 105 °C
Maximum operating temperature	105 °C
Overload maximum core temperature	125 °C
Chemical resistance	Excellent
Fire load	0.027 kWh/m