

# TRAYCONTROL® 600-C flexible, oil-resistant, shielded, EMC-preferred type, exposed run TC-ER, PLTC-ER, ITC-ER, NFPA 79, torsion rated



HELUKABEL® TRAYCONTROL 600-C P/N 63069 12 AWG (3.31mm<sup>2</sup>)/4C (UL) TC-ER 90C DRY / WET 600V SUN RES DIR BUR OIL RES I/II E330430 OR MTW "FLEXING" OR WTTC 1000V OR c(UL) CIC-TC PVC/N FT4 — LL257839 CSA AWM I/II A/B 90C 600V FT4 CE

## Technical data

- Shielded, PVC control and power cable acc. to UL Std. 1277 and 2277
- **Temperature range**  
UL/CSA TC -40°C to +90°C  
flexing +5°C to +50°C  
static -40°C to +105°C
- **Nominal voltage**  
UL/CSA TC 600 V  
UL WTTC 1000 V
- **Test voltage** 3000 V
- **Coupling resistance**  
max. 250 Ohm/km
- **Minimum bending radius**  
flexing 6x cable Ø
- **Insulation resistance**  
min. 20 MOhm x km
- **Radiation resistance**  
up to 80x10<sup>6</sup> cJ/kg (up to 80 Mrad)

## Cable structure

- Finely stranded (Cl. K), bare copper acc. to AWG standards
- Conductor insulation:  
Special PVC with transparent nylon coating (20-1 AWG)  
XLPE (1/0 AWG & larger)
- Conductor identification to DIN VDE  
0293 black conductors with continuous white numbering
- GN-YE conductor, 3 conductors and above in the outer layer
- Conductors stranded in layers with optimal lay length
- Foil separator
- Braided, tinned copper shield, approx. 85% coverage
- Separator
- Special PVC outer jacket
- Black (RAL 9005) jacket
- With length marking in feet

## Properties

- Self-extinguishing and flame retardant acc. to CSA FT4
- The materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers
- UV-resistant
- Direct burial rated
- Resistant to cleaning and disinfecting agents acc. to ECOLAB®

## Tests

- **UL:**  
TC-ER (1277), WTTC (2277) & DP-1 - (18 AWG-500 kcmil), ITC-ER & PLTC-ER - (20-12AWG), XHHW-2 (44) - 1/0 AWG - 500 kcmil, MTW, NFPA 79, Class I Div. 2 per NEC Art. 501, NEC Art. 336 & 392, Oil Res I/II, 90°C Dry/Wet, -40°C Cold Bend
- **CSA:**  
C22.2 No. 230 & 239 - c(UL) CIC-TC FT4 (18-4/0 AWG), C22.2 No. 210 - AWM I/II A/B FT4

## Application

NFPA 79 conformant, shielded, flexible control and power cable up to 600 V (WTTC 1000 V), for all machinery in new plant construction. Torsion resistant, exceptional flexibility and abrasion resistance. Suitable for installation in dry, humid and damp environments, outdoors and pipes. For underground installation and for open, unprotected installation from the cable tray to machines in industrial plants. Only cables with 3 or more conductors are rated for exposed run (ER).

**EMC** = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC.

Part no.	Cross section mm <sup>2</sup>	No. conductors x AWG No.	Outer Ø app. mm	Cu factor per km	Weight app. kg / km
11009462	0,507	2 x 20	7,3	24,3	76,0
11009463	0,507	3 x 20	7,6	29,9	88,0
11009464	0,507	4 x 20	8,1	36,3	103,0
11009465	0,507	5 x 20	8,7	42,9	118,0
11009466	0,507	7 x 20	9,3	54,7	143,0
11009467	0,507	9 x 20	10,5	68,3	174,0
11009468	0,507	12 x 20	11,6	85,9	213,0
11009469	0,507	18 x 20	13,6	119,5	284,0
11009470	0,507	25 x 20	16,2	160,1	405,0
710465	0,963	2 x 18	7,8	34,3	89,0
63049	0,963	3 x 18	8,2	44,0	107,0
63050	0,963	4 x 18	8,8	54,9	126,0
63051	0,963	5 x 18	9,4	66,4	150,0
63052	0,963	7 x 18	10,1	85,9	180,0
11009471	0,963	9 x 18	11,6	108,7	222,0
11009472	0,963	10 x 18	12,4	120,2	244,0
63053	0,963	12 x 18	12,8	139,4	278,0
11009473	0,963	15 x 18	14,9	169,6	359,0
11009474	0,963	16 x 18	14,9	178,3	372,0
63054	0,963	18 x 18	15,6	198,5	402,0
11009475	0,963	19 x 18	15,6	207,1	420,0
63055	0,963	25 x 18	18,0	281,4	479,0

Part no.	Cross section mm <sup>2</sup>	No. conductors x AWG No.	Outer Ø app. mm	Cu factor per km	Weight app. kg / km
11009476	0,963	27 x 18	18,4	299,2	576,0
11009477	0,963	34 x 18	20,3	368,5	695,0
11009478	0,963	37 x 18	20,3	396,2	734,0
11009479	0,963	41 x 18	22,7	437,4	865,0
11009480	0,963	50 x 18	24,6	523,9	1013,0
11009481	0,963	61 x 18	26,0	628,3	1205,0
59855	1,31	2 x 16	8,4	41,6	100,0
62997	1,31	3 x 16	8,7	56,1	124,0
63056	1,31	4 x 16	9,4	70,4	149,0
63057	1,31	5 x 16	10,1	85,1	173,0
11009482	1,31	6 x 16	10,9	100,0	196,0
63058	1,31	7 x 16	10,9	111,9	216,0
11009483	1,31	8 x 16	11,7	126,8	240,0
11009484	1,31	9 x 16	12,5	141,5	265,0
11009485	1,31	10 x 16	14,3	157,1	323,0
63059	1,31	12 x 16	14,7	182,8	365,0
11009486	1,31	14 x 16	15,3	209,3	405,0
11009487	1,31	15 x 16	16,1	224,4	430,0
11009488	1,31	16 x 16	16,1	236,5	448,0
63060	1,31	18 x 16	16,8	263,3	499,0
11009489	1,31	19 x 16	16,8	275,4	524,0
11009490	1,31	20 x 16	17,8	290,8	552,0

Continuation ▶

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Part no.	Cross section mm <sup>2</sup>	No. conductors x AWG No.	Outer Ø app. mm	Cu factor per km	Weight app. kg / km
63061	1,31	25 x 16	19,5	371,8	662,0
11009491	1,31	27 x 16	19,9	398,0	699,0
11009492	1,31	30 x 16	20,6	435,7	759,0
11009493	1,31	34 x 16	23,1	492,3	908,0
11009494	1,31	40 x 16	23,9	567,3	1022,0
11009495	1,31	41 x 16	24,7	583,6	1052,0
11009496	1,31	50 x 16	26,8	701,5	1263,0
11009497	1,31	61 x 16	28,3	842,6	1476,0
11009498	2,08	2 x 14	9,4	60,3	129,0
63062	2,08	3 x 14	9,8	80,6	161,0
63063	2,08	4 x 14	10,6	102,6	171,0
63064	2,08	5 x 14	11,5	124,2	231,0
11009499	2,08	6 x 14	12,5	146,8	263,0
63065	2,08	7 x 14	12,5	163,0	290,0
11009500	2,08	9 x 14	15,2	210,7	390,0
11009501	2,08	10 x 14	16,3	234,5	443,0
63066	2,08	12 x 14	16,9	286,1	506,0
11009502	2,08	15 x 14	18,6	351,1	603,0
11009503	2,08	16 x 14	18,6	370,2	628,0
63067	2,08	18 x 14	19,5	411,7	673,0
11009504	2,08	19 x 14	19,5	430,8	716,0
63068	2,08	25 x 14	23,7	585,0	997,0
11009505	3,31	2 x 12	10,3	85,8	165,0
11009506	3,31	3 x 12	10,8	117,7	208,0
63069	3,31	4 x 12	11,8	151,6	265,0
63070	3,31	5 x 12	12,8	185,9	313,0
11009507	3,31	6 x 12	14,7	219,8	384,0
63071	3,31	7 x 12	14,7	249,8	418,0
11009508	3,31	9 x 12	16,8	318,9	525,0
11009509	3,31	12 x 12	18,8	430,3	680,0
11009510	3,31	15 x 12	20,8	530,7	820,0
11009511	3,31	16 x 12	20,8	561,2	857,0
11009512	3,31	18 x 12	22,8	627,0	1006,0
11009513	3,31	19 x 12	22,8	657,6	1045,0

Part no.	Cross section mm <sup>2</sup>	No. conductors x AWG No.	Outer Ø app. mm	Cu factor per km	Weight app. kg / km
11009514	3,31	20 x 12	23,9	694,7	1100,0
11009515	3,31	25 x 12	26,5	883,0	1354,0
11009516	5,26	2 x 10	12,3	129,8	232,0
11009517	5,26	3 x 10	13,0	180,6	299,0
63072	5,26	4 x 10	15,0	234,2	412,0
63073	5,26	5 x 10	16,3	287,6	506,0
63074	5,26	7 x 10	17,8	402,5	640,0
11009518	5,26	9 x 10	20,6	513,8	798,0
11009519	5,26	12 x 10	24,0	670,4	1013,0
11009520	5,26	18 x 10	27,9	1012,0	1530,0
11009521	5,26	19 x 10	27,9	1061,1	1591,0
11009522	5,26	25 x 10	32,4	1381,1	2034,0
11009523	8,37	3 x 8	18,1	292,8	522,0
63075	8,37	4 x 8	19,9	400,0	682,0
11009524	8,37	5 x 8	22,6	485,8	799,0
11009525	8,37	7 x 8	24,5	650,9	1055,0
11009526	13,3	3 x 6	20,1	452,5	701,0
63076	13,3	4 x 6	23,2	586,6	975,0
11009527	13,3	5 x 6	25,1	720,1	1128,0
11009528	13,3	7 x 6	27,5	979,7	1496,0
11009529	21,2	3 x 4	25,2	696,9	1101,0
63077	21,2	4 x 4	27,8	903,7	1406,0
11009530	21,2	5 x 4	30,4	1115,3	1702,0
11009531	33,6	3 x 2	29,3	1053,7	1565,0
63078	33,6	4 x 2	32,3	1377,7	2076,0
11009532	33,6	5 x 2	35,4	1708,0	2411,0
63330	42,4	4 x 1	36,4	1721,8	2626,0
11009533	53,5	4 x 1/0	39,5	2227,7	2978,0
11009534	67,4	4 x 2/0	39,0	2763,5	3609,0
11009535	85,0	4 x 3/0	47,5	3437,6	4380,0
710467	107,2	4 x 4/0	49,8	4224,8	5497,0
11009536	126,7	4 x 250 kcmil	53,8	5000,2	6502,0
11009537	177,3	4 x 350 kcmil	60,1	7024,1	8792,0
11009538	253,4	4 x 500 kcmil	74,7	9732,5	11823,0

Dimensions and specifications may be changed without prior notice.



Suitable accessories can be found in Chapter X.

- Cable Gland - HELUTOP® HT-MS-EP4