

HELUPOWER® 1000 HY-CARBO SWA FIRE RES

Steel Wire Armoured, hydrocarbon resistant & fire resistant Power & Control cable 0.6/1 kV in acc. to IEC 60502



HELUPOWER® 1000 HY-CARBO SWA FIRE RES CE



HELUPOWER® 1000 HY-CARBO GSTA FIRE RES CE

Technical data

- LSLH Power & Control cable acc. to IEC 60502
- **Temperature range**
flexing -5°C to +50°C
fixed installation -20°C to +90°C
short circuit temperature max. 250°C
- **Nominal voltage**
U₀/U 0,6/1 kV
- **Test voltage**
3500 V AC for 5 min.
8400 V DC for 5 min.
- **Minimum bending radius**
fixed 12 x cable Ø
- **Insulation resistance**
> 100 MΩxkm

Cable structure

- Bare copper conductor, multiple wired acc. to DIN VDE 0295 cl. 2 / IEC 60228 cl. 2
- MICA tape wrapping (fire barrier)
- Core insulation: XLPE acc. to IEC 60502-1, BS 50290-2-29 and EN 50363-0
- Core identification acc. to HD 308 S2
- Inner sheath: PVC
- Armour:
for single core cables: amagnetic aluminium wires
for multi core cables: galvanized steel wire armour with galvanized steel conterspiral tape (if necessary) acc. to IEC 60502-1 TAB. 9
- Outer sheath: hydrocarbon resistant PVC
- Outer sheath colour: black

Properties

- Hydrocarbon resistant
- Oil resistant
- Flame retardant
- Low Smoke Low Halogen (LSLH)
- Suitable for direct burial
- UV resistant

Tests

- Flame retardant acc. to DIN VDE 482-332-1-2, DIN EN 60332-1-2, IEC 60332-1-2
- Flame test on bunched wires acc. to DIN VDE 0482-332-3-24 / DIN EN 60332-3-24 / IEC 60332-3-24 (Cat. C, 20 min.)
- Flame test on bunched wires acc. to DIN VDE 0482-332-3-22 / DIN EN 60332-3-22 / IEC 60332-3-22 (Cat. A, 40 min.)
- Low amount of halogen acid gas acc. to DIN VDE 0482-754-1 / DIN EN 60754-1 / IEC 60754-1
- UV and sunlight resistant acc. to UL 1581 sect. 1200

Note

- Galvanized steel tape armouring (GSTA) upon request
- Other core identification upon request

Application

The HELUPOWER® 1000 HY-CARBO SWA FIRE RES is an armoured power and control cable. Fire resistant, suitable for systems where it is necessary to ensure their functionality also in the case of fire. The cable construction protects against flame propagation and offers reduced emission of toxic/corrosive gase and opaque fumes in case of fire. The HELUPOWER® 1000 HY-CARBO SWA FIRE RES is suitable for use in civil/industrial environment, in fixed lay also directly buried in ground without protection. The armour provides a good mechanical protection also in heavy applications.

CE = Product complies to the Low-Voltage Directive 2014/35/EU.

Part no.	No. cores x cross-sec. mm ²	Conductor resistance at 20°C	Current rating (A) in air at 30°C	Current rating (A) directly buried at 20°C, ρ = 1,5 K*m/W	Diameter under armour approx. mm	Outer Ø app. mm	Copper weight kg / km	Weight app. kg / km
17001960	1 x 1,5	12,100	24,0	24,0	5,4	10,8	13,0	161
17001961	1 x 2,5	7,410	33,0	31,0	5,9	11,3	22,0	181
17001962	1 x 4	4,610	45,0	40,0	6,4	11,8	35,0	206
17001963	1 x 6	3,080	58,0	51,0	7,0	12,4	52,0	238
17001964	1 x 10	1,830	80,0	68,0	7,9	13,3	87,0	294
17001965	1 x 16	1,150	107,0	98,0	8,9	14,3	139,0	370
17001966	1 x 25	0,727	141,0	115,0	10,6	16,0	220,0	495
17001967	1 x 35	0,524	176,0	139,0	11,8	17,2	305,0	608
17001968	1 x 50	0,387	216,0	173,0	13,3	20,0	413,0	821

Continuation ►

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Part no.	No.cores x cross-sec. mm ²	Conductor resistance at 20°C	Current rating (A) in air at 30°C	Current rating (A) directly buried at 20°C, $\rho = 1,5$ K+m/W	Diameter under armour approx. mm	Outer Ø app. mm	Copper weight kg / km	Weight app. kg / km
17001969	1 x 70	0,268	279,0	212,0	15,3	22,0	597,0	1063
17001970	1 x 95	0,193	342,0	250,0	17,1	23,8	828,0	1347
17001971	1 x 120	0,153	400,0	289,0	18,9	26,3	1038,0	1669
17001972	1 x 150	0,124	464,0	330,0	20,9	28,3	1290,0	1993
17001973	1 x 185	0,099	533,0	371,0	23,1	30,5	1612,0	2392
17001974	1 x 240	0,075	490,0	409,0	26,0	33,6	2127,0	3024
17001975	1 x 300	0,060	0,0	463,0	28,5	36,3	2656,0	3654
17001976	1 x 400	0,047	0,0	0,0	32,3	41,3	3402,0	4713
17002170	2 x 1,5	12,100	26,0	26,0	8,8	14,2	26,0	388
17002171	2 x 2,5	7,410	36,0	35,0	9,8	15,6	43,0	453
17002172	2 x 4	4,610	49,0	45,0	10,8	16,2	69,0	523
17002173	2 x 6	3,080	63,0	56,0	12,0	17,4	104,0	620
17002174	2 x 10	1,830	86,0	76,0	13,8	20,5	175,0	914
17002175	2 x 16	1,150	115,0	95,0	15,8	22,5	278,0	1140
17002176	2 x 25	0,727	149,0	128,0	19,2	26,6	440,0	1684
17002177	2 x 35	0,524	185,0	156,0	21,6	29,0	610,0	2045
17002178	2 x 50	0,387	225,0	193,0	24,6	32,0	826,0	2513
17002179	2 x 70	0,268	0,0	0,0	28,6	36,6	1193,0	3283
17002100	3 x 1,5	12,100	10,0	9,0	9,3	14,7	40,0	418
17002101	3 x 2,5	7,410	23,0	22,0	10,4	15,8	65,0	492
17002102	3 x 4	4,610	42,0	37,0	11,5	16,9	104,0	582
17002103	3 x 6	3,080	54,0	47,0	12,8	18,2	156,0	691
17002104	3 x 10	1,830	75,0	63,0	14,7	21,4	262,0	1038
17002105	3 x 16	1,150	100,0	83,0	16,9	23,6	417,0	1316
17002106	3 x 25	0,727	127,0	107,0	20,6	28,0	659,0	1961
17002107	3 x 35	0,524	158,0	131,0	23,2	30,6	915,0	2404
17002108	3 x 50	0,387	192,0	162,0	26,4	34,2	1238,0	2997
17002109	3 x 70	0,268	246,0	200,0	31,1	39,9	1790,0	4245
17002110	3 x 95	0,193	298,0	237,0	35,0	44,2	2483,0	5370
17002111	3 x 120	0,153	346,0	274,0	38,9	48,3	3114,0	6425
17002112	3 x 150	0,124	399,0	313,0	43,6	54,4	3871,0	8232
17002113	3 x 185	0,099	456,0	352,0	48,4	59,4	4835,0	9846
17002114	3 x 240	0,075	538,0	414,0	55,0	66,4	6383,0	12393
17002115	3 x 300	0,060	621,0	0,0	60,4	72,2	7971,0	14825
17002116	3 x 400	0,047	0,0	0,0	67,8	80,0	10207,0	18264
17002120	4 x 1,5	12,100	23,0	22,0	10,2	15,6	53,0	467
17002121	4 x 2,5	7,410	32,0	29,0	11,4	16,8	86,0	552
17002122	4 x 4	4,610	42,0	37,0	12,6	18,0	139,0	663
17002123	4 x 6	3,080	54,0	47,0	14,1	20,8	208,0	939
17002124	4 x 10	1,830	75,0	63,0	16,3	23,0	349,0	1209
17002125	4 x 16	1,150	100,0	83,0	18,7	26,1	556,0	1695
17002126	4 x 25	0,727	127,0	107,0	22,8	30,2	879,0	2311
17002127	4 x 35	0,524	158,0	131,0	25,7	33,3	1220,0	2880
17002128	4 x 50	0,387	192,0	162,0	29,3	37,3	1651,0	3619
17002129	4 x 70	0,268	246,0	200,0	34,6	43,8	2387,0	5167
17002130	4 x 95	0,193	298,0	237,0	38,9	48,3	3310,0	6523
17002131	4 x 120	0,153	346,0	274,0	43,7	54,5	4152,0	8428
17002132	4 x 150	0,124	399,0	313,0	48,5	59,5	5162,0	10053
17002133	4 x 185	0,099	456,0	352,0	53,9	65,3	6446,0	12076
17002134	4 x 240	0,075	538,0	414,0	61,3	73,1	8510,0	15262
17002135	4 x 300	0,060	621,0	0,0	67,3	79,5	10627,0	182783
17002136	4 x 400	0,047	0,0	0,0	76,0	90,1	13609,0	23803
17002140	5 x 1,5	12,100	23,0	22,0	11,2	16,6	66,0	529
17002141	5 x 2,5	7,410	32,0	29,0	12,5	17,9	108,0	625
17002142	5 x 4	4,610	42,0	37,0	13,9	20,6	173,0	900
17002143	5 x 6	3,080	54,0	47,0	15,5	22,2	259,0	1074
17002144	5 x 10	1,830	75,0	63,0	17,9	24,6	437,0	1388
17002145	5 x 16	1,150	100,0	86,0	20,6	28,0	694,0	1964
17002146	5 x 25	0,727	127,0	107,0	25,2	32,6	1099,0	2707
17002147	5 x 35	0,524	158,0	131,0	28,5	36,3	1524,0	3417
17002148	5 x 50	0,387	192,0	162,0	32,9	41,9	2064,0	4644
17002149	5 x 70	0,268	0,0	0,0	38,3	47,7	2983,0	6134
17002150	5 x 95	0,193	0,0	0,0	43,6	54,2	4138,0	8322
17002151	5 x 120	0,153	0,0	0,0	48,4	59,4	5190,0	9988
17002152	5 x 150	0,124	0,0	0,0	53,8	65,2	6452,0	12011
17002153	5 x 185	0,099	0,0	0,0	60,2	72,0	8058,0	14599
17002154	5 x 240	0,075	0,0	0,0	68,0	80,2	10638,0	18346
17002155	5 x 300	0,060	0,0	0,0	75,2	89,1	13284,0	23263
17002156	5 x 400	0,047	0,0	0,0	84,3	98,4	17011,0	28599
17002180	7 x 1,5	12,100	13,0	16,0	12,2	17,6	93,0	575
17002157	10 x 1,5	12,100	13,0	16,0	15,6	22,3	132,0	901
17002158	12 x 1,5	12,100	11,0	13,0	16,1	22,8	159,0	959
17002159	19 x 1,5	12,100	9,0	12,0	19,0	25,7	251,0	1214
17002160	27 x 1,5	12,100	0,0	0,0	22,9	30,3	357,0	1720
17002161	37 x 1,5	12,100	0,0	0,0	25,8	33,2	489,0	2046
17002162	7 x 2,5	7,410	18,0	21,0	13,7	20,4	151,0	832
17002163	10 x 2,5	7,410	18,0	21,0	17,6	24,3	216,0	1083
17002164	12 x 2,5	7,410	14,0	18,0	18,2	24,9	259,0	1162
17002165	19 x 2,5	7,410	12,0	14,0	21,5	28,9	410,0	1679
17002166	27 x 2,5	7,410	0,0	0,0	26,0	33,4	583,0	2133
17002167	37 x 2,5	7,410	0,0	0,0	29,3	37,1	798,0	2607

Dimensions and specifications may be changed without prior notice.