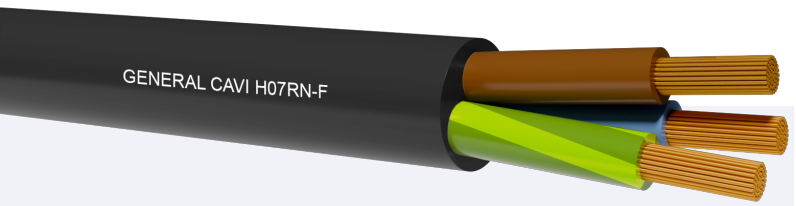
HARMONIZED

H07RN-F

CPR Eca

Model Product: 250-251 - 20250206



ENERGY TRANSMISSION RUBBER INSULATED CABLES WITH SPECIAL SHEATH SUITED FOR FIXED LAY, MOBILE LINK AND MECHANICAL SERVICE HEAVY TOO

Class 5 flexible copper conductor.
Elastomeric mixture Insulation in EI4 quality.
Polychloroprene sheath, EM2.

STANDARDS

CEI EN 50525-2-21 CEI 20-107/2-21 CEI 20-19/4 (CENELEC HD 22.4 S4) BS 7919:2001 NF C 32-102-4 VDE 0282-4
EN 50575:2014 + EN 50575/A1:2016 EN 60332-1-2 EN 60811 403/504/505/506 EN 50396

Accordingly to the standards BT 2014/35/UE- 2011/65/EU (RoHS 3)

- Nominal voltage U0: 450 V
- Nominal voltage U: 750 V
- Test voltage: 2500 V
- Maximun voltage Um: 1000V Installazioni Fisse / for fixed and protected installation
- Maximun operating temperature: +60°C(+90°C for fixed installation)
- Maximun short circuit temperature: +200°C(+250°C)
- Minimum installation and laying temperature: -25°C(-40°C)
- Min. operating temperature (without mechanical shocks): -40°C(-50°C)

COMMON FEATURES

This cable is suitable for dry, humid or wet environments in open air, in workshops with an explosive athmosphere. When used for connections they're subjected to medium/severe mechanical stress. It can be used even in fixed laying like floors and temporary construction site set offs.CPR Compliant 305/2011 EU
Special Features in addition to the features of the H07RN_F:
-Insulation tested up to +90°C includes the characteristics of the H07BN4-F cables and the H07BB-F cables. Low Temperature Resistant (-40°C dynamic -50°C static).
-AD8 water resistance 10 bar such as the H07RN8-F.
-OZONE RESISTANT (Test A) and (Test B). UV Resistant. AG3 Shock Resistant. Excellent resistance to mineral oils, fats, AF3, and atmospheric agents AK2.Resistance to alternate bending of sections ≤ 4 mm2: for at least 100000 cycles

EMPLOYMENT

Minimum bending radius per D cable diameter (in mm):
Fixed installation D<8=3D D<12=3D D<20=4D D>20=4D
Free Movement D<8=4D D<12=4D D<20=5D D>20=6D

Maximum pulling stress: 15 N/mm2 section of copper dynamic applications, for fixed 50 N/mm2

PACKING

100mt. rings in thermoplastic film or drums to agree.

CORE COLOURS

Single core: black

Two cores: blue-brown

Three cores: Brown - Black - Gray (o Y/G, Blue and Brown)

Four cores: blue-brown-black-gray (or Y/G instead blue)

Five cores: Y/G-blue-brown-black-gray (black no Y/G)

Multicores: black with numbers and Y/G

SHEATH COLOUR

Black

INK MARKING

GENERAL CAVI-Eca-year-IEMMEQU<HAR>H07RN-F-form x sect-iwo

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Cores number	Cross section	Approx conductor diameter	Insulation medium thickness	Approx external production diameter	Approx cable weight	Electric resistance at 20°C	Mobile service Current carrying capacities at 60°C conductor temp	Current rating for fixed installation at 90°C of conductor temp. air in trifoil
(N°)	(mm²)	(mm)	(mm)	(mm)	(kg/km)	(Ohm/km)	(A)	(A)
Single core								
1x	1.5	1.6	0.8	5.9	50	13.3	16	24
1x	2.5	2	0.9	6.50	65	7.98	25	33
1x	4	2.6	1.0	7.4	89	4.95	30	45
1x	6	3.4	1.0	8.10	115	3.30	38	58
1x	10	4.4	1.2	10.4	190	1.91	53	80
1x	16	5.7	1.2	11.62	259	1.21	71	107
1x	25	6.9	1.4	13.74	375	0.780	94	135
1x	35	8.1	1.4	15.35	492	0.554	117	169
1x	50	9.8	1.6	17.68	675	0.386	148	207
1x	70	11.6	1.6	20.00	908	0.272	185	268
1x	95	13.3	1.8	22.12	1171	0.206	222	328
1x	120	15.1	1.8	24.54	1445	0.161	260	383
1x	150	16.8	2.0	26.87	1783	0.129	300	444
1x	185	18.6	2.2	28.89	2125	0.106	341	510
1x	240	21.4	2.4	32.62	2733	0.0801	407	607
1x	300	23.9	2.6	36.46	3348	0.0641	468	703
1x	400	27.5	2.8	39.6	4800	0.0486	553	823
1x	500	35.0	3.0	45.5	5800	0.0384	620	946
1x	630	39.0	3.0	49.5	6800	0.0287	742	1088
Two cores								
2x	1	1.3	0.8	8.4	90	19.5	10	19
2x	1.5	1.6	0.8	9.10	109	13.3	18	26
2x	2.5	2	0.9	10.80	158	7.98	27	36
2x	4	2.6	1.0	12.40	217	4.95	34	49
2x	6	3.4	1.0	13.80	282	3.30	43	63
2x	10	4.4	1.2	19.37	539	1.91	60	86
2x	16	5.7	1.2	21.76	722	1.21	79	115
2x	25	6.9	1.4	25.93	1043	0.780	105	149
2x	35	8.1	1.4	28.77	1169	0.554	129	185
2x	50	9.8	1.6	33.1	1606	0.386	150	225
2x	70	11.6	1.6	37.8	2140	0.272	185	289
2x	95	13.3	1.8	42.4	2806	0.206	216	352
Three cores								
3G	1	1.3	0.8	9.07	110	19.5	10	19

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(N°)	(mm²)	(mm)	(mm)	(mm)	(kg/km)	(Ohm/km)	(A)	(A)
3G	1.5	1.6	0.8	10.18	134	13.3	16	26
3G	2.5	2.0	0.9	11.58	196	7.98	25	36
3G	4	2.6	1.0	13.3	271	4.95	29	49
3G	6	3.4	1.0	14.78	355	3.30	36	63
3G	10	4.4	1.2	20.73	674	1.91	51	86
3G	16	5.7	1.2	23.26	913	1.21	67	115
3G	25	6.9	1.4	27.69	1324	0.780	89	149
3G	35	8.1	1.4	30.95	1754	0.554	110	185
3G	50	9.8	1.6	35.80	2409	0.386	138	225
3G	70	11.6	1.6	40.45	3211	0.272	172	289
3G	95	13.3	1.8	45.08	4210	0.206	204	352
3G	120	15.1	1.8	49.93	5205	0.161	238	410
3G	150	16.8	2.0	54.78	6389	0.129	273	473
3G	185	18.6	2.2	58.99	7591	0.106	309	542
3G	240	21.4	2.4	67.85	9944	0.0801	365	641
3G	300	23.9	2.6	75.56	10133	0.0641	450	741
Four cores								
4G	1	1.3	0.8	10.0	136	19.5	10	17
4G	1.5	1.6	0.8	10.76	166	13.3	16	23
4G	2.5	2.0	0.9	12.73	241	7.98	20	32
4G	4	2.6	1.0	14.63	336	4.95	30	42
4G	6	3.4	1.0	16.44	449	3.30	37	54
4G	10	4.4	1.2	22.57	833	1.91	52	75
4G	16	5.7	1.2	25.36	1138	1.21	69	100
4G	25	6.9	1.4	30.75	1714	0.780	92	127
4G	35	8.1	1.4	34.23	2204	0.554	114	158
4G	50	9.8	1.6	39.56	3029	0.386	143	192
4G	70	11.6	1.6	44.89	4121	0.272	178	246
4G	95	13.3	1.8	50.36	5361	0.206	210	298
4G	120	15.1	1.8	55.33	6546	0.161	246	346
4G	150	16.8	2.0	60.87	8095	0.129	282	399
4G	185	18.6	2.2	65.70	9652	0.106	319	456
4G	240	21.4	2.4	75.70	12614	0.0801	377	538
4G	300	23.9	2.6	86.33	13890	0.0641	460	621
Five cores								

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(N°)	(mm²)	(mm)	(mm)	(mm)	(kg/km)	(Ohm/km)	(A)	(A)
5G	1	1.3	0.8	11.0	168	19.5	10	17
5G	1.5	1.6	0.8	11.80	206	13.3	16	23
5G	2.5	2.0	0.9	13.96	297	7.98	20	32
5G	4	2.6	1.0	16.25	422	4.95	30	42
5G	6	3.4	1.0	18.07	567	3.30	38	54
5G	10	4.4	1.2	24.75	1010	1.91	54	75
5G	16	5.7	1.2	28.01	1400	1.21	71	100
5G	25	6.9	1.4	33.57	2096	0.780	94	127
5G	35	8.1	1.4	39.2	2697	0.554	114	158
5G	50	9.8	1.6	45.4	3740	0.386	143	192
5G	70	11.6	1.6	48.0	5033	0.272	178	246
5G	95	13.3	1.8	53.22	6271	0.206	210	2987
Multicores								
7G	1.5	1.6	0.8	15.3	315	13.3	16	23
7G	2.5	2.0	0.9	17.9	445	7.98	20	32
7G	4	2.6	1.0	19.64	618	4.95	25	42
10G	1.5	1.6	0.8	17.9	420	13.3	16	23
12G	1.5	1.6	0.8	18.4	493	13.3	16	23
12G	2.5	2.0	0.9	22.17	702	7.98	20	32
12G	4	2.6	1.0	25.77	1004	4.95	25	42
18G	1.5	1.6	0.8	22.00	705	13.3	16	23
18G	2.5	2.0	0.9	25.95	1020	7.98	20	32
19G	1.5	1.6	0.8	22.79	710	13.3	16	21
19G	2.5	2.0	0.9	26.25	1030	7.98	20	29
24G	1.5	1.6	0.8	25.04	898	13.3	16	21
24G	2.5	2.0	0.9	29.37	1312	7.98	20	29
27G	2.5	2.0	0.9	31.3	1427	7.98	20	29
36G	1.5	1.6	0.8	29.3	1246	13.3	16	21
36G	2.5	2.0	0.9	35.0	1851	7.98	20	29

Current carrying capacities for unipolar cables are calculated on 3 spanned cables.
Current carrying capacities for cables are calculated on 3-4 spanned cables.
Special Bending Radius:
At the entrance to a portable device or a mobile device mechanical stress with D <8 = 6D D <12 = 6D D <20 = 6D D> 20 = 8D
Winding repeated D <8 = 6D D <12 = 6D D <20 = 6D D> 20 = 8D
Diverted to pulley D <8 = 8D D <12 = 8D D <20 = 8D D> 20 = 8D