



**Reference:** 10171573  
**Country Ref.:** 2PI232

### CONTACT

Markets and Products Information  
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## COMMUNICATION CABLES

FLAMEX® ETHERNET are intended for the train backbone and the connection to the different devices. They are designed to operate in harsh environmental conditions. FLAMEX® ETHERNET are designed to improve the protection against electromagnetic noises and provides the highest level of reliability and robustness required by the railway industry.

### STANDARDS

**Product** EN 45545-2 (HL3); EN 50264-1

### DESIGN

#### 1. Conductor

Stranded tinned copper

#### 2. Insulation

Polyethylene (PE)  
 Quad or Pairs assemblies

#### 3. Screen

Tinned copper braid  
 Separator tape

#### 4. Outer sheath

Cross-linked material EM 104 or EM 101 acc. EN 50264-1  
 Oil, diesel, ozone and UV resistant  
 Colour: black or blue

Example of marking: FLAMEX 239 - [4(2xAWG26/19 10Gigabit CAT7)]M S - EDE  
 XXXX - week/year / batch number

### ADDITIONAL INFORMATION

- 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



Flame retardant  
 EN 60332-1-2



Fire retardant  
 EN IEC 60332-3-25 (cat D)



Smoke density  
 EN/IEC 61034-2



Gases toxicity  
 EN 50305-9.2



Minimum operating temperature  
 -40 °C



Electro magnetic interference resistance  
**Yes**

## CHARACTERISTICS

### Construction characteristics

Conductor material	Tin plated copper
Type of cable	CAT 5E
Construction type	2 x (2 x 0.50 <sup>2</sup> )
Conductor flexibility	Flexible stranded
Outer sheath	Cross-linked compound
Sheath colour	Black
Core identification	B
Screen	Tinned copper braid
Halogen free	EN 60754-1 & EN 60684-2

### Dimensional characteristics

Nominal outer diameter	9.7 mm
Approximate weight	120 kg/km

### Usage characteristics

Flame retardant	EN 60332-1-2
Fire retardant	EN IEC 60332-3-25 (cat D)
Smoke density	EN/IEC 61034-2
Gases toxicity	EN 50305-9.2
Minimum operating temperature	-40 °C
Electro magnetic interference resistance	Yes
Chemical resistance	Good

## SELLING AND DELIVERY INFORMATION

### A: Color coding for pairs

N°1: white + blue  
N°2: white + orange  
N°3: white + green  
N°4: white + brown

**B: Color coding for pairs:** N°1: white + blue    N°2: yellow + orange

**C: Color coding for quads:** N°1: white + blue    N°2: yellow + orange

**D: Color coding for quads:** N°1: white + yellow    N°2: red + black