PANEL WIRE CABLES
INDOOR APLICATIONS (PVC STANDARD)

ALCOBRE
A MEMBER OF HENGTONG GROUP

H07V-K

Product group 317(E):2024-01

Rated Voltage U_0/U - 450/750 V

CABLE STANDARDS

Construction	Fire performance
EN 50525-2-31	EN 60332-1 / IEC 60332-1 Flame non-propagation
IEC 60227-3	EN 50575:2014+A1:2016

CABLE DESIGN

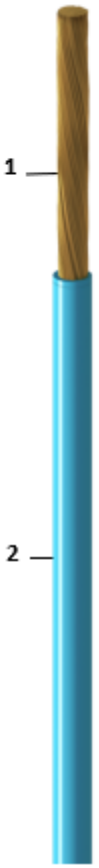
1. Conductor Flexible electrolytic annealed copper, class 5 (-K) according to IEC 60228 and EN 60228

2. Insulation PVC polyvinyl chloride, type TI1 according to EN 50363-3, and type PVC/C according to IEC 60227-1

The standard identification of insulated conductors is the following:

- Blue (RAL 5012)
- Dark Blue (RAL 5010)
- Brown (RAL8003)
- Black (RAL 9005)
- Grey (RAL 7015)
- Green/Yellow (RAL 6018/1021)
- Red (RAL 3000)
- White (RAL 9013)
- Orange (RAL 2003)

Other colors available on request.



Marking of cables by printing on the insulation, according to the standard, or customer upon agreement.
The packaging labels of these cables include the CE marking according to the Construction Product Regulation UE N. 305/2011 articles 8 and 9.
Minimum content for the external marking of the cable. There may be additional marks respecting what is indicated in the cable construction regulations.

GENERAL APPLICATIONS

Indoor applications, electric cabinet wiring and domestic use.

Transporting power in domestic or industrial environments (offices, units, indoor wiring, signaling circuits, etc.), as they are installed in surface-mounted, panels, built-in conductors, or similar enclosed systems. Extra sliding cable facilitating installation.

APPROVALS

Range **HAR**: 1 x (1,5 - 240) mm^2

Certif HAR CE REACH RoHS Compliant CPR Construction Products Regulation E_{ca} EN 50575

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CABLE SPECIFICATIONS & OTHER CHARACTERISTICS

ELECTRICAL PERFORMANCE

Rated Voltage: H07V-K 450/750 V A.C. (U_0/U)

Voltage test: 2.500 V A.C

Maximum admissible voltages (EN 50565-1)

Alternating current (A.C.):

Phase conductor and earth: 480 A
Two phase conductors: 825 A

Direct current (D.C.):

Phase conductor and earth: 620 A
Two phase conductors: 1.240 A

FIRE PERFORMANCE

Flame non-propagation
based on EN 60332-1 / IEC 60332-1 (H≤425 mm)

Reduced halogen emission. Chlorine <15%

REACTION TO FIRE (EN 50575:2014+A1:2016)

Class E_{ca}

It satisfies the non-flame propagation test, without additional classifications.

DECLARATION of PERFORMANCE

DoP: 005/rev.**

System 3 Notified body N. 0028

PACKAGING

Available in rolls and drums:

Maximum storage temperature: 40 ºC

APPLICATIONS (FIXED INSTALLATION)

Electrical panel use

Domestic use

CHEMICAL PERFORMANCE

Chemical & Oil resistance: acceptable

MINIMUM BENDING RADIUS

D= Overall diameter of the insulated conductor (in mm).

Handling and during Installation:
4xD (D ≤ 8); 5xD (8 < D ≤ 12); 6xD (12 < D ≤ 20); 6xD (D > 20)

Fixed: 3xD (≤ 8 D ≤ 12); 4xD (12 D ≤ 20); 4xD (D > 20)

Minimum bending radii at cable temperature of 20 ºC (± 10ºC)

HIGH FLEXIBILITY

Copper conductor class 5

THERMAL PERFORMANCE

Maximum conductor temperature:
Maximum operation: 70 ºC
Short circuit: 160 ºC (t≤5s)

MINIMUM SERVICE TEMPERATURE

-40 ºC (fixed and protected installations)

MAXIMUM PULLING FORCE (N)

The maximum pulling force must not exceed:

F = 50 x S (N), where "S" is the cross-sectional area of the conductors (mm^2) and 50 N/mm^2 is the permissible tensile stress for cables with copper conductors If the traction force is applied on the conductors.

Recommended not to exceed 1000 N.

WATER PERFORMANCE

Water resistance: AD3 water sprays

APPROVALS

Certif HAR / CE / REACH / RoHS / CPR

SUITABLE FOR THE FOLLOWING INSTALLATIONS

In tube, cable ducting or similar closed systems

Individual by-pass

Indoor or receiver installations

Public premises

Maximum installation and handling temperature: +5 ºC

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PHYSICAL AND ELECTRICAL CHARACTERISTICS

Alcobre Code	Cross Section nc x mm²	Thickness of insulation mm	Nominal insulation diameter mm	Nominal weight kg/km	Max. DC resistance conductor at 20ºC Ω/km	Max. current rating Air 30 ºC A	Voltage drop Cos φ= 0,8 V/A.km
31701001	1x1,5	0,7	2,9	20	13,3	16	25,581
31702001	1x2,5	0,8	3,6	32	7,98	21	15,392
31703001	1x4	0,8	4,1	46	4,95	28	9,586
31704001	1x6	0,8	4,7	64	3,30	36	6,421
31705001	1x10	1,0	6,1	110	1,91	50	3,759
31706001	1x16	1,0	7,0	161	1,21	68	2,413
31707001	1x25	1,2	8,8	251	0,78	89	1,377
31708001	1x35	1,2	9,8	343	0,554	110	0,999
31709001	1x50	1,4	11,6	493	0,386	134	0,720
31710001	1x70	1,4	13,1	650	0,272	171	0,528
31711001	1x95	1,6	15,0	872	0,206	207	0,419
31712001	1x120	1,6	17,0	1.072	0,161	239	0,342
31713001	1x150	1,8	18,6	1.350	0,129	262	0,290
31714001	1x185	2,0	20,5	1.662	0,106	296	0,252
31715001	1x240	2,2	23,5	2.177	0,0801	346	0,208

- On the Air the current rating is in according to IEC 60364-5-52 table B.52.4, installation method B1, three loaded conductors.

➢ Nominal values subject to variation depending on manufacturing or standard tolerance.

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