

# TRAYCONTROL® 600-C



Oil Res I/II, exposed run: TC-ER, PLTC-ER, ITC-ER, NFPA 79, EMC-preferred type



HELUKABEL® TRAYCONTROL® 600-C P/N 63069 12AWG 4C (UL) TC-ER 90°C DRY WET 600V SUN RES DIR BUR OIL RES I/II E330430 OR MTW "FLEXING" OR WTTC 1000V c(UL)CIC TC FT4 CSA AWM I/II A/B 105°C 1000V FT4

## TECHNICAL DATA

PVC control and connection cable acc. to CSA-Std. C22.2 No. 210 - AWM I/II A/B, 20 AWG - 1 AWG: UL-Std. 1063 (MTW), 20 AWG - 12 AWG: UL-Std. 2250 (ITC-ER), UL-Std. 13 (PLTC-ER), 18 AWG - 500 kcmil: UL-Std. 1277 (TC-ER), UL-Std. 2277 (WTTC), UL-Std. 1690 (DP-1), 18 AWG - 4/0 AWG: CSA-Std. C22.2 No. 230 & 239 - c(UL) CIC-TC, 1/0 AWG - 500 kcmil: UL-Std. 44 (XHHW-2)

<b>Temperature range</b>	flexible +5°C to +50°C fixed -25°C to +105°C UL (TC) flexible to +90°C
<b>Nominal voltage</b>	UL (TC) AC 600 V UL (WTTC) AC 1000 V UL (MTW) AC 600 V CIC-TC AC 600 V
<b>Test voltage core/core</b>	6000 V
<b>Test voltage core/screen</b>	6000 V
<b>Minimum bending radius</b>	flexible 12x Outer-Ø fixed 6x Outer-Ø

- direct burial (DIR BUR)
- the materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers

## TESTS

- flame-retardant acc. to CSA FT4
- oil-resistant acc. to UL Std 1277 Tab. 12.2, Oil Res I / Oil Res II
- Cold Bend Test acc. to UL Std. 1277 No. 17
- Impact Test (-ER) acc. to UL Std. 1277 No. 23
- Crushing Test (-ER) acc. to UL Std. 1277 No. 24
- direct burial (DIR BUR) acc. to UL Std. 1277 No. 5 (wet-locations insulation), No. 19 (crushing test)
- Vertical-Tray Flame Test (FT4) acc. to UL Std. 1277 No. 15 / UL Std. 1685
- certifications and approvals:  
EAC  
ECOLAB®  
Part numbers with protective conductor (GN-YE): for Class 1 Div. 2 explosive environments acc. to NEC Art. 501

## CABLE STRUCTURE

- Copper wire bare, finely stranded acc. to ASTM B 174 Class K, AWG sizes
- Core insulation: see table
- Core identification: black cores with consecutive labeling in white digits
- Protective conductor: starting with 3 cores,  
G = with protective conductor GN-YE, in the outer layer,  
x = without protective conductor
- Cores stranded in layers with optimal lay lengths
- 1. Screen: plastic-coated aluminium foil (St)
- 2. Screen: braided screen of tinned copper wires, approx. coverage 85%
- Outer sheath: Special-PVC
- Sheath colour: black (RAL 9005)
- Length marking: in feet

## APPLICATION

TRAYCONTROL® 600-C is a flexible, oil resistant control cable. The special combination of TC-ER, PLTC-ER and ITC-ER allows this cable to be used as a connecting cable for industrial plant and machinery in accordance with NFPA 79. Approved for open, unprotected installation in cable trays to the machine. Its outstanding oil resistance (OIL RES I & II) allows for a long service life. For industrial applications in dry, damp and wet environments. Recommended applications: Production lines, bottling plants, machine construction, switch cabinets, conveyor systems, packaging machines, automotive industry. EMC = Electromagnetic Compatibility; in order to optimise EMC properties, we recommend a double-sided and all-round large contact area of the copper braiding. Only cables with 3 or more cores are rated for exposed run (ER).

## PROPERTIES

- resistant to: oil, UV radiation (SUN RES)
- for outdoor use

## NOTES

- Conductor sizes are based on the AWG measurement system, metric conductor sizes (mm<sup>2</sup>) are approximated and are for reference only

Part no.	No. cores x AWG-No.	Cross-sec. mm <sup>2</sup> , approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.	Core insulation
11009462	2 x 20	0.51	7.3	24.3	76.0	PVC / Nylon
11009463	3 G 20	0.51	7.6	29.9	88.0	PVC / Nylon
11009464	4 G 20	0.51	8.1	36.3	103.0	PVC / Nylon
11009465	5 G 20	0.51	8.7	42.9	118.0	PVC / Nylon
11009466	7 G 20	0.51	9.3	54.7	143.0	PVC / Nylon
11009467	9 G 20	0.51	10.5	68.3	174.0	PVC / Nylon
11009468	12 G 20	0.51	11.6	85.9	213.0	PVC / Nylon
11009469	18 G 20	0.51	13.6	119.5	284.0	PVC / Nylon
11009470	25 G 20	0.51	16.2	160.1	405.0	PVC / Nylon
710465	2 x 18	0.96	7.8	34.3	89.0	PVC / Nylon
63049	3 G 18	0.96	8.2	44.0	107.0	PVC / Nylon

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Part no.	No. cores x AWG-No.	Cross-sec. mm <sup>2</sup> , approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.	Core insulation
63050	4 G 18	0.96	8.8	54.9	126.0	PVC / Nylon
63051	5 G 18	0.96	9.4	66.4	150.0	PVC / Nylon
63052	7 G 18	0.96	10.1	85.9	180.0	PVC / Nylon
11009471	9 G 18	0.96	11.6	108.7	222.0	PVC / Nylon
11009472	10 G 18	0.96	12.4	120.2	244.0	PVC / Nylon
63053	12 G 18	0.96	12.8	139.4	278.0	PVC / Nylon
11009473	15 G 18	0.96	14.9	169.6	359.0	PVC / Nylon
11009474	16 G 18	0.96	14.9	178.3	372.0	PVC / Nylon
63054	18 G 18	0.96	15.6	198.5	402.0	PVC / Nylon
11009475	19 G 18	0.96	15.6	207.1	420.0	PVC / Nylon
63055	25 G 18	0.96	18.0	281.4	479.0	PVC / Nylon
11009476	27 G 18	0.96	18.4	299.2	576.0	PVC / Nylon
11009477	34 G 18	0.96	20.3	368.5	695.0	PVC / Nylon
11009478	37 G 18	0.96	20.3	396.2	734.0	PVC / Nylon
11009479	41 G 18	0.96	22.7	437.4	865.0	PVC / Nylon
11009480	50 G 18	0.96	24.5	523.9	1013.0	PVC / Nylon
11009481	61 G 18	0.96	26.0	628.3	1205.0	PVC / Nylon
59855	2 x 16	1.31	8.4	41.6	100.0	PVC / Nylon
62997	3 G 16	1.31	8.7	56.1	124.0	PVC / Nylon
63056	4 G 16	1.31	9.4	70.4	149.0	PVC / Nylon
63057	5 G 16	1.31	10.1	85.1	173.0	PVC / Nylon
11009482	6 G 16	1.31	10.9	100.0	196.0	PVC / Nylon
63058	7 G 16	1.31	10.9	111.9	216.0	PVC / Nylon
11009483	8 G 16	1.31	11.7	126.8	240.0	PVC / Nylon
11009484	9 G 16	1.31	12.5	141.5	265.0	PVC / Nylon
11009485	10 G 16	1.31	14.3	157.1	323.0	PVC / Nylon
63059	12 G 16	1.31	14.7	182.8	365.0	PVC / Nylon
11009486	14 G 16	1.31	15.3	209.3	405.0	PVC / Nylon
11009487	15 G 16	1.31	16.1	224.4	430.0	PVC / Nylon
11009488	16 G 16	1.31	16.1	236.5	448.0	PVC / Nylon
63060	18 G 16	1.31	16.8	263.3	499.0	PVC / Nylon
11009489	19 G 16	1.31	16.8	275.4	524.0	PVC / Nylon
11009490	20 G 16	1.31	17.8	290.8	552.0	PVC / Nylon
63061	25 G 16	1.31	19.5	371.8	662.0	PVC / Nylon
11009491	27 G 16	1.31	19.9	398.0	699.0	PVC / Nylon
11009492	30 G 16	1.31	20.6	435.7	759.0	PVC / Nylon
11009493	34 G 16	1.31	23.1	492.3	908.0	PVC / Nylon
11009494	40 G 16	1.31	23.9	567.3	1022.0	PVC / Nylon
11009495	41 G 16	1.31	24.7	583.6	1052.0	PVC / Nylon
11009496	50 G 16	1.31	26.8	701.5	1263.0	PVC / Nylon
11009497	61 G 16	1.31	28.3	842.6	1476.0	PVC / Nylon
11009498	2 x 14	2.08	9.4	60.3	129.0	PVC / Nylon
63062	3 G 14	2.08	9.8	80.6	161.0	PVC / Nylon
63063	4 G 14	2.08	10.6	102.6	171.0	PVC / Nylon
63064	5 G 14	2.08	11.5	124.2	231.0	PVC / Nylon
11009499	6 G 14	2.08	12.5	146.8	263.0	PVC / Nylon
63065	7 G 14	2.08	12.5	163.0	290.0	PVC / Nylon
11009500	9 G 14	2.08	15.2	210.7	390.0	PVC / Nylon
11009501	10 G 14	2.08	16.3	234.5	443.0	PVC / Nylon
63066	12 G 14	2.08	16.8	286.1	506.0	PVC / Nylon
11009502	15 G 14	2.08	18.6	351.1	603.0	PVC / Nylon
11009503	16 G 14	2.08	18.6	370.2	628.0	PVC / Nylon
63067	18 G 14	2.08	19.5	411.7	673.0	PVC / Nylon
11009504	19 G 14	2.08	19.5	430.8	716.0	PVC / Nylon
63068	25 G 14	2.08	23.7	585.0	997.0	PVC / Nylon
11009505	2 x 12	3.31	10.3	85.8	165.0	PVC / Nylon
11009506	3 G 12	3.31	10.8	117.7	208.0	PVC / Nylon
63069	4 G 12	3.31	11.8	151.6	265.0	PVC / Nylon
63070	5 G 12	3.31	12.8	185.9	313.0	PVC / Nylon
11009507	6 G 12	3.31	14.7	219.8	384.0	PVC / Nylon
63071	7 G 12	3.31	14.7	249.8	418.0	PVC / Nylon
11009508	9 G 12	3.31	16.8	318.9	525.0	PVC / Nylon
11009509	12 G 12	3.31	18.8	430.3	680.0	PVC / Nylon
11009510	15 G 12	3.31	20.8	530.7	820.0	PVC / Nylon
11009511	16 G 12	3.31	20.8	561.2	857.0	PVC / Nylon
11009512	18 G 12	3.31	22.8	627.0	1006.0	PVC / Nylon
11009513	19 G 12	3.31	22.8	657.6	1045.0	PVC / Nylon

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Part no.	No. cores x AWG-No.	Cross-sec. mm <sup>2</sup> , approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.	Core insulation
11009514	20 G 12	3.31	23.9	694.7	1100.0	PVC / Nylon
11009515	25 G 12	3.31	26.5	883.0	1354.0	PVC / Nylon
11009516	2 x 10	5.26	12.3	129.8	232.0	PVC / Nylon
11009517	3 G 10	5.26	13.0	180.6	299.0	PVC / Nylon
63072	4 G 10	5.26	15.0	234.2	412.0	PVC / Nylon
63073	5 G 10	5.26	16.3	287.6	506.0	PVC / Nylon
63074	7 G 10	5.26	17.8	402.5	640.0	PVC / Nylon
11009518	9 G 10	5.26	20.6	513.8	798.0	PVC / Nylon
11009519	12 G 10	5.26	24.0	670.4	1013.0	PVC / Nylon
11009520	18 G 10	5.26	27.9	1012.0	1530.0	PVC / Nylon
11009521	19 G 10	5.26	27.9	1061.1	1591.0	PVC / Nylon
11009522	25 G 10	5.26	32.4	1381.1	2034.0	PVC / Nylon
11009523	3 G 8	8.37	17.6	292.8	522.0	PVC / Nylon
63075	4 G 8	8.37	19.3	400.0	682.0	PVC / Nylon
11009524	5 G 8	8.37	21.1	485.8	799.0	PVC / Nylon
11009525	7 G 8	8.37	23.9	650.9	1055.0	PVC / Nylon
11009526	3 G 6	13.3	20.1	452.5	701.0	PVC / Nylon
63076	4 G 6	13.3	23.2	586.6	975.0	PVC / Nylon
11009527	5 G 6	13.3	25.1	720.1	1128.0	PVC / Nylon
11009528	7 G 6	13.3	27.5	979.7	1496.0	PVC / Nylon
11009529	3 G 4	21.2	25.2	696.6	1101.0	PVC / Nylon
63077	4 G 4	21.2	27.8	903.7	1406.0	PVC / Nylon
11009530	5 G 4	21.2	30.4	1115.3	1702.0	PVC / Nylon
11009531	3 G 2	33.6	29.3	1053.7	1565.0	PVC / Nylon
63078	4 G 2	33.6	32.3	1377.7	2076.0	PVC / Nylon
11009532	5 G 2	33.6	35.4	1708.0	2411.0	PVC / Nylon
63330	4 G 1	42.4	36.4	1721.8	2626.0	PVC / Nylon
11009533	4 G 1/0	53.5	39.5	2227.7	2978.0	XLPE
11009534	4 G 2/0	67.4	39.0	2763.5	3609.0	XLPE
11009535	4 G 3/0	85	47.5	3437.6	4380.0	XLPE
710467	4 G 4/0	107.2	49.8	4224.8	5497.0	XLPE
11009536	4 G 250 kcmil	126.7	53.8	5000.2	6502.0	XLPE
11009537	4 G 350 kcmil	177.3	60.1	7024.1	8792.0	XLPE
11009538	4 G 500 kcmil	253.4	74.7	9732.5	11823.0	XLPE

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