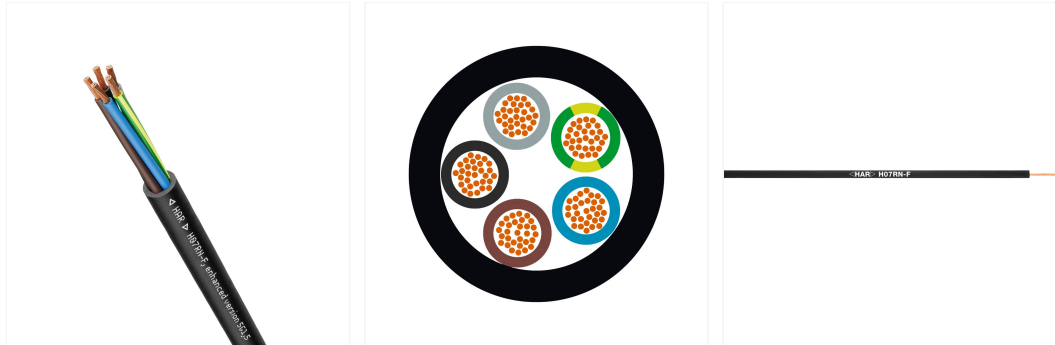


H07RN-F, ENHANCED VERSION 4X1,5

Article No.: 4533064

Power and control cable; 4X1.5; HAR-certified; U_0/U : 450/750 V; Rubber; Core identification: Colors; Flexible



Details

Benefits

- Extremely versatile in various applications and environments thanks to high-quality insulation and jacket materials and improved properties (compared to H07RN-F, normal variant).
- Halogen free conductor insulation and jacket compound to meet special fire safety requirements.
- Wider temperature range than usual for other rubber cables.
- Tested for use underwater to a water depth of 500 m and a water temperature of 40°C.
- Made according to harmonized European type H07RN-F, with <HAR> testing mark for proven reliability and quality.
- <HAR> cables are widely accepted and can be used in Europe.
- Single-conductor cables of this type can be used for short circuit-proof and short-to-ground-proof installation.

Application

- For connecting devices and machines to a power supply in various applications
- For structured building cabling for fulfilling special fire protection requirements.
- For flexible use.
- Cable design also suitable for torsion applications in wind turbines.

- Can be used in dry, wet and especially in harsh and oily environments.
- Withstands heavy mechanical stress.
- Suitable for outdoor use.
- Flexible use at temperatures down to -40°C.

Notes

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

If applicable, the prices are solid metal prices without additional charges and VAT. Sales only to business customers.

Unless specified otherwise, the product values shown are rated values at room temperature. You can receive additional values, such as tolerances, upon request if they are available and have been released for publication.

The absence of PWIS raw materials does not protect against the potential risk of contamination with substances that interfere with the paint wetting during subsequent handling of the product(s) during transport, storage or further processing after delivery.

Trade product, not a LAPP product.

Remarks

Current rating see data sheet (Freely installed in air at 30°C)

Trade product, not a LAPP product.

Technical Data

General information

Product type	Power and control cable
Copper index	387 lb/10000 ft
Industry segment	Construction Machinery Energy Heating, Ventilation, Air Conditioning & Refrigeration Rolling Stock Ships & boats

Electrical parameters

Nominal voltage	U_0/U : 450/750 V AC rms according to IEC
test voltage	2.5 kV

Product design

Harmonized product type	H07RN-F
Cable dimension	4X1.5
Nominal cross section conductor (mm ²)	1.5 mm ²
Conductor material	Bare Copper
Conductor design	IEC 60228 class 5: fine-wire
Including protective ground	No
Number of cores	4
Shielded	No
Min. outer diameter	0.402 in
Max. outer diameter	0.516 in
Cable form	Round
Core insulation base material	Rubber
Basic material of outer jacket	Rubber
Outer jacket color	black
Core identification	Colors
Conductor color code	VDE 0293-308

Product features

Application area	Flexible Torsion
For torsional load	Yes
Minimum bending radius, stationary	4 x outer diameter
Minimum bending radius in inch, fixed installation	2.063 in
Minimum bending radius, occasionally moved	6 x outer diameter
Minimum bending radius in mm, occasionally moved	3.094 in

Torsion	For +/- 150 °/m and min. 5 °C up to 5000 Torsion cycles For +/- 150 °/m and min. -40 °C up to 2000 Torsion cycles
Temperature, fixed installation	-50 °C to 90 °C max. conductor temperature
Temperature, occasionally moved	-40 °C to 90 °C max. conductor temperature
Installation temperature min.	-40 °C
Max. assembly temperature	80 °C
Storage temperature max.	-25 °C
Storage temperature maximum	40 °C
Flame-retardant	Yes
Flame retardance according to	IEC 60332-1-2
low smoke density according to	IEC 61034-2
UV-resistant	Yes
UV-resistant according to	EN 50525-1 (cables with a black jacket are suitable for permanent outdoor use)
Ozone-resistant	Yes
ozone resistant according to	EN 60811-403
Chemical resistant	Yes
Halogenfree	Yes
Halogen-free according to	IEC 60754-1
Oil resistant	Yes
Oil resistance according to	EN 50363-2-1
PWIS-free	Yes
PWIS-free according to	VDMA 24364-B2-L
Water resistant	Yes
salt water resistant	Yes
Permanently immersible in water	Yes
Permanent submersible according to	EN 50525-2-21
Long-time water submersion up to	1,640.42 ft
Certifications and standards	
CE marking	Yes

EAC certified	Yes
EAC certification number	EAЭC RU C-DE.AЮ64.B.00091/19, EAЭC RU C-DE.AЮ64.B.00110/20
UL recognized	No
UL listed	No
cUR recognized	No
cUL listed	No
CSA certified	No
VDE certified	No
HAR-certified	Yes
Product standard DIN / EN	EN 50525-2-21
CPR fire class	Eca
Resistance to flame propagation tested according to UN/ECE-R118	No

H07RN-F, enhanced version

Article No.	Name	Number of cores	Including protective ground	Nominal cross section conductor (mm ²)	Min. outer diameter	Max. outer diameter	Copper index
4533000	H07RN-F, ENHANCED VERSION 1X1,5	1	No	1.5 mm ²	0.224 in	0.28 in	96.77 lb/10000 ft
4533001	H07RN-F, ENHANCED VERSION 1X2,5	1	No	2.5 mm ²	0.248 in	0.311 in	161.27 lb/10000 ft
4533002	H07RN-F, ENHANCED VERSION 1X4	1	No	4 mm ²	0.283 in	0.354 in	258.04 lb/10000 ft
4533003	H07RN-F, ENHANCED VERSION 1X6	1	No	6 mm ²	0.311 in	0.386 in	387.06 lb/10000 ft
4533004	H07RN-F, ENHANCED VERSION 1X10	1	No	10 mm ²	0.374 in	0.469 in	645 lb/10000 ft
4533005	H07RN-F, ENHANCED VERSION 1X16	1	No	16 mm ²	0.425 in	0.528 in	1032 lb/10000 ft
4533006	H07RN-F, ENHANCED VERSION 1X25	1	No	25 mm ²	0.5 in	0.622 in	1612.56 lb/10000 ft
4533007	H07RN-F, ENHANCED VERSION 1X35	1	No	35 mm ²	0.563 in	0.705 in	2257.6 lb/10000 ft
4533008	H07RN-F, ENHANCED VERSION 1X50	1	No	50 mm ²	0.65 in	0.811 in	3225.1 lb/10000 ft
4533009	H07RN-F, ENHANCED VERSION 1X70	1	No	70 mm ²	0.732 in	0.917 in	4515.2 lb/10000 ft
4533010	H07RN-F, ENHANCED VERSION 1X95	1	No	95 mm ²	0.819 in	1.024 in	6127.7 lb/10000 ft
4533011	H07RN-F, ENHANCED VERSION 1X120	1	No	120 mm ²	0.898 in	1.126 in	7740.3 lb/10000 ft
4533012	H07RN-F, ENHANCED VERSION 1X150	1	No	150 mm ²	0.992 in	1.236 in	9675.4 lb/10000 ft
4533013	H07RN-F, ENHANCED VERSION 1X185	1	No	185 mm ²	1.087 in	1.354 in	11932.9 lb/10000 ft
4533014	H07RN-F, ENHANCED VERSION 1X240	1	No	240 mm ²	1.205 in	1.508 in	15480.6 lb/10000 ft
4533015	H07RN-F, ENHANCED VERSION 1X300	1	No	300 mm ²	1.319 in	1.65 in	19350.7 lb/10000 ft
4533016	H07RN-F, ENHANCED VERSION 1X400	1	No	400 mm ²	1.472 in	1.843 in	25801 lb/10000 ft
4533017	H07RN-F, ENHANCED VERSION 1X500	1	No	500 mm ²	1.626 in	2.047 in	32251.2 lb/10000 ft
4533020	H07RN-F, ENHANCED VERSION 2X1,5	2	No	1.5 mm ²	0.335 in	0.433 in	193.53 lb/10000 ft
4533021	H07RN-F, ENHANCED VERSION 2X2,5	2	No	2.5 mm ²	0.402 in	0.516 in	322.55 lb/10000 ft
4533022	H07RN-F, ENHANCED VERSION 2X4	2	No	4 mm ²	0.465 in	0.594 in	516.08 lb/10000 ft
4533023	H07RN-F, ENHANCED VERSION 2X6	2	No	6 mm ²	0.516 in	0.661 in	774.11 lb/10000 ft
4533024	H07RN-F, ENHANCED VERSION 2X10	2	No	10 mm ²	0.697 in	0.89 in	1290.19 lb/10000 ft
4533027	H07RN-F, ENHANCED VERSION 3G1	3	Yes	1 mm ²	0.327 in	0.421 in	193.5 lb/10000 ft
4533029	H07RN-F, ENHANCED VERSION 3G1,5	3	Yes	1.5 mm ²	0.362 in	0.469 in	290.3 lb/10000 ft
4533031	H07RN-F, ENHANCED VERSION 3G2,5	3	Yes	2.5 mm ²	0.429 in	0.551 in	483.8 lb/10000 ft
4533033	H07RN-F, ENHANCED VERSION 3G4	3	Yes	4 mm ²	0.5 in	0.638 in	774 lb/10000 ft
4533035	H07RN-F, ENHANCED VERSION 3G6	3	Yes	6 mm ²	0.555 in	0.709 in	1161.04 lb/10000 ft
4533037	H07RN-F, ENHANCED VERSION 3G10	3	Yes	10 mm ²	0.752 in	0.953 in	1935.1 lb/10000 ft
4533039	H07RN-F, ENHANCED VERSION 3G16	3	Yes	16 mm ²	0.858 in	1.087 in	3096.1 lb/10000 ft

Article No.	Name	Number of cores	Including protective ground	Nominal cross section conductor (mm ²)	Min. outer diameter	Max. outer diameter	Copper index
4533041	H07RN-F, ENHANCED VERSION 3G25	3	Yes	25 mm ²	1.028 in	1.299 in	4837.7 lb/10000 ft
4533043	H07RN-F, ENHANCED VERSION 3G35	3	Yes	35 mm ²	1.154 in	1.461 in	6772.8 lb/10000 ft
4533045	H07RN-F, ENHANCED VERSION 3G50	3	Yes	50 mm ²	1.343 in	1.689 in	9675.4 lb/10000 ft
4533061	H07RN-F, ENHANCED VERSION 4G1	4	Yes	1 mm ²	0.362 in	0.469 in	258 lb/10000 ft
4533063	H07RN-F, ENHANCED VERSION 4G1,5	4	Yes	1.5 mm ²	0.402 in	0.516 in	387 lb/10000 ft
4533064	H07RN-F, ENHANCED VERSION 4X1,5	4	No	1.5 mm ²	0.402 in	0.516 in	387 lb/10000 ft
4533065	H07RN-F, ENHANCED VERSION 4G2,5	4	Yes	2.5 mm ²	0.476 in	0.61 in	645 lb/10000 ft
4533067	H07RN-F, ENHANCED VERSION 4G4	4	Yes	4 mm ²	0.551 in	0.705 in	1032 lb/10000 ft
4533069	H07RN-F, ENHANCED VERSION 4G6	4	Yes	6 mm ²	0.618 in	0.787 in	1548.1 lb/10000 ft
4533071	H07RN-F, ENHANCED VERSION 4G10	4	Yes	10 mm ²	0.823 in	1.043 in	2580.1 lb/10000 ft
4533073	H07RN-F, ENHANCED VERSION 4G16	4	Yes	16 mm ²	0.937 in	1.185 in	4128.2 lb/10000 ft
4533075	H07RN-F, ENHANCED VERSION 4G25	4	Yes	25 mm ²	1.138 in	1.441 in	6450.2 lb/10000 ft
4533077	H07RN-F, ENHANCED VERSION 4G35	4	Yes	35 mm ²	1.28 in	1.63 in	9030.3 lb/10000 ft
4533079	H07RN-F, ENHANCED VERSION 4G50	4	Yes	50 mm ²	1.484 in	1.87 in	12900.5 lb/10000 ft
4533081	H07RN-F, ENHANCED VERSION 4G70	4	Yes	70 mm ²	1.681 in	2.126 in	18060.7 lb/10000 ft
4533083	H07RN-F, ENHANCED VERSION 4G95	4	Yes	95 mm ²	1.906 in	2.402 in	24510.9 lb/10000 ft
4533085	H07RN-F, ENHANCED VERSION 4G120	4	Yes	120 mm ²	2.087 in	2.598 in	30961.2 lb/10000 ft
4533087	H07RN-F, ENHANCED VERSION 4G150	4	Yes	150 mm ²	2.283 in	2.874 in	38701.4 lb/10000 ft
4533089	H07RN-F, ENHANCED VERSION 4G185	4	Yes	185 mm ²	2.52 in	3.15 in	47731.8 lb/10000 ft
4533091	H07RN-F, ENHANCED VERSION 5G1	5	Yes	1 mm ²	0.402 in	0.516 in	322.5 lb/10000 ft
4533093	H07RN-F, ENHANCED VERSION 5G1,5	5	Yes	1.5 mm ²	0.441 in	0.567 in	483.8 lb/10000 ft
4533095	H07RN-F, ENHANCED VERSION 5G2,5	5	Yes	2.5 mm ²	0.524 in	0.669 in	806.3 lb/10000 ft
4533097	H07RN-F, ENHANCED VERSION 5G4	5	Yes	4 mm ²	0.614 in	0.783 in	1290 lb/10000 ft
4533099	H07RN-F, ENHANCED VERSION 5G6	5	Yes	6 mm ²	0.689 in	0.874 in	1935.1 lb/10000 ft
4533101	H07RN-F, ENHANCED VERSION 5G25	5	Yes	25 mm ²	1.26 in	1.591 in	8062.8 lb/10000 ft
4533103	H07RN-F, ENHANCED VERSION 5G35	5	Yes	35 mm ²	1.406 in	1.776 in	11287.9 lb/10000 ft
4533105	H07RN-F, ENHANCED VERSION 5G50	5	Yes	50 mm ²	1.646 in	2.087 in	16125.6 lb/10000 ft
4533107	H07RN-F, ENHANCED VERSION 5G70	5	Yes	70 mm ²	1.87 in	2.362 in	22575.8 lb/10000 ft
4533109	H07RN-F, ENHANCED VERSION 5G95	5	Yes	95 mm ²	2.126 in	2.638 in	30638.6 lb/10000 ft
4533111	H07RN-F, ENHANCED VERSION 7G1,5	7	Yes	1.5 mm ²	0.579 in	0.736 in	677.3 lb/10000 ft

Article No.	Name	Number of cores	Including protective ground	Nominal cross section conductor (mm ²)	Min. outer diameter	Max. outer diameter	Copper index
4533113	H07RN-F, ENHANCED VERSION 12G1,5	12	Yes	1.5 mm ²	0.693 in	0.882 in	1161.04 lb/10000 ft
4533115	H07RN-F, ENHANCED VERSION 12G2,5	12	Yes	2.5 mm ²	0.811 in	1.031 in	1935.1 lb/10000 ft

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