

CABLE DATA for H07V-U (R, K)

General Information



Cable Standard(s)

- EN 50525-2-31, IEC 60227-3.

Construction Product Regulation (CPR) Classification

- Regulation: Compliant with the EU Regulation (EU) No. 305/2011 on construction products.
- Intended Use: Suitable for general applications in construction works with fire safety requirements.
- Harmonized Standard: EN 50575:2014.
- Reaction to Fire Classification: Eca (according to EN 13501-6).
- Release of Dangerous Substances: N.P.D. (No Performance Determined).

Flame Retardant Properties

- The cable complies with the self-extinguishing requirements specified in EN 60332-1-2 (single vertical wire flame test).

Temperature Ratings

- Minimum installation and handling temperature: 0°C
- Maximum continuous conductor operating temperature: +70°C
- Maximum conductor temperature during short-circuit (≤ 5 seconds): +160°C
- Permissible ambient temperature range during operation: -30 °C to +50°C

Minimum internal bending radius (D = external diameter of the cable):

- $8 \times D$ for H07V-U and H07V-R
- $6 \times D$ for H07V-K

Scope of Application

- H07V-U: Intended for installation inside electrical equipment and control panels, or for protected routing within conduits. Provides reliable performance in fixed wiring where flexibility is not required.
- H07V-R: Suitable for power and lighting circuits as well as general building wiring. Designed for use in semi-exposed or embedded conduits, including enclosed ducts. Commonly applied for internal wiring of appliances and fixed installations requiring moderate flexibility.
- H07V-K Used for internal wiring of electrical devices, lighting fixtures, and switchboards, serving as a connecting conductor in signal and control circuits. Intended for installation in dry environments, within open wiring channels. Not suitable for direct embedding in plaster.

Cable Construction and Electrical Properties

Conductor(s)

- Copper conductor: solid (Class 1) for H07V-U, stranded (Class 2) for H07V-R, and fine-wire stranded (Class 5) for H07V-K, in accordance with IEC 60228 Clause 5.

Insulation

- PVC compound type TI1, compliant with EN 50363-3.
- Insulation color coding according to HD 308 S2.

Sheath

- No outer sheath.

Rated Voltage

- $U_0/U = 450/750$ V.

Test Voltage

- 2,5 kV AC

Ampacity chart

Cross Section	Method A		Method B		Method C		Method F				
							Touching			Spaced by 1xD	
mm ²	2 cables	3 or 4 cables	2 cables	3 or 4 cables	2 cables	3 or 4 cables	2 cables	3 cables flat	3 cables	horiz.	vertic.
1,5	14,5	13,5	17,5	15,5	20	18	–	–	–	–	–
2,5	20	18	24	21	27	25	–	–	–	–	–
4	26	24	32	28	37	33	–	–	–	–	–
6	34	31	41	36	47	43	–	–	–	–	–
10	46	42	57	50	65	59	–	–	–	–	–
16	61	56	76	68	87	79	–	–	–	–	–
25	80	73	101	89	114	104	131	114	110	146	130
35	99	89	125	110	141	129	162	143	137	181	162
50	119	108	151	134	182	167	196	174	167	219	197
70	151	136	192	171	234	214	251	225	216	281	254
95	182	164	232	207	284	261	304	275	264	341	311
120	210	188	269	239	330	303	352	321	308	396	362
150	240	216	300	262	381	349	406	372	356	456	419
185	273	245	341	296	436	400	463	427	409	521	480
240	321	286	400	346	515	472	546	507	485	615	569

- The above table is in accordance with Table 4D1A of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52.
- For bundled cables, higher ambient temperatures, or longer runs, derating factors must be applied.

Dimensional Specifications

Nº	Construction [n×mm²]	Metal index [kg/km]	Weight (approx.) [kg/km]	Diameter (range) [mm]	Resistance at 20°C [Ω/km]
H07V-U					
1	1×1,5	14,4	20	2,6–3,2	12,1
2	1×2,5	24,0	31	3,2–3,9	7,41
3	1×4,0	38,4	46	3,6–4,4	4,61
4	1×6,0	57,6	65	4,1–5,0	3,08
5	1×10,0	96,0	110	5,3–6,4	1,83
H07V-K					
1	1×1,5	14,4	20,6	2,8–3,4	13,3
2	1×2,5	24	32,1	3,4–4,1	7,98
3	1×4	38,4	47,5	3,9–4,8	4,95
4	1×6	57,6	68,3	4,4–5,3	3,3
5	1×10	96	115	5,7–6,8	1,91
6	1×16	153,6	170	6,7–8,1	1,21
7	1×25	240	270	8,4–10,2	0,78
8	1×35	336	355	9,7–11,7	0,554
9	1×50	480	529	11,5–13,9	0,386
10	1×70	672	742	13,2–16,0	0,272
11	1×95	912	958	15,1–18,2	0,206
12	1×120	1152	1300	16,7–20,2	0,161
13	1×150	1140	1600	18,6–22,5	0,129
14	1×185	1776	1900	20,6–24,9	0,106
15	1×240	2304	2400	23,5–28,4	0,0801
16	1×300	2667	2900	26,0–30,5	0,0641

- H07V-R variant provided upon customer-initiated order