

SAFETY CABLES WITH CIRCUIT INTEGRITY

(N)HXH FE180/E90 (8310)

SiR/FRNC halogen-free energy cable with
insulation integrity and circuit integrity
VDE Reg. No. 8310



TECHNICAL DATA



Standard
adapted to DIN VDE 0266



Certificate
VDE Germany
VDE Reg. No. 8310



Test Voltage
core/core 4 kV / 50 Hz



Rated Voltage
0,6/1 kV



Bending radius (min.)
12 x Ø of cable (multi core)
15 x Ø of cable (single core)



Fire properties
EN 60332-1-2: flame retardant
EN 60754-2: halogen-free, non-corrosive
combustion gases
EN IEC 60332-3-24: reduced flame
propagation
EN 61034-2: low smoke emission
DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E90



Core identification
HD 308 S2



Temperature range
Laying temperature: min. -5°C
Operating temperature: -30°C up to 90°C
Conductor temperature: max. 90°C
Short circuit temperature: max. 90°C

DESIGN



1 Copper conductor, round solid (RE) resp. round stranded (RM)



2 Primary core insulation (silicone rubber)



3 Secondary core insulation (silicone rubber)



4 Inner covering (halogen-free bedding compound)



5 Sheath (halogen-free polymer compound, orange)

PARAMETERS

Number of cores x nominal cross-section (mm²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter appr. (mm)	Total weight appr. (kg/km)
2 x 1.5 RE	12.1	28	11.7	191
3 x 1.5 RE	12.1	24	12.3	214
4 x 1.5 RE	12.1	24	13.2	246
5 x 1.5 RE	12.1	16	14.2	282
6 x 1.5 RE	12.1	16	15.2	324
7 x 1.5 RE	12.1	16	15.2	342
8 x 1.5 RE	12.1	14	16.7	400
10 x 1.5 RE	12.1	13	18.6	490
12 x 1.5 RE	12.1	13	19.2	532
14 x 1.5 RE	12.1	12	20.1	586
16 x 1.5 RE	12.1	12	21.1	647
19 x 1.5 RE	12.1	11	22.1	728
24 x 1.5 RE	12.1	10	26.5	1009
30 x 1.5 RE	12.1	9	28.0	1148
2 x 2.5 RE	7.41	37	12.5	228
3 x 2.5 RE	7.41	32	13.1	260
4 x 2.5 RE	7.41	32	14.1	304
5 x 2.5 RE	7.41	22	15.2	351
6 x 2.5 RE	7.41	21	16.4	407
7 x 2.5 RE	7.41	21	16.4	433
8 x 2.5 RE	7.41	18	18.1	505
8 x 2.5 RE	7.41	18	18.1	505
10 x 2.5 RE	7.41	18	20.2	623
12 x 2.5 RE	7.41	18	20.8	684
14 x 2.5 RE	7.41	16	21.8	759
16 x 2.5 RE	7.41	15	22.9	842
19 x 2.5 RE	7.41	14	24.0	954
24 x 2.5 RE	7.41	13	29.0	1315
2 x 4 RE	4.61	49	13.4	275
3 x 4 RE	4.61	42	14.0	320
4 x 4 RE	4.61	42	15.1	377
5 x 4 RE	4.61	28	16.3	440
7 x 4 RE	4.61	27	17.6	550
12 x 4 RE	4.61	22	22.6	883
19 x 4 RE	4.61	19	27.1	1326
2 x 6 RE	3.08	62	14.3	337
3 x 6 RE	3.08	53	15.1	399
4 x 6 RE	3.08	53	16.3	476
5 x 6 RE	3.08	36	17.7	559
7 x 6 RE	3.08	34	19.1	709
2 x 10 RE	1.83	85	15.9	456
3 x 10 RE	1.83	74	16.8	552
4 x 10 RE	1.83	74	18.2	670
4 x 10 RM	1.83	74	18.7	692



PARAMETERS

Number of cores x nominal cross-section (mm²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter appr. (mm)	Total weight appr. (kg/km)
5 x 10 RE	1.83	49	19.8	800
5 x 10 RM	1.83	49	20.4	827
7 x 10 RE	1.83	48	21.5	1023
1 x 16 RE	1.15	131	11.5	271
1 x 16 RM	1.15	131	11.7	278
2 x 16 RE	1.15	113	17.8	616
2 x 16 RM	1.15	113	18.2	639
3 x 16 RE	1.15	98	18.8	761
3 x 16 RM	1.15	98	19.3	788
4 x 16 RE	1.15	98	20.4	934
4 x 16 RM	1.15	98	21.0	965
5 x 16 RE	1.15	65	22.3	1128
5 x 16 RM	1.15	65	22.9	1164
1 x 25 RM	0.727	177	13.4	392
1 x 25 RM	0.727	177	13.4	392
2 x 25 RM	0.727	152	21.5	935
3 x 25 RM	0.727	133	22.9	1165
3 x 25 + 16 RM/RM	0.727	133	24.1	1326
4 x 25 RM	0.727	133	26.0	1509
5 x 25 RM	0.727	90	28.4	1819
1 x 35 RM	0.524	217	14.4	494
2 x 35 RM	0.524	186	23.6	1192
3 x 35 RM	0.524	162	26.1	1575
3 x 35 + 16 RM/RM	0.524	162	27.1	1721
4 x 35 RM	0.524	162	28.5	1945
5 x 35 RM	0.524	109	31.4	2373
1 x 50 RM	0.387	265	16.2	642
3 x 50 RM	0.387	197	29.9	2082
3 x 50 + 25 RM/RM	0.387	197	31.4	2329
4 x 50 RM	0.387	197	33.3	2630
5 x 50 RM	0.387	133	36.7	3203
1 x 70 RM	0.268	336	18.0	858
3 x 70 RM	0.268	250	34.2	2858
3 x 70 + 35 RM/RM	0.268	250	35.7	3183
4 x 70 RM	0.268	250	37.7	3578
5 x 70 RM	0.268	180	41.6	4368
1 x 95 RM	0.193	415	20.2	1140
3 x 95 RM	0.193	308	39.0	3845
3 x 95 + 50 RM/RM	0.193	308	41.0	4296
4 x 95 RM	0.193	308	43.1	4827
4 x 95 RM	0.193	308	43.1	4826
5 x 95 RM	0.193	215	48.1	5960
1 x 120 RM	0.153	485	21.6	1384
3 x 120 RM	0.153	359	42.1	4683



PARAMETERS

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter appr. (mm)	Total weight appr. (kg/km)
3 x 120 + 70 RM/RM	0.153	359	44.9	5380
4 x 120 RM	0.153	359	46.8	5935
5 x 120 RM	0.153	247	51.9	7278
1 x 150 RM	0.124	557	23.6	1680
3 x 150 RM	0.124	412	46.8	5778
3 x 150 + 70 RM/RM	0.124	412	48.7	6370
4 x 150 RM	0.124	412	51.8	7279
5 x 150 RM	0.124	279	57.7	8976
1 x 185 RM	0.099	646	25.8	2061
3 x 185 + 95 RM/RM	0.099	475	54.1	7991
4 x 185 RM	0.099	475	57.5	9058
1 x 240 RM	0.075	774	28.8	2650
3 x 240 + 120 RM/RM	0.075	564	60.9	10297
4 x 240 RM	0.075	564	64.7	11689



System / System Manufacturer	System identification	Classification	Range	Distance (a) / Width (b) / Load (g)	AbP number	Laying type No.
Normtrag	Leiter	E90	$n \times \geq 1.5$	$a \leq 1200 \text{ mm}$ $b = 400 \text{ mm}$ $g \leq 20 \text{ kg/m}$	P-MPA-E-09-016	2.2.2 - 1
Normtrag	Rinne	E90	$n \times \geq 1.5$	$a \leq 1200 \text{ mm}$ $b = 300 \text{ mm}$ $g \leq 10 \text{ kg/m}$	P-MPA-E-09-016	2.2.2 - 2
Normtrag	Abstandschelle	E90	$n \times \geq 1.5$	$a \leq 300 \text{ mm}$	P-MPA-E-09-016	2.2.2 - 3
Normtrag	Bügeschelle mit LW	E90	$n \times \geq 1.5$	$a \leq 600 \text{ mm}$	P-MPA-E-09-016	2.2.2 - 4
OBO Bettermann	2031-M/15	E90	$n \times \geq 1.5$	$a \leq 600 \text{ mm}$ $g \leq 1.1 \text{ kg/m}$	P-MPA-E-09-016	2.2.15 - 7
Niedax	RLVC 60.300 S + KTA300	E90	$n \times \geq 1.5$	$a \leq 1500 \text{ mm}$ $b = 300 \text{ mm}$ $g \leq 20 \text{ kg/m}$	P-1016 DMT DO	I
Niedax	RLVC 60.400 S + KTA400	E90	$n \times \geq 1.5$	$a \leq 1500 \text{ mm}$ $b = 400 \text{ mm}$ $g \leq 30 \text{ kg/m}$	P-1016 DMT DO	II
Lanz	G-Kanal 100x150	E90	$n \times \geq 1.5$	$a \leq 1500 \text{ mm}$ $g \leq 10 \text{ kg/m}$	P-1016 DMT DO	III
Lanz	G-Kanal 50x100	E90	$n \times \geq 1.5$	$a \leq 1500 \text{ mm}$ $g \leq 10 \text{ kg/m}$	P-1016 DMT DO	IV
Lanz	G-Kanal 100x150 (decke)	E90	$n \times \geq 1.5 - n \times \leq 10$	$a \leq 1500 \text{ mm}$ $g \leq 10 \text{ kg/m}$	P-1016 DMT DO	V
Lanz	C-Kanal (decke)	E90	$n \times \geq 1.5 - n \times \leq 2.5$	$a \leq 800 \text{ mm}$ $g \leq 0.85 \text{ kg/m}$	P-1016 DMT DO	VIII

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