

# TRONIC-CY (LiY-CY) flexible, Cu-screened, colour coded to DIN 47100, EMC-preferred type, meter marking



## Technical data

- Special PVC data screened cables, adapted to DIN VDE 0812
- **Temperature range**  
flexing -5 °C to +80 °C  
fixed installation -40 °C to +80 °C
- **Nominal voltage**  
0,14 mm<sup>2</sup> = 350 V  
≥ 0,25 mm<sup>2</sup> = 500 V
- **Test voltage**  
core/core 1200 V  
core/screen 800 V
- **Breakdown voltage** min. 2400 V
- **Insulation resistance**  
min. 200 MOhm x km
- **Capacitance** (approx. -value) at 800 Hz  
core/core at 0,14 mm<sup>2</sup> = 120 pF/m  
core/core ≥ 0,25 mm<sup>2</sup> = 150 pF/m  
core/screen at 0,14 mm<sup>2</sup> = 240 pF/m  
core/screen ≥ 0,25 mm<sup>2</sup> = 270 pF/m
- **Load** (A) According to different cross-sections, see table Technical Information
- **Inductance** approx. 0,65 mH/km
- **Impedance** approx. 78 Ohm
- **Coupling resistance** max. 250 Ohm/km
- **Minimum bending radius**  
flexing 10x cable ø  
fixed installation 5x cable ø
- **Radiation resistance**  
up to 80x10<sup>6</sup> cJ/kg (up to 80 Mrad)

## Cable structure

- Bare copper, fine wire conductors for 0,5 mm<sup>2</sup> to DIN VDE 0295 cl. 5 and IEC 60228 cl. 5
- Conductor make-up for  
0,14 mm<sup>2</sup> = 18x0,1 mm  
0,25 mm<sup>2</sup> = 14x0,15 mm  
0,34 mm<sup>2</sup> = 7x0,25 mm
- Special PVC core insulation TI2, to DIN VDE 0281 part 1
- Cores stranded in layers with optimal lay-length
- Colour coded to DIN 47100, but without colour repetition
- Core wrapping with foil
- Drain-wire, tinned
- Tinned, copper braided screen, approx. 85% coverage
- Special PVC outer sheath TM2, to DIN VDE 0281 part 1
- Colour grey (RAL 7001)
- with meter marking, change-over in 2011

## Properties

- Extensively oil resistant, oil-/ chemical Resistance - see table Technical Informations
- PVC self-extinguishing and flame retardant according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

## Note

- HELUKABEL®-TRONIC-CY is also available in paired version (e.g. HELUKABEL®-PAAR-TRONIC-CY 16x2x0,14 mm<sup>2</sup>).
- For 1 core cable screen of helically wound.
- **unscreened analogue type: TRONIC (LiYY)**, see page B 4

## Application

These screened cables are used for flexible use with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air, wherever the construction requirements call for a minimum outer diameter, TRONIC is the suitable cable to use. This applies especially to such areas as tool making and machine industries as well as electronic, computer, measurement and control sectors.

The extremely small outer diameter make suitable for miniature plugs etc.

**EMC** = Electromagnetic compatibility

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

**CE** = The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm <sup>2</sup>	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
20139	1 x 0,14	2,5	6,1	16,0	26
20001	2 x 0,14	3,7	12,0	20,0	26
20002	3 x 0,14	3,9	13,0	27,0	26
20003	4 x 0,14	4,1	14,5	32,0	26
20004	5 x 0,14	4,4	15,5	37,0	26
20005	6 x 0,14	4,9	18,2	42,0	26
20006	7 x 0,14	4,9	19,0	48,0	26
20007	8 x 0,14	5,2	21,3	55,0	26
20008	10 x 0,14	6,2	28,7	65,0	26
20009	12 x 0,14	6,2	30,5	77,0	26
20010	14 x 0,14	6,6	32,0	79,0	26
20011	16 x 0,14	6,9	43,2	89,0	26
20012	18 x 0,14	7,2	51,0	103,0	26
20013	20 x 0,14	7,7	55,0	116,0	26
20014	21 x 0,14	7,9	56,0	120,0	26

Part no.	No. cores x cross-sec. mm <sup>2</sup>	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
20015	24 x 0,14	8,3	62,0	131,0	26
20091	25 x 0,14	8,5	61,0	136,0	26
20016	27 x 0,14	8,5	65,0	142,0	26
20017	30 x 0,14	9,3	69,0	157,0	26
20018	32 x 0,14	9,6	76,0	163,0	26
20019	36 x 0,14	9,9	83,0	182,0	26
20020	40 x 0,14	10,2	88,0	209,0	26
20021	42 x 0,14	10,5	94,0	217,0	26
20022	44 x 0,14	11,2	110,0	226,0	26
20023	48 x 0,14	11,3	115,0	240,0	26
20024	52 x 0,14	11,8	124,0	270,0	26
20025	56 x 0,14	12,1	132,0	320,0	26
20026	61 x 0,14	12,4	146,0	370,0	26
20027	80 x 0,14	14,1	226,0	510,0	26
20028	100 x 0,14	15,6	267,0	580,0	26

Continuation ▶

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B

Part no.	No. cores x cross-sec. mm <sup>2</sup>	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
20084	1 x 0,25	2,9	7,2	27,0	24
20029	2 x 0,25	4,2	15,8	31,0	24
20030	3 x 0,25	4,3	18,6	36,0	24
20031	4 x 0,25	4,7	22,0	40,0	24
20032	5 x 0,25	5,3	26,5	51,0	24
20083	6 x 0,25	5,7	32,4	58,0	24
20033	7 x 0,25	5,7	35,0	64,0	24
20034	8 x 0,25	6,3	42,1	82,0	24
20035	10 x 0,25	7,2	49,9	85,0	24
20036	12 x 0,25	7,3	58,0	90,0	24
20037	14 x 0,25	7,9	62,0	144,0	24
20038	16 x 0,25	8,3	67,0	110,0	24
20039	18 x 0,25	9,1	78,0	142,0	24
20086	19 x 0,25	9,1	79,0	146,0	24
20040	20 x 0,25	9,4	88,0	152,0	24
20041	21 x 0,25	9,4	91,0	150,0	24
20042	24 x 0,25	10,0	96,0	163,0	24
20092	25 x 0,25	10,1	99,0	169,0	24
20043	27 x 0,25	10,1	122,0	176,0	24
20044	30 x 0,25	11,1	132,0	189,0	24
20045	32 x 0,25	11,5	138,0	204,0	24
20046	36 x 0,25	11,9	146,0	219,0	24
20087	37 x 0,25	11,9	152,0	230,0	24
20047	40 x 0,25	12,4	157,0	247,0	24
20048	42 x 0,25	12,8	160,0	269,0	24
20049	44 x 0,25	13,6	164,0	292,0	24
20050	48 x 0,25	13,7	164,0	317,0	24
20051	52 x 0,25	14,1	175,0	330,0	24
20052	56 x 0,25	14,5	189,0	343,0	24
20053	61 x 0,25	15,1	204,0	365,0	24
20054	80 x 0,25	17,1	387,0	480,0	24
20055	100 x 0,25	19,1	505,0	605,0	24
20088	1 x 0,34	3,2	13,5	24,0	22
20056	2 x 0,34	5,0	18,0	30,0	22
20057	3 x 0,34	5,2	22,0	37,0	22
20058	4 x 0,34	5,6	28,0	48,0	22
20059	5 x 0,34	6,0	31,0	54,0	22
20085	6 x 0,34	6,7	45,0	61,0	22
20060	7 x 0,34	6,7	51,0	67,0	22
20061	8 x 0,34	7,2	54,0	81,0	22
20062	10 x 0,34	8,4	65,0	103,0	22
20063	12 x 0,34	8,5	70,0	110,0	22
20064	14 x 0,34	9,0	81,0	153,0	22
20065	16 x 0,34	9,6	88,0	159,0	22
20066	18 x 0,34	10,1	103,0	172,0	22
20089	19 x 0,34	10,1	106,0	181,0	22
20067	20 x 0,34	10,7	112,0	191,0	22
20068	21 x 0,34	10,7	116,0	199,0	22
20069	24 x 0,34	11,3	129,0	229,0	22
20093	25 x 0,34	11,5	120,0	241,0	22
20070	27 x 0,34	11,5	138,0	258,0	22
20071	30 x 0,34	12,6	158,0	290,0	22
20072	32 x 0,34	13,0	163,0	305,0	22
20073	36 x 0,34	13,7	178,0	330,0	22
20090	37 x 0,34	13,7	192,0	348,0	22
20074	40 x 0,34	14,2	198,0	364,0	22
20075	42 x 0,34	14,8	203,0	389,0	22
20076	44 x 0,34	15,4	214,0	414,0	22
20077	48 x 0,34	15,6	227,0	420,0	22
20078	52 x 0,34	16,2	242,0	450,0	22
20079	56 x 0,34	16,6	267,0	480,0	22
20080	61 x 0,34	17,1	295,0	520,0	22
20081	80 x 0,34	19,4	524,0	580,0	22
20082	100 x 0,34	21,7	620,0	694,0	22
16001	1 x 0,5	3,6	15,0	40,0	20
16002	2 x 0,5	5,5	29,0	45,0	20
16003	3 x 0,5	5,7	39,0	55,0	20
16004	4 x 0,5	6,3	46,0	61,0	20
16005	5 x 0,5	6,8	52,0	76,0	20
16006	6 x 0,5	7,3	66,0	89,0	20
16007	7 x 0,5	7,3	68,0	98,0	20
16008	8 x 0,5	8,0	80,0	117,0	20
16009	10 x 0,5	9,4	93,0	135,0	20
16010	12 x 0,5	9,6	117,0	157,0	20
16011	14 x 0,5	10,1	122,0	190,0	20

Part no.	No. cores x cross-sec. mm <sup>2</sup>	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16012	16 x 0,5	10,6	129,0	210,0	20
16013	18 x 0,5	10,7	152,0	217,0	20
16526	19 x 0,5	11,2	156,0	246,0	20
16014	20 x 0,5	11,7	173,0	275,0	20
16015	24 x 0,5	12,6	236,0	337,0	20
16016	25 x 0,5	12,7	250,0	351,0	20
16527	27 x 0,5	12,7	265,0	373,0	20
16017	30 x 0,5	14,1	297,0	396,0	20
16018	32 x 0,5	14,6	301,0	431,0	20
16164	34 x 0,5	15,3	312,0	440,0	20
16019	36 x 0,5	15,3	320,0	445,0	20
16528	37 x 0,5	15,3	325,0	458,0	20
16020	40 x 0,5	15,8	345,0	470,0	20
16021	50 x 0,5	18,1	407,0	570,0	20
16022	61 x 0,5	19,1	508,0	650,0	20
16023	80 x 0,5	21,9	690,0	780,0	20
16024	100 x 0,5	24,3	814,0	990,0	20
16025	1 x 0,75	3,8	19,0	41,0	18
16026	2 x 0,75	5,8	38,0	59,0	18
16027	3 x 0,75	6,3	50,0	66,0	18
16028	4 x 0,75	6,8	57,0	77,0	18
16029	5 x 0,75	7,3	70,0	93,0	18
16030	6 x 0,75	8,1	87,0	113,0	18
16031	7 x 0,75	8,2	96,0	130,0	18
16032	8 x 0,75	9,0	110,0	145,0	18
16033	10 x 0,75	10,3	140,0	180,0	18
16034	12 x 0,75	10,5	151,0	202,0	18
16035	14 x 0,75	11,3	167,0	225,0	18
16036	16 x 0,75	11,8	183,0	275,0	18
16037	18 x 0,75	12,6	207,0	292,0	18
16529	19 x 0,75	12,6	221,0	322,0	18
16038	20 x 0,75	13,4	238,0	362,0	18
16039	24 x 0,75	14,1	270,0	435,0	18
16040	25 x 0,75	14,3	278,0	415,0	18
16041	27 x 0,75	14,3	287,0	467,0	18
16042	30 x 0,75	15,8	315,0	486,0	18
16043	32 x 0,75	16,3	330,0	530,0	18
16163	34 x 0,75	17,1	350,0	570,0	18
16044	36 x 0,75	17,1	370,0	600,0	18
16530	37 x 0,75	17,9	386,0	640,0	18
16045	40 x 0,75	17,9	395,0	680,0	18
16120	42 x 0,75	18,4	408,0	714,0	18
16047	61 x 0,75	21,5	555,0	900,0	18
16048	80 x 0,75	24,6	715,0	1200,0	18
16049	100 x 0,75	27,2	910,0	1440,0	18
16475	2 x 1	6,4	46,0	65,0	17
16476	3 x 1	6,7	56,0	80,0	17
16477	4 x 1	7,2	69,0	98,0	17
16478	5 x 1	8,0	89,0	127,0	17
16479	6 x 1	8,6	105,0	144,0	17
16480	7 x 1	8,6	111,0	158,0	17
16481	8 x 1	9,4	130,0	197,0	17
16482	10 x 1	11,2	140,0	232,0	17
16483	12 x 1	11,4	168,0	260,0	17
16484	14 x 1	12,0	198,0	302,0	17
16485	16 x 1	12,8	218,0	346,0	17
16486	19 x 1	13,6	268,0	412,0	17
16487	24 x 1	15,2	320,0	493,0	17
16488	27 x 1	15,4	360,0	562,0	17
16489	37 x 1	18,3	485,0	790,0	17
16500	2 x 1,5	7,3	63,0	88,0	16
16501	3 x 1,5	7,6	76,0	100,0	16
16502	4 x 1,5	8,3	98,0	126,0	16
16503	5 x 1,5	9,2	116,0	160,0	16
16504	6 x 1,5	9,9	140,0	192,0	16
16505	7 x 1,5	9,9	152,0	208,0	16
16506	8 x 1,5	10,8	172,0	244,0	16
16507	10 x 1,5	13,0	193,0	315,0	16
16508	12 x 1,5	13,0	254,0	338,0	16
16509	14 x 1,5	13,9	272,0	383,0	16
16510	16 x 1,5	14,9	285,0	424,0	16
16511	19 x 1,5	15,6	387,0	506,0	16
16512	24 x 1,5	17,7	448,0	690,0	16
16513	27 x 1,5	17,9	506,0	781,0	16
16514	37 x 1,5	21,2	682,0	941,0	16

Dimensions and specifications may be changed without prior notice. (RB01)