

- Standard. Construction and tests: **EN 50525-3-31, UNE 211002**
- Low voltage directive: **2014/35/UE**
- CPR Regulation (EU) n° 305/2011: **Reaction to fire: C_{ca}-s1b,d1,a1**
- **RoHS compliant.**

1. TECHNICAL FEATURES

1.1. Technical designation

H05Z1-K / ES05Z1-K (AS)

1.2. Rated voltage

300 / 500 V (U_o/U)

1.3. Maximum conductor temperature

- Normal Operation: 70 °C
- Short circuit (5 s. max): 160 °C

1.4. Voltage test

2,5 kV A.C.

1.5. Reaction to fire. Standards

- Declared performances:
C_{ca}-s1b, d1, a1 EN 50575:2014+A1:2016
 - Flame retardant
EN 60332-1-2; IEC 60332-1-2 (H≤425 mm)
 - Fire retardant
EN 50399 (20,5 kW) → (F_s ≤ 2 m)
 - Heat generation & FIGRA
EN 50399 (20,5 kW): THR ≤ 30 MJ; Peak HRR ≤ 60 kW; FIGRA ≤ 300 W/s
 - Low production and opacity of emitted smokes:
 - **s1** (EN 50399): TSP ≤ 50 m² and Peak SPR ≤ 0,25 m²/s
 - **b** (UNE EN 61034-2; IEC 61034-2): 60 % < transmittance < 80 %
 - Flaming droplets and/or particles
 - EN 50399 (20,5 kW)
 - **d1**: If no flaming droplets/particles persisting longer than 10 s occurs within 1200 seconds
 - Low acidity and conductivity of the emitted gases
 - EN 60754-2; IEC 60754-2
 - **a1**: pH≥4,3 & Conductivity < 2,5 μS/mm
- System AVCP: **1+**
- Notified body: **0099 AENOR S.A.U.**
- DoP: **MCH05Z1K**

1.6. Other fire performances:

- Flame retardant
EN 60332-1-2; IEC 60332-1 (H≤425 mm)
- Fire retardant
EN 60332-3-24 / IEC 60332-3-24 (Cat. C).
- Halogen free
EN 60754-1 / IEC 60754-1 (HCl < 0,5 % / Fluor < 0,1 %)

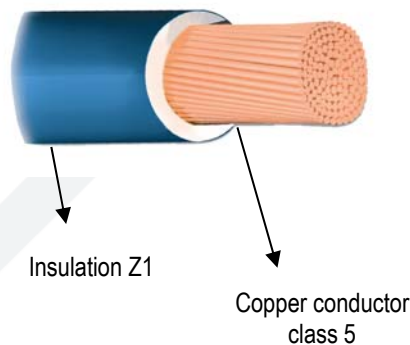
2. CABLE DESCRIPTION

2.1. Construction

It is manufactured according to European standard EN 50525-3-31 & Spanish standard UNE 211002.

- Conductor
Flexible, annealed copper conductor, class 5 acc. to the International & European standard IEC 60228, EN 60228.
Cross sectional areas: 0,5 / 0,75 y 1 mm².
- Insulation
Thermoplastic polyolefin insulation, halogen free (Type TI 7) acc. to the European standard EN 50363-7.

2.2. Picture



2.3. Marking

MIGUELEZ AFIRENAS-L H05Z1-K 1xS mm² 0.3/0.5 kV 70°C ES05Z1-K (AS) clase Cca-s1b,d1,a1 EN 50575
Made in Spain

- **S**: Cross sectional area (mm²)

The packaging labels of these cables include the CE marking according to the Construction Product Regulation (EU) N° 305/2011 articles 8 and 9.

3. APPLICATIONS¹

3.1. Type of installation

Fixed

3.2. User's guide

It is specially indicated for its use in public concurrence places (airports, museums, malls, hospitals, cinemas, schools...) and, in general, whenever an important fire risk exists or where it's required a low level of smoke and corrosive gases emissions in case of fire or burning. Its special fire performance protects public health, fireman works and avoids any possible damage to electronic equipment.

Fixed protected installation inside appliances and in lighting fittings

3.3. Suitable methods of installation

In internal wiring of electrical equipment and mechanisms in normal temperature zones (*).

(*) The maximum temperature for a conductor depends on the maximum temperature of the other cables or accessories around them.

The cables are suitable for installation in surface-mounted or embedded conduits when used only for signalling or control circuits.

- Maximum storage temperature: +40 °C.
- Maximum installation and handling temperature: +5 °C.
- Minimum temperature: -15°C (Insulated conductor permanently installed without mechanical exigencies, vibrations and movements).
- When installing, the tension applied to a cable shall not exceed the following values of tensile stress per conductor, subject to a total maximum tensile force of 1.000 N.
 - o 50 N / mm² (during installation)
 - o In circumstances where a stress exceeding these values would result, a separate stress-bearing member or device shall be used. The method of attaching such a member or device to the cable shall be such that the cable is not damaged.

4. DIMENSIONAL CHARACTERISTICS

Cross sectional area	Thickness insulation	Overall Ø*	Weight *	Maximum electrical resistance at 20°C (D.C)	Minimum insulation resistance at 70°C
mm ²	mm	mm	kg/km	Ω/km	MΩ·km
1x0,5	0,6	2,3	9,1	39,0	0,013
1x0,75	0,6	2,4	11,3	26,0	0,011
1x1	0,6	2,6	13,7	19,5	0,010

* The indicated weight and overall diameter values are approximated and subject to normal manufacturing tolerances

5. COLOURS

Core identification by colours.

(black, brown, gray, blue, yellow-green, red, white, orange, pink, turquoise, purple)

The identification of the conductors is according to the European standard EN 50525-1.

¹ It must be respected the methods of installation established by the standards and regulations that will affect each individual case