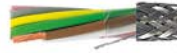


# TRONIC-CY (LiY-CY) / TRONIC-DY (LiY-DY)

colour code DIN 47100, without colour repetition, EMC-preferred type



HELUKABEL® TRONIC-CY (LiY-CY) 6x0,25 QMM / 20083 CE

## TECHNICAL DATA

PVC data cable in alignment with DIN VDE 0812

<b>Temperature range</b>	flexible -5°C to +80°C fixed -40°C to +80°C
<b>Peak operating voltage</b>	0.14 mm <sup>2</sup> : 350 V 0.25 - 1.5 mm <sup>2</sup> : 500 V (not for high power current installation purposes)
<b>Test voltage core/core</b>	0.14 - 0.25 mm <sup>2</sup> : 1200 V 0.34 - 1.5 mm <sup>2</sup> : 2000 V
<b>Test voltage core/screen</b>	0.14 - 0.25 mm <sup>2</sup> : 800 V 0.34 - 1.5 mm <sup>2</sup> : 1200 V
<b>Breakdown voltage</b>	0.14 - 0.25 mm <sup>2</sup> : 2400 V 0.34 - 1.5 mm <sup>2</sup> : 4000 V
<b>Mutual capacitance core/core</b>	at 800 Hz 0.14 - 0.25 mm <sup>2</sup> : approx. 100 pF/m 0.34 - 1.5 mm <sup>2</sup> : approx. 150 pF/m
<b>Mutual capacitance core/screen</b>	at 800 Hz 0.14 - 0.25 mm <sup>2</sup> : approx. 200 pF/m 0.34 - 1.5 mm <sup>2</sup> : approx. 270 pF/m
<b>Characteristic impedance</b>	78 Ohm (approx. value)
<b>Inductance</b>	approx. 0.65 mH/km
<b>Coupling resistance</b>	at 30 MHz, approx. 250 Ohm/km
<b>Minimum bending radius</b>	flexible 10x Outer-Ø fixed 5x Outer-Ø

## CABLE STRUCTURE

- Copper wire bare, 0.5 - 1.5 mm<sup>2</sup>: finely stranded acc. to DIN VDE 0295 Class 5 / IEC 60228 Class 5
- Wire structure:  
0.14 mm<sup>2</sup>: approx. 18 x 0.10 mm  
0.25 mm<sup>2</sup>: approx. 14 x 0.15 mm  
0.34 mm<sup>2</sup>: 7 x 0.25 mm
- Core insulation: PVC acc. to DIN VDE 0207-363-3 / DIN EN 50363-3 (compound type T12)
- Core identification in alignment with DIN 47100, colour coded, without colour repetition from the 45th core

### TRONIC-DY (LiY-DY), helically wound tinned copper wires

Part no.	No. cores x cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu-weight kg/km	Weight kg/km, approx.
20139	1 x 0.14	26	2.6	6.1	16.0
20084	1 x 0.25	24	3.0	7.2	27.0
20088	1 x 0.34	22	3.2	13.5	24.0

- x = without protective conductor
- Cores stranded in layers with optimal lay lengths
- Foil wrapping
- Drain wire, tinned copper
- Screen:  
1 core(s): helically wound tinned copper wires, approx. coverage 85 %  
2 - 61 core(s): braided screen of tinned copper wires, approx. coverage 85 %
- Outer sheath: PVC acc. to DIN VDE 0207-363-4-1 / DIN EN 50363-4-1 (compound type TM2)
- Sheath colour: grey (RAL 7001)
- Length marking: in metres

## PROPERTIES

- largely resistant to: oil, for details, see "Technical Information"
- 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 DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2

## APPLICATION

Suitable for flexible applications with free movement, without tensile stress and without forced motion control in dry, damp and wet rooms, however, not suitable for outdoor use. Used as control and signal cables in the milliampere range for computer systems, control devices, scales etc. Due to its extremely small outer-Ø, it is especially suitable for subminiature plugs, electronic devices etc. These cables with copper screening are ideally suited for interference-free data and signal transmission for measurement and control technology. EMC= Electromagnetic Compatibility; in order to optimise EMC properties, we recommend a double-sided and all-round large contact area of the copper braiding.

## NOTES

- the conductor is metrically (mm<sup>2</sup>) constructed, AWG numbers are approximated, and are for reference only

Part no.	No. cores x cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu-weight kg/km	Weight kg/km, approx.
16001	1 x 0.5	20	3.5	15.0	40.0
16025	1 x 0.75	19	4.0	19.0	41.0

# TRONIC-CY (LiY-CY) / TRONIC-DY (LiY-DY)

colour code DIN 47100, without colour repetition, EMC-preferred type



## TRONIC-CY (LiY-CY), braided screen of tinned copper wires

Part no.	No. cores x cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu-weight kg/km	Weight kg/km, approx.	Part no.	No. cores x cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu-weight kg/km	Weight kg/km, approx.
20001	2 x 0.14	26	3.9	12.0	20.0	20065	16 x 0.34	22	9.6	88.0	159.0
20002	3 x 0.14	26	4.0	13.0	27.0	20066	18 x 0.34	22	10.1	103.0	172.0
20003	4 x 0.14	26	4.3	14.5	32.0	20089	19 x 0.34	22	10.1	106.0	181.0
20004	5 x 0.14	26	4.7	15.5	37.0	20067	20 x 0.34	22	10.8	112.0	191.0
20005	6 x 0.14	26	5.2	18.2	42.0	20068	21 x 0.34	22	10.9	116.0	199.0
20006	7 x 0.14	26	5.2	19.0	48.0	20069	24 x 0.34	22	11.7	129.0	229.0
20007	8 x 0.14	26	5.9	21.3	55.0	20093	25 x 0.34	22	12.0	120.0	241.0
20008	10 x 0.14	26	6.5	28.7	65.0	20070	27 x 0.34	22	12.1	138.0	258.0
20009	12 x 0.14	26	6.7	30.5	77.0	20071	30 x 0.34	22	12.6	158.0	290.0
20010	14 x 0.14	26	6.9	32.0	79.0	20072	32 x 0.34	22	13.0	163.0	305.0
20011	16 x 0.14	26	7.3	43.2	89.0	20073	36 x 0.34	22	13.8	178.0	330.0
20012	18 x 0.14	26	7.6	51.0	103.0	20090	37 x 0.34	22	13.8	192.0	348.0
20013	20 x 0.14	26	8.3	55.0	116.0	20074	40 x 0.34	22	14.8	198.0	364.0
20014	21 x 0.14	26	8.4	56.0	120.0	20075	42 x 0.34	22	14.9	203.0	389.0
20015	24 x 0.14	26	8.9	62.0	131.0	20076	44 x 0.34	22	15.6	214.0	414.0
20091	25 x 0.14	26	9.1	61.0	136.0	20077	48 x 0.34	22	15.8	227.0	420.0
20016	27 x 0.14	26	9.2	65.0	142.0	20078	52 x 0.34	22	16.3	242.0	450.0
20017	30 x 0.14	26	9.5	69.0	157.0	20079	56 x 0.34	22	16.8	267.0	480.0
20018	32 x 0.14	26	9.9	76.0	163.0	20080	61 x 0.34	22	17.2	295.0	520.0
20019	36 x 0.14	26	10.2	83.0	182.0	16002	2 x 0.5	20	5.3	29.0	45.0
20020	40 x 0.14	26	11.1	88.0	209.0	16003	3 x 0.5	20	5.6	39.0	55.0
20021	42 x 0.14	26	11.2	94.0	217.0	16004	4 x 0.5	20	6.3	46.0	61.0
20022	44 x 0.14	26	11.5	110.0	226.0	16005	5 x 0.5	20	6.8	52.0	76.0
20023	48 x 0.14	26	11.7	115.0	240.0	16006	6 x 0.5	20	7.3	66.0	89.0
20024	52 x 0.14	26	12.3	124.0	270.0	16007	7 x 0.5	20	7.3	68.0	98.0
20025	56 x 0.14	26	12.5	132.0	320.0	16008	8 x 0.5	20	8.6	80.0	117.0
20026	61 x 0.14	26	12.8	146.0	370.0	16009	10 x 0.5	20	9.4	93.0	135.0
20029	2 x 0.25	24	4.3	15.8	31.0	16010	12 x 0.5	20	9.6	117.0	157.0
20030	3 x 0.25	24	4.5	18.6	36.0	16011	14 x 0.5	20	10.1	122.0	190.0
20031	4 x 0.25	24	4.8	22.0	40.0	16012	16 x 0.5	20	10.6	129.0	210.0
20032	5 x 0.25	24	5.4	26.5	51.0	16013	18 x 0.5	20	11.3	152.0	217.0
20083	6 x 0.25	24	5.8	32.4	58.0	16526	19 x 0.5	20	11.3	156.0	246.0
20033	7 x 0.25	24	5.8	35.0	64.0	16014	20 x 0.5	20	12.0	173.0	275.0
20034	8 x 0.25	24	7.0	42.1	82.0	16015	24 x 0.5	20	13.2	236.0	337.0
20035	10 x 0.25	24	7.3	49.9	85.0	16016	25 x 0.5	20	13.7	250.0	351.0
20036	12 x 0.25	24	7.5	58.0	90.0	16527	27 x 0.5	20	13.8	265.0	373.0
20037	14 x 0.25	24	8.1	62.0	98.0	16017	30 x 0.5	20	14.2	297.0	396.0
20038	16 x 0.25	24	8.5	67.0	110.0	16018	32 x 0.5	20	14.7	301.0	431.0
20039	18 x 0.25	24	9.1	78.0	142.0	16164	34 x 0.5	20	15.4	312.0	440.0
20086	19 x 0.25	24	9.1	79.0	146.0	16019	36 x 0.5	20	15.5	320.0	445.0
20040	20 x 0.25	24	9.5	88.0	152.0	16528	37 x 0.5	20	15.5	325.0	458.0
20041	21 x 0.25	24	9.6	91.0	150.0	16020	40 x 0.5	20	16.4	345.0	470.0
20042	24 x 0.25	24	10.4	96.0	163.0	16021	50 x 0.5	20	18.2	407.0	570.0
20092	25 x 0.25	24	10.6	99.0	169.0	16022	61 x 0.5	20	19.2	508.0	650.0
20043	27 x 0.25	24	10.7	122.0	176.0	16026	2 x 0.75	19	5.8	38.0	59.0
20044	30 x 0.25	24	11.1	132.0	189.0	16027	3 x 0.75	19	6.3	50.0	66.0
20045	32 x 0.25	24	11.5	138.0	204.0	16028	4 x 0.75	19	6.8	57.0	77.0
20046	36 x 0.25	24	11.9	146.0	219.0	16029	5 x 0.75	19	7.4	70.0	93.0
20087	37 x 0.25	24	11.9	152.0	230.0	16030	6 x 0.75	19	8.2	87.0	113.0
20047	40 x 0.25	24	12.9	157.0	247.0	16031	7 x 0.75	19	8.2	96.0	130.0
20048	42 x 0.25	24	13.0	160.0	269.0	16032	8 x 0.75	19	9.7	110.0	145.0
20049	44 x 0.25	24	13.7	162.0	292.0	16033	10 x 0.75	19	10.3	140.0	180.0
20050	48 x 0.25	24	13.9	168.0	317.0	16034	12 x 0.75	19	10.5	151.0	202.0
20051	52 x 0.25	24	14.3	175.0	330.0	16035	14 x 0.75	19	11.3	167.0	225.0
20052	56 x 0.25	24	14.7	189.0	343.0	16036	16 x 0.75	19	11.9	183.0	275.0
20053	61 x 0.25	24	15.2	204.0	365.0	16037	18 x 0.75	19	12.7	207.0	292.0
20056	2 x 0.34	22	4.9	18.0	30.0	16529	19 x 0.75	19	12.7	221.0	322.0
20057	3 x 0.34	22	5.1	22.0	37.0	16038	20 x 0.75	19	13.6	238.0	362.0
20058	4 x 0.34	22	5.5	28.0	48.0	16039	24 x 0.75	19	14.9	270.0	435.0
20059	5 x 0.34	22	6.0	31.0	54.0	16040	25 x 0.75	19	15.0	278.0	415.0
20085	6 x 0.34	22	6.6	45.0	61.0	16041	27 x 0.75	19	15.1	287.0	467.0
20060	7 x 0.34	22	6.6	51.0	67.0	16042	30 x 0.75	19	16.0	315.0	486.0
20061	8 x 0.34	22	7.7	54.0	81.0	16043	32 x 0.75	19	16.5	330.0	530.0
20062	10 x 0.34	22	8.4	65.0	103.0	16163	34 x 0.75	19	17.1	350.0	570.0
20063	12 x 0.34	22	8.6	70.0	110.0	16044	36 x 0.75	19	17.4	370.0	600.0
20064	14 x 0.34	22	9.0	81.0	153.0	16530	37 x 0.75	19	17.4	386.0	640.0