

## H07V-K (X07V-K)

DB4520001EN

valid from: 2013-01-15

**H07V-K (X07V-K) Data sheet EN**  
**CENELEC HARMONISED CABLE TYPE**

H07V-K

**CABLE TYPE CERTIFICATION**

- H07V-K ◀HAR▶ (arrowheads are permitted to be left void, also) acc. to the European norm EN 50525-2-31, the cable type standard of H07V-K
- Not certifiable core insulation colours acc. EN 50525-1: Transparent, yellow (single colour), green (single colour), all double-coloured (except of green-yellow, which means green-yellow and yellow-green are certified)
- No H07V-K cable type certification at all for parts with twin colour helix insulation

**APPLICATION** (harmonisation document HD 516)

The single-layer PVC insulated, European hook-up wire „H07V-K“ is a flexible single-core without nylon jacket, for static, appliance internal laying, e. g. for control cabinet internal wiring, for static installation in electrical installation conduits/tubes/ducts laid on or under plaster, in closed installation channels or in similar, closed systems. However, these cables must not be installed directly on housings, racks, files, shelves, cupboards, assembly groups, trenches, troughs, conduits, tubes, pipes or ducts in a touchable way. According to harmonisation document HD 516, H07V-K is suitable for protected, static installation in or on lighting equipment or control units for voltages up to 1000 V AC or 750 V DC against ground. Contact with water or chemically claiming substances, such as oil, must be strictly avoided. In general, H07V-K can be used for the laying in electrical installation conduits/tubes/ducts, openable electrical installation channels, closed electrical installation channels as well as for the wiring inside of devices, tools, appliances, machines and equipment. Anyway, the normal temperature range must be complied with – the maximum, permitted conductor temperature amounts to +80°C. In case of operation in conjunction with other H07V-K, other cables or sets inside electrical installation conduits/tubes/ducts/pipes/channels, a single H07V-K's conductor temperature also depends on the heat loss of further, possibly installed H07V-K, other cable types and miscellaneous sets which parallel inside there, which each single H07V-K can get in physical contact with and which heat up the internal atmosphere by means of running, electrical current (please, see HD 516, HD 384.5.523 and IEC 60364-5-523 for current ratings and correction factors). Such kind of clustering of cables implies the attention to the requirement that the upper conductor and surface temperature of the weakest cable, as regards the upper continuous conductor temperature limit, as part of the cluster, which can be H07V-K by all means, shall not be exceeded.

**DESIGN** (EN 50525-2-31)

|  |   |
|--|---|
| Conductor  | Copper strands  |
| IEC conductor class  | Fine-wired/conductor class 5 acc. IEC 60228, for static installation  |
| Range of nominal IEC conductor cross sections in mm <sup>2</sup> | 1.5 to 240 acc. IEC 60228, conductor class 5<br>(only up to 2.5 in conjunction with twin colour helix insulation) |
| Hook-up wire's core insulation compound material                 | Tl1, PVC based, acc. EN 50363-5   |

**ELECTRICAL PROPERTIES @ +20°C** (EN 50525-2-31, appendix A, table A.1)

|   |                              |
|---|------------------------------|
| IEC rated H07 voltage class U <sub>0</sub> /U | 450/750 V AC                 |
| H07V-K test voltage acc. EN 50525-2-31        | 2500 V AC                    |
| Ohmic conductor DC resistance                 | IEC 60228, conductor class 5 |

**MECHANICAL, CHEMICAL AND THERMAL PROPERTIES**

|   |   |   |
|---|---|---|
| Minimum bending radii @ cable temperature of +20°C ±10°C (HD 516) | OD* ≤ 8 mm<br>8 mm < OD* ≤ 12 mm<br>OD* > 12 mm   | 4**OD*/2***OD*<br>5**OD*/3***OD*<br>6**OD*/4***OD*        |
| Impact test @ -5°C acc. EN 50525-2-31, appendix A, table A.1      | IEC 60811-1-4/EN 60811-1-4, section 8.5   |   |
| Marginal temperatures (HD 516; Lapp)                              | Continuous load, conductor temperature, unmoved<br>Continuous load, conductor temperature, moved<br>Short-circuit/earth fault (≤ 5 sec.), conductor temp.<br>Ambient temperature at storage | max. +80 °C<br>max. +70 °C<br>max. +160 °C<br>max. +40 °C |
| Flame retardance acc. EN 50525-2-31, appendix A, table A.1        | IEC 60332-1-2/EN 60332-1-2/VDE 0482-332-1-2   |   |
| European low voltage EC directive (LVD) 2006/95/EC                | This cable conforms to the low voltage directive 2006/95/EC.  |   |
| Substance restrictions acc. EU RoHS**** directive 2011/65/EU      | Chemically, the cable doesn't exceed the hazardous substance concentration restrictions for homogeneous design parts, as per the European RoHS**** directive 2011/65/EU.                    |   |

\* OD = outer cable diameter

\*\* at normatively intended use of H07V-K as per HD 516

\*\*\* at cautious bending

\*\*\*\* RoHS = Restriction of (the use of certain) Hazardous Substances