H07RN-F

-25°C to +60°C, 450/750V AC



Construction
Conductor: Bare Copper · Flexible Stranded
Core Insulation: Extruded · EPR (Type EI 4)
Cabling: Laid Up · Concentric lay-up; cotton yarn (4G4–4G6, 5G1.0–5G6) or central elastomer filler (4G10–4G240, 5G10–5G95) and separator tape as required; multi-core control constructions (7G–24G) concentrically cabled in layers with separator tape.
Core Identification: HD 308 S2 (1–5 cores); ≥6 cores black numbered + Green/Yellow PE per EN 50334 (see Color Code Chart)
Jacket: Extruded · Cross-linked Elastomer (Type EM 2)

Thermal Characteristics
Operating Temperature: -25°C to +60°C
Fixed Protected Installation: -40°C to +85°C ambient (+90°C max. conductor temperature in fixed protected installations).
Short-Circuit Temperature: Max. +200°C at the conductor (max. 5 s duration).

Electrical Characteristics
Operating Voltage: 450/750V AC
Test Voltage: 2500V / 5 min
Rated Voltage (U0/U): 450/750V AC; up to 600/1000V AC in fixed protected installations.

Application
Industrial Machinery, Tools & Mobile Equipment: Heavy-duty portable power and control supply for industrial machinery, workshop tools, cranes, hoists, mobile generators, stage lighting and agricultural equipment in dry, damp or wet locations.
Fixed Protected Power Connections: Suitable for fixed protected installation in conduits, equipment enclosures and motor leads up to 600/1000V AC as permitted by EN 50565-2.

General Characteristics
Heavy-Duty Mechanical Toughness: Cross-linked EM 2 rubber sheath resists abrasion, crushing, impact and rough handling under medium-to-heavy mechanical stress.
Oil & Chemical Resistance: Elastomeric outer sheath resists mineral oils, greases and industrial fluids in workshop and plant environments.
Weather, UV & Ozone Resistance: Designed for continuous indoor and outdoor use in dry, damp or wet locations under sunlight and changing weather.
High Flexibility: Class 5 fine-stranded bare copper conductors enable easy coiling, mobile routing and repeated flexing.

Standards & Approvals
EN 50525-2-21 / IEC 60245-4: Constructed in accordance with EN 50525-2-21 / IEC 60245-4 heavy-duty elastomer-sheathed flexible cable requirements, Type H07RN-F (450/750 V). Applicable certification documentation (including EU DoC) and jacket marking options confirmed upon order.
EN 50565-2: Guide to use for cables with a rated voltage not exceeding 450/750V (including fixed protected installations up to 600/1000V AC).
IEC 60228 / EN 60228: Class 5 flexible stranded bare copper conductors.
EN 50363-1 & EN 50363-2-1: Cross-linked EPR insulation (Type EI 4) and synthetic elastomer sheath (Type EM 2).
HD 308 S2 / EN 50334: Core color and sequential number identification.

Fire Performance
Fire Retardant: IEC 60332-1-2

RoHS COMPLIANT REACH COMPLIANT

CASMO Part No.	Conductor			Nom. Ins. Thickness (mm)	Cable			Max. DCR @20°C (Ω/km)	Nom. Cable Weight (kg/km)
	Nom. Size	Conductor Size (mm²)	Max. Strand Dia. (mm)		Nom. Jkt. Thickness (mm)	Min. Overall O.D. (mm)	Max. Overall O.D. (mm)		
1114081C1.5	1×1.5	1.5	0.26	0.8	1.4	5.7	7.1	13.3	57
1114081C2.5	1×2.5	2.5	0.26	0.9	1.4	6.3	7.9	7.98	75
1114081C4	1×4	4	0.31	1.0	1.5	7.2	9.0	4.95	104
1114081C6	1×6	6	0.31	1.0	1.6	7.9	9.8	3.30	131
1114081C10	1×10	10	0.41	1.2	1.8	9.5	11.9	1.91	202

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CABLES FOR EXTREMES

H07RN-F

-25°C to +60°C, 450/750V AC



CASMO Part No.	Conductor			Nom. Ins. Thickness (mm)	Cable			Max. DCR @20°C (Ω/km)	Nom. Cable Weight (kg/km)
	Nom. Size	Conductor Size (mm²)	Max. Strand Dia. (mm)		Nom. Jkt. Thickness (mm)	Min. Overall O.D. (mm)	Max. Overall O.D. (mm)		
1114081C16	1×16	16	0.41	1.2	1.9	10.8	13.4	1.21	278
1114081C25	1×25	25	0.41	1.4	2.0	12.7	15.8	0.780	389
1114081C35	1×35	35	0.41	1.4	2.2	14.3	17.9	0.554	509
1114081C50	1×50	50	0.41	1.6	2.4	16.5	20.6	0.386	704
1114081C70	1×70	70	0.51	1.6	2.6	18.6	23.3	0.272	939
1114081C95	1×95	95	0.51	1.8	2.8	20.8	26.0	0.206	1205
1114081C120	1×120	120	0.51	1.8	3.0	22.8	28.6	0.161	1479
1114081C150	1×150	150	0.51	2.0	3.2	25.2	31.4	0.129	1817
1114081C185	1×185	185	0.51	2.2	3.4	27.6	34.4	0.106	2197
1114081C240	1×240	240	0.51	2.4	3.5	30.6	38.3	0.0801	2808
1114081C300	1×300	300	0.51	2.6	3.6	33.5	41.9	0.0641	3486
1114082C1.0	2×1.0	1.0	0.21	0.8	1.3	7.7	10.0	19.5	101
1114082C1.5	2×1.5	1.5	0.26	0.8	1.5	8.5	11.0	13.3	129
1114082C2.5	2×2.5	2.5	0.26	0.9	1.7	10.2	13.1	7.98	185
1114082C4	2×4	4	0.31	1.0	1.8	11.8	15.1	4.95	253
1114082C6	2×6	6	0.31	1.0	2.0	13.1	16.8	3.30	332
1114082C10	2×10	10	0.41	1.2	3.1	17.7	22.6	1.91	519
1114082C16	2×16	16	0.41	1.2	3.3	20.2	25.7	1.21	707
1114082C25	2×25	25	0.41	1.4	3.6	24.3	30.7	0.780	1009
1114082C35	2×35	35	0.41	1.4	3.8	27.1	34.3	0.554	1390
1114082C50	2×50	50	0.41	1.6	4.2	31.4	39.8	0.386	1890
1114082C70	2×70	70	0.51	1.6	4.6	35.6	45.1	0.272	2520
1114082C95	2×95	95	0.51	1.8	5.0	40.3	51.0	0.206	3290
1114083C1.0	3G1.0	1.0	0.21	0.8	1.4	8.3	10.7	19.5	121
1114083C1.5	3G1.5	1.5	0.26	0.8	1.6	9.2	11.9	13.3	155
1114083C2.5	3G2.5	2.5	0.26	0.9	1.8	10.9	14.0	7.98	222
1114083C4	3G4	4	0.31	1.0	1.9	12.7	16.2	4.95	307
1114083C6	3G6	6	0.31	1.0	2.1	14.1	18.0	3.30	410
1114083C10	3G10	10	0.41	1.2	3.3	19.1	24.2	1.91	685
1114083C16	3G16	16	0.41	1.2	3.5	21.8	27.6	1.21	933
1114083C25	3G25	25	0.41	1.4	3.8	26.1	33.0	0.780	1322

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CABLES FOR EXTREMES

H07RN-F

-25°C to +60°C, 450/750V AC



CASMO Part No.	Conductor			Nom. Ins. Thickness (mm)	Cable			Max. DCR @20°C (Ω/km)	Nom. Cable Weight (kg/km)
	Nom. Size	Conductor Size (mm²)	Max. Strand Dia. (mm)		Nom. Jkt. Thickness (mm)	Min. Overall O.D. (mm)	Max. Overall O.D. (mm)		
1114083C35	3G35	35	0.41	1.4	4.1	29.3	37.1	0.554	1710
1114083C50	3G50	50	0.41	1.6	4.5	34.1	42.9	0.386	2480
1114083C70	3G70	70	0.51	1.6	4.8	38.4	48.3	0.272	3290
1114083C95	3G95	95	0.51	1.8	5.3	43.3	54.0	0.206	4290
1114083C120	3G120	120	0.51	1.8	5.6	47.4	60.0	0.161	5220
1114083C150	3G150	150	0.51	2.0	6.0	52.0	66.0	0.129	6460
1114083C185	3G185	185	0.51	2.2	6.4	57.0	72.0	0.106	7860
1114083C240	3G240	240	0.51	2.4	7.1	65.0	82.0	0.0801	10200
1114084C1.0	4G1.0	1.0	0.21	0.8	1.5	9.2	11.9	19.5	149
1114084C1.5	4G1.5	1.5	0.26	0.8	1.7	10.2	13.1	13.3	190
1114084C2.5	4G2.5	2.5	0.26	0.9	1.9	12.1	15.5	7.98	273
1114084C4	4G4	4	0.31	1.0	2.0	14.0	17.9	4.95	383
1114084C6	4G6	6	0.31	1.0	2.3	15.7	20.0	3.30	513
1114084C10	4G10	10	0.41	1.2	3.4	20.9	26.5	1.91	857
1114084C16	4G16	16	0.41	1.2	3.6	23.8	30.1	1.21	1173
1114084C25	4G25	25	0.41	1.4	4.1	28.9	36.6	0.780	1693
1114084C35	4G35	35	0.41	1.4	4.4	32.5	41.1	0.554	2196
1114084C50	4G50	50	0.41	1.6	4.8	37.7	47.5	0.386	3049
1114084C70	4G70	70	0.51	1.6	5.2	42.7	54.0	0.272	4302
1114084C95	4G95	95	0.51	1.8	5.9	48.4	61.0	0.206	5583
1114084C120	4G120	120	0.51	1.8	6.0	53.0	66.0	0.161	6734
1114084C150	4G150	150	0.51	2.0	6.5	58.0	73.0	0.129	8286
1114084C185	4G185	185	0.51	2.2	7.0	64.0	80.0	0.106	10059
1114084C240	4G240	240	0.51	2.4	7.7	72.0	91.0	0.0801	13035
1114085C1.0	5G1.0	1.0	0.21	0.8	1.6	10.2	13.1	19.5	180
1114085C1.5	5G1.5	1.5	0.26	0.8	1.8	11.2	14.4	13.3	229
1114085C2.5	5G2.5	2.5	0.26	0.9	2.0	13.3	17.0	7.98	328
1114085C4	5G4	4	0.31	1.0	2.2	15.6	19.9	4.95	470
1114085C6	5G6	6	0.31	1.0	2.5	17.5	22.2	3.30	629
1114085C10	5G10	10	0.41	1.2	3.6	22.9	29.1	1.91	1054
1114085C16	5G16	16	0.41	1.2	3.9	26.4	33.3	1.21	1457

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CASMO Part No.	Conductor			Nom. Ins. Thickness (mm)	Cable			Max. DCR @20°C (Ω/km)	Nom. Cable Weight (kg/km)
	Nom. Size	Conductor Size (mm²)	Max. Strand Dia. (mm)		Nom. Jkt. Thickness (mm)	Min. Overall O.D. (mm)	Max. Overall O.D. (mm)		
1114085C25	5G25	25	0.41	1.4	4.4	32.0	40.4	0.780	2085
1114085C35	5G35	35	0.41	1.4	4.6	35.6	45.1	0.554	2734
1114085C50	5G50	50	0.41	1.6	5.2	41.8	53.0	0.386	3804
1114085C70	5G70	70	0.51	1.6	5.7	47.5	60.0	0.272	5368
1114085C95	5G95	95	0.51	1.8	6.3	54.0	67.0	0.206	6958
1114087C1.5	7G1.5	1.5	0.26	0.8	2.5	14.7	18.7	13.3	338
11140812C1.5	12G1.5	1.5	0.26	0.8	2.9	17.6	22.4	13.3	540
11140816C1.5	16G1.5	1.5	0.26	0.8	3.1	19.6	24.9	13.3	680
11140824C1.5	24G1.5	1.5	0.26	0.8	3.5	24.3	30.7	13.3	989
1114087C2.5	7G2.5	2.5	0.26	0.9	2.7	17.1	21.8	7.98	490
11140812C2.5	12G2.5	2.5	0.26	0.9	3.1	20.6	26.2	7.98	750
11140824C2.5	24G2.5	2.5	0.26	0.9	3.9	28.8	36.4	7.98	1425

Table Notes

1. Standard outer sheath color: Black. Core identification follows HD 308 S2 (1–5 cores) and EN 50334 (6 cores and above); see Color Code Chart below. In European size designations, "G" indicates a cable with a Green/Yellow protective earth (ground) conductor (G/Y), while "×" indicates without a protective earth conductor.
2. Conductor maximum wire diameter and DC resistance at 20°C comply with IEC 60228 / EN 60228 Class 5 (plain bare copper). Nominal cable weights are approximate reference values.
3. Insulation (EI 4) and sheath (EM 2) thicknesses and overall diameter limits comply with EN 50525-2-21 Tables B.2 & B.3 (minimum insulation wall ≥ 0.9×nom − 0.1 mm; minimum sheath wall ≥ 0.85×nom − 0.1 mm). Extended sizes 2×35–2×95 mm² and 5G35–5G95 mm² are constructed in accordance with EN 50525-2-21.

COLOR CODE CHART					
Cond. #	Color	Cond. #	Color	Cond. #	Color
1×	Black (standard)	3G	G/Y, Brown, Blue	5G	G/Y, Blue, Brown, Black, Grey
2×	Brown, Blue	4G	G/Y, Brown, Black, Grey	≥6G	Black numbered + G/Y (EN 50334)

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