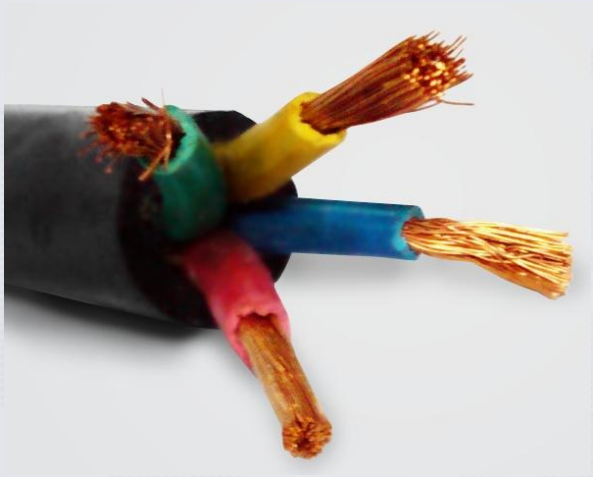
H07RN-F

Power and flexibility to the limit



A Applications:

The rubber sheathed flexible cables are mostly used as power cable for equipment in industry work such as boilers, heating plates, hand lamps, transportable motor etc. They can be installed at medium mechanical stress in dry, damp and wet areas as well as in open air and in agriculture plants. 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 like lifts and cranes.

The cables 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 and including AC 1000V or DC 750V against ground.

B Characteristics

1 - They are designed to provide high flexibility and have the capacity to with stand weather, oil, mechanical and thermal stresses.

2 - **Special wind torsion test:** the **H07RN-F cable** passes the special 2.000 cycle Torsion Test required for wind generators（for single core cables ）.

3 - **Improved working temperature:** The H07RN-F can operate at work temperatures up to 90°C, improving the HD 22 standard rated temperature, due to insulation with high thermal grade.

4 - **Rated voltage up to 1000V:** possible thanks to the high dielectric properties of the insulation material（according to HD 5163.）

5 - **Weather resistance:** The properties of the thermosetting vulcanized rubber outer sheath on the H07RN-F cables allows a permanent use outdoors.

6 - **Immersion resistance:** Exceeds the established tests for type H07RN8-F, suitable for functioning permanently submerged CAD83.

7 - **Resistance to chemical products:** Vulcanized rubber outer sheath is the most effective protection against chemical products such as hydrocarbons and mineral oils.

8 - **With-stand short contacts at high temperature:** Due to the vulcanized materials used, this cable

Applications

Heavy Duty | Industrial mobile use | Windmills | Robotics | Heavy mobile use | Oper Air | Underwater | No flame propagation

Technical Data

The table shows diameter, weight, current-carrying capacity and voltage drop detailed for each cable.

Current-carrying capacities shown in the table are calculated according to HD 516 for mobile service, according to IEC 60364 for fixed installations and with the following conditions:

- **Mobile service:** open air installation, one cable with effective air renewal and with ambient temperature of 30°C.

- **Fixed installation:** open air installation, one cable with effective air renewal and with ambient temperature of 30°C, fixed by cleats an hangers or on perforated tray (reference method F for single core and E for multi-core cables).

For cables with 2 or 3 conductors it is supposed a single-phase circuit.

For cables with 1, 4 or 5 conductors it is supposed a three-phase circuit.

For cables with 6 or more conductors it is supposed a single-phase circuit where not all conductors are fully loaded simultaneously.

Environmental conditions

No flame propagation IEC60332-1 En50265

Impact resistance: AG 2 Medium impact

Outdoor instalation: permanent

Low temperature resistance excellent

Water nesistance: AD 8 Submerged

Chemical & oil attack resistance: excellent

Dimensions

Cross section mm^2	Diameter mm	Weight kg/km	Resistance at 20°C Ω/km	Mobile service 30°C A	Fixed installation 30°C A	Voltage drop V/A km
1×6	8,2	112	3.3	38	53	6,63
1×10	9,9	175	1.91	53	74	3,84
1×16	11,1	241	1.21	71	101	2,43
1×25	13,2	354	0.78	94	135	1,57
1×35	14,7	467	0.554	117	169	1,11
1×50	17,1	645	0.386	148	207	0,776
1×70	19,2	861	0.272	185	268	0,546
1×95	21,7	1,122	0.206	222	328	0,414
1 ×120	23,5	1,385	0.161	260	383	0,323
1×150	25,8	1,712	0.129	300	444	0,259
1 ×185	28,8	2,079	0.106	341	510	0,213
1×240	32,0	2,669	0.0801	407	607	0,161
1×300	34,9	3,270	0.0641	468	703	0,129
2×1	8,2	89	19.5	10	21	45,2
2×1.5	8,7	107	13.3	16	26	30,9
2×2.5	10,3	154	7.98	25	36	18,5
2×4	12,0	216	4.95	34	49	11,5
2×6	13,5	284	3.3	43	63	7,66
2×10	17,5	498	1.91	60	86	4,43
2×16	21,3	710	1.21	79	115	2,81
2×25	25,7	1,052	0.78	105	149	1,81
3×1	8,7	106	19.5	10	21	45,2
3×1.5	9,7	134	13.3	16	26	30,9
3×2.5	11,3	192	7.98	25	36	18,5
3×4	13,0	269	4.95	35	49	11,5
3×6	14,3	350	3.3	44	63	7,66
3×10	19,8	639	1.91	62	86	4,43
3×16	22,3	872	1.21	82	115	2,81
3×25	27,0	1,299	0.78	109	149	1,81
3×35	29,7	1,684	0.554	135	185	1,29
3×50	35.4	2,355	0.386	169	225	0,896
3×70	39,6	3,108	0.272	211	289	0,631
3×95	45,1	4,070	0.206	250	352	0,478
4×1	9,6	130	19.5	10	17	39,2
4×1.5	10,6	164	13.3	16	23	26,7
4×2.5	12,4	237	7.98	20	32	16,0
4×4	14,5	337	4.95	30	42	9,95
4×6	16,3	452	3.3	37	54	6,63
4×10	21,3	781	1.91	52	75	3,84
4×16	24,2	1,077	1.21	69	100	2,43
4×25	30,5	1,667	0.78	92	127	1,57
4×35	33,3	2,156	0.554	114	158	1,11
4×50	38,6	2,971	0.386	143	192	0,776
4×70	43,1	3,934	0.272	178	246	0,546
4×95	54,1	6,360	0.206	246	346	0,323
4×120	49,5	5,199	0.161	210	298	0,414
5×1	10,4	156	19.5	10	17	39,2
5×l.5	11,6	202	13.3	16	23	26,7
5×2.5	13,8	289	7.98	20	32	16,0
5×4	16,3	430	4.95	30	42	9,95
5×6	17,9	548	3.3	38	54	6,63
5×10	23,6	964	1.91	54	75	3,84
5×16	26,8	1,335	1.21	71	100	2,43
5×25	33,3	2,035	0.78	94	127	1,57
5 × 35	36,7	2,660	0.554	116	158	1,11
7×1.5	14,8	302	13.3	16	26	30,9
12×1.5	17,8	453	13.3	16	26	30,9
18×1.5	21,9	657	13.3	16	26	30,9
24×1.5	24,0	818	13.3	16	26	30,9
36×1.5	29,3	1,155	13.3	16	26	30,9
7×2.5	17,0	427	7.98	25	36	18,5
12×2.5	21,8	664	7.98	25	36	18,5
18×2.5	25,8	948	7.98	25	36	18,5
24×2.5	28,3	1,194	7.98	25	36	18,5
36×2.5	34,9	1,704	7.98	25	36	18,5

D Design

ZMS Cable reserves the right to carry out any modification whatsoever without giving previous notice.

- Conductor:
Flexible electrolytic annealed copper conductor, class 5 according to IEC 60228.

- Insulation:
Thermosetting rubber insulation, type EI4 according to HD 22.
The standard identification according to HD 308 or EN 50334, is the following:

up to 5 conductors: by colours.
6 or more conductors: black numbered + green/yellow.

- Outer sheath:
Thermosetting rubber outer sheath, black color, type EM2 according to HD 22.

Characteristics

According to Hd22 UNE 21027

Flexible Conductor class 5/6


Rated Voltage
Fixed: 600/1000V
Mobile: 450/750V


Maxinum service temperature: 90℃


Minimum bending radius
4×Φcable

Meter by meter marking