



Features

- Maximum conductor operating temperature: +60°C*
- Maximum conductor temperature during short circuit: +250°C
- Lowest ambient temperature for fixed installation: -40°C
- Lowest ambient temperature for mobile installation: -25°C
- UV, sunlight, oil resistant

* Max continuous operating conductor temperature in normal use:

+60°C (in every case of mobile installation)

+85°C (fixed protected installation)

Applications

- The cables may be rated 0.6/1 kV where the installation has been built in protection and for motors in lifting appliances - machine tools etc.
- Heavy-duty flexible cables for medium mechanical stress in dry and wet, suitable for large boiling installations, heating plates.
- Inspections lamps, electrical tools such as drills circular saws.
- Domestic electric tools, transportable motors etc.
- Other industrial applications

Standard length cable packing 1000m on drums. Other forms of packing and delivery are available on request.

Construction

Conductors	Annealed flexible stranded tin coated or bare copper class 5 to EN 60228		
Separator	If needed a suitable tape separator between the conductor and insulation		
Insulation	Ethylene-propylene rubber (EPR) type EI4 in acc. to EN 50363-1		
Circuit Identification	Colour coding of power conductors comply to HD 308, DIN VDE 0293-308		
	Number of cores	G (earth core)	x (without earth core)
	2	-	Blue and Brown
	3	Green-yellow, Blue, Brown	Brown, Black, Grey Blue, Brown, Black ^a
	4	Green-yellow, Brown, Black, Grey Green-yellow, Blue, Brown, Black ^a	Blue, Brown, Black, Grey
	5	Green-yellow, Blue, Brown, Black, Grey	Blue, Brown, Black, Grey, Black
	> 5	Green-yellow, other cores black with white numbering	Black with white numbering
	*for certain applications only		
Internal Jacket	A synthetic thermosetting compound type EM3 in acc. to EN 50363-2-1 (above 2, 3, 4, 5 x 6 mm ² and 1 x 50 mm ²)		
Outer Jacket	A synthetic thermosetting compound type EM2 in acc. to EN 50363-2-1		
Colour of Outer Jacket	Black or colours can be provided		
Flame Propagation	EN 60332-1-2: 2004, IEC 60332-1-2: 2004		

Minimum Bending Radius

Minimum Bending Radius:	For Cable Diameter D (mm)			
	D ≤ 8	8 < D ≤ 12	12 < D ≤ 20	D > 20
For fixed installation:	3 D	3 D	4 D	4 D
At inlet of portable appliance or mobile equipment. No mechanical load on cable	4 D	4 D	5 D	6 D
Under mechanical load	6 D	6 D	6 D	8 D

H07RN-F 450/750V EN 50525-2-21

Size	Number** Maximum Diameter of Wire	Nominal Thickness of Insulation	Nominal Thickness of Jacket			Approx. O. D. of Cable	Voltage Drop	Approx. Weight of Cable	Maximum Conductor Resistance at 20°C
			Single	Double Layer					
				Internal	Outer				
(n x mm ²)	(mm)	(mm)	(mm)	(mm)	(mm)	(V/A/km)	(kg/km)	(Ω/km)	
1 x 1*	29 x 0.2	0.8	1.4	-	-	5.6	-	43	20.0
1 x 1.5	28 x 0.26	0.8	1.4	-	-	5.7	23.73	49	13.7
1 x 2.5	45 x 0.26	0.9	1.4	-	-	6.4	14.22	65	8.21
1 x 4	51 x 0.31	1.0	1.5	-	-	7.3	8.82	89	5.09
1 x 6	76 x 0.31	1.0	1.6	-	-	7.9	5.88	114	3.39
1 x 10	74 x 0.41	1.2	1.8	-	-	9.8	3.38	178	1.95
1 x 16	116 x 0.41	1.2	1.9	-	-	11.1	2.16	248	1.24
1 x 25	180 x 0.41	1.4	2.0	-	-	12.9	1.39	356	0.795
1 x 35	254 x 0.41	1.4	2.2	-	-	14.3	0.99	476	0.565
1 x 50	364 x 0.41	1.6	2.4	-	-	16.8	0.70	657	0.393
1 x 70	514 x 0.51	1.6	-	1.0	1.6	19.0	0.51	884	0.277
1 x 95	684 x 0.51	1.8	-	1.1	1.7	21.9	0.40	1156	0.210
1 x 120	870 x 0.51	1.8	-	1.2	1.8	23.4	0.33	1420	0.164
1 x 150	1092 x 0.51	2.0	-	1.3	1.9	26.0	0.28	1762	0.132
1 x 185	1325 x 0.51	2.2	-	1.4	2.0	29.1	0.24	2145	0.108
1 x 240	1752 x 0.51	2.4	-	1.4	2.1	31.2	0.20	2720	0.0817
1 x 300	2203 x 0.51	2.6	-	1.4	2.2	35.4	0.19	3385	0.0654
1 x 400	2904 x 0.51	2.8	-	1.5	2.3	38.4	0.17	4196	0.0495
1 x 500	3679 x 0.61	3.0	-	1.6	2.4	43.5	0.16	5431	0.0391
1 x 630	4880 x 0.61	3.0	-	1.6	2.5	48.4	0.15	6300	0.0292
2 x 1	29 x 0.21	0.8	1.3	-	-	7.9	40.00	89	20.0
2 x 1.5	28 x 0.26	0.8	1.5	-	-	8.9	27.40	116	13.7
2 x 2.5	45 x 0.26	0.9	1.7	-	-	10.6	16.42	167	8.21
2 x 4	51 x 0.31	1.0	1.8	-	-	12.1	10.18	227	5.09
2 x 6	76 x 0.31	1.0	2.0	-	-	13.7	6.78	301	3.39
2 x 10	74 x 0.41	1.2	-	1.2	1.9	18.9	3.90	559	1.95
2 x 16	116 x 0.41	1.2	-	1.3	2.0	21.6	2.49	765	1.24
2 x 25	180 x 0.41	1.4	-	1.4	2.2	25.3	1.60	1092	0.795
2 x 35	254 x 0.41	1.4	-	1.5	2.3	28.2	0.99	1399	0.565
2 x 50	364 x 0.41	1.6	-	1.7	2.5	32.4	0.79	1890	0.393
3 x 1	29 x 0.21	0.8	1.4	-	-	8.5	34.64	107	20.0
3 x 1.5	28 x 0.26	0.8	1.6	-	-	9.5	23.73	137	13.7
3 x 2.5	45 x 0.26	0.9	1.8	-	-	11.3	14.22	202	8.21
3 x 4	51 x 0.31	1.0	1.9	-	-	13.8	8.82	292	5.09
3 x 6	76 x 0.31	1.0	2.1	-	-	15.0	5.87	390	3.39
3 x 10	74 x 0.41	1.2	-	1.3	2.0	20.2	3.38	684	1.95
3 x 16	116 x 0.41	1.2	-	1.4	2.1	23.1	2.15	944	1.24
3 x 25	180 x 0.41	1.4	-	1.5	2.3	27.1	1.38	1355	0.795
3 x 35	254 x 0.41	1.4	-	1.6	2.5	29.3	0.99	1726	0.565
3 x 50	364 x 0.41	1.6	-	1.8	2.7	35.2	0.69	2452	0.393
3 x 70	514 x 0.51	1.6	-	1.9	2.9	39.7	0.50	3253	0.277

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Size	Number** Maximum Diameter of Wire	Nominal Thickness of Insulation	Nominal Thickness of Jacket			Approx. O. D. of Cable	Voltage Drop	Approx. Weight of Cable	Maximum Conductor Resistance at 20°C
			Single	Double Layer					
				Internal	Outer				
(n x mm ²)	(mm)	(mm)	(mm)	(mm)	(mm)	(V/A/km)	(kg/km)	(Ω/km)	
3 x 95	684 x 0.51	1.8	-	2.1	3.2	46.1	0.39	4303	0.210
3 x 120	870 x 0.51	1.8	-	2.2	3.4	49.0	0.31	5191	0.164
3 x 150	1092 x 0.51	2.0	-	2.4	3.6	54.7	0.26	6455	0.132
3 x 185	1325 x 0.51	2.2	-	2.5	3.9	61.1	0.23	7906	0.108
3 x 240	1752 x 0.51	2.4	-	2.8	4.3	66.6	0.18	10027	0.0817
3 x 300	2203 x 0.51	2.6	7.7	3.1	4.6	77.0	0.16	12300	0.0654
4 x 1*	29 x 0.21	0.8	1.5	-	-	9.4	34.64	131	20.0
4 x 1.5	28 x 0.26	0.8	1.7	-	-	10.4	23.73	167	13.7
4 x 2.5	45 x 0.26	0.9	1.9	-	-	12.5	14.22	247	8.21
4 x 4	51 x 0.31	1.0	2.0	-	-	14.3	8.82	340	5.09
4 x 6	76 x 0.31	1.0	2.3	-	-	16.3	5.87	463	3.39
4 x 10	74 x 0.41	1.2	-	1.4	2.0	22.1	3.38	831	1.95
4 x 16	116 x 0.41	1.2	-	1.4	2.2	25.3	2.15	1166	1.24
4 x 25	180 x 0.41	1.4	-	1.6	2.5	30.1	1.38	1711	0.795
4 x 35	254 x 0.41	1.4	-	1.7	2.7	32.5	0.99	2190	0.565
4 x 50	364 x 0.41	1.6	-	1.9	2.9	37.8	0.69	3101	0.393
4 x 70	514 x 0.51	1.6	-	2.0	3.2	44.2	0.50	4143	0.277
4 x 95	684 x 0.51	1.8	-	2.3	3.6	49.6	0.39	5517	0.210
4 x 120	870 x 0.51	1.8	-	2.4	3.6	54.4	0.31	6611	0.164
4 x 150	1092 x 0.51	2.0	-	2.6	3.9	60.3	0.26	7881	0.132
4 x 185	1325 x 0.51	2.2	-	2.8	4.2	68.2	0.23	10113	0.108
4 x 240	1752 x 0.51	2.4	-	3.1	4.6	74.1	0.18	12838	0.0817
4 x 300	2203 x 0.51	2.6	8.4	-	-	84.8	0.16	15529	0.0654
5 x 1	29 x 0.21	0.8	1.6	-	-	10.3	34.64	159	20.0
5 x 1.5	28 x 0.26	0.8	1.8	-	-	11.5	23.73	206	13.7
5 x 2.5	45 x 0.26	0.9	2.0	-	-	13.7	14.22	304	8.21
5 x 4	51 x 0.31	1.0	2.2	-	-	15.9	8.82	426	5.09
5 x 6	76 x 0.31	1.0	2.5	-	-	18.1	5.87	579	3.39
5 x 10	74 x 0.41	1.2	-	1.4	2.2	24.3	3.38	1024	1.95
5 x 16	116 x 0.41	1.2	-	1.5	2.4	28.7	2.15	1440	1.24
5 x 25	180 x 0.41	1.4	-	1.7	2.7	33.3	1.38	2105	0.795
5 x 35	254 x 0.41	1.4	-	1.8	2.8	37.0	0.99	2581	0.565
5 x 50	364 x 0.41	1.6	-	2.1	3.1	43.3	0.69	3658	0.393
5 x 70	514 x 0.51	1.6	-	2.3	3.4	48.8	0.50	4884	0.277
5 x 95	684 x 0.51	1.8	-	2.5	3.8	56.9	0.39	6550	0.210
5 x 120*	870 x 0.51	1.8	-	2.5	3.8	59.4	0.31	7786	0.164
5 x 150*	1092 x 0.51	2.0	-	2.7	4.1	67.0	0.26	9770	0.132
5 x 185*	1325 x 0.51	2.2	-	3.0	4.4	74.8	0.23	12208	0.108
5 x 240*	1752 x 0.51	2.4	-	3.2	4.9	81.9	0.18	15230	0.0817

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Size	Number** Maximum Diameter of Wire	Nominal Thickness of Insulation	Nominal Thickness of Jacket			Approx. O. D. of Cable	Voltage Drop	Approx. Weight of Cable	Maximum Conductor Resistance at 20°C
			Single	Double Layer					
(n x mm ²)	(mm)	(mm)	(mm)	Internal	Outer	(mm)	(V/A/km)	(kg/km)	(Ω/km)
6 x 1.5	28 x 0.26	0.8	2.5	-	-	13.9	27.40	288	13.7
6 x 2.5	45 x 0.26	0.9	2.7	-	-	16.3	16.42	412	8.21
6 x 4	51 x 0.31	1.0	2.9	-	-	18.8	10.18	567	5.09
6 x 6*	76 x 0.31	1.0	3.1	-	-	22	-	747	3.39
6 x 10*	74 x 0.41	1.2	3.5	-	-	26.2	-	1168	1.95
6 x 16*	116 x 0.41	1.2	3.9	-	-	30.5	-	1644	1.24
7 x 0.75*	22 x 0.21	0.8	2.4	-	-	13.5	-	237	26.7
7 x 1*	29 x 0.21	0.8	2.6	-	-	14.4	-	277	20.0
7 x 1.5	28 x 0.26	0.8	2.6	-	-	15.7	40.00	341	13.7
7 x 2.5	45 x 0.26	0.9	2.7	-	-	17.5	27.40	471	8.21
7 x 4	51 x 0.31	1.0	2.9	-	-	20.1	16.42	650	5.09
7 x 6*	76 x 0.31	1.0	3.1	-	-	23.0	-	858	3.39
8 x 1.5	28 x 0.26	0.8	2.9	-	-	16.7	27.40	385	13.7
8 x 2.5	45 x 0.26	0.9	3.1	-	-	19.5	16.42	549	8.21
8 x 4	51 x 0.31	1.0	3.5	-	-	22.9	10.18	788	5.09
8 x 6*	76 x 0.31	1.0	3.3	-	-	25.6	-	1007	3.39
9 x 1.5	28 x 0.26	0.8	2.9	-	-	17.6	27.40	431	13.7
9 x 2.5	45 x 0.26	0.9	3.1	-	-	20.6	16.42	617	8.21
10 x 1.5	28 x 0.26	0.8	2.9	-	-	17.8	27.40	428	13.7
10 x 2.5	45 x 0.26	0.9	3.1	-	-	20.6	16.42	620	8.21
10 x 4	51 x 0.31	1.0	3.5	-	-	23.9	10.18	866	5.09
12 x 1.0*	29 x 0.21	0.8	2.9	-	-	17.6	-	409	20.0
12 x 1.5	28 x 0.26	0.8	2.9	-	-	18.2	27.40	484	13.7
12 x 2.5	45 x 0.26	0.9	3.1	-	-	22.1	16.42	708	8.21
12 x 4	51 x 0.31	1.0	3.5	-	-	25.0	10.18	988	5.09
12 x 6*	76 x 0.31	1.0	3.9	-	-	28.7	-	1320	3.39
14 x 1.5	28 x 0.26	0.8	3.2	-	-	19.7	27.40	545	13.7
14 x 2.5	45 x 0.26	0.9	3.5	-	-	22.6	16.42	785	8.21
15 x 2.5	45 x 0.26	0.9	3.5	-	-	24.3	16.42	857	8.21
16 x 1.5	28 x 0.26	0.8	3.2	-	-	20.5	27.40	602	13.7
16 x 2.5	45 x 0.26	0.9	3.5	-	-	24.3	16.42	879	8.21
18 x 1.0*	29 x 0.21	0.8	3.2	-	-	20.6	-	572	20.0
18 x 1.5	28 x 0.26	0.8	3.2	-	-	22.3	27.40	684	13.7
18 x 2.5	45 x 0.26	0.9	3.5	-	-	25.3	16.42	1001	8.21

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Size	Number** Maximum Diameter of Wire	Nominal Thickness of Insulation	Nominal Thickness of Jacket			Approx. O. D. of Cable	Voltage Drop	Approx. Weight of Cable	Maximum Conductor Resistance at 20°C
			Single	Double Layer					
				Internal	Outer				
(n x mm ²)	(mm)	(mm)	(mm)	(mm)	(mm)	(V/A/km)	(kg/km)	(Ω/km)	
18 x 4	51 x 0.31	1.0	3.9	-	-	29.5	10.18	1417	5.09
19 x 1.5	28 x 0.26	0.8	3.5	-	-	23.0	27.40	739	13.7
19 x 2.5	45 x 0.26	0.9	3.9	-	-	28.1	16.42	1101	8.21
20 x 1.5	28 x 0.26	0.8	3.5	-	-	23.0	27.40	755	13.7
20 x 2.5	45 x 0.26	0.9	3.9	-	-	28.1	16.42	1165	8.21
24 x 1.0*	29 x 0.21	0.8	3.5	-	-	24.0	-	746	20.0
24 x 1.5	28 x 0.26	0.8	3.5	-	-	25.8	27.40	916	13.7
24 x 2.5	45 x 0.26	0.9	3.9	-	-	29.8	16.42	1313	8.21
25 x 1.5	28 x 0.26	0.8	3.8	-	-	26.1	27.40	927.5	13.7
25 x 2.5	45 x 0.26	0.9	4.3	-	-	32.1	16.42	1428	8.21
27 x 1.5	28 x 0.26	0.8	3.8	-	-	26.1	27.40	962	13.7
27 x 2.5	45 x 0.26	0.9	4.3	-	-	31.3	16.42	1432	8.21
30 x 1.5	28 x 0.26	0.8	3.8	-	-	26.9	27.40	1037	13.7
30 x 2.5	45 x 0.26	0.9	4.3	-	-	32.2	16.42	1546	8.21
32 x 1.5	28 x 0.26	0.8	3.8	-	-	27.7	27.40	1102	13.7
34 x 1.5	28 x 0.26	0.8	3.8	-	-	29.5	27.40	1217	13.7
36 x 1.0*	29 x 0.21	0.8	3.8	-	-	27.3	-	1021	20.0
36 x 1.5	28 x 0.26	0.8	3.8	-	-	28.5	27.40	1233	13.7
36 x 2.5	45 x 0.26	0.9	4.3	-	-	34.3	16.42	1845	8.21
37 x 1.5*	28 x 0.26	0.8	3.6	-	-	28.9	27.40	1322	13.7
37 x 2.5*	45 x 0.26	0.9	4.3	-	-	35.50	16.42	1864	8.21
42 x 2.5*	45 x 0.26	0.9	4.8	-	-	37.6	16.42	2134	8.21

* Based on EN 50525-2-21 - as 07RN-F

Current Rating In Free Air At Air Temperature of 30°C

Cross Section	Mobile Service	Fixed Installation
(mm ²)	(A)	(A)
1 x 1.5	16.5	23
1 x 2.5	22	32
1 x 4	30	43
1 x 6	38	56
1 x 10	53	77
1 x 16	71	102
1 x 25	94	136
1 x 35	117	168
1 x 50	148	203
1 x 70	185	254
1 x 120	260	363
1 x 150	300	416
1 x 185	341	475
1 x 240	407	559
1 x 300	468	637
1 x 400	553	722
1 x 500	620	833
1 x 630	742	888
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2 x 1.0	10	18
2 x 1.5	16	23
2 x 2.5	25	32
2 x 4	34	43
2 x 6	43	56
2 x 10	60	77
2 x 16	79	102
2 x 25	105	136
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3 x 1.0	10	18
3 x 1.5	16	23
3 x 2.5	25	32
3 x 4	35	43
3 x 6	44	56
3 x 10	60	77
3 x 16	82	102
3 x 25	109	136
3 x 35	135	168
3 x 50	169	203
3 x 70	211	254
3 x 95	250	299
3 x 120	290	263
3 x 150	332	416
3 x 185	375	475