

H07V-R / H07V-U Cable



APPLICATION

H07V-R/H07V-U is suitable for power and lighting circuits and building wiring. The cable is intended for use in semi-flush exposed conduits and embedded conduits as well as in closed installation ducts, and is ideal for the internal wiring of appliances.

CHARACTERISTICS

Voltage Rating U_0/U

450/750V

Operating Temperature

-15°C to +70°C

Minimum Bending Radius

Up to 10mm²: 3 x overall diameter

10mm² to 25mm²: 4 x overall diameter

Above 25mm²: 5 x overall diameter

STANDARDS

EN 50525-2-31

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

CONSTRUCTION

Conductor

Class 2 stranded copper conductor

Insulation

PVC (Polyvinyl Chloride)

Insulation Colour

Red Black Blue Yellow White Green/Yellow

Grey Brown

Note

5mm² to 10mm² also available as H07V-U

Class 1 solid copper conductor

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

NOMINAL CROSS SECTIONAL AREA	NOMINAL THICKNESS OF INSULATION	NOMINAL OVERALL DIAMETER	NOMINAL WEIGHT
mm ²	mm	mm	kg/km
1.5	0.7	2.9	22
2.5	0.8	3.6	32
4	0.8	4.1	50
6	0.8	4.7	71
10	1	5.9	110
16	1	6.8	164
25	1.2	8.4	256
35	1.2	9.4	346
50	1.4	11	473
70	1.4	12.7	674
95	1.6	14.7	913
120	1.6	16.2	1150
150	1.8	18	1416
185	2	20	1749
240	2.2	23	2317
300	2.4	25.2	3049
400	2.6	28.4	3657
500	2.8	31.8	4700
630	2.8	38.1	5890

COLOUR CODES

COLOUR CODE	Black BK	Blue BL	Grey GR	Green/Yellow GY	Red RD	Yellow YW	Brown BR	White WH
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CONDUCTORS

Class 2 Stranded Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA	MINIMUM NO. OF WIRES IN CONDUCTOR mm						MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor
mm ²	Cu	Al	Cu	Al	Cu	Al	Plain Wires
1.5	7	-	6	-	-	-	12.1
2.5	7	-	6	-	-	-	7.41
4	7	-	6	-	-	-	4.61
6	7	-	6	-	-	-	3.08
10	7	7	6	6	-	-	1.83
16	7	7	6	6	-	-	1.15
25	7	7	6	6	6	6	0.727
35	7	7	6	6	6	6	0.524
50	19	19	6	6	6	6	0.387
70	19	19	12	12	12	12	0.268
95	19	19	15	15	15	15	0.193
120	37	37	18	15	18	15	0.153
150	37	37	18	15	18	15	0.124
185	37	37	30	30	30	30	0.0991
240	37	37	34	30	34	30	0.0754
300	61	61	34	30	34	30	0.0601
400	61	61	53	53	53	53	0.047
500	61	61	53	53	53	53	0.0366
630	91	91	53	53	53	53	0.0283

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	
mm ²	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
300	367	328	458	394	594	545	629	587	561	709	659
400	-	-	546	467	694	634	754	689	656	852	795
500	-	-	626	533	792	723	868	789	749	982	920
630	-	-	720	611	904	826	1005	905	855	1138	1070

Ambient temperature: 30°C

Conductor operating temperature: 70°C

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)								
					Cables Touching			Cables Spaced*						Cables touching, Trefoil			Cables touching, Flat			Cables spaced*, Flat		
mm2	mV/A /m																					
1.5	28	29			29			29			25			25			25			25		
2.5	18	18			18			18			15			15			15			15		
4	11	11			11			11			9.5			9.5			9.5			9.5		
6	7.3	7.3			7.3			7.3			6.4			6.4			6.4			6.4		
10	4.4	4.4			4.4			4.4			3.8			3.8			3.8			3.8		
16	2.8	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