

Power and control cables

Harsh conditions • Rubber cables



H05RR-F

Rubber cable for light mechanical stress and handheld devices used in households, kitchens, offices



Info

- Light mechanical stress

Benefits

- Type-compliant versions <HAR>-certified with „<HAR>“ testing and certification mark for accelerated granting of approvals if final application of cable is within the European CENELEC area

Application range

- Handheld and power supply devices according to EN 50565-2
- For lightweight workshop tools that are subject to light loads
- According to EN 50565-2: dry and damp rooms; only temporary use outdoors; not for industrial/commercial or agricultural facilities, except tailors/cutting workshops; not suitable for supplying industrial power tools
- Light & sound technology

Product features

- Ozone-resistant

Norm references / Approvals

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

Product Make-up

- Bare copper wire according to HAR
- Core insulation: rubber compound, type EI 4
- Outer sheath: rubber compound, type EM3

Technical data

	Classification ETIM 5/6 ETIM 5.0/6.0 Class-ID: EC001578 ETIM 5.0/6.0 Class-Description: Flexible cable
	Core identification code Coloured according to HD 308
	Conductor stranding Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5
	Minimum bending radius 4 to 8 x outer diameter (EN 50565-1)
	Nominal voltage U0/U: 300/500 V
	Test voltage 2000 V
	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 Flexible use: -25°C to +60°C

Article number	Number of cores and mm² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
H05RR-F				
1600203	2 X 0.75	5.7 - 6.7	14.4	61
1600207	3 G 0.75	6.2 - 7.4	21.6	75
1600204	2 X 1.0	6.1 - 7.3	19.2	73
1600208	3 G 1.0	6.5 - 7.7	28.8	86
16002113	4 G 1.0	7.1 - 8.5	38.4	105
1600205	2 X 1.5	7.6 - 8.8	28.8	115
1600200	3 G 1.5	8.0 - 9.4	43.2	135
16002013	4 G 1.5	9.0 - 10.4	57.6	165
16002023	5 G 1.5	9.8 - 11.4	72	190
1600206	2 X 2.5	9.0 - 10.4	48	160
1600209	3 G 2.5	9.6 - 11.2	72	190
16002123	4 G 2.5	10.7 - 12.3	96	235
16002133	5 G 2.5	11.9 - 13.7	120	285

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
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Similar products

- H05RN-F refer to page 97



H05RN-F

Rubber cable for handheld devices and chains of decorative lights

Info

- Oil-resistant



Benefits

- Type-compliant versions <HAR>-certified with „<HAR>“ testing and certification mark for accelerated granting of approvals if final application of cable is within the European CENELEC area

Application range

- According to EN 50565-2: for supplying devices in households, kitchens or offices under light mechanical stress; handheld inspection lamps
- According to EN 50565-2: provided the maximum conductor temperature of +60 °C, the maximum outer sheath surface temperature of +50 °C and the lack of ozone resistance are taken into account, suitable for permanent use outdoors with conventional mechanical stress

Product features

- Flame-retardant according IEC 60332-1-2
- Oil-resistant according to EN 60811-404

Norm references / Approvals

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

Product Make-up

- Bare copper wire according to HAR
- Core insulation: rubber compound, type EI 4
- Outer sheath: rubber compound, type EM2

Technical data

	Classification ETIM 5/6 ETIM 5.0/6.0 Class-ID: EC001578 ETIM 5.0/6.0 Class-Description: Flexible cable
	Core identification code Coloured according to HD 308
	Conductor stranding Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5
	Minimum bending radius 4 to 8 x outer diameter (EN 50565-1)
	Nominal voltage U0/U: 300/500 V
	Test voltage 2000 V
	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 Flexible use: -25 °C to +60 °C

Article number	Number of cores and mm ² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
H05RN-F				
1600250	2 X 0.75	5.7 - 6.7	14.4	55
1600252	3 G 0.75	6.2 - 7.4	21.6	68
16002583	4 G 0.75	6.8 - 7.9	28.8	81
1600251	2 X 1.0	6.1 - 7.3	19.2	63
1600253	3 G 1.0	6.5 - 7.7	28.8	78

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 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
 Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
 Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
 Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Similar products

- H07RN-F refer to page 98

Power and control cables

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H07RN-F

Heavy standard construction



Benefits

- For mechanically more demanding applications
- 1000 V AC at protected + static laying
- 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

Application range

- Handheld and power supply devices according to EN 50565-2
- Medium, mechanical stress
- Industrial, agricultural use
- According to EN 50565-2: In dry, damp and wet rooms as well as for fixed installation e.g. on the plaster

Product features

- Flame-retardant according to IEC 60332-1-2
- Oil-resistant according to EN 60811-404

Norm references / Approvals

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

Product Make-up

- Bare copper wire according to HAR
- Core insulation: rubber compound, type EI 4
- Outer sheath: rubber compound, type EM2



Info

- Medium mechanical stress
- Oil-resistant

Technical data

	Classification ETIM 5/6 ETIM 5.0/6.0 Class-ID: EC001578 ETIM 5.0/6.0 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
	Minimum bending radius 4 to 8 x outer diameter (EN 50565-1)
	Nominal voltage U0/U: 450/750 V
	Test voltage 2500 V
	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 -25°C to +60°C

Article number	Number of cores and mm² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
H07RN-F				
1600096	1 X 1.5	5.7 - 6.5	14.4	59
1600099	1 X 2.5	6.3 - 7.2	24	72
1600097	1 X 4.0	7.2 - 8.1	38.4	99
1600098	1 X 6.0	7.9 - 8.8	57.6	130
1600194	1 X 10.0	9.5 - 10.7	96	230
1600195	1 X 16.0	10.8 - 12.0	153.6	320
1600196	1 X 25.0	12.7 - 14.0	240	450
1600193	1 X 35.0	14.3 - 15.9	336	605
1600197	1 X 50.0	16.5 - 18.2	480	825
1600189	1 X 70.0	18.6 - 20.5	672	1090
1600190	1 X 95.0	20.8 - 22.9	912	1405
1600198	1 X 120.0	22.8 - 25.1	1152	1745
1600191	1 X 150.0	25.2 - 27.6	1440	1887
1600175	1 X 185.0	27.6 - 30.2	1776	2274
1600177	1 X 240.0	30.6 - 33.5	2304	2955
30015435	1 X 300.0	33.5 - 36.7	2880	3479
1600117	3 G 1.0	8.3 - 9.6	28.8	130
1600199	2 X 1.5	8.5 - 9.9	28.8	135
1600103	3 G 1.5	9.2 - 10.7	43.2	165
16001233	4 G 1.5	10.2 - 11.7	57.6	200
16001043	5 G 1.5	11.2 - 12.8	72	240
1600151	7 G 1.5	14.7 - 16.5	100.8	385
1600148	12 G 1.5	17.6 - 19.8	172.8	516
1600259	19 G 1.5	20.7 - 26.3	273.6	800
1600166	24 G 1.5	24.3 - 27.0	345.6	882
1600263	25 G 1.5	25.1 - 25.9	360	920
1600187	2 X 2.5	10.2 - 11.7	48	195
1600118	3 G 2.5	10.9 - 12.5	72	235
16001053	4 G 2.5	12.1 - 13.8	96	290
16001293	5 G 2.5	13.3 - 15.1	120	294

Article number	Number of cores and mm² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
1600152	7 G 2.5	17.1 - 19.3	168	520
1600154	12 G 2.5	20.6 - 23.1	288	810
1600156	19 G 2.5	25.5 - 31.0	456	1200
1600157	24 G 2.5	28.8 - 31.9	576	1298
1600186	2 X 4.0	11.8 - 13.4	76.8	270
1600119	3 G 4.0	12.7 - 14.4	115.2	320
16001063	4 G 4.0	14.0 - 15.9	153.6	395
16001303	5 G 4.0	15.6 - 17.6	192	485
1600161	7 G 4.0	20.1 - 22.4	268.8	681
1600120	3 G 6.0	14.1 - 15.9	172.8	360
16001073	4 G 6.0	15.7 - 17.7	230.4	475
16001313	5 G 6.0	17.5 - 19.6	288	760
1600121	3 G 10.0	19.1 - 21.3	288	880
16001083	4 G 10.0	20.9 - 23.3	384	1060
16001093	5 G 10.0	22.9 - 25.6	480	1300
1600122	3 G 16.0	21.8 - 24.3	460.8	1090
16001103	4 G 16.0	23.8 - 26.4	614.4	1345
16001113	5 G 16.0	26.4 - 29.2	768	1680
16001123	4 G 25.0	28.9 - 32.1	960	1995
16001133	5 G 25.0	32.0 - 35.4	1200	2470
1600124	3 G 35.0	29.3 - 32.5	1008	1910
16001143	4 G 35.0	32.5 - 36.0	1344	2645
16001363	5 G 35.0	35.7 - 39.5	1680	2810
16001153	4 G 50.0	37.7 - 41.5	1920	3635
1600126	5 G 50.0	41.8 - 46.6	2400	4050
16001163	4 G 70.0	42.7 - 47.1	2688	4830
16001283	4 G 95.0	48.4 - 53.2	3648	6320
16001323	4 G 120.0	53.0 - 57.5	4608	6830
16000883	4 G 150.0	58.0 - 63.6	5760	8320
1600141	4 G 185.0	64.0 - 69.7	7104	9800
1600183	4 G 240.0	72.0 - 79.2	9216	12800

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Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths / Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs and graphics are not to scale and do not represent detailed images of the respective products.



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

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 and 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 according to EN 60754 (sub-parts -1 and -2), flame-retardant according to IEC 60332-1-2 and low smoke density (LS) according to EN 61034-2

Norm references / Approvals

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

Product Make-up

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

Technical data



Classification ETIM 5/6

ETIM 5.0/6.0 Class-ID: EC001578
ETIM 5.0/6.0 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

U0/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 mm ² 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 4.0	7.2 - 9.0	38.4	98
4533022	2 X 4.0	11.8 - 15.1	76.8	239
4533033	3 G 4.0	12.7 - 16.2	115.2	325
4533067	4 G 4.0	14.0 - 17.9	153.6	395
4533097	5 G 4.0	15.6 - 19.9	192	485
4533003	1 X 6.0	7.9 - 9.8	57.6	127
4533023	2 X 6.0	13.1 - 16.8	115.2	330
4533035	3 G 6.0	14.1 - 18.0	172.8	415
4533069	4 G 6.0	15.7 - 20.0	230.4	535
4533099	5 G 6.0	17.5 - 22.2	288	648

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Article number	Number of cores and mm ² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
4533004	1 X 10.0	9.5 - 11.9	96	192
4533024	2 X 10.0	17.7 - 22.6	192	590
4533037	3 G 10.0	19.1 - 24.2	288	712
4533071	4 G 10.0	20.9 - 26.5	384	920
4533005	1 X 16.0	10.8 - 13.4	153.6	262
4533039	3 G 16.0	21.8 - 27.6	460.8	990
4533073	4 G 16.0	23.8 - 30.1	614.4	1290
4533006	1 X 25.0	12.7 - 15.8	240	375
4533041	3 G 25.0	26.1 - 33.0	720	1395
4533075	4 G 25.0	28.9 - 36.6	960	1930
4533101	5 G 25.0	32.0 - 40.4	1200	2500
4533007	1 X 35.0	14.3 - 17.9	336	493
4533043	3 G 35.0	29.3 - 37.1	1008	1815
4533077	4 G 35.0	32.5 - 41.4	1344	2470
4533103	5 G 35.0	35.7 - 45.1	1680	3250
4533008	1 X 50.0	16.5 - 20.6	480	675
4533045	3 G 50.0	34.1 - 42.9	1440	2470
4533079	4 G 50.0	37.7 - 47.5	1920	3320
4533105	5 G 50.0	41.8 - 53.0	2400	4408
4533009	1 X 70.0	18.6 - 23.3	672	914
4533081	4 G 70.0	42.7 - 54.0	2688	4420
4533107	5 G 70.0	47.5 - 60.0	3360	5863
4533010	1 X 95.0	20.8 - 26.0	912	1200
4533083	4 G 95.0	48.4 - 61.0	3648	5750
4533109	5 G 95.0	54.0 - 67.0	4560	7537
4533011	1 X 120.0	22.8 - 28.6	1152	1481
4533085	4 G 120.0	53.0 - 66.0	4608	6990
4533012	1 X 150.0	25.2 - 31.4	1440	1833
4533087	4 G 150.0	58.0 - 73.0	5760	8650
4533013	1 X 185.0	27.6 - 34.4	1776	2190
4533089	4 G 185.0	64.0 - 80.0	7104	9785
4533014	1 X 240.0	30.6 - 38.3	2304	2780
4533015	1 X 300.0	33.5 - 41.9	2880	3310
4533016	1 X 400.0	37.4 - 46.8	3840	4320
4533017	1 X 500.0	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
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Accessories

- KNIPEX Cable shear refer to page 952
- KNIPEX Ratchet cutter refer to page 952
- V 1311-A pressing pliers, hydraulic refer to page 980
- PVX 1300 pressing pliers battery-operated refer to page 981
- STAR STRIP stripping tool refer to page 957



H07ZZ-F

Machines, devices; halogen-free: events, locations with a high density of people and valuable assets



Info

- Halogen-free

Benefits

- Broad usages due to halogen-free materials
- According to VDE 0100-711, cables with low smoke emission are required in buildings for exhibitions, shows and stands without a fire alarm system
- Type-compliant versions <HAR>-certified with „<HAR>“ testing and certification mark for accelerated granting of approvals if final application of cable is within the European CENELEC area

Application range

- Stage technology
- For mobile equipment and machines
- According to EN 50565-2: In dry, damp and wet rooms as well as for fixed installation e.g. on the plaster
- For buildings or industrial plants with a high density of people or valuable assets

Product features

- Low amount of corrosive gases in the event of fire
- Flame-retardant according to IEC 60332-1-2 and bundle flame test according to IEC 60332-3-24
- Low smokes/low smoke density in the event of fire according to IEC 61034
- Ozone-resistant acc. to EN 50363-6, EN 60811-403, EN 50396-8.1.3

Norm references / Approvals

- <HAR> H07ZZ-F cable type approval according to EN 50525-3-21

Product Make-up

- Conductor made of bare copper wires
- Core insulation: rubber compound, halogen-free
- Outer sheath: rubber compound, halogen-free

Technical data

	Classification ETIM 5/6 ETIM 5.0/6.0 Class-ID: EC001578 ETIM 5.0/6.0 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
	Minimum bending radius 4 to 8 x outer diameter (EN 50565-1)
	Nominal voltage U0/U: 450/750 VAC In protected and fixed installations: U0/U: 600/1000 V
	Test voltage 2500 V
	Protective conductor G = with GN-YE protective conductor X = without protective conductor
	Current rating VDE 0298 Part 4 EN 50565-1/ VDE 0298-565-1
	Temperature range Static/Moved: -40°C/-5°C ...to +90°C

Article number	Number of cores and mm ² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
H07ZZ-F				
1600810	3 G 1.5	9.2 - 10.8	43.2	125
1600811	4 G 1.5	10.2 - 11.8	57.6	155
1600812	5 G 1.5	11.2 - 12.8	72	190
1600815	14 G 1.5	18.8 - 21.3	201.6	570
1600816	18 G 1.5	20.7 - 23.3	259.2	750
1600820	3 G 2.5	10.9 - 12.5	72	185
1600821	4 G 2.5	12.1 - 13.9	96	235
1600822	5 G 2.5	13.3 - 15.1	120	290
1600823	7 G 2.5	17.1 - 19.3	168	520
1600825	14 G 2.5	22.2 - 25.0	336	860
1600836	4 G 4.0	14.0 - 16.0	153.6	325
1600837	5 G 4.0	15.6 - 17.6	192	410
1600841	4 G 6.0	15.7 - 17.7	230.4	440
1600842	5 G 6.0	17.5 - 19.5	288	550
1600844	4 G 10.0	20.9 - 23.3	384	770
1600845	5 G 10.0	22.9 - 25.7	480	950
1600847	4 G 16.0	23.8 - 26.4	614.4	1070
1600849	4 G 25.0	28.9 - 32.1	960	1570
1600851	4 G 35.0	32.5 - 36.1	1344	2040
1600852	4 G 50.0	37.7 - 41.5	1920	2810

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

Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum

Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).

Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Similar products

- H07RN-F refer to page 98
- H07RN-F, enhanced version refer to page 99

Accessories

- CLICK System
- KNIPEX Cable shear refer to page 952
- EASY STRIP stripping and cutting tool refer to page 962
- PEW 8.87 crimping pliers



H01N2-D

Normative arc-welding cable



Info

- Arc welding cable according to EN 50525-2-81
- Formerly, VDE type NSLFFÖU

Benefits

- Type-compliant versions <HAR>-certified with „<HAR>“ testing and certification mark for accelerated granting of approvals if final application of cable is within the European CENELEC area

Application range

- Use the welding cable only under consideration of EN 50565-2
- For use on handheld electrode holder up to 100 V
- Can be used in dry or damp rooms
- For transmitting high currents from the electric welding device to the welding tool

Product features

- Flame-retardant according IEC 60332-1-2

Norm references / Approvals

- <HAR> H01N2-D cable type approval according to EN 50525-2-81

Product Make-up

- Bare copper wire according to HAR
- Stranding approximately corresponds to class 6 up to 95 mm², and from 120 mm² approximately to class 5 acc. to VDE 0295
- Separator made of synthetic film or paper
- Outer sheath: rubber compound, type EM5

Technical data

	Classification ETIM 5/6 ETIM 5.0/6.0 Class-ID: EC000824 ETIM 5.0/6.0 Class-Description: Welding cable
	Conductor stranding H01N2-D according to EN 50525-2-81
	Minimum bending radius Flexible use: 12 x outer diameter
	Nominal voltage U ₀ /U: 100/100 V
	Test voltage 1000 V
	Current rating According to VDE 0298 Part 4, table 16 EN 50565-1/ VDE 0298-565-1
	Temperature range Flexible use: -25°C to +85°C

Article number	Conductor cross-section (mm ²)	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
H01N2-D				
2310026	10	7.7 - 8.7	96	171
2210700	16	8.8 - 9.8	153.6	198
2210701	25	10.1 - 11.3	240	305
2210702	35	11.4 - 12.6	336	415
2210703	50	13.2 - 14.6	480	555
2210704	70	15.3 - 16.9	672	765
2210705	95	17.1 - 18.8	912	1010
2210706	120	19.2 - 21.1	1152	1262
2210707	150	21.1 - 23.2	1440	1610
2210708	240	25.8 - 27.7	2304	2520

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

Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum

Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).

Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Accessories

- KNIPEX Cable shear refer to page 952



NSSHÖU

Mechanically robust rubber cable for mining and surface mining

Info

- Mining
- Outdoors
- Oil-resistant

Technical data

	Classification ETIM 5/6 ETIM 5.0/6.0 Class-ID: EC000057 ETIM 5.0/6.0 Class-Description: Low voltage power 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
	Minimum bending radius Flexible use: 10 x outer diameter Fixed installation: 5 x outer diameter
	Nominal voltage U0/U: 600/1000 V
	Test voltage 3000 V
	Protective conductor G = with GN-YE protective conductor X = without protective conductor
	Current rating According to VDE 0298 Part 4, Table 15
	Temperature range Flexible use: -25°C to +90°C Fixed installation: -40°C to +90°C

Benefits

- For use at very high mechanical stress
- Single-core design suitable for robust connection cables for welding equipment
- Not antistatic

Application range

- For mining as well as surface mining
- Connection for moving equipment and machinery
- Under extreme environmental conditions
- Suitable for outdoor use, as well as in dry and damp interiors

Product features

- Flame retardant acc. to IEC 60332-1-2
- Oil-resistant according to EN 60811-404
- High notch resistance
- Abrasion-resistant

Norm references / Approvals

- <VDE> NSSHÖU cable type approval according to VDE 0250-812

Product Make-up

- Fine-wire strand made of tinned-copper wires
- Core insulation: rubber compound, type 3GI3
- Inner sheath: rubber-compound, type GM1b or 5GM5
- Outer sheath: rubber compound, type 5GM5

Article number	Number of cores and mm ² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
NSSHÖU-O				
1600500	1 X 16.0	10.9	153.6	260
1600501	1 X 25.0	13.3	240	390
1600502	1 X 35.0	14.4	336	500
1600503	1 X 50.0	16.7	480	680
1600504	1 X 70.0	18.9	672	900
1600505	1 X 95.0	21.0	912	1150
1600506	1 X 120.0	23.3	1152	1440
1600507	1 X 150.0	25.2	1440	1750
1600508	1 X 185.0	28.4	1776	2180
1600509	1 X 240.0	31.4	2304	2790
NSSHÖU-J				
1600516	3 G 1.5	11.8	43.2	200
16005243	4 G 1.5	12.7	57.6	230
16005333	5 G 1.5	13.6	72	280
1600517	3 G 2.5	13.2	72	260
16005253	4 G 2.5	15.4	96	360
16005343	5 G 2.5	16.5	120	420
1600541	7 G 2.5	20.0	168	600
1600544	12 G 2.5	26.0	288	860
16005263	4 G 4.0	16.9	153.6	470
16005353	5 G 4.0	18.2	192	550
16005273	4 G 6.0	18.3	230.4	580
16005363	5 G 6.0	20.6	288	740
16005283	4 G 10.0	22.3	384	950
16005373	5 G 10.0	24.1	480	1100
16005293	4 G 16.0	26.1	614	1400
16005383	5 G 16.0	28.3	768	1720
16005303	4 G 25.0	31.2	960	2000
16005313	4 G 35.0	34.1	1344	2700
16005323	4 G 50.0	41.0	1920	3700

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.

Copper price basis: EUR 100/100 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 / Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum

Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).

Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Similar products

- H07RN-F, enhanced version refer to page 99
- ÖLFLEX® CRANE PUR refer to page 179
- ÖLFLEX® CRANE VS (N)SHTÖU refer to page 178



NSGAFÖU 1,8/3 kV

Flexible single-conductor rubber cable with 1.8/3 kV rated voltage



Info

- Public transport
- Control panel internal wiring

Benefits

- Arrangements made of single-conductor cables NSGAFÖU in accordance with VDE 0250 Part 602 with nominal voltage of at least U₀/U: 1.8/3 kV can be used for short circuit-proof and short-to-ground-proof installation up to 1000 V in acc. with VDE 0100 Part 520 and VDE 0298 Part 3

Application range

- Wiring of machines, tools, devices, appliances and control cabinets
- Railway vehicles, buses; short-circuit-proof up to 1000 V in switching stations and power distributors
- No direct burial, except of lead-through through fire separations such as sand cups
- In ducts, tubes, pipes, conduits and closed installation channels
- Bundled or for connection of movable parts

Product features

- Flame-retardant according IEC 60332-1-2
- Oil-resistant according to EN 60811-404
- Normative rated voltage classes U₀/U 0.6/1 kVac and 3.6/6 kVac available on request
- The outer diameters stated in the part number table are maximum values

Norm references / Approvals

- <VDE> NSGAFÖU 1,8/3 kV cable type approval according to VDE 0250-602

Product Make-up

- Fine-wire strand made of tinned-copper wires
- Core insulation: rubber compound, type 3GI3
- Outer coating: rubber compound, type 5GM3

Technical data



Classification ETIM 5/6

ETIM 5.0/6.0 Class-ID: EC000993
ETIM 5.0/6.0 Class-Description: Single core cable



Conductor stranding

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



Minimum bending radius

Flexible use: 10 x outer diameter
Fixed installation: 6 x outer diameter



Nominal voltage

U₀/U: 1.8/3 kV



Test voltage

6000 V



Current rating

According to VDE 0298 Part 4, Table 15



Temperature range

Flexible use: -25°C to +90°C
Fixed installation: -40°C to +90°C

Article number	Conductor cross-section (mm ²)	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
NSGAFÖU 1,8/3 kV				
1600300	1.5	7.0	14.4	60
1600301	2.5	7.5	24	70
1600302	4	9.0	38.4	90
1600303	6	9.5	57.6	120
1600304	10	11.0	96	180
1600305	16	13.0	153.6	250
1600306	25	15.0	240	390
1600307	35	16.5	336	470
1600308	50	18.0	480	625
1600309	70	20.5	672	880
1600310	95	24.0	912	1190
1600311	120	26.0	1152	1430
1600312	150	28.0	1440	1750
1600313	185	31.0	1776	2160
1600314	240	34.5	2304	2640
3026826	300	38.0	2880	3545

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

Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum

Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).

Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Accessories

- KNIPEX Cable shear refer to page 952
- V 1311-A pressing pliers, hydraulic refer to page 980
- PVX 1300 pressing pliers battery-operated refer to page 981



NSHXAFÖ 1,8/3 kV

Halogen-free, flexible single-core rubber cable for public transport and wiring



Info

- Public transport
- Control panel internal wiring
- Halogen-free



Benefits

- Arrangements made of single-conductor cables NSHXAFÖ in accordance with VDE 0250 Part 606 with nominal voltage of at least U₀/U: 1.8/3 kV can be used for short circuit-proof and short-to-ground-proof installation up to 1000 V in acc. with VDE 0100 Part 520 and VDE 0298 Part 3

Application range

- Wiring of machines, tools, devices, appliances and control cabinets
- Railway vehicles, buses; short-circuit-proof up to 1000 V in switching stations and power distributors
- No direct burial, except of lead-through through fire separations such as sand cups
- In ducts, tubes, pipes, conduits and closed installation channels
- Bundled or for connection of movable parts

Product features

- Halogen-free: to protect human life and valuable assets in the event of a fire, through low smoke density and low amount of corrosive gases
- Flame-retardant according IEC 60332-1-2
- Normative rated voltage class 3.6/6 kVAc available on request
- The outer diameters stated in the part number table are maximum values

Norm references / Approvals

- <VDE> NSHXAFÖ 1,8/3 kV cable type approval according to VDE 0250-606

Product Make-up

- Fine copper wire strands
- Core insulation: halogen-free rubber compound, type 3GI3
- Outer coating: halogen-free polymer compound, type HM3

Technical data



Classification ETIM 5/6

ETIM 5.0/6.0 Class-ID: EC000993
ETIM 5.0/6.0 Class-Description: Single core cable



Conductor stranding

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



Minimum bending radius

Flexible use: 10 x outer diameter
Fixed installation: 6 x outer diameter



Nominal voltage

U₀/U: 1.8/3 kV



Test voltage

6000 V



Temperature range

Flexing: -5°C to +90°C
Fixed installation: -25°C to +90°C

Article number	Conductor cross-section (mm²)	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
NSHXAFÖ 1,8/3 kV				
3022673	1.5	7.0	14.4	60
3022674	2.5	7.5	24	70
3022675	4	9.0	38.4	90
3022676	6	9.5	57.6	120
3022677	10	11.0	96	180
3022678	16	13.0	153.6	250
3022679	25	15.0	240	390
3022680	35	16.5	336	470
3022681	50	18.0	480	625
3022682	70	20.5	672	880
3022683	95	24.0	912	1190
3022684	120	26.0	1152	1430
3022685	150	28.0	1440	1750
3022686	185	31.0	1776	2160
3022687	240	34.5	2304	2718
3022688	300	38.0	2880	3470

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

Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum

Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).

Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Accessories

- KNIPEX Cable shear refer to page 952
- V 1311-A pressing pliers, hydraulic refer to page 980
- PVX 1300 pressing pliers battery-operated refer to page 981

Power and control cables

Harsh conditions • Rubber cables



H07RN8-F

Submersible pump cable; Formerly: „ÖLFLEX® AQUA RN8“



Info

- Use down to 10 m depth
- Submersible pump cable
- Oil-resistant

Benefits

- Submersion, considering application standards, e.g. EN 50565-2
- According to EN 50565-2, underwater use prohibited in areas with shipping traffic, moving water or where there is a risk of dangerous, mechanical damage
- High stresses
- Type-compliant versions <HAR>-certified with „<HAR>“ testing and certification mark for accelerated granting of approvals if final application of cable is within the European CENELEC area

Application range

- According to EN 50565-2: Dry or damp rooms, as well as outdoors and in industrial water
- For connecting mobile, electrical equipment in industrial water
- For use with submersible pumps
- Submersion acc. AD8 standard down to 10 m depth

Product features

- Flame-retardant according IEC 60332-1-2
- Oil-resistant according to EN 60811-404
- Flexible

Norm references / Approvals

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

Product Make-up

- Conductor made of bare copper wires
- Core insulation: rubber compound, type EI 4
- Outer sheath: rubber compound, type EM2

Technical data



Classification ETIM 5/6

ETIM 5.0/6.0 Class-ID: EC001578
ETIM 5.0/6.0 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



Minimum bending radius

4 to 8 x outer diameter (EN 50565-1)



Nominal voltage

U0/U: 450/750 V



Test voltage

2500 V



Protective conductor

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



Current rating

VDE 0298 Part 4
EN 50565-1/ VDE 0298-565-1



Temperature range

Conductor:
Fix/Moved: -40/-25°C to +60°C
Max. water temperature: +40°C

Article number	Number of cores and mm² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
H07RN8-F				
1600600	1 X 4.0	7.2 - 7.8	38.4	100
1600601	1 X 6.0	7.9 - 8.5	57.6	120
1600602	1 X 10.0	9.5 - 10.5	96	180
1600604	1 X 25.0	12.7 - 13.7	240	400
1600606	3 G 1.5	9.2 - 10.8	43.2	141
1600609	4 G 1.5	10.2 - 11.8	57.6	205
1600620	7 G 1.5	14.0 - 17.5	100.8	385
1600607	3 G 2.5	10.9 - 12.5	72	210
1600610	4 G 2.5	12.1 - 13.9	96	260
1600621	7 G 2.5	16.5 - 20.0	168	520
1600611	4 G 4.0	14.0 - 16.0	153.6	356
1600612	4 G 6.0	15.7 - 17.7	230.4	475
1600613	4 G 10.0	20.9 - 23.3	384	837
1600614	4 G 16.0	23.8 - 26.4	614.4	1220
1600615	4 G 25.0	28.9 - 32.1	960	1770
1600616	4 G 35.0	32.5 - 36.1	1344	2304

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.

Packaging size: Coil ≤ 30 kg, otherwise drum

Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).

Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Similar products

- H07RN-F refer to page 98
- H07RN-F, enhanced version refer to page 99

Accessories

- CLICK System
- KNIPEX Cable shear refer to page 952
- EASY STRIP stripping and cutting tool refer to page 962
- PEW 8.87 crimping pliers