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U.I. Lapp GmbH	DATA SHEET	LAPP KABEL

H07V-K (X07V-K)

DB4520001EN
valid from: 2010-08-20

MAKE-UP TYPE
H07V-K

CERTIFICATION
H07V-K ◄HAR► (arrowheads can be blank also) according to harmonisation document HD 21.3/VDE 0281-3

APPLICATION (HD 516/VDE 0298-300)
The single-conductor cable H07V-K is a flexible, non-sheathed cable for fix, internal wiring, that is, for fixed installation in pipes on, in and under plaster, in closed installation channels or in similar, closed systems. But these cables mustn't be used for direct laying on racks, troughs and tubes. H07V-K is suitable for protected, fix laying, in or on lighting equipment or control and switching devices for voltages up to 1000 V AC or up to 750 V DC to ground. Contact with water is forbidden. Basically, H07V-K can be used for the laying in rigid conduits, installation channels meant to be opened and closed installation channels as well as for the wiring inside of tools, devices, appliances and operating material, provided the normal temperature range is respected. In case of laying inside of rigid conduits, tubes, pipes, installation channels, the conductor temperature reached also depends on the lost heat of further H07V-K, other types of cables or mountings laid inside of the conduit, too, and which any single H07V-K single-conductor cable gets or could get in touch with. Moreover, the maximum conductor temperature truly operated of H07V-K installed inside of pipes, tubes, installation channels and conduits depends on the maximum surface and conductor temperatures of other cable types and mountings that are laid inside in parallel possibly.

PERMISSIBLE VOLTAGES (HD 21.1/VDE 0281-1)

Rated, conductor-to-ground (PE) (U_0)	450 V AC/675 V DC; 600 V AC****/900 V DC****
Rated, conductor (not PE)-to-conductor (not PE) (U)	750 V AC/1125 V DC; 1000 V AC****/1500 V DC****
Operated, conductor-to-ground (PE) (U_0)	495 V AC/742.5 V DC; 660 V AC****/990 V DC****
Operated, conductor (not PE)-to-conductor (not PE) (U)	825 V AC/1237.5 V DC; 1100 V AC****/1650 V DC****

MAKE-UP (HD 21.3/VDE 0281-3)

Conductor	Bare copper strands
Conductor class	Fine-wired/Class 5 according to IEC 60228/EN 60228/VDE 0295
Cross sections in mm²	1.5 to 240
Insulation	PVC-based compound TI 1 according to HD 21.1/VDE 0281-1 Wall thicknesses in line with HD 21.3/VDE 0281-3
Outer cable diameter	HD 21.3/VDE 0281-3

ELECTRICAL PROPERTIES AT +20 °C (HD 21.3/VDE 0281-3)

Rated voltage U_0/U	450/750 V AC
Test voltage	2500 V AC

MECHANICAL, CHEMICAL AND THERMAL PROPERTIES

Category temperature (HD 516/VDE 0298-300; Lapp)	Permanent load	+80 °C max.
	Short-to-ground (5 sec maximally)	+160 °C max.
	Cable surface	+70 °C max.
	Laying and handling	+5 °C min.
	Ambient temperature during storage	+40 °C max.
	Cable surface during storage and at direct solar radiation	+60 °C max.
Minimum bending radii (HD 516/VDE 0298-300)	OD* ≤ 8 mm	4**OD*/2***OD*
(at a cable temperature of +10 °C to +30 °C)	8 mm < OD* ≤ 12 mm	5**OD*/3***OD*
	OD* > 12 mm	6**OD*/4***OD*
Current rating	HD 516/VDE 0298-300 VDE 0298-4	
Cold bending up to the average OD* of 12.5 mm	HD 21.3/VDE 0281-3; EN 60811-1-4, 8.1/VDE 0473-811-1-4, 8.1	
Cold elongation above the average OD* of 12.5 mm	HD 21.3/VDE 0281-3; EN 60811-1-4, 8.3/VDE 0473-811-1-4, 8.3	
Heat shock	HD 21.3/VDE 0281-3; EN 60811-3-1, 9.1/VDE 0473-811-3-1, 9.1	
Heat pressure	HD 21.3/VDE 0281-3; EN 60811-3-1, 8.1/VDE 0473-811-3-1, 8.1	
Flame retardance	HD 21.3/VDE 0281-3; IEC 60332-1-2/EN 60332-1-2/VDE 0482-332-1-2	
Ozone resistance	**Not ozone-resistant** (insulation compound TI 1 acc. to HD 21.1/VDE 0281-1)	
European EC low voltage directive	This cable complies with ECD 73/23/EEC (LVD – low voltage directive).	

* OD = outer cable diameter
** if used H07V-K-conventionally according to HD 516/VDE 0298-300
*** at cautious bending
**** at fix laying with mechanical protection in switch and control stations/cabinets/systems according to HD 516/VDE 0298-300

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