

H05V-K / H07V-K Flexible Cable



APPLICATION

PVC panel wiring for use in the switch control, relay and instrumentation panels of power switchgear and for purposes such as internal connectors in rectifier equipment, motor starters and controllers.

CHARACTERISTICS

Voltage Rating U_0/U

H05V-K: 300/500V

H07V-K: 450/750V

Operating Temperature

Fixed: -30°C to +70°C

Flexed: -5°C to +70°C

Minimum Bending Radius

Fixed: 6 x overall diameter

STANDARDS

EN 50525-2-31, EN 60228

Flame Retardant according to IEC/EN 60332-1-2

UV Resistant

CONSTRUCTION

Conductor

Class 5 flexible copper conductor

Insulation

PVC (Polyvinyl Chloride)

Insulation Colour

Red Black Blue Orange Yellow White

Green/Yellow Grey Brown Violet Pink

THE CABLE TEST

We have world-class testing facility, and made rigorous testing regime, every meter of cable before leaving the factory must go through strict testing, testing qualified products will be shipped to customers, effectively ensure product quality and meet customer requirements.

SUSTAINABILITY COMMITMENT

Guowang Cable actively implements the "carbon reduction" goal, strives to promote the green's low-carbon transformation, strengthens energy-saving and emission reduction technology innovation, and promotes the company's healthy and sustainable development.

DIMENSIONS

H05V-K

NOMINAL CROSS SECTIONAL AREA	NOMINAL OVERALL DIAMETER	NOMINAL WEIGHT
mm ²	mm	kg/km
0.5	2.2	9.1
0.75	2.4	11.7
1	2.55	14.4

H07V-K

NOMINAL CROSS SECTIONAL AREA	NOMINAL OVERALL DIAMETER	NOMINAL WEIGHT
mm ²	mm	kg/km
1.5	3	20.1
2.5	3.65	31.5
4	4.2	46.2
6	4.8	65.1
16	7.4	165.2
35	10.4	345.5
70	14.1	669.3
95	17.2	910.4
120	17.7	1129.4
150	19.6	1401
185	23	1741
240	26.4	2267.5

COLOUR CODES

COLOUR	Black	Blue	Grey	Green/Yellow	Orange	Red	Pink	Yellow	Violet	Brown	White
CODE	BK	BL	GR	GY	OR	RD	PK	YW	VI	BR	WH

CONDUCTORS

Class 5 Flexible Copper Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA	MAXIMUM DIAMETER OF WIRES IN CONDUCTOR	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km Plain Wires
mm ²	mm	
0.5	0.21	39
0.75	0.21	26
1	0.21	19.5
1.5	0.26	13.3
2.5	0.26	7.98
4	0.31	4.95
6	0.31	3.3
10	0.41	1.91
16	0.41	1.21
25	0.41	0.78
35	0.41	0.554
50	0.41	0.386
70	0.51	0.272

NOMINAL CROSS SECTIONAL AREA	MAXIMUM DIAMETER OF WIRES IN CONDUCTOR	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km
mm ²	mm	Plain Wires
95	0.51	0.206
120	0.51	0.161
150	0.51	0.129
185	0.51	0.106
240	0.51	0.0801

ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA	REFERENCE METHOD A (ENCLOSED IN CONDUIT IN THERMALLY INSULATING WALL ETC) Amps		REFERENCE METHOD B (ENCLOSED IN CONDUIT IN WALL OR IN TRUNKING ETC) Amps		REFERENCE METHOD C (CLIPPED DIRECT) Amps		REFERENCE METHOD F (IN FREE AIR OR ON A PERFORATED CABLE TRAY ETC HORIZONTAL OR VERTICAL ETC) Amps				
							Touching			Spaced by one diameter 2 Cables Single-Phase AC or DC or 3 Cables Three-Phase AC flat	
	2 Cables Single-Phase AC or DC	3 or 4 Cables Three-Phase AC	2 Cables Single-Phase AC or DC	3 or 4 Cables Three-Phase AC	2 Cables Single-Phase AC or DC	3 or 4 Cables Three-Phase AC	2 Cables Single-Phase AC or DC flat	3 Cables Three-Phase AC flat	3 Cables Three-Phase AC trefoil	Horizontal	Vertical
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

Ambient temperature: 30°C

Conductor operating temperature: 70°C

For Class 5 flexible conductors the tabulated values for current carrying capacity or voltage drop are multiplied by the following factors:

CABLE SIZE ≤ 16mm ²	CURRENT CARRYING CAPACITY: 0.95	VOLTAGE DROP: 1.10
CABLE SIZE ≥ 25mm ²	CURRENT CARRYING CAPACITY: 0.97	VOLTAGE DROP: 1.06

VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA	2 CABLES DC	2 CABLES SINGLE-PHASE AC mV/A/m									3 OR 4 CABLES THREE-PHASE AC mV/A/m											
		Reference Methods A and B enclosed in conduit or trunking)			Reference Methods C, F and G (clipped direct, on tray or in free air)						Reference Methods A and B enclosed in conduit or trunking)			Reference Methods C, F and G (clipped direct, on tray or in free air)								
mm ²	mV/A/m													Cables touching, Trefoil			Cables touching, Flat			Cables spaced*, Flat		
1.5	28	29			29						25			25			25			25		
2.5	18	18			18						15			15			15			15		
4	11	11			11						9.5			9.5			9.5			9.5		
6	7.3	7.3			7.3						6.4			6.4			6.4			6.4		
10	4.4	4.4			4.4						3.8			3.8			3.8			3.8		
16	2.8	2.8			2.8						2.4			2.4			2.4			2.4		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
25	1.75	1.80	0.33	1.80	1.75	0.20	1.75	1.75	0.29	1.80	1.50	0.29	1.55	1.50	0.18	1.50	0.15	0.25	1.55	1.50	0.32	1.55
35	1.25	1.30	0.31	1.30	1.25	0.20	1.25	1.25	0.28	1.30	1.10	0.27	1.10	1.10	0.17	1.10	1.10	0.24	1.10	1.10	0.32	1.15
50	0.93	0.95	0.30	1.00	0.93	0.19	0.95	0.93	0.28	0.97	0.81	0.26	0.85	0.80	0.17	0.82	0.80	0.24	0.84	0.80	0.32	0.86
70	0.63	0.65	0.29	0.72	0.63	0.19	0.66	0.63	0.27	0.69	0.56	0.25	0.61	0.55	0.16	0.57	0.55	0.24	0.60	0.55	0.31	0.63
95	0.46	0.49	0.28	0.56	0.47	0.18	0.50	0.47	0.27	0.54	0.42	0.24	0.48	0.41	0.16	0.43	0.41	0.23	0.47	0.40	0.31	0.51
120	0.36	0.39	0.27	0.47	0.37	0.18	0.41	0.37	0.26	0.45	0.33	0.23	0.41	0.32	0.15	0.36	0.32	0.23	0.40	0.32	0.30	0.44
150	0.29	0.31	0.27	0.41	0.30	0.18	0.34	0.29	0.26	0.39	0.27	0.23	0.36	0.26	0.15	0.30	0.26	0.23	0.34	0.26	0.30	0.40
185	0.23	0.25	0.27	0.37	0.24	0.17	0.29	0.24	0.26	0.35	0.22	0.23	0.32	0.21	0.15	0.26	0.21	0.22	0.31	0.21	0.30	0.36
240	0.18	0.20	0.26	0.33	0.19	0.17	0.25	0.19	0.25	0.31	0.17	0.23	0.29	0.16	0.15	0.22	0.16	0.22	0.27	0.16	0.29	0.34
300	0.15	0.16	0.26	0.31	0.15	0.17	0.22	0.15	0.25	0.29	0.14	0.23	0.27	0.13	0.14	0.19	0.13	0.22	0.25	0.13	0.29	0.32
400	0.11	0.13	0.26	0.29	0.12	0.16	0.20	0.12	0.25	0.27	0.12	0.22	0.25	0.11	0.14	0.18	0.11	0.21	0.24	0.10	0.29	0.31
500	0.086	0.11	0.26	0.28	0.98	0.155	0.185	0.093	0.24	0.26	0.10	0.22	0.25	0.086	0.135	0.16	0.086	0.21	0.23	0.081	0.29	0.30
630	0.068	0.094	0.25	0.27	0.081	0.155	0.175	0.076	0.24	0.25	0.08	0.22	0.24	0.072	0.135	0.15	0.072	0.21	0.22	0.066	0.28	0.29

Conductor operating temperature: 70°C

r = Resistive Component

x = Reactive Component

z = Impedance Value

*Spacings larger than one cable diameter will result in a larger voltage drop

DE-RATING FACTORS

For Ambient Air Temperatures other than 30°C

AMBIENT TEMPERATURE	25°C	30°C	35°C	40°C	45°C	50°C	55°C
DE-RATING FACTOR	1.03	1.00	0.94	0.87	0.79	0.71	0.61