H07RN-F, enhanced version

Halogen-free; Long-run submersion; Bending/Loop Torsion (WTG): -40°C to +90°C; UV/Ozone resistant

Info

- Halogen-free & Low Smoke density
- Loop Torsion/Flexible: -40°C to +90°C
- 100m long-run submersion, UV/ Ozone resistant

Benefits

- Arrangements made of single-core, rubber-sheathed cables H07RN-F can be used for short circuit-proof and short-to-ground-proof installations in accordance with IEC 60364-5-52/ HD 60364-5-52/ VDE 0100 Part 520
- More water-resistant than H07RN-F and H07RN8-F
- Conductor temperature range more suitable for outdoor installation and wider than H07RN-F, H07ZZ-F, H07BN4-F und NSSHÖU

Application range

- Medium, mechanical stress and industrial and agricultural use as well as for handheld and power supply devices (H07RN-F according to EN 50565-2)
- Drip loop torsion between the nacelle and the tower of wind turbine generators/ windmills
- Outdoors acc. EN 50565-2
- For buildings or industrial plants with a high density of people or valuable assets

Product features

- Oil resistant according to EN 60811-404; Good resistance to abrasion, atmospheric agents, grease and mineral oils
- UV-, Ozone- (acc. EN 60811), Cold- (-40 °C flexible at the conductor) and Heat-resistant (+90 °C at the conductor)
- Drip loop torsion resistant (wind turbine) ==>TW-0, TW-1 and TW-2: -40 °C to +90 °C / 2,000 cycles (5,000 cycles from +5 °C)/ torsion angle of +/-150 ° per metre at one revolution per minute
- Long-time water submersion (AD8) down to 100 m without interruption (no drinking water, minimum water temperature of +5 °C, standing water only, no areas with boat/ ship/ submarine traffic)
- Halogen-free acc. EN 50267-2 (sub-parts -1 and -2), flame-retardant according to IEC 60332-1-2 and low smoke density (LS) acc. EN 61034-2

Norm references / Approvals

- <HAR> H07RN-F cable type approval according to EN 50525-2-21

Product Make-up

- Strands of bare copper wires
- Core insulation: special rubber
- Outer sheath: special rubber compound

Technical data

Classification
ETIM 5.0 Class-ID: EC001578
ETIM 5.0 Class-Description: Flexible cable

Core identification code
Up to 5 cores: colour-coded according to VDE 0293-308, refer to Appendix T9
From 6 cores: black with white numbers

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Torsion movement in WTG
TW-0 & TW-2, refer to Appendix T0

Minimum bending radius
Moved: 6 x Outer diameter
Fixed installation: 4 x Outer diameter

Nominal voltage
U_0/U: 450/750 V

Test voltage
2500 V AC

Protective conductor
G = with GN-YE protective conductor
X = without protective conductor

Current rating
According to IEC 60364-5-52/ VDE 0298-4
EN 50565-1/ VDE 0298-565-1

Temperature range
Moved: -40°C to +90°C
Fixed installation: -50°C to +90°C

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
H07RN-F, enhanced version				
4533027	3 G 1.0	8.3 - 10.7	28.8	140
4533061	4 G 1.0	9.2 - 11.9	38.4	160
4533062	4 X 1.0	9.2 - 11.9	38.4	160
4533091	5 G 1.0	10.2 - 13.1	48	200
4533000	1 X 1.5	5.7 - 7.1	14.4	55
4533020	2 X 1.5	8.5 - 11.0	28.8	125
4533029	3 G 1.5	9.2 - 11.9	43.2	172
4533063	4 G 1.5	10.2 - 13.1	57.6	200
4533064	4 X 1.5	10.2 - 13.1	57.6	200
4533093	5 G 1.5	11.2 - 14.4	72	250
4533111	7 G 1.5	14,7 - 18,7	100.8	430
4533113	12 G 1.5	17.6 - 22.4	172.8	620
4533001	1 X 2.5	6.3 - 7.9	24	72
4533021	2 X 2.5	10.2 - 13.1	48	173
4533031	3 G 2.5	10.9 - 14.0	72	225
4533065	4 G 2.5	12.1 - 15.5	96	285
4533066	4 X 2.5	12.1 - 15.5	96	285
4533095	5 G 2.5	13.3 - 17.0	120	345
4533115	12 G 2.5	20.6 - 26.2	288	850
4533002	1 X 4	7.2 - 9.0	38.4	98
4533022	2 X 4	11.8 - 15.1	76.8	239
4533033	3 G 4	12.7 - 16.2	115.2	325
4533067	4 G 4	14.0 - 17.9	153.6	395
4533097	5 G 4	15.6 - 19.9	192	485
4533003	1 X 6	7.9 - 9.8	57.6	127
4533023	2 X 6	13.1 - 16.8	115.2	330

Article number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
4533035	3 G 6	14.1 - 18.0	172.8	415
4533069	4 G 6	15.7 - 20.0	230.4	535
4533099	5 G 6	17.5 - 22.2	288	648
4533004	1 X 10	9.5 - 11.9	96	192
4533024	2 X 10	17,7 - 22,6	192	590
4533037	3 G 10	19.1 - 24.2	288	712
4533071	4 G 10	20.9 - 26.5	384	920
4533005	1 X 16	10.8 - 13.4	153.6	262
4533039	3 G 16	21.8 - 27.6	460.8	990
4533073	4 G 16	23.8 - 30.1	614.4	1290
4533006	1 X 25	12.7 - 15.8	240	375
4533041	3 G 25	26.1 - 33.0	720	1395
4533075	4 G 25	28.9 - 36.6	960	1930
4533101	5 G 25	32.0 - 40.4	1200	2500
4533007	1 X 35	14.3 - 17.9	336	493
4533043	3 G 35	29.3 - 37.1	1008	1815
4533077	4 G 35	32.5 - 41.4	1344	2470
4533103	5 G 35	35.7 - 45.1	1680	3250
4533008	1 X 50	16.5 - 20.6	480	675
4533045	3 G 50	34.1 - 42.9	1440	2470
4533079	4 G 50	37.7 - 47.5	1920	3320
4533105	5 G 50	41.8 - 53.0	2400	4408
4533009	1 X 70	18.6 - 23.3	672	914
4533081	4 G 70	42.7 - 54.0	2688	4420
4533107	5 G 70	47.5 - 60.0	3360	5863
4533010	1 X 95	20.8 - 26.0	912	1200
4533083	4 G 95	48.4 - 61.0	3648	5750
4533109	5 G 95	54.0 - 67.0	4560	7537
4533011	1 X 120	22.8 - 28.6	1152	1481
4533085	4 G 120	53.0 - 66.0	4608	6990
4533012	1 X 150	25.2 - 31.4	1440	1833
4533087	4 G 150	58.0 - 73.0	5760	8650
4533013	1 X 185	27.6 - 34.4	1776	2190
4533089	4 G 185	64.0 - 80.0	7104	9785
4533014	1 X 240	30.6 - 38.3	2304	2780
4533015	1 X 300	33.5 - 41.9	2880	3310
4533016	1 X 400	37.4 - 46.8	3840	4320
4533017	1 X 500	41.3 - 52.0	4800	5342

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- V 1311-A pressing pliers, hydraulic refer to page 1030
- STAR STRIP stripping tool refer to page 1000
- KT cable shears refer to page 999
- PVL 1300 pressing pliers battery-operated refer to page 1031