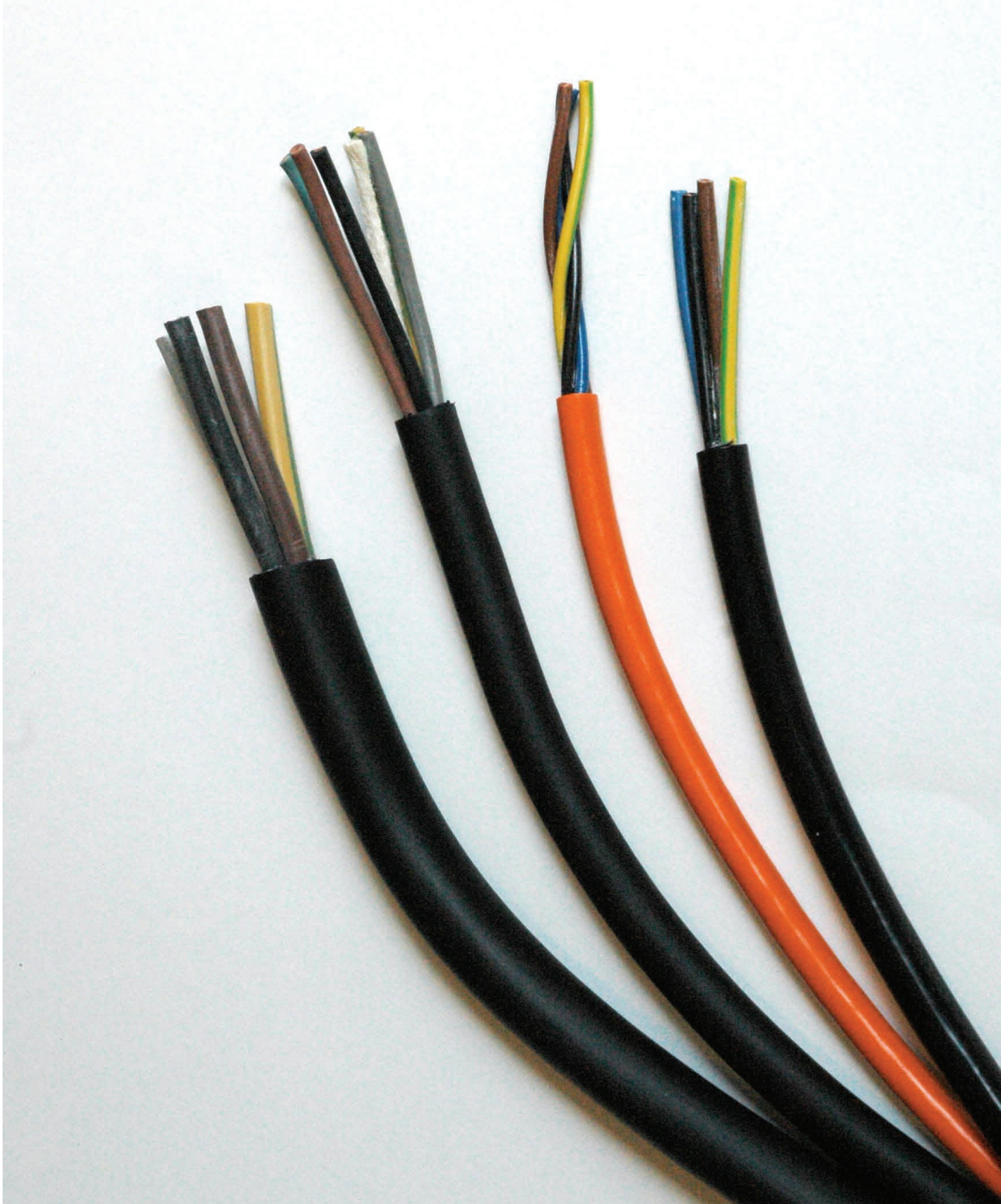


Mueller

Harmonized Cordage



What is Harmonization?

<HAR>

A cable that is intended to be used in Europe on electronic or electrical equipment should have a Harmonized <HAR> approval. The development of common standards for the European marketplace facilitates export trade to European countries. An international safety standards agency called CENELEC was formed to develop electrical standards that would be acceptable to all European CENELEC nations.

The electrical standards are classified as Harmonization Documents. <HAR> cordage and Hookup wire conforms to Harmonization documents HD-21 and HD-22.

HD-21 : Specifications for PVC insulated wires and cables

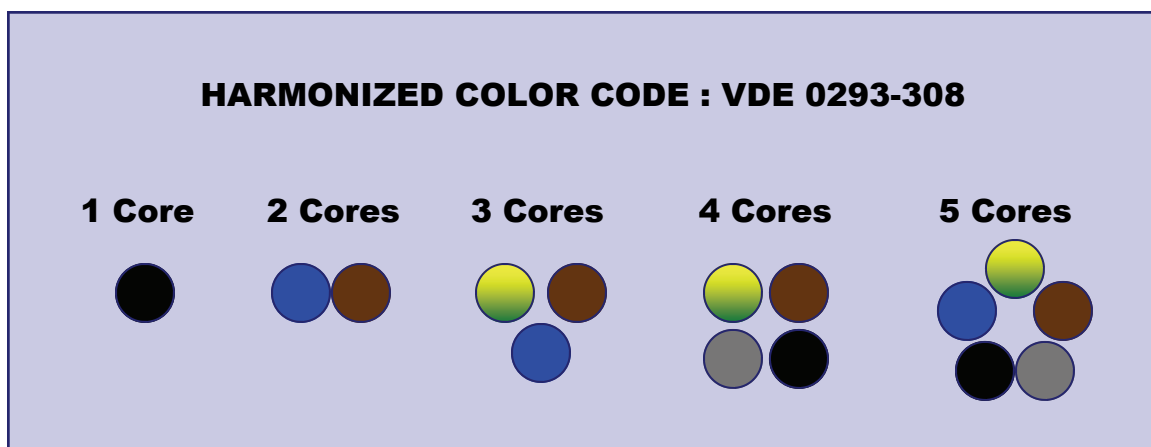
HD-22 : Specifications for Rubber insulated cords and cables

In order to identify a <HAR> wire or cable, one of the following identification methods are required:

Printed letter <HAR> on either the outer jacket or insulation

Printed tape internally within the cable

Countries involved in CENELEC are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.



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H03VV-F 300 Volt

<HAR>



H03VV-F is a harmonized, light-duty, oil-resistant, flexible, PVC multi-conductor 300-volt European cord. Recommended for use in connecting small electrical appliances under low mechanical stress environments as in offices, kitchens and households. **H03VV-F** can commonly be found in connections to kitchen utensils, desk lamps, floor lamps, vacuum cleaners, office machines and radios. These cables should NOT be used in cooking and heating apparatus. Available in black, white or gray jacket. Max operating voltage in single or three phase system is Uo/U 330/330 volts. In a direct current system max operating voltage is Uo/U 495/495 volts. Outdoor installation is not permitted.



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 Cl-5
- PVC core insulation to VDE-0281 Part 1
- Color code VDE-0293-308
- PVC outer jacket - Black (RAL 9005), White (RAL 9003) or Gray (RAL 7001)
- **Oil resistant**

Technical:

- Working voltage: 300/300 volts
- Test voltage: 2000 volts
- Flexing bending radius: 7.5 x Ø
- Static bending radius: 4 x Ø
- Flexing temp: -5° C to +70° C
- Static temp: -40° C to +70° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> HD21.5 S3
- VDE-0281 Part-5
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60227-5
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
20 AWG (16/32) 0,50mm²				
4032002*	2	0.201" / 5.1mm	7	27
4032003*	3	0.217" / 5.5mm	10	33
4032004*	4	0.236" / 6.0mm	13	41
18 AWG (24/32) 0,75mm²				
4031802*	2	0.213" / 5.4mm	10	33
4031803*	3	0.224" / 5.7mm	15	40
4031804*	4	0.248" / 6.3mm	19	48
4031805*	5	0.280" / 7.1mm	24	58

* Available in white jacket (404) and gray jacket (405)

** For larger than #18 AWG (0,75mm²) see H05VV-F (400)

H05VV-F 500 Volt

<HAR>



H05VV-F is a harmonized, light-duty, oil-resistant, flexible, PVC multi-conductor 500-volt European cord. Recommended for use in connecting electrical appliances under medium mechanical stress environments as in offices, kitchens and households. **H05VV-F** can commonly be found in connections in damp and wet areas as in refrigerators, washing machines and spin-dryers. These cables are suitable to be used in cooking and heating apparatus if there is no actual direct contact with the hot parts or other heat influences. These cables are also suitable for fixed applications in furniture, wall partitions, decoration coverings and in hollow spaces of prefabricated building parts. Available in black, white or gray jacket. Max operating voltage in single or three phase system is Uo/U 318/550 volts. In a direct current system max operating voltage is Uo/U 413/825 volts. Outdoor installation is not permitted.



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 CI-5
- PVC core insulation to VDE-0281 Part 1
- Color code VDE-0293-308
- PVC outer jacket - Black (RAL 9005), White (RAL 9003) or Gray (RAL 7001)
- **Oil resistant**

Technical:

- Working voltage: 300/500 volts
- Test voltage: 2000 volts
- Flexing bending radius: 7.5 x Ø
- Static bending radius: 4 x Ø
- Flexing temp: -5° C to +70° C
- Static temp: -40° C to +70° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> HD21.5 S3
- VDE-0281 Part-5
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60227-5
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
18 AWG (24/32) 0,75mm²				
4001802*	2	0.252" / 6.4mm	10	34
4001803*	3	0.268" / 6.8mm	15	40
4001804*	4	0.291" / 7.4mm	19	49
4001805*	5	0.335" / 8.5mm	24	65
17 AWG (32/32) 1,00mm²				
4001702*	2	0.268" / 6.8mm	13	42
4001703*	3	0.283" / 7.2mm	19	50
4001704*	4	0.315" / 8.0mm	25	62
4001705*	5	0.346" / 8.8mm	32	76
16 AWG (30/30) 1,50mm²				
4001602*	2	0.299" / 7.6mm	19	57
4001603*	3	0.323" / 8.2mm	29	71
4001604*	4	0.362" / 9.2mm	39	90
4001605*	5	0.413" / 10.5mm	48	112
14 AWG (50/30) 2,50mm²				
4001402*	2	0.366" / 9.3mm	32	85
4001403*	3	0.398" / 10.1mm	48	106
4001404*	4	0.441" / 11.2mm	64	132
4001405*	5	0.488" / 12.4mm	80	163

* Available in white jacket (401) and gray jacket (402)

** For larger than #14 AWG (2,50mm²) see H07RN-F (410)

H05VV-F/SJT UL/CSA/HAR



H05VV-F/SJT is a harmonized, UL/CSA approved, light-duty, oil-resistant, flexible, PVC multi-conductor European and UL 62 SJT cord. The international and national approvals make this cable ideal for import and export to North American and European markets. Recommended for use in connecting electrical appliances under medium mechanical stress environments as in offices, kitchens and households. **H05VV-F/SJT** can commonly be found in connections in damp and wet areas as in refrigerators, washing machines and spin-dryers. These cables are suitable to be used in cooking and heating apparatus if there is no actual direct contact with the hot parts or other heat influences. These cables are also suitable for fixed applications in furniture, wall partitions, decoration coverings and in hollow spaces of prefabricated building parts. Available in black, white or gray jacket. Outdoor installation is not permitted.



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 CI-5
- PVC core insulation to VDE-0281 Part 1
- Color code VDE-0293-308
- PVC outer jacket - Black (RAL 9005), White (RAL 9003) or Gray (RAL 7001)
- **Oil resistant**

Technical:

- Working voltage VDE: 300/500 volts
- Working Voltage UL/CSA: 300 volts
- Test voltage: 2000 volts
- Flexing bending radius: 7.5 x Ø
- Static bending radius: 4 x Ø
- Flexing temp: -5° C to +70° C
- Static temp: -40° C to +70° C
- Flame retardant: IEC 60332.1, VW-1
- Insulation resistance: 20 MΩ x km

Approvals:

- UL Style 62 (SJT), VW-1
- CSA 22.2 No 49, FT-1
- <HAR> HD21.5 S3
- VDE-0281 Part-5 & Part-2
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60227-5
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
18 AWG (32/32) 1,00mm²				
4501802*	2	0.283" / 7.2mm	13	38
4501803*	3	0.299" / 7.6mm	19	49
4501804*	4	0.339" / 8.6mm	26	58
4501805*	5	0.370" / 9.4mm	32	70
16 AWG (30/30) 1,50mm²				
4501602*	2	0.299" / 7.6mm	19	55
4561603*	3	0.327" / 8.3mm	30	64
4501604*	4	0.366" / 9.3mm	39	78
4501605*	5	0.409" / 10.4mm	48	97
14 AWG (50/30) 2,50mm²				
4501402*	2	0.362" / 9.2mm	32	79
4501403*	3	0.394" / 10.0mm	48	102
4501404*	4	0.429" / 10.9mm	64	129
4501405*	5	0.480" / 12.2mm	80	163
12 AWG (56/28) 4,00mm²				
4501202*	2	0.417" / 10.6mm	52	131
4501203*	3	0.453" / 11.5mm	77	158
4501204*	4	0.488" / 12.4mm	103	201
4501205*	5	0.555" / 14.1mm	129	242

* Available in white jacket (451) and gray jacket (452)

FLEX-SF Super Flexible

<HAR>



FLEX-SF is a harmonized, light-duty, super-flexible, PVC multi-conductor 500-volt European cord. Commonly used as supply cables for small machines and portable devices. Recommended especially for use on domestic appliances, electrical power tools and various kinds of handyman tools. **FLEX-SF** is not recommended for permanent outdoor use, but is suitable for use in low temperatures. The superfine strand and orange PVC flame-retardant jacket ensure and retain excellent flexibility.



Construction:

- Super-fine bare copper strands
- Strands to individual diameter of 0.07mm
- PVC-based cold flexible core insulation
- Color code VDE-0293-308
- PVC-based cold flexible outer jacket
- Orange (RAL 2003)

Technical:

- Working voltage: 300/500 volts
- Test voltage: 3000 volts
- Flexing bending radius: 10 x Ø
- Static bending radius: 4 x Ø
- Flexing temp: -15° C to +60° C
- Static temp: -40° C to +60° C
- Flame retardant: IEC 60332.1-2
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> HD21.5 S3 type H05VV-F
- VDE-0281 Part-5
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60227-5
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
18 AWG (195/41) 0,75mm²				
4391802	2	0.260" / 6.6mm	10	34
4391803	3	0.276" / 7.0mm	15	40
4391804	4	0.299" / 7.6mm	20	49
4391805	5	0.335" / 8.5mm	25	59
4391807	7	0.402" / 10.2mm	35	73
17 AWG (260/41) 1,00mm²				
4391702	2	0.276" / 7.0mm	13	50
4391703	3	0.291" / 7.4mm	20	58
4391704	4	0.319" / 8.1mm	27	68
4391705	5	0.354" / 9.0mm	34	87
16 AWG (392/41) 1,50mm²				
4391603	3	0.343" / 8.7mm	30	78
4391604	4	0.382" / 9.7mm	41	111
4391605	5	0.425" / 10.8mm	48	123

H05RN-F 300/500 Volts

<HAR>



H05RN-F is a harmonized, medium-duty, flexible, rubber insulated, black neoprene jacketed, multi-conductor European cord. Recommended for use in electrical equipment under low stress in dry, damp and wet areas in indoor or outdoor environments. Commonly used as a connection cable in horticulture tools or workshop tools that might be subject to or in contact with oils and fats. Also suitable for fixed installation in furniture, decorative coverings, wall partitions and pre-fabricated building parts. Max operating voltage in single or three phase system is Uo/U 318/550 volts. In a direct current system max operating voltage is Uo/U 413/825 volts



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 CI-5
- Rubber core insulation to VDE-0282 Part-1
- Color code VDE-0293-308 and HD 186
- Polychloroprene rubber (neoprene) jacket
- Ozone resistant
- Oil & fat resistant to touch

Technical:

- Working voltage: 300/500 volts
- Test voltage: 2000 volts
- Flexing bending radius: 7.5 x Ø
- Fixed bending radius: 4.0 x Ø
- Temp Range: -30° C to +60° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> HD22.4 S3
- VDE-0282 Part-4
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60245-4
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
18 AWG (24/32) 0,75mm²				
4111802	2	0.224 - 0.291" / 5.7 - 7.4mm	9	54
4111803	3	0.244 - 0.319" / 6.2 - 8.1mm	15	64
4121804*	4	0.268 - 0.346" / 6.8 - 8.8mm	20	70
17 AWG (32/32) 1,00mm²				
4111702	2	0.240 - 0.315" / 6.1 - 8.0mm	13	64
4111703	3	0.256 - 0.335" / 6.5 - 8.5mm	19	77
16 AWG (30/30) 1,50mm²				
4111603	3	0.339 - 0.433" / 8.6 - 11.0mm	29	105
4111604**	4	0.374 - 0.480" / 9.5 - 12.2mm	39	129
4111605**	5	0.413 - 0.531" / 10.5 - 13.5mm	48	153

* Not a VDE Recognized size. Adapted to National Type (A)05RN-F

** Not a HAR Recognized size. Adapted to VDE Type (H)05RN-F

*** For sizes larger than #16 AWG (1,50mm²) see H07RN-F (410)

H07RN-F 450/750 Volts

<HAR>



H07RN-F is a harmonized, heavy-duty, flexible, rubber insulated, black neoprene jacketed, multi-conductor European cord. Recommended for use in electrical equipment under medium mechanical stress in a dry or damp indoor or outdoor environment. Commonly used on equipment in industry works such as boilers, heating plates, hand lamps, electric tools (drills and circular saws), in homework tools and transportable motors or machines at site. Also suitable for fixed installations on plaster, temporary buildings and residential barracks. **H07RN-F** is also suitable for direct laying on components and mechanical parts of machines in lifts and cranes. Max operating voltage in single or three phase system is Uo/U 476/825 volts. In a direct current system max operating voltage is Uo/U 619/1238 volts. If in a fixed or protected installation Uo/U is 600/1000 volts.



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 CI-5
- Rubber core insulation to VDE-0282 Part-1
- Color code VDE-0293-308 and HD 186
- Polychloroprene rubber (neoprene) jacket
- Ozone & weather resistant
- Oil & fat resistant to touch

Technical:

- Working voltage: 450/750 volts
- Test voltage: 2500 volts
- Flexing bending radius: 7.5 x Ø
- Fixed bending radius: 4.0 x Ø
- Temp Range: -30° C to +60° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> HD22.4 S3
- VDE-0282 Part-4
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60245-4
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
17 AWG (32/32) 1,00mm²				
4101702	2	0.303 - 0.394" / 7.7 - 10.0mm	13	66
4101703	3	0.327 - 0.421" / 8.3 - 10.7mm	19	87
4101704	4	0.362 - 0.469" / 9.2 - 11.9mm	25	101
16 AWG (30/30) 1,50mm²				
4101601	1	0.224 - 0.280" / 5.7 - 7.1mm	10	39
4101602	2	0.335 - 0.433" / 8.5 - 11.0mm	19	91
4101603	3	0.362 - 0.469" / 9.2 - 11.9mm	29	108
4101604	4	0.402 - 0.516" / 10.2 - 13.1mm	39	136
4101605	5	0.441 - 0.567" / 11.2 - 14.4mm	48	160
4101607	7	0.571 - 0.689" / 14.5 - 17.5mm	68	252
4101612	12	0.693 - 0.882" / 17.6 - 22.4mm	117	309
4101619	19	0.815 - 1.035" / 20.7 - 26.3mm	184	543
4101624	24	0.957 - 1.209" / 24.3 - 30.7mm	232	681
14 AWG (50/30) 2,50mm²				
4101401	1	0.248 - 0.311" / 6.3 - 7.9mm	16	48
4101402	2	0.402 - 0.516" / 10.2 - 13.1mm	32	129
4101403	3	0.429 - 0.551" / 10.9 - 14.0mm	48	155
4101404	4	0.476 - 0.610" / 12.1 - 15.5mm	64	189
4101405	5	0.524 - 0.669" / 13.3 - 17.0mm	80	223
4101407	7	0.650 - 0.787" / 16.5 - 20.0mm	113	349
4101412	12	0.811 - 1.031" / 20.6 - 26.2mm	193	510
4101419	19	1.004 - 1.220" / 25.5 - 31.0mm	306	721
4101424	24	1.134 - 1.433" / 28.8 - 36.4mm	386	932
12 AWG (56/28) 4,00mm²				
4101201	1	0.283 - 0.354" / 7.2 - 9.0mm	25	67
4101202	2	0.465 - 0.594" / 11.8 - 15.1mm	52	178
4101203	3	0.500 - 0.638" / 12.7 - 16.2mm	77	216
4101204	4	0.551 - 0.705" / 14.0 - 17.9mm	103	263
4101205	5	0.614 - 0.783" / 15.6 - 19.9mm	129	321
4101207	7	0.717 - 0.858" / 18.2 - 21.8mm	170	457
10 AWG (84/28) 6,00mm²				
4101001	1	0.311 - 0.386" / 7.9 - 9.8mm	39	87
4101003	3	0.555 - 0.709" / 14.1 - 18.0mm	116	284
4101004	4	0.618 - 0.787" / 15.7 - 20.0mm	154	356
4101005	5	0.689 - 0.874" / 17.5 - 22.2mm	193	437

Sizes continued on next page.

H07RN-F 450/750 Volts

<HAR>



H07RN-F Sizes Continued. (8 AWG & Larger)

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
8 AWG (80/26) 10,0mm²				
4100801	1	0.374 - 0.469" / 9.5 - 11.9mm	64	141
4100803	3	0.752 - 0.953" / 19.1 - 24.2mm	193	538
4100804	4	0.823 - 1.043" / 20.9 - 26.5mm	258	645
4100805	5	0.902 - 1.146" / 22.9 - 29.1mm	322	779
6 AWG (128/26) 16,0mm²				
4100601	1	0.425 - 0.528" / 10.8 - 13.4mm	103	202
4100603	3	0.858 - 1.087" / 21.8 - 27.6mm	309	759
4100604	4	0.937 - 1.185" / 23.8 - 30.1mm	412	921
4100605	5	1.039 - 1.311" / 26.4 - 33.3mm	515	1129
4 AWG (200/26) 25,0mm²				
4100401	1	0.500 - 0.622" / 12.7 - 15.8mm	161	283
4100403	3	1.028 - 1.299" / 26.1 - 33.0mm	483	838
4100404	4	1.138 - 1.441" / 28.9 - 36.6mm	644	1309
4100405	5	1.260 - 1.591" / 32.0 - 40.4mm	805	1509
2 AWG (280/26) 35,0mm²				
4100201	1	0.563 - 0.705" / 14.3 - 17.9mm	225	370
4100203	3	1.154 - 1.461" / 29.3 - 37.1mm	676	1274
4100204	4	1.280 - 1.618" / 32.5 - 41.1mm	901	1722
4100205	5	1.449 - 1.803" / 36.8 - 45.8mm	1127	1845
1 AWG (400/26) 50,0mm²				
4100101	1	0.650 - 0.811" / 16.5 - 20.6mm	322	510
4100103	3	1.343 - 1.689" / 34.1 - 42.9mm	966	1274
4100104	4	1.484 - 1.870" / 37.7 - 47.5mm	1288	2140
2/0 AWG (356/24) 70,0mm²				
4102101	1	0.732 - 0.917" / 18.6 - 23.3mm	451	665
4102103	3	1.512 - 1.902" / 38.4 - 48.3mm	1352	1743
4102104	4	1.681 - 2.126" / 42.7 - 54.0mm	1803	2857
3/0 AWG (485/24) 95,0mm²				
4103101	1	0.819 - 1.024" / 20.8 - 26.0mm	612	859
4103103	3	1.705 - 2.126" / 43.3 - 54.0mm	1835	2280
4103104	4	1.906 - 2.402" / 48.4 - 61.0mm	2447	3756
4/0 AWG (614/24) 120,0mm²				
4104101	1	0.898 - 1.126" / 22.8 - 28.6mm	773	1068
4104103	3	1.866 - 2.362" / 47.4 - 60.0mm	2318	3474
4104104	4	2.087 - 2.598" / 53.0 - 66.0mm	3091	4581
300 MCM (765/24) 150,0mm²				
4103001	1	0.992 - 1.236" / 25.2 - 31.4mm	966	1311
4103004	4	2.283 - 2.874" / 58.0 - 73.0mm	3863	5580
350 MCM (944/24) 185,0mm²				
4103501	1	1.087 - 1.354" / 27.6 - 34.4mm	1191	1546
4103504	4	2.520 - 3.150" / 64.0 - 80.0mm	4765	6573
500 MCM (1221/24) 240,0mm²				
4105001	1	1.205 - 1.508" / 30.6 - 38.3mm	1545	2083
4105004	4	2.835 - 3.583" / 72.0 - 91.0mm	6181	8115

* For 18 AWG (0,75mm²) please see H05RN-F (411)

** Additional AWG/MCM sizes and core counts may be available.

Harmonized Cordage

H07RN8-F Submersible

<HAR>



H07RN8-F is a harmonized, heavy-duty, flexible, rubber insulated, black neoprene jacketed, multi-conductor European submersible pump cable. Designed for use in submersible pumps and applications for permanent use in water and under high mechanical stress. Recommended immersion depth is 10 meters with a max water temp of +40° C. Commonly found in connecting electrical equipment in industrial water as floater switches and other flexible applications found in indoor and outdoor swimming pools. The special outer rubber jacket is ozone, UV and oil resistant. If in a fixed or protected installation Uo/U is 600/1000 volts. Can be used in dry, damp and wet areas as well as outdoors.



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 CI-5
- Rubber core insulation to VDE-0282 Part-1
- Color code VDE-0293-308 and HD 186
- Polychloroprene rubber (neoprene) jacket
- Ozone, UV & weather resistant
- Permanent use in water

Technical:

- Working voltage: 450/750 volts
- Test voltage: 2500 volts
- Flexing bending radius: 6.0 x Ø
- Fixed bending radius: 4.0 x Ø
- Flexing Temp: -25° C to +60° C
- Fixed Temp: -40° C to +60° C
- Max Water Temp: +40° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> HD22.16 S1
- VDE-0282 Part-16
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
17 AWG (32/32) 1,00mm2				
4181702	2	0.303 - 0.394" / 7.7 - 10.0mm	13	66
4181703	3	0.327 - 0.421" / 8.3 - 10.7mm	19	87
4181704	4	0.362 - 0.469" / 9.2 - 11.9mm	25	101
4181705	5	0.402 - 0.516" / 10.2 - 13.1mm	32	117
16 AWG (30/30) 1,50mm2				
4181601	1	0.224 - 0.280" / 5.7 - 7.1mm	10	39
4181602	2	0.335 - 0.433" / 8.5 - 11.0mm	19	91
4181603	3	0.362 - 0.469" / 9.2 - 11.9mm	29	108
4181604	4	0.402 - 0.516" / 10.2 - 13.1mm	39	136
4181605	5	0.441 - 0.567" / 11.2 - 14.4mm	48	160
4181606	6	0.528 - 0.677" / 13.4 - 17.2mm	58	115
4181607	7	0.571 - 0.689" / 14.5 - 17.5mm	68	252
4181612	12	0.693 - 0.882" / 17.6 - 22.4mm	117	309
14 AWG (50/30) 2,50mm2				
4181401	1	0.248 - 0.311" / 6.3 - 7.9mm	16	48
4181402	2	0.402 - 0.516" / 10.2 - 13.1mm	32	129
4181403	3	0.429 - 0.551" / 10.9 - 14.0mm	48	155
4181404	4	0.476 - 0.610" / 12.1 - 15.5mm	64	189
4181405	5	0.524 - 0.669" / 13.3 - 17.0mm	80	223
4181406	6	0.618 - 0.787" / 15.7 - 20.0mm	97	187
4181407	7	0.650 - 0.799" / 16.5 - 20.3mm	113	349
4181412	12	0.811 - 1.031" / 20.6 - 26.2mm	193	510
12 AWG (56/28) 4,00mm2				
4181201	1	0.283 - 0.354" / 7.2 - 9.0mm	25	67
4181202	2	0.465 - 0.594" / 11.8 - 15.1mm	52	178
4181203	3	0.500 - 0.638" / 12.7 - 16.2mm	77	216
4181204	4	0.551 - 0.705" / 14.0 - 17.9mm	103	263
4181205	5	0.614 - 0.783" / 15.6 - 19.9mm	129	321
10 AWG (84/28) 6,00mm2				
4181001	1	0.311 - 0.386" / 7.9 - 9.8mm	39	87
4181003	3	0.555 - 0.709" / 14.1 - 18.0mm	116	284
4181004	4	0.618 - 0.787" / 15.7 - 20.0mm	154	356
4181005	5	0.689 - 0.874" / 17.5 - 22.2mm	193	437

Sizes continued on next page.

H07RN8-F Submersible

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H07RN8-F Sizes Continued. (8 AWG & Larger)

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
8 AWG (80/26) 10,0mm²				
4180801	1	0.374 - 0.469" / 9.5 - 11.9mm	64	141
4180803	3	0.752 - 0.953" / 19.1 - 24.2mm	193	538
4180804	4	0.823 - 1.043" / 20.9 - 26.5mm	258	645
4180805	5	0.902 - 1.146" / 22.9 - 29.1mm	322	779
6 AWG (128/26) 16,0mm²				
4180601	1	0.425 - 0.528" / 10.8 - 13.4mm	103	202
4180603	3	0.858 - 1.087" / 21.8 - 27.6mm	309	759
4180604	4	0.937 - 1.185" / 23.8 - 30.1mm	412	921
4180605	5	1.039 - 1.311" / 26.4 - 33.3mm	515	1129
4 AWG (200/26) 25,0mm²				
4180401	1	0.500 - 0.622" / 12.7 - 15.8mm	161	283
4180403	3	1.028 - 1.299" / 26.1 - 33.0mm	483	838
4180404	4	1.138 - 1.441" / 28.9 - 36.6mm	644	1309
4180405	5	1.260 - 1.591" / 32.0 - 40.4mm	805	1509
2 AWG (280/26) 35,0mm²				
4180201	1	0.563 - 0.705" / 14.3 - 17.9mm	225	370
4180203	3	1.154 - 1.461" / 29.3 - 37.1mm	676	1274
4180204	4	1.280 - 1.618" / 32.5 - 41.1mm	901	1722
1 AWG (400/26) 50,0mm²				
4180101	1	0.650 - 0.811" / 16.5 - 20.6mm	322	510
4180103	3	1.343 - 1.689" / 34.1 - 42.9mm	966	1743
4180104	4	1.484 - 1.870" / 37.7 - 47.5mm	1288	2140
2/0 AWG (356/24) 70,0mm²				
4182101	1	0.732 - 0.917" / 18.6 - 23.3mm	451	665
4182103	3	1.512 - 1.902" / 38.4 - 48.3mm	1352	2280
4182104	4	1.681 - 2.126" / 42.7 - 54.0mm	1803	2857
3/0 AWG (485/24) 95,0mm²				
4183101	1	0.819 - 1.024" / 20.8 - 26.0mm	612	859
4183103	3	1.705 - 2.126" / 43.3 - 54.0mm	1835	2984
4183104	4	1.906 - 2.402" / 48.4 - 61.0mm	2447	3756
4/0 AWG (614/24) 120,0mm²				
4184101	1	0.898 - 1.126" / 22.8 - 28.6mm	773	1068
4184103	3	1.866 - 2.362" / 47.4 - 60.0mm	2318	3474
4184104	4	2.087 - 2.598" / 53.0 - 66.0mm	3091	4581
300 MCM (765/24) 150,0mm²				
4183001	1	0.992 - 1.236" / 25.2 - 31.4mm	966	1311
4183004	4	2.283 - 2.874" / 58.0 - 73.0mm	3863	5580
350 MCM (944/24) 185,0mm²				
4183501	1	1.087 - 1.354" / 27.6 - 34.4mm	1191	1546
4183504	4	2.520 - 3.150" / 64.0 - 80.0mm	4765	6573
500 MCM (1221/24) 240,0mm²				
4185001	1	1.205 - 1.508" / 30.6 - 38.3mm	1545	2083
4185004	4	2.835 - 3.583" / 72.0 - 91.0mm	6181	8115

* Additional AWG/MCM sizes and core counts may be available.

Harmonized Cordage

A07RN-F 450/750 Volts



A07RN-F is a VDE approved and Authorized national, heavy-duty, flexible, rubber insulated, black neoprene jacketed, multi-conductor European cord. Recommended for use in electrical equipment under medium mechanical stress in a dry or damp indoor or outdoor environment. Commonly used on equipment in industry works such as boilers, heating plates, hand lamps, electric tools (drills and circular saws), in homework tools and transportable motors or machines at site. Also suitable for fixed installations on plaster, temporary buildings and residential barracks. **A07RN-F** is also suitable for direct laying on components and mechanical parts of machines in lifts and cranes. Max operating voltage in single or three phase system is Uo/U 476/825 volts. In a direct current system max operating voltage is Uo/U 619/1238 volts. If in a fixed or protected installation Uo/U is 600/1000 volts.



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 CI-5
- Rubber core insulation to VDE-0282 Part-1
- Color code VDE-0293-308
- 3,4,& 5 cores cables - NO green/yellow ground
- Polychloroprene rubber (neoprene) jacket
- Ozone & weather resistant
- Oil & fat resistant to touch

Technical:

- Working voltage: 450/750 volts
- Test voltage: 2500 volts
- Flexing bending radius: 7.5 x Ø
- Fixed bending radius: 4.0 x Ø
- Temp Range: -30° C to +60° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- Authorized national to A07RN-F
- VDE-0282 Part-4
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60245-4
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
16 AWG (30/30) 1,50mm²				
4121603*	3	0.362 - 0.469" / 9.2 - 11.9mm	29	111
4121604*	4	0.402 - 0.516" / 10.2 - 13.1mm	39	152
4121605*	5	0.441 - 0.567" / 11.2 - 14.4mm	48	208
4121607	7	0.551 - 0.689" / 14.0 - 17.5mm	68	248
4121612	12	0.693 - 0.882" / 17.6 - 22.4mm	116	349
4121619	19	0.846 - 1.004" / 21.5 - 25.5mm	184	537
4121627	27	1.004 - 1.240" / 25.5 - 31.5mm	258	738
14 AWG (50/30) 2,50mm²				
4121403*	3	0.429 - 0.551" / 10.9 - 14.0mm	48	158
4121407	7	0.650 - 0.787" / 16.5 - 20.0mm	113	335
4121412	12	0.811 - 1.031" / 20.6 - 26.2mm	193	483
4121419	19	0.984 - 1.161" / 25.0 - 29.5mm	306	738
4121424	24	1.134 - 1.433" / 28.8 - 36.4mm	386	905
4121427	27	1.181 - 1.457" / 30.0 - 37.0mm	429	1020
4121437	37	1.339 - 1.476" / 34.0 - 37.5mm	483	1301
12 AWG (56/28) 4,00mm²				
4121203*	3	0.500 - 0.638" / 12.7 - 16.2mm	77	215
10 AWG (84/28) 6,00mm²				
4121003*	3	0.555 - 0.709" / 14.1 - 18.0mm	116	332
8 AWG (80/26) 10,0mm²				
4120803*	3	0.752 - 0.953" / 19.1 - 24.2mm	193	590
4120804*	4	0.823 - 1.043" / 20.9 - 26.5mm	258	714
6 AWG (128/26) 16,0mm²				
4120603*	3	0.858 - 1.087" / 21.8 - 27.6mm	309	734
4120604*	4	0.937 - 1.185" / 23.8 - 30.1mm	412	919

* 3, 4 and 5 core constructions have **NO** green/yellow ground wire

** Additional AWG/MCM sizes and core counts may be available.

H05RR-F 300/500 Volts

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H05RR-F is a harmonized, light-duty, flexible, rubber insulated, black rubber jacketed, multi-conductor European cord. Recommended for use in electrical equipment under low stress in dry, damp and wet areas. Commonly used in connecting electrical appliances as vacuums and kitchen appliances in offices and households. **H05RR-F** can be found in flat irons, soldering irons, kitchen aids, toasters, stoves and in connections with light commercial electric tools. Also suitable for fixed installation in furniture, decorative coverings, wall partitions and pre-fabricated building parts. Max operating voltage in single or three phase system is Uo/U 318/550 volts. In a direct current system max operating voltage is Uo/U 413/825 volts. Outdoor use is permitted only for a short time.



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 Cl-5
- Rubber core insulation to VDE-0282 Part-1
- Color code VDE-0293-308 and HD 186
- Rubber jacket
- Ozone resistant
- Oil & fat resistant to touch

Technical:

- Working voltage: 300/500 volts
- Test voltage: 2000 volts
- Flexing bending radius: 7.5 x Ø
- Fixed bending radius: 4.0 x Ø
- Temp Range: -30° C to +60° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> HD22.4 S3
- VDE-0282 Part-4
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60245-4
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
18 AWG (24/32) 0,75mm²				
4201802	2	0.224 - 0.291" / 5.7 - 7.4mm	10	40
4201803	3	0.244 - 0.319" / 6.2 - 8.1mm	15	50
4201804	4	0.268 - 0.346" / 6.8 - 8.8mm	19	58
4201805	5	0.299 - 0.390" / 7.6 - 9.9mm	24	66
17 AWG (32/32) 1,00mm²				
4201702	2	0.240 - 0.315" / 6.1 - 8.0mm	13	48
4201703	3	0.256 - 0.335" / 6.5 - 8.5mm	19	57
4201704	4	0.280 - 0.366" / 7.1 - 9.3mm	25	66
4201705	5	0.315 - 0.406" / 8.0 - 10.3mm	32	90
16 AWG (30/30) 1,50mm²				
4201602	2	0.299 - 0.386" / 7.6 - 9.8mm	19	66
4201603	3	0.315 - 0.409" / 8.0 - 10.4mm	29	80
4201604	4	0.354 - 0.457" / 9.0 - 11.6mm	39	101
4201605	5	0.386 - 0.500" / 9.8 - 12.7mm	48	121
14 AWG (50/30) 2,50mm²				
4201402	2	0.354 - 0.457" / 9.0 - 11.6mm	32	97
4201403	3	0.378 - 0.488" / 9.6 - 12.4mm	48	114
4201404	4	0.421 - 0.543" / 10.7 - 13.8mm	64	148
4201405	5	0.469 - 0.602" / 11.9 - 15.3mm	80	181

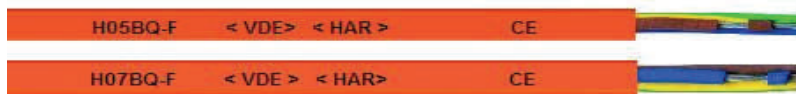
* For sizes larger than #14 AWG (2,50mm²) see H07RN-F (410)

H05BQ-F / H07BQ-F

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H05BQ-F / H07BQ-F are harmonized, medium-duty, flexible, EPR rubber insulated, orange polyurethane jacketed multi-conductor European cords. Recommended for use with medium mechanical loads in dry, damp or wet environments. Commonly found in connections to commercial and agriculture electrical tools such as drills, hand-held saws, circular saws and portable motors. May also be used in connections to soldering equipment and heating apparatus providing there is no contact with the actual hot parts or heat rays. **H07BQ-F** can commonly be found in other machinery in agriculture, building sites, docks and refrigeration plants. The robust PUR jacket adds abrasion, notch and tear resistance as well as chemical resistance to oils, fats, petrol, water, ozone, UV radiation, hydrolysis and microbes. Common European designation is NGMH11YÖ



Construction:

- Fine bare or tinned copper strands
- Strands to VDE-0295 Class-5, IEC 60228 CI-5
- Rubber core insulation to VDE-0282 Part-1
- Color code VDE-0293-308 and HD 308 S2
- Polyurethane outer jacket - orange (RAL 2003)
- **Extremely oil and chemical resistant**

Technical:

- Working voltage: 300/500 volts
- Voltage: 450/750v (16 AWG and up)
- Test voltage: 2000/2500 volts
- Flexing bending radius: 5.0 x Ø
- Fixed bending radius: 3.0 x Ø
- Flexing Temp: -40° C to +80° C
- Fixed Temp: -50° C to +90° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> HD22.10 S1
- VDE-0282 Part-10
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60245-4
- ROHS compliant

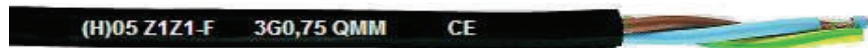
PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
18 AWG (24/32) 0,75mm²				
4301802	2	0.224 - 0.291" / 5.7 - 7.4mm	10	35
4301803	3	0.244 - 0.319" / 6.2 - 8.1mm	15	42
4301804	4	0.268 - 0.346" / 6.8 - 8.8mm	19	54
4301805	5	0.299 - 0.390" / 7.6 - 9.9mm	24	64
17 AWG (32/32) 1,00mm²				
4301702	2	0.240 - 0.315" / 6.1 - 8.0mm	13	40
4301703	3	0.256 - 0.335" / 6.5 - 8.5mm	19	48
4301704	4	0.280 - 0.366" / 7.1 - 9.3mm	25	61
4301705	5	0.315 - 0.406" / 8.0 - 10.3mm	32	76
16 AWG (30/30) 1,50mm²				
4301602	2	0.299 - 0.386" / 7.6 - 9.8mm	19	62
4301603	3	0.315 - 0.409" / 8.0 - 10.4mm	29	73
4301604	4	0.354 - 0.457" / 9.0 - 11.6mm	39	97
4301605	5	0.386 - 0.500" / 9.8 - 12.7mm	48	113
4301607	7	0.512 - 0.591" / 13.0 - 15.0mm	68	154
4301612	12	0.669 - 0.787" / 17.0 - 20.0mm	116	267
14 AWG (50/30) 2,50mm²				
4301402	2	0.354 - 0.457" / 9.0 - 11.6mm	32	81
4301403	3	0.378 - 0.488" / 9.6 - 12.4mm	48	110
4301404	4	0.421 - 0.543" / 10.7 - 13.8mm	64	139
4301405	5	0.469 - 0.602" / 11.9 - 15.3mm	80	176
4301407	7	0.516 - 0.665" / 13.1 - 16.9mm	113	248
12 AWG (56/28) 4,0mm²				
4301202	2	0.417 - 0.539" / 10.6 - 13.7mm	52	131
4301203	3	0.445 - 0.571" / 11.3 - 14.5mm	77	151
4301204	4	0.500 - 0.638" / 12.7 - 16.2mm	103	219
4301205	5	0.555 - 0.705" / 14.1 - 17.9mm	129	278
10 AWG (84/28) 6,0mm²				
4301002	2	0.465 - 0.594" / 11.8 - 15.1mm	77	209
4301003	3	0.504 - 0.642" / 12.8 - 16.3mm	116	271
4301004	4	0.559 - 0.713" / 14.2 - 18.1mm	154	333
4301005	5	0.618 - 0.787" / 15.7 - 20.0mm	193	393

* Additional AWG sizes and core counts may be available.

(H)05Z1Z1-F halogen-free



(H)05Z1Z1-F is a VDE approved, halogen-free, light-duty, flexible, black jacketed multi-conductor 300/500v. European cord. Recommended when halogen-free, low-smoke and corrosive gas properties are required in case of fire. Applications include connecting electrical appliances under medium mechanical stress environments in offices, kitchens and households. (H)05Z1Z1-F can commonly be found in connections to refrigerators, washing machines and spin-dryers. These cables can also be used in cooking and heating apparatus if not in direct contact with the hot parts of the apparatus. Not suitable for outdoor use, high temperature and lighting installations or in connections to electrical power tools.



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 CI-5
- Thermoplastic core insulation
- Color code VDE-0293-308
- Halogen-free thermoplastic outer jacket
- Black (RAL 9005) or White (RAL 9003)

Technical:

- Working voltage: 300/500 volts
- Test voltage: 2500 volts
- Flexing bending radius: 7.5 x Ø
- Fixed bending radius: 4.0 x Ø
- Flexing Temp: -5° C to +70° C
- Fixed Temp: -40° C to +70° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- Like <HAR> HD21.14 S1
- Like VDE-0281 Part-14
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
18 AWG (24/32) 0,75mm²				
4841802*	2	0.244" / 6.2mm	10	39
4841803*	3	0.252" / 6.6mm	15	46
4841804*	4	0.280" / 7.1mm	19	54
4841805*	5	0.315" / 8.0mm	24	68
17 AWG (32/32) 1,00mm²				
4841702*	2	0.260" / 6.6mm	13	45
4841703*	3	0.272" / 6.9mm	19	54
4841704*	4	0.303" / 7.7mm	25	68
4841705*	5	0.331" / 8.4mm	32	72
16 AWG (30/30) 1,50mm²				
4841602*	2	0.291" / 7.4mm	19	58
4841603*	3	0.319" / 8.1mm	29	73
4841604*	4	0.354" / 9.0mm	39	78
4841605*	5	0.394" / 10.0mm	48	113
14 AWG (50/30) 2,50mm²				
4841402*	2	0.366" / 9.3mm	32	93
4841403*	3	0.398" / 10.1mm	48	115
4841404*	4	0.433" / 11.0mm	64	141
4841405*	5	0.484" / 12.3mm	80	174
12 AWG (56/28) 4,00mm²				
4841202*	2	0.417" / 10.6mm	52	127
4841203*	3	0.453" / 11.5mm	77	162
4841204*	4	0.492" / 12.5mm	103	200
4841205*	5	0.555" / 14.1mm	129	249

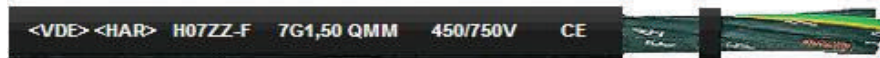
* Also available in white jacket (485)

H07ZZ-F Halogen-free

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H07ZZ-F is a harmonized, halogen-free, heavy-duty, flexible, black jacketed multi-conductor 750V. European cable. Recommended when halogen-free, low-smoke and corrosive gas properties are required in case of fire. Designed for use in electrical equipment under medium mechanical stress in dry and damp interiors. **H07ZZ-F** cables are used in equipment in industry works such as boilers, heating plates, hand lamps, electric tools (drills, circular saws) and transportable motors or machines at site. Also recommended for stage technology applications. Not suitable for continuous outdoor use.



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 Cl-5
- Halogen-free cross-linked rubber insulation
- Color code VDE-0293-308
- Halogen-free cross-linked rubber outer jacket
- Low smoke and corrosive gas
- UV resistant

Technical:

- Flexing voltage: 450/750 volts
- Fixed voltage: 600/1000 volts
- Test voltage: 2500 volts
- Flexing bending radius: 10.0 x Ø
- Fixed bending radius: 4.0 x Ø
- Flexing Temp: -5° C to +70° C
- Fixed Temp: -20° C to +70° C
- Flame retardant: **IEC 60332.3**
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> HD22.13 S1 & A1
- VDE-0282 Part-13
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60245-4
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
17 AWG (32/32) 1,00mm²				
4881702	2	0.303 - 0.394" / 7.7 - 10.0mm	13	64
4881703	3	0.327 - 0.421" / 8.3 - 10.7mm	19	77
4881704	4	0.362 - 0.469" / 9.2 - 11.9mm	25	95
4881705	5	0.401 - 0.515" / 10.2 - 13.1mm	32	114
16 AWG (30/30) 1,50mm²				
4881601	1	0.224 - 0.280" / 5.7 - 7.1mm	10	39
4881602	2	0.335 - 0.433" / 8.5 - 11.0mm	19	80
4881603	3	0.362 - 0.469" / 9.2 - 11.9mm	29	97
4881604	4	0.402 - 0.516" / 10.2 - 13.1mm	39	118
4881605	5	0.441 - 0.567" / 11.2 - 14.4mm	48	144
4881607	7	0.571 - 0.689" / 14.5 - 17.5mm	68	203
4881612	12	0.693 - 0.882" / 17.6 - 22.4mm	117	333
4881614	14	0.740 - 0.839" / 18.8 - 21.3mm	134	382
4881618	18	0.814 - 1.035" / 20.7 - 26.3mm	174	503
4881624	24	0.957 - 1.209" / 24.3 - 30.7mm	232	627
4881636	36	1.094 - 1.386" / 27.8 - 35.2mm	347	870
14 AWG (50/30) 2,50mm²				
4881401	1	0.248 - 0.311" / 6.3 - 7.9mm	16	48
4881402	2	0.402 - 0.516" / 10.2 - 13.1mm	32	115
4881403	3	0.429 - 0.551" / 10.9 - 14.0mm	48	142
4881404	4	0.476 - 0.610" / 12.1 - 15.5mm	64	158
4881405	5	0.524 - 0.669" / 13.3 - 17.0mm	80	212
4881407	7	0.650 - 0.787" / 16.5 - 20.0mm	113	300
4881412	12	0.811 - 1.031" / 20.6 - 26.2mm	193	486
4881414	14	0.874 - 0.984" / 22.2 - 25.0mm	225	577
4881418	18	0.961 - 1.217" / 24.4 - 30.9mm	290	724
4881424	24	1.134 - 1.433" / 28.8 - 36.4mm	386	888
4881436	36	1.307 - 1.646" / 33.2 - 41.8mm	590	1307
12 AWG (56/28) 4,00mm²				
4881201	1	0.283 - 0.354" / 7.2 - 9.0mm	25	67
4881203	3	0.500 - 0.638" / 12.7 - 16.2mm	77	195
4881204	4	0.551 - 0.705" / 14.0 - 17.9mm	103	245
4881205	5	0.614 - 0.783" / 15.6 - 19.9mm	129	300
4881212	12	0.953 - 1.205" / 24.2 - 30.6mm	309	699

Sizes continued on next page.

H07ZZ-F Halogen-free

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H07ZZ-F Sizes Continued. (10 AWG & Larger)

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
10 AWG (84/28) 6,00mm²				
4881001	1	0.311 - 0.386" / 7.9 - 9.8mm	39	87
4881003	3	0.555 - 0.709" / 14.1 - 18.0mm	116	262
4881004	4	0.618 - 0.787" / 15.7 - 20.0mm	154	336
4881005	5	0.689 - 0.874" / 17.5 - 22.2mm	193	407
8 AWG (80/26) 10,0mm²				
4880801	1	0.374 - 0.469" / 9.5 - 11.9mm	64	154
4880803	3	0.752 - 0.953" / 19.1 - 24.2mm	193	474
4880804	4	0.823 - 1.043" / 20.9 - 26.5mm	258	585
4880805	5	0.902 - 1.146" / 22.9 - 29.1mm	322	721
6 AWG (128/26) 16,0mm²				
4880601	1	0.425 - 0.528" / 10.8 - 13.4mm	103	195
4880603	3	0.858 - 1.087" / 21.8 - 27.6mm	309	645
4880604	4	0.937 - 1.185" / 23.8 - 30.1mm	412	801
4880605	5	1.039 - 1.311" / 26.4 - 33.3mm	515	992
4 AWG (200/26) 25,0mm²				
4880401	1	0.500 - 0.622" / 12.7 - 15.8mm	161	282
4880403	3	1.028 - 1.299" / 26.1 - 33.0mm	483	965
4880404	4	1.138 - 1.441" / 28.9 - 36.6mm	644	1222
4880405	5	1.260 - 1.591" / 32.0 - 40.4mm	805	1513
2 AWG (280/26) 35,0mm²				
4880201	1	0.563 - 0.705" / 14.3 - 17.9mm	225	355
4880203	3	1.154 - 1.461" / 29.3 - 37.1mm	676	1217
4880204	4	1.280 - 1.618" / 32.5 - 41.1mm	901	1547
1 AWG (400/26) 50,0mm²				
4880101	1	0.650 - 0.811" / 16.5 - 20.6mm	225	750
4880104	4	1.484 - 1.870" / 37.7 - 47.5mm	1288	2182
2/0 AWG (356/24) 70,0mm²				
4882101	1	0.732 - 0.917" / 18.6 - 23.3mm	451	644
4882104	4	1.681 - 2.126" / 42.7 - 54.0mm	1803	2770
3/0 AWG (485/24) 95,0mm²				
4883101	1	0.819 - 1.024" / 20.8 - 26.0mm	612	838
4883104	4	1.906 - 2.402" / 48.4 - 61.0mm	2447	3837
4/0 AWG (614/24) 120,0mm²				
4884101	1	0.898 - 1.126" / 22.8 - 28.6mm	773	1046
4884104	4	2.087 - 2.598" / 53.0 - 66.0mm	3091	5798
300 MCM (765/24) 150,0mm²				
4883001	1	0.992 - 1.236" / 25.2 - 31.4mm	966	1274
4883004	4	2.283 - 2.874" / 58.0 - 73.0mm	3863	5798
350 MCM (944/24) 185,0mm²				
4883501	1	1.087 - 1.354" / 27.6 - 34.4mm	1191	1543
4883504	4	2.520 - 3.150" / 64.0 - 80.0mm	4765	7108
500 MCM (1221/24) 240,0mm²				
4885001	1	1.205 - 1.508" / 30.6 - 38.3mm	1545	1979
4885004	4	2.835 - 3.583" / 72.0 - 91.0mm	6181	8116

* Additional AWG/MCM sizes and core counts may be available.

Harmonized Cordage

H07BN4-F +90° C

<HAR>



H07BN4-F is a harmonized, heavy-duty, flexible, EPR rubber insulated, special black polychloroprene jacketed, multi-conductor European cord. Recommended for use in electrical equipment under high mechanical stress in a dry or damp indoor or outdoor environment. Commonly used on equipment in industry works such as boilers, heating plates, hand lamps, electric tools (drills and circular saws), in homework tools and transportable motors or machines at site. Also suitable for fixed installations on plaster, temporary buildings and residential barracks. **H07BN4-F** is also suitable for use in wind energy applications found in the construction of wind turbines. If used in a fixed installation Uo/U voltage is 600/1000 volts. The polychloroprene jacket is weather and ozone resistant making this cable suitable for outdoor use and carries an improved temperature range of up to +90 Deg C.



Construction:

- Fine bare copper strands
- Strands to VDE-0295 Class-5, IEC 60228 CI-5
- EPR Rubber core insulation
- Color code VDE-0293-308
- Special polychloroprene rubber jacket
- UV, weather resistant
- Torsion, abrasion & oil resistant

- Maximum Short Circuit Temp: +250° C

Technical:

- Working voltage: 450/750 volts
- Fixed voltage: 600/1000 volts
- Test voltage: 2500 volts
- Minimum bending radius: 6.0 x Ø
- Temp range: -35° C to +90° C
- Wind energy: -15° C to +90° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> HD22.12 S1
- VDE-0282 Part-12
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- IEC 60245-4 type 66
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
17 AWG (32/32) 1,00mm2				
4411702	2	0.327" / 8.3mm	13	59
4411703	3	0.354" / 9.0mm	19	71
4411704	4	0.390" / 9.9mm	25	89
4411705	5	0.429" / 10.9mm	32	109
16 AWG (30/30) 1,50mm2				
4411601	1	0.232" / 5.9mm	10	34
4411602	2	0.366" / 9.3mm	19	76
4411603	3	0.394" / 10.0mm	29	92
4411604	4	0.433" / 11.0mm	39	114
4411605	5	0.476" / 12.1mm	48	140
4411607	7	0.579" / 14.7mm	68	258
4411612	12	0.740" / 18.8mm	117	309
4411618	18	0.866" / 22.0mm	174	444
4411624	24	1.012" / 25.7mm	232	573
4411636	36	1.157" / 29.4mm	347	808
14 AWG (50/30) 2,50mm2				
4411401	1	0.260" / 6.6mm	16	44
4411402	2	0.437" / 11.1mm	32	111
4411403	3	0.480" / 12.2mm	48	133
4411404	4	0.516" / 13.1mm	64	166
4411405	5	0.567" / 14.4mm	80	203
4411407	7	0.673" / 17.1mm	113	298
4411412	12	0.866" / 22.0mm	193	441
4411419	19	1.024" / 26.0mm	290	645
4411424	24	1.205" / 30.6mm	386	841
4411436	36	1.386" / 35.2mm	590	1202
12 AWG (56/28) 4,00mm2				
4411201	1	0.295" / 7.5mm	25	60
4411202	2	0.496" / 12.6mm	52	149
4411203	3	0.531" / 13.5mm	77	181
4411204	4	0.587" / 14.9mm	103	226
4411205	5	0.654" / 16.6mm	129	284
4411207	7	0.772" / 19.6mm	185	415
4411212	12	1.008" / 25.6mm	309	623

Sizes continued on next page.

H07BN4-F +90° C

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H07BN4-F Sizes Continued. (10 AWG & Larger)

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
10 AWG (84/28) 6,00mm²				
4411001	1	0.323" / 8.2mm	39	78
4411002	2	0.559" / 14.2mm	77	197
4411003	3	0.598" / 15.2mm	116	241
4411004	4	0.665" / 16.9mm	154	307
4411005	5	0.736" / 18.7mm	193	383
8 AWG (80/26) 10,0mm²				
4410801	1	0.398" / 10.1mm	64	121
4410802	2	0.760" / 19.3mm	129	355
4410803	3	0.815" / 20.7mm	193	437
4410804	4	0.886" / 22.5mm	258	545
4410805	5	0.976" / 24.8mm	322	665
6 AWG (128/26) 16,0mm²				
4410601	1	0.449" / 11.4mm	103	167
4410603	3	0.925" / 23.5mm	309	603
4410604	4	1.012" / 25.7mm	412	753
4410605	5	1.122" / 28.5mm	515	932
4 AWG (200/26) 25,0mm²				
4410401	1	0.520" / 13.2mm	161	239
4410403	3	1.083" / 27.5mm	483	863
4410404	4	1.201" / 30.5mm	644	1106
4410405	5	1.327" / 33.7mm	805	1362
2 AWG (280/26) 35,0mm²				
4410201	1	0.567" / 14.4mm	225	314
4410203	3	1.169" / 29.7mm	676	1103
4410204	4	1.201" / 30.5mm	901	1414
1 AWG (400/26) 50,0mm²				
4410101	1	0.673" / 17.1mm	322	439
4410103	3	1.406" / 35.7mm	966	1559
4410104	4	1.555" / 39.5mm	1288	2003
2/0 AWG (356/24) 70,0mm²				
4412101	1	0.760" / 19.3mm	451	590
4412103	3	1.579" / 40.1mm	1352	2072
4412104	4	1.756" / 44.6mm	1803	2674
3/0 AWG (485/24) 95,0mm²				
4413101	1	0.874" / 22.2mm	612	770
4413103	3	1.831" / 46.5mm	1835	2733
4413104	4	2.047" / 52.0mm	2447	3558
4/0 AWG (614/24) 120,0mm²				
4414101	1	0.933" / 23.7mm	773	946
4414103	3	1.945" / 49.4mm	2318	3305
4414104	4	2.157" / 54.8mm	3091	4269
300 MCM (765/24) 150,0mm²				
4413001	1	1.035" / 26.3mm	966	1173
4413004	4	2.413" / 61.3mm	3863	5325
350 MCM (944/24) 185,0mm²				
4413501	1	1.157" / 29.4mm	1191	1427
4413504	4	2.701" / 68.6mm	4765	6511
500 MCM (1221/24) 240,0mm²				
4415001	1	1.240" / 31.5mm	1545	1810
4415004	4	3.209" / 81.5mm	6181	8461

* Additional AWG/MCM sizes and core counts may be available.

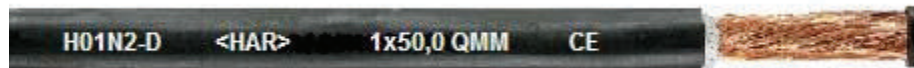
Harmonized Cordage

H01N2-D (NSKFFÖU)

<HAR>



H01N2-D is a harmonized, flexible, rubber jacketed welding cable. This cable is designed for the transmission of high currents from electric welding machines to the welding tool on manually or automatically operated line and spot welding machines. Also suitable for assembly lines and conveyor systems in the ship building, automobile industry and tool making industries. **H01N2-D** cables retain their high flexibility even under the influence of ozone, light, oxygen, protective gases, and oils. The robust jacket and construction aids in the resistance to both hot and cold temperatures as well as to flames. They are suitable for use outdoors in dry or damp conditions.



Construction:

- Extra fine bare copper strands
- Strands to VDE-0295 as listed below
- Synthetic or paper separator over core
- Polychloroprene rubber (neoprene) jacket
- UV, heat, cold and flame resistant

Technical:

- Working voltage: 100/100 volts
- Test voltage: 1000 volts
- Flexing bending radius: 12.0 x Ø
- Fixed bending radius: 7.5 x Ø
- Flexing Temp: -25° C to +80° C
- Fixed Temp: -40° C to +80° C
- Flame retardant: IEC 60332.1

Approvals:

- <HAR> HD22.6 S2
- VDE-0282 Part-6
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- ROHS compliant
- Replaces old type NSLFFÖU

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
8 AWG (320/32) 10,0mm2 4700801	1	0.303 - 0.382" / 7.7 - 9.7mm	64	91
6 AWG (512/32) 16,0mm2 4700601	1	0.346 - 0.433" / 8.8 - 11.0mm	103	138
4 AWG (800/32) 25,0mm2 4700401	1	0.398 - 0.500" / 10.1 - 12.7mm	161	203
2 AWG (1120/32) 35,0mm2 4700201	1	0.449 - 0.559" / 11.4 - 14.2mm	225	282
1 AWG (1600/32) 50,0mm2 4700101	1	0.520 - 0.650" / 13.2 - 16.5mm	322	393
2/0 AWG (2240/32) 70,0mm2 4702101	1	0.602 - 0.756" / 15.3 - 19.2mm	451	535
3/0 AWG (3024/32) 95,0mm2 4703101	1	0.673 - 0.843" / 17.1 - 21.4mm	612	681
4/0 AWG (614/24) 120,0mm2 4704101	1	0.756 - 0.945" / 19.2 - 24.0mm	773	879
300 MCM (765/24) 150,0mm2 4703001	1	0.835 - 1.039" / 21.2 - 26.4mm	966	1087
350 MCM (944/24) 185,0mm2 4703501	1	0.909 - 1.138" / 23.1 - 28.9mm	1191	1285
500 MCM (1225/24) 240,0mm2 4705001	1	0.984 - 1.161" / 25.0 - 29.5mm	1545	1704

* All sizes listed are available in an extreme flexible version H01N2-E (471)

H00V-D (ESUY)

<HAR>



H00V-D (ESUY) is a harmonized, very high flex single core used for the earthing of portable equipment and short-circuiting. These cables perform a protective function in the live repair of high voltage power supply in railway systems, failing current equipment, alternating current systems and in networks of transmission and distribution. **H00V-D (ESUY)** offers high flexing, low weights and a wide temperature range to designate it as a safety cable. A protective copper braid and overall PVC jacket assure essential function for proper protection against mechanical and chemical stresses.



Construction:

- Extra fine bare copper strands
- Strands to VDE-0295 as listed below
- Overall bare copper wire braid
- PVC transparent jacket
- High stress resistance
- Spark Test 6, 4 & 2 AWG: 5000V
- Spark Test 1 & 2/0 AWG: 6000V
- Spark Test 3/0 - 500 MCM: 8000V

Technical:

- Working voltage: N/A - earthing only
- Test voltage: 2000 volts
- Minimal bending radius: 12.0 x Ø
- Temp range: -5° C to +70° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

Approvals:

- <HAR> EN61138
- VDE-0283 Part-3
- DIN 46438 & DIN 46440
- CE low voltage directive 73/23/EEC & 93/68/EEC.
- ROHS compliant

PART NUMBER	CORES	NOMINAL OD	CU LBS/MFT	WT LBS/MFT
6 AWG (4200/41) 16,0mm ² 4900601	1	.358" / 9.1mm	130	154
4 AWG (3192/38) 25,0mm ² 4900401	1	.413" / 10.5mm	188	225
2 AWG (4480/38) 35,0mm ² 4900201	1	.492" / 12.5mm	278	319
1 AWG (6383/38) 50,0mm ² 4900101	1	.559" / 14.2mm	392	449
2/0 AWG (8918/38) 70,0mm ² 4902101	1	.661" / 16.8mm	550	607
3/0 AWG (12100/38) 95,0mm ² 4903101	1	.780" / 19.8mm	731	818
4/0 AWG (15300/38) 120,0mm ² 4904101	1	.846" / 21.5mm	912	1009
250 MCM (19152/38) 150,0mm ² 4902501	1	.945" / 24.0mm	1107	1301
350 MCM (23580/38) 185,0mm ² 4903501	1	1.087" / 27.6mm	1442	1603
500MCM (30600/38) 240,0mm ² 4905001	1	1.220" / 31.0mm	1845	2072

* Sizes #6 AWG (16,0mm²) to #250 MCM (150,0mm²) are available in a cold flexing (-25° C) construction with a standard flexible strand and no bare copper overall protective braid. H00V3-D (ESY) series (491)