H07 RN-F rubber-sheathed cable, harmonized type

Technical data

- Rubber sheathed cable H07 RN-F to DIN VDE 0282 part 4, HD 22.4 S4, BS7919 ≙IEC 60245-4
- **Temperature range** -30 °C to +60 °C
- Permissible **operating temperature** at conductor +60 °C
- **Nominal voltage** U_0/U 450/750 V in case of protected and fixed installation U_0/U 600/1000 V
- Max. permissible **operating voltage** in three phase and one phase a.c. system U_0/U 476/825 V direct current-system U_0/U 619/1238 V
- **Test voltage** 2500 V
- **Permanent tensile load** max. 15 N/mm²
- **Minimum bending radius** for fixed installation 4x cable ø for guiding over roller 7,5x cable ø during winding on drums 5-7x cable ø

Cable structure

- Copper conductor fine wire stranded, bare to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5 and HD 383
- Rubber core insulation EI4 to DIN VDE 0282 part 1
- Insulation thickness to DIN VDE 0282 part 4
- Core identification to DIN VDE 0293-308
- Core colours
  -up to 5 cores one-coloured
  -6 and more cores, black with numbering
  -3 and above, with green-yellow earth core
  -2 cores without green-yellow earth core
- Cores stranded in layers with optimal lay-length
- Outer jacket of rubber black, rubber compound to DIN VDE 0282 part 1
- Sheath thickness to DIN VDE 0282 part 4

Properties

- **Resistant to** Weather
- **Test** Test according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Ozone resistant of the insulation to DIN VDE 0472 part 805, test method A or part 805 A1, test method C
- Oil resistant Test according to EN 60811-2-1

Note

- G = with green-yellow earth core; x = without green-yellow earth core.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- Further dimensions and cross-sections available on request.
- H07 RN-F = harmonized rubber-sheathed cable, working voltage 750 V, fine stranded.
- The core identification of a single core jacketed, of an insulated wire is black. For application as a protective core, the ends are to be identified with green-yellow and the middle conductor with light blue

Application

Heavy duty rubber-sheathed flexible cables are suited for use for medium mechanical stress in dry, damp and wet areas as well as in open air and in agriculture plants.
They are used for equipment in industry works such as boilers, heating plates, hand lamps, electric tools such as drills, circular saws and homework tools as well as for transportable motors or machines at site.
These cables are also suitable for fixed installation on plaster, in temporary buildings and residential barracks. They are suitable for direct laying on components and mechanical parts of machines, for example lifts and cranes.
They can be used in case of protected and fixed installation in tubes or in equipment as well as rotor connecting cable of motors with a working voltage up to 1000 V alternating voltage or a direct voltage up to 750 V against ground. The operating direct voltage is permitted up to 900 V against ground when they are used in rail-coaches. Installation in hazardous areas according to DIN VDE 0165 is allowed.
CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No.cores x cross-sec. mm²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
37001	1 x 1,5	5,7 - 7,1	14,4	58,0	16
37002	1 x 2,5	6,3 - 7,9	24,0	71,0	14
37003	1 x 4	7,2 - 9,0	38,0	100,0	12
37004	1 x 6	7,9 - 9,8	58,0	130,0	10
37005	1 x 10	9,5 - 11,9	96,0	230,0	8
37006	1 x 16	10,8 - 13,4	154,0	290,0	6
37007	1 x 25	12,7 - 15,8	240,0	420,0	4
37008	1 x 35	14,3 - 17,9	336,0	530,0	2
37009	1 x 50	16,5 - 20,6	480,0	750,0	1
37010	1 x 70	18,6 - 23,3	672,0	960,0	2/0
37011	1 x 95	20,8 - 26,0	912,0	1250,0	3/0
37012	1 x 120	22,8 - 28,6	1152,0	1560,0	4/0
37013	1 x 150	25,2 - 31,4	1440,0	1900,0	300 kcmil
37014	1 x 185	27,6 - 34,4	1776,0	2300,0	350 kcmil
37015	1 x 240	30,6 - 38,3	2304,0	2950,0	500 kcmil
37016	1 x 300	33,5 - 41,9	2880,0	3600,0	600 kcmil
37017	1 x 400	37,4 - 46,8	3840,0	4600,0	750 kcmil
37018	1 x 500	41,3 - 52,0	4800,0	6000,0	1000 kcmil
37019	2 x 1	7,7 - 10,0	19,0	98,0	17
37020	2 x 1,5	8,5 - 11,0	29,0	135,0	16

Part no.	No.cores x cross-sec. mm²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
37021	2 x 2,5	10,2 - 13,1	48,0	193,0	14
37022	2 x 4	11,8 - 15,1	77,0	280,0	12
37023	2 x 6	13,1 - 16,8	115,0	330,0	10
37024	2 x 10	17,7 - 22,6	192,0	586,0	8
37025	2 x 16	20,2 - 25,7	307,0	810,0	6
37026	2 x 25	24,3 - 30,7	480,0	1160,0	4
37027	3 G 1	8,3 - 10,7	29,0	130,0	17
37028	3 G 1,5	9,2 - 11,9	43,0	165,0	16

Continuation ▸

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Part no.	No.cores x cross-sec. mm²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
37029	3 G 2,5	10,9 - 14,0	72,0	235,0	14
37030	3 G 4	12,7 - 16,2	115,0	320,0	12
37031	3 G 6	14,1 - 18,0	173,0	420,0	10
37032	3 G 10	19,1 - 24,2	288,0	810,0	8
37033	3 G 16	21,8 - 27,6	461,0	1050,0	6
37034	3 G 25	26,1 - 33,0	720,0	1250,0	4
37035	3 G 35	29,3 - 37,1	1008,0	1900,0	2
37036	3 G 50	34,1 - 42,9	1440,0	2600,0	1
37037	3 G 70	38,4 - 48,3	2016,0	3400,0	2/0
37038	3 G 95	43,3 - 54,0	2736,0	4450,0	3/0
37039	3 G 120	47,4 - 60,0	3456,0	5180,0	4/0
37040	3 G 150	52,0 - 66,0	4320,0	6500,0	300 kcmil
37041	3 G 185	57,0 - 72,0	5328,0	7860,0	350 kcmil
37042	3 G 240	65,0 - 82,0	6192,0	10224,0	500 kcmil
37043	3 G 300	72,0 - 90,0	8640,0	12620,0	600 kcmil
37044	4 G 1	9,2 - 11,9	38,0	150,0	17
37045	4 G 1,5	10,2 - 13,1	58,0	200,0	16
37046	4 G 2,5	12,1 - 15,5	96,0	290,0	14
37047	4 G 4	14,0 - 17,9	154,0	395,0	12
37048	4 G 6	15,7 - 20,0	230,0	540,0	10
37049	4 G 10	20,9 - 26,5	384,0	950,0	8
37050	4 G 16	23,8 - 30,1	614,0	1260,0	6
37051	4 G 25	28,9 - 36,6	960,0	1860,0	4
37052	4 G 35	32,5 - 41,1	1344,0	2380,0	2
37053	4 G 50	37,7 - 47,5	1920,0	3190,0	1
37054	4 G 70	42,7 - 54,0	2688,0	4260,0	2/0
37055	4 G 95	48,4 - 61,0	3648,0	5600,0	3/0
37056	4 G 120	53,0 - 66,0	4608,0	6830,0	4/0
37057	4 G 150	58,0 - 73,0	5760,0	8320,0	300 kcmil
37058	4 G 185	64,0 - 80,0	7104,0	9800,0	350 kcmil
37059	4 G 240	72,0 - 91,0	9216,0	12100,0	500 kcmil
37060	4 G 300	80,0 - 101,0	11520,0	15200,0	600 kcmil
37061	5 G 1,5	11,2 - 14,4	72,0	240,0	16
37062	5 G 2,5	13,3 - 17,0	120,0	345,0	14
37063	5 G 4	15,6 - 19,9	192,0	485,0	12
37064	5 G 6	17,5 - 22,2	288,0	650,0	10
37065	5 G 10	22,9 - 29,1	480,0	1200,0	8
37066	5 G 16	26,4 - 33,3	768,0	1550,0	6
37067	5 G 25	32,0 - 40,4	1200,0	2250,0	4
37068	5 G 35	36,8 - 45,8	1680,0	2750,0	2
37091	5 G 50	40,0 - 50,8	2400,0	3950,0	1
37154	5 G 70	43,8 - 54,0	3360,0	4740,0	1
34090	5 G 95	51,7 - 60,7	4560,0	6600,0	14
34349	5 G 120	59,6 - 68,6	5760,0	8180,0	14
37092	7 G 1,5	14,5 - 17,5	101,0	375,0	16
37079	7 G 2,5	16,5 - 20,0	168,0	520,0	14
37093	12 G 1,5	17,6 - 22,4	175,0	460,0	16
37096	12 G 2,5	20,6 - 26,2	288,0	760,0	14
37097	18 G 2,5	24,4 - 30,9	432,0	850,0	14
37094	19 G 1,5	20,7 - 26,3	274,0	810,0	16
37098	19 G 2,5	25,5 - 31,0	456,0	1075,0	14
37095	24 G 1,5	24,3 - 30,7	346,0	1015,0	16
37099	24 G 2,5	28,8 - 36,4	576,0	1390,0	14

Dimensions and specifications may be changed without prior notice. (RF01)

Current ratings for H07 RN F for current supply in industrial application

Operating temperature at conductor 60°C; Ambient temperature 30°C (Air)

Number of cores	1-core		2-cores	3-cores	3-cores	4-cores	5-cores
Number of loaded cores	2 cores loaded	3 cores loaded	2 cores loaded	2 cores loaded	3 cores loaded	3 cores loaded	3 cores loaded
Cross-section, mm²	Current ratings in Ampere (A)						
4	34	30	34	35	29	30	30
6	43	38	43	44	36	37	38
10	60	53	60	62	51	52	54
16	79	71	79	82	67	69	71
25	104	94	105	109	89	92	94
35	129	117	–	135	110	114	–
50	162	148	–	169	138	143	–
70	202	185	–	211	172	178	–
95	240	222	–	250	204	210	–
120	280	260	–	292	238	246	–
150	321	300	–	335	273	282	–
185	363	341	–	378	309	319	–
240	433	407	–	447	365	377	–
300	497	468	–	509	415	430	–
400	586	553	–	–	–	–	–
500	670	634	–	–	–	–	–
630	784	742	–	–	–	–	–

Note

For the method of installation

• Single core cables are bunched (unit-form) • 2 cores cables laid parallel with contact • 3 cores cables are in triangle-form

Conversion factores for deviating ambient temperature

Ambient temperature at air °C	30	35	40	45	50	55
Factor	1,0	0,91	0,82	0,71	0,58	0,41