

Industrial flexible cable, insulation and outer sheath in elastomer

Description

Application

H07RN-F flexible cable is intended for installations with moving equipment, electric appliances and for building sites. The cable may be rated 0,6/1 kV where the installation has built-in protection and for motors in lifting appliances - machine tools - etc.

This cable can be used in refrigerating installations.

Installation

This cable can be installed in open air or be buried but with extra mechanical protection.

Conductors laid up

Assembled conductors.

Marking

USE <HAR> N (x ou G) S

- N = number of cores
- G = with Green-Yellow
- x = without Green-Yellow
- S = section in mm²

Nota

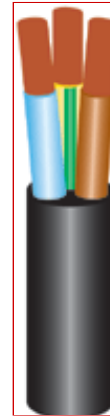
Max continuous operating conductor temperature in normal use :

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

+85°C (fixed protected installation)

+200°C (in short circuit)

Permissible current rating is measured for an ambient temperature of 30°C and a maximum operating and conductor temperature of 85°C . For other temperature please refer to correction factors .



Standards

International HD 22.4; HD 516; IEC 60245-4 type 66

National NF C 32-102-4



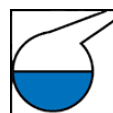
Lead free
Yes



Mechanical resistance to
impacts
Very good



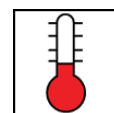
Cable flexibility
Flexible



Chemical resistance
Accidental



Water proof
Good



Operating temperature,
range
-25 .. 55 °C

Contact

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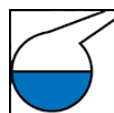
Lead free
Yes



Mechanical resistance to
impacts
Very good



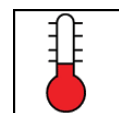
Cable flexibility
Flexible



Chemical resistance
Accidental



Water proof
Good



Operating temperature,
range
-25 .. 55 °C

Characteristics
Construction characteristics

Outer sheath	Special cross-linked elastomer
Sheath colour	Black
Insulation	Special cross-linked elastomer
Lead free	Yes

Mechanical characteristics

Mechanical resistance to impacts	Very good
Cable flexibility	Flexible

Usage characteristics

Chemical resistance	Accidental
Water proof	Good
Short-circuit maximum core temperature	200 °C
Operating temperature, range	-25 .. 55 °C
Maximum core temperature still	60 °C

New cores identification

Core identification in accordance with HD 308 S2 (October 2001) Identification of cores in cables and flexible cords.

Number of cores	HD 308 S2 since january 2004	
	G (earth core)	X (without earth core)
1	Black (preferential)	Black (preferential)
2	Blue + Brown	Blue + Brown
3*	Green - Yellow + Blue + Brown	Brown + Black + Grey
3**		Blue + Brown + Black
4	Green - Yellow + Brown + Black + Grey	Blue + Brown + Black + Grey
5	Green - Yellow + Blue + Brown + Black + Grey	Blue + Brown + Black + Grey + Black
> 5	White printed numbers + 1 Green - Yellow	White printed numbers

* For the cables without Green/Yellow with a cross-section >4mm²

** For the cables without Green/Yellow with a cross-section of 1,5mm² & 2,5mm²

Single Core

Cross section mm ²	Perm. current rating open air A	Voltage drop, single phase V/A.km	Max. outer diam. mm	Approx. weight kg/km	Max. linear resistance, phase conductor Ohm/km
1.5	23	23.3	7.1	50	13.3
2.5	32	14.0	7.9	66	7.98
4	43	8.7	9.0	94	4.95
6	56	5.9	9.8	109	3.3
10	77	3.4	11.9	182	1.91
16	102	2.2	13.4	256	1.21

H07RN-F

Cross section mm ²	Perm. current rating open air A	Voltage drop, single phase V/A.km	Max. outer diam. mm	Approx. weight kg/km	Max. linear resistance, phase conductor Ohm/km
25	136	1.4	15.8	369	0.78
35	168	1.04	17.9	482	0.554
50	203	0.75	20.6	662	0.386
70	254	0.56	23.3	895	0.272
120	363	0.36	28.6	1430	0.161
150	416	0.31	31.4	1740	0.129
185	475	0.28	34.4	2160	0.106
240	559	0.23	38.3	2730	0.0801
300	637	0.2	41.9	3480	0.0641
500	833	0.16	52.0	5700	0.0384

Two cores

Cross section mm ²	Perm. current rating open air A	Voltage drop, single phase V/A.km	Max. outer diam. mm	Approx. weight kg/km	Max. linear resistance, phase conductor Ohm/km
1	18	39.4	10.0	99	19.5
1.5	23	27.0	11.0	111	13.3
4	43	10.1	15.1	238	4.95
6	56	6.7	16.8	279	3.3
10	77	3.8	22.6	538	1.91
16	102	2.5	25.7	744	1.21
25	136	1.68	30.7	1074	0.78

Three cores

Cross section mm ²	Perm. current rating open air A	Voltage drop, single phase V/A.km	Max. outer diam. mm	Approx. weight kg/km	Max. linear resistance, phase conductor Ohm/km
1.5	23	27.0	11.9	134	13.3
2.5	32	16.2	14.0	195	7.98
6	56	7.0	18.0	346	3.3
10	77	4.0	24.2	663	1.91
16	102	2.5	27.6	924	1.21
25	136	1.7	33.0	1345	0.78
35	168	1.21	37.1	1760	0.554
50	203	0.87	42.9	2390	0.386
70	262	0.64	48.3	3110	0.272
95	320	0.5	54.0	4170	0.206
120	373	0.4	60.0	5080	0.161
150	432	0.35	66.0	6220	0.129
185	495	0.3	72.0	7730	0.106
240	587	0.26	82.0	9780	0.08
300	680	0.22	90.0	12620	0.064

Four cores

Cross section mm ²	Perm. current rating open air A	Voltage drop, single phase V/A.km	Max. outer diam. mm	Approx. weight kg/km	Max. linear resistance, phase conductor Ohm/km
1	16	34.08	12.0	144	19.5
1.5	21	23.3	13.1	165	13.3
2.5	29	14.0	15.5	245	7.98
4	38	8.71	18.0	357	4.95
6	50	5.84	20.0	443	3.3
10	68	3.42	26.5	818	1.91
16	92	2.2	30.1	1150	1.21
25	122	1.44	36.6	1700	0.78
35	150	1.04	41.1	2180	0.554
50	182	0.75	47.5	3030	0.386
70	232	0.56	54.0	3990	0.272
95	281	0.44	61.0	5360	0.206
120	325	0.36	66.0	6500	0.161
150	373	0.31	73.0	7990	0.129
185	425	0.28	80.0	9910	0.106
240	500	0.23	91.0	13120	

Five cores

Cross section mm ²	Perm. current rating open air A	Voltage drop, single phase V/A.km	Max. outer diam. mm	Approx. weight kg/km	Max. linear resistance, phase conductor Ohm/km
1	16	34.1	14.0	180	19.5
1.5	21	23.6	14.4	238	13.3
2.5	29	14.0	17.0	297	7.98
4	38	8.72	19.9	453	4.95
6	50	5.84	22.2	557	3.3
10	68	3.43	29.1	1001	1.91
16	92	2.2	33.3	1430	1.21
25	122	1.44	40.4	2096	0.78
35				2716	
50				3809	0.386
70				5087	
95				6637	

Twelve cores

Cross section mm ²	Perm. current rating open air A	Voltage drop, single phase V/A.km	Max. outer diam. mm	Approx. weight kg/km	Max. linear resistance, phase conductor Ohm/km
1.5	11	23.3	22.14	510	13.3

Eighteen cores

Cross section mm ²	Perm. current rating open air A	Voltage drop, single phase V/A.km	Max. outer diam. mm	Approx. weight kg/km	Max. linear resistance, phase conductor Ohm/km
1.5	9	20.7	26.3	730	13.3

thirty six cores

Cross section mm ²	Perm. current rating open air A	Max. outer diam. mm	Approx. weight kg/km	Max. linear resistance, phase conductor Ohm/km
1.5	6	35.2	1325	13.3