



VDE Reg.-Nr.



HELUKABEL JZ-500 VDE Reg.-Nr. 7032 CE

Technical data

- Control cables, special PVC
- Requirements adapted to DIN VDE 0245, 0281, 0293, 0295
- **Temperature range** flexing - 5°C to +80°C fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** for permanent approx. 7,5 x cable Ø
- **Radiation resistance** up to 80x10⁶ cJ/kg (up to 80 Mrad)

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Cable structure

- Bare copper, fine wire conductors, according to DIN VDE 0295 cl. 5 and IEC 60228 cl. 5
- Core insulation of special PVC Z 7225
- Black cores with continuous white numbering according to DIN VDE 0293 (also available with other core colours)
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC, TM2 to DIN VDE 0281 part 1 and HD 21.1, colour grey
- Extensively oil resistant
- Chemical Resistance – see table Technical Informations
- PVC self-extinguishing and flame retardant, test method B according to VDE 0472 part 804 and IEC 60332-1

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air, as measuring and control cables in tool machines, conveyor belts, production lines in machinery production, in air-conditioning and in steel production. The cores have been numbered in such a way that there is no difficulty in recognising them, even if only a small piece of sheathing has been removed. The numbers have been underlined to avoid confusion. The earth core is laid in the outer layer. Selected PVC-compounds guarantee a good flexibility as well as an economic and fast installation.

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CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Outer Ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no. *)
10001 OZ	2 x 0,5	4,8	9,6	40	20
10002	3 G 0,5	5,1	14,4	46	20
10003 OZ	3 x 0,5	5,1	14,4	46	20
10004	4 G 0,5	5,7	19,0	56	20
10005 OZ	4 x 0,5	5,7	19,0	56	20
10006	5 G 0,5	6,2	24,0	65	20
10007 OZ	5 x 0,5	6,2	24,0	65	20
10008	6 G 0,5	6,7	29,0	75	20
10009	7 G 0,5	7,4	33,6	80	20
10010 OZ	7 x 0,5	7,4	33,6	80	20
10011*	8 G 0,5	8,0	38,0	97	20
10172 OZ	8 x 0,5	8,0	38,0	97	20
10012	10 G 0,5	8,8	48,0	116	20
10013	12 G 0,5	9,1	58,0	135	20
10014 OZ	12 x 0,5	9,1	58,0	135	20
10015	14 G 0,5	9,5	67,0	150	20
10183	16 G 0,5	10,0	76,0	175	20
10016	18 G 0,5	10,7	86,0	196	20
10017	20 G 0,5	11,2	96,0	215	20
10018	21 G 0,5	11,8	101,0	240	20
10019	25 G 0,5	13,0	120,0	270	20
10020	30 G 0,5	13,5	144,0	310	20
10021	32 G 0,5	14,0	154,0	323	20
10022	34 G 0,5	14,5	163,0	362	20
10023	40 G 0,5	15,8	192,0	434	20
10024	42 G 0,5	15,8	202,0	449	20
10025	50 G 0,5	17,3	240,0	513	20
10169	52 G 0,5	17,3	252,0	534	20
10026	61 G 0,5	19,4	293,0	625	20
10027	65 G 0,5	19,4	312,0	682	20
10028	80 G 0,5	21,3	384,0	780	20
10029	100 G 0,5	23,7	480,0	980	20

Part No.	No. cores x cross-sec. mm ²	Outer Ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no. *)
10030 OZ	2 x 0,75	5,2	14,4	46	18
10031*	3 G 0,75	5,5	21,6	54	18
10032 OZ	3 x 0,75	5,5	21,6	54	18
10033*	4 G 0,75	6,2	29,0	66	18
10034 OZ	4 x 0,75	6,2	29,0	66	18
10035	5 G 0,75	6,8	36,0	80	18
10036 OZ	5 x 0,75	6,8	36,0	80	18
10037	6 G 0,75	7,5	43,0	99	18
10177 OZ	6 x 0,75	7,5	43,0	99	18
10038	7 G 0,75	8,1	50,0	110	18
10039 OZ	7 x 0,75	8,1	50,0	110	18
10040	8 G 0,75	8,9	58,0	130	18
10173 OZ	8 x 0,75	8,9	58,0	130	18
10041	9 G 0,75	9,5	65,0	153	18
10042	10 G 0,75	9,6	72,0	162	18
10043*	12 G 0,75	9,9	86,0	179	18
10044 OZ	12 x 0,75	9,9	86,0	179	18
10045	14 G 0,75	10,6	101,0	214	18
10046	15 G 0,75	11,2	108,0	218	18
10047	18 G 0,75	11,9	130,0	257	18
10533	19 G 0,75	12,3	137,0	264	18
10048	20 G 0,75	12,6	144,0	286	18
10049	21 G 0,75	13,3	151,0	320	18
10050	25 G 0,75	14,5	180,0	365	18
10534	27 G 0,75	15,2	195,0	382	18
10051	32 G 0,75	15,6	230,0	455	18
10052	34 G 0,75	16,4	245,0	510	18
10182	37 G 0,75	17,2	260,0	537	18
10053	40 G 0,75	17,6	288,0	595	18
10054	41 G 0,75	17,6	296,0	607	18
10055	42 G 0,75	17,6	302,0	612	18
10056	50 G 0,75	19,8	360,0	735	18
10057	61 G 0,75	20,9	439,0	845	18
10178	65 G 0,75	21,5	468,0	895	18
10058	80 G 0,75	23,6	576,0	1070	18
10059	100 G 0,75	27,2	720,0	1322	18

Continuation ►

For screened version see type HELUKABEL® F-CY-JZ in page C 11 – 12.
 * These dimensions are also available with red resp. blue cores.
 G = with green-yellow earth core
 X = without green-yellow earth core (OZ)
 PVC cables will be changed to lead free PVC successively.

***) Note**
 AWG sizes are approximate equivalent values.
 The actual cross-section is in mm² – see page T 15.
 1) Cleanroom quality, further informations on page 7.



CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Outer ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.¹)
10060 OZ	2x1	5,5	19,2	60	17
10061*	3G1	6,0	29,0	72	17
10062 OZ	3x1	6,0	29,0	72	17
10063*	4G1	6,6	38,4	86	17
10064 OZ	4x1	6,6	38,4	86	17
10065*	5G1	7,2	48,0	104	17
10066 OZ	5x1	7,2	48,0	104	17
10067	6G1	8,0	58,0	125	17
10068*	7G1	8,6	67,0	141	17
10069 OZ	7x1	8,6	67,0	141	17
10070*	8G1	9,4	77,0	175	17
10071	9G1	10,1	86,0	200	17
10180	10G1	10,4	96,0	217	17
10170 OZ	10x1	10,4	96,0	217	17
10072*	12G1	10,7	115,0	230	17
10073 OZ	12x1	10,7	115,0	230	17
10074*	14G1	11,3	134,0	271	17
10075	16G1	12,0	154,0	300	17
10076*	18G1	12,7	173,0	343	17
10174 OZ	18x1	12,7	173,0	343	17
10197	19G1	13,0	182,0	355	17
10077	20G1	13,5	192,0	375	17
10184 OZ	20x1	13,5	192,0	375	17
10179	21G1	14,1	205,0	420	17
10175	24G1	14,7	236,0	440	17
10078*	25G1	15,6	240,0	485	17
10176 OZ	25x1	15,6	240,0	485	17
10196	26G1	15,6	252,0	500	17
10198	27G1	15,8	259,0	534	17
10168 OZ	30x1	16,0	308,0	550	17
10079*	34G1	17,4	326,0	650	17
10080	36G1	17,4	346,0	668	17
10199	37G1	18,4	355,0	701	17
10081	40G1	18,9	384,0	755	17
10167 OZ	40x1	18,9	384,0	755	17
10082	41G1	18,9	394,0	770	17
10083	42G1	18,9	403,0	810	17
10084*	50G1	21,0	480,0	936	17
10085	56G1	21,5	538,0	920	17
10086	61G1	22,2	586,0	1100	17
10087	65G1	22,8	628,0	1180	17
10088	80G1	25,4	786,0	1294	17
10089	100G1	28,2	960,0	1644	17
10090* OZ	2x1,5	6,3	29,0	70	16
10091*	3G1,5	6,7	43,0	90	16
10092 OZ	3x1,5	6,7	43,0	90	16
10093*	4G1,5	7,3	58,0	109	16
10094 OZ	4x1,5	7,3	58,0	109	16
10095*	5G1,5	8,2	72,0	131	16
10096 OZ	5x1,5	8,2	72,0	131	16
10097	6G1,5	8,9	86,0	157	16
10098*	7G1,5	9,8	101,0	184	16
10099 OZ	7x1,5	9,8	101,0	184	16
10100	8G1,5	10,6	115,0	216	16
10101	9G1,5	11,5	129,0	259	16
10181	10G1,5	11,7	144,0	275	16
10102	11G1,5	12,1	158,0	300	16
10103*	12G1,5	12,1	173,0	309	16
10104 OZ	12x1,5	12,1	173,0	309	16
10105	14G1,5	12,9	202,0	345	16
10106	16G1,5	13,6	230,0	386	16
10107*	18G1,5	14,5	259,0	440	16
10185	19G1,5	15,2	279,0	445	16
10108	20G1,5	15,2	288,0	490	16
10109	21G1,5	16,1	302,0	555	16
10110*	25G1,5	17,8	360,0	620	16
10535	27G1,5	19,0	389,0	670	16
10111*	32G1,5	19,1	461,0	790	16
10112*	34G1,5	19,8	490,0	830	16
10536	37G1,5	20,2	533,0	892	16
10113	41G1,5	21,0	576,0	996	16
10114	42G1,5	21,4	605,0	1007	16
10115	50G1,5	23,7	720,0	1250	16
10116	56G1,5	25,0	806,0	1332	16
10117	61G1,5	25,3	878,0	1440	16
10187	65G1,5	26,0	936,0	1602	16

Part No.	No. cores x cross-sec. mm ²	Outer ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.¹)
10118	80G1,5	29,0	1152,0	1871	16
10119	100G1,5	32,5	1440,0	2353	16
10120 OZ	2x2,5	7,6	48,0	112	14
10121	3G2,5	8,3	72,0	148	14
10122 OZ	3x2,5	8,3	72,0	148	14
10123	4G2,5	9,1	96,0	178	14
10124 OZ	4x2,5	9,1	96,0	178	14
10125	5G2,5	10,2	120,0	221	14
10126 OZ	5x2,5	10,2	120,0	221	14
10127	7G2,5	12,1	168,0	306	14
10128 OZ	7x2,5	12,1	168,0	306	14
10129	8G2,5	13,2	192,0	363	14
10130	12G2,5	15,2	288,0	498	14
10131	14G2,5	16,1	336,0	569	14
10132	18G2,5	18,1	432,0	764	14
10133	21G2,5	20,4	504,0	914	14
10134	25G2,5	22,2	600,0	1044	14
10135	34G2,5	25,1	816,0	1470	14
10136	42G2,5	27,2	1008,0	1790	14
10137	50G2,5	30,0	1200,0	2095	14
10138	61G2,5	32,0	1464,0	2750	14
10139	100G2,5	41,0	2400,0	4450	14
10140 OZ	2x4	9,2	77,0	195	12
10141	3G4	9,9	115,0	230	12
10142	4G4	11,0	154,0	295	12
10143	5G4	12,1	192,0	361	12
10144	7G4	13,3	269,0	458	12
10145	8G4	15,9	307,0	590	12
10146	12G4	18,3	461,0	790	12
10147	3G6	11,7	173,0	355	10
10148	4G6	13,0	230,0	424	10
10149	5G6	14,5	288,0	525	10
10150	7G6	16,0	403,0	625	10
10151	3G10	15,0	288,0	540	8
10152	4C10	16,8	384,0	701	8
10153	5G10	18,7	480,0	858	8
10154	7G10	20,6	672,0	1106	8
10190	3G16	17,6	461,0	827	6
10155	4C16	19,7	614,0	1055	6
10156	5C16	21,9	768,0	1259	6
10157	7C16	24,4	1075,0	1780	6
10191	3G25	22,5	720,0	1186	4
10158	4C25	25,2	960,0	1582	4
10159	5G25	27,9	1200,0	1999	4
10160	7G25	31,0	1680,0	2825	4
10192**	3G35	25,2	1008,0	1585	2
10161**	4G35	28,0	1344,0	2105	2
10162**	5C35	29,3	1680,0	2633	2
10193**	3G50	29,9	1440,0	2550	1
10163**	4G50	33,4	1920,0	2940	1
10188**	5G50	37,2	2400,0	3936	1
10194**	3G70	37,0	2016,0	3180	2/0
10164**	4C70	41,2	2688,0	4090	2/0
10189**	5C70	46,0	3360,0	5443	2/0
10195**	3G95	41,0	2736,0	4680	3/0
10165**	4C95	46,0	3648,0	5540	3/0
10333**	5C95	50,5	4560,0	6931	3/0
10166**	4C120	50,3	4608,0	7000	4/0
13139**	4C150	57,0	5760,0	8340	300 MCM
13140**	4C185	63,5	7104,0	9904	350 MCM

***) Note**
AWG sizes are approximate equivalent values.
The actual cross-section is in mm² – see page T 15.



Note
Important for assemblers: We supply any "desired length" of stranded cores without outer sheath, core insulation colour acc. RAL 5010 with number combination acc. customer's requirement.
* These dimensions are also available with red resp. blue cores.
** Available in colour coded version only: HELUKABEL®-JB.
G = with green-yellow earth core X = without green-yellow earth core (OZ)
For screened version see type HELUKABEL® F-CY-JZ in page C 11 – 12.
PVC cables will be changed to lead free PVC successively.
¹) Cleanroom quality, further informations on page 7.