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

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




## TECHNICAL DATA

**PVC data cable in alignment with DIN VDE 0812**

| | |
|---|---|
| **Temperature range** | flexible -5°C to +80°C<br>fixed -40°C to +80°C |
| **Peak operating voltage** | 0.14 mm²: 350 V<br>0.25 - 1.5 mm²: 500 V<br>(not for high power current installation purposes) |
| **Test voltage core/core** | 0.14 - 0.25 mm²: 1200 V<br>0.34 - 1.5 mm²: 2000 V |
| **Test voltage core/screen** | 0.14 - 0.25 mm²: 800 V<br>0.34 - 1.5 mm²: 1200 V |
| **Breakdown voltage** | 0.14 - 0.25 mm²: 2400 V<br>0.34 - 1.5 mm²: 4000 V |
| **Mutual capacitance core/core** | at 800 Hz<br>0.14 - 0.25 mm²: approx. 100 pF/m<br>0.34 - 1.5 mm²: approx. 150 pF/m |
| **Mutual capacitance core/screen** | at 800 Hz<br>0.14 - 0.25 mm²: approx. 200 pF/m<br>0.34 - 1.5 mm²: approx. 270 pF/m |
| **Characteristic impedance** | 78 Ohm,<br>(approx. value) |
| **Inductance** | approx. 0.65 mH/km |
| **Coupling resistance** | at 30 MHz, approx. 250 Ohm/km |
| **Minimum bending radius** | flexible 10x Outer-Ø<br>fixed 5x Outer-Ø |

## CABLE STRUCTURE

- Copper wire bare, 0.5 - 1.5 mm²: finely stranded acc. to DIN VDE 0295 Class 5 / IEC 60228 Class 5
- Wire structure:
  0.14 mm²: approx. 18 x 0.1 mm
  0.25 mm²: approx. 14 x 0.15 mm
  0.34 mm²: 7 x 0.25 mm
- Core insulation: PVC acc. to DIN VDE 0207-363-3 / DIN EN 50363-3 (compound type TI2)
- Core identification in alignment with DIN 47100, colour coded without colour repetition from the 45th core
- 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
- certifications and approvals:
  EAC

## 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 interefence-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 (mm²) constructed, AWG numbers are approximated, and are for reference only

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

| Part no. | No. cores x cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu factor per km | Weight kg/km, approx. |
|---|---|---|---|---|---|
| 20139 | 1 x 0.14 | 26 | 2.6 | 6.1 | 16.0 |
| 20084 | 1 x 0.25 | 24 | 2.9 | 7.2 | 27.0 |
| 20088 | 1 x 0.34 | 22 | 3.0 | 13.5 | 24.0 |
| 16001 | 1 x 0.5 | 20 | 3.5 | 15.0 | 40.0 |
| 16025 | 1 x 0.75 | 19 | 3.8 | 19.0 | 41.0 |

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# 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. mm² | AWG, approx. | Outer Ø mm, approx. | Cu factor per km | Weight kg/km, approx. |
|---|---|---|---|---|---|
| 20001 | 2 x 0.14 | 26 | 3.8 | 12.0 | 20.0 |
| 20002 | 3 x 0.14 | 26 | 4.0 | 13.0 | 27.0 |
| 20003 | 4 x 0.14 | 26 | 4.2 | 14.5 | 32.0 |
| 20004 | 5 x 0.14 | 26 | 4.5 | 15.5 | 37.0 |
| 20005 | 6 x 0.14 | 26 | 5.0 | 18.2 | 42.0 |
| 20006 | 7 x 0.14 | 26 | 5.0 | 19.0 | 48.0 |
| 20007 | 8 x 0.14 | 26 | 5.6 | 21.3 | 55.0 |
| 20008 | 10 x 0.14 | 26 | 6.0 | 28.7 | 65.0 |
| 20009 | 12 x 0.14 | 26 | 6.2 | 30.5 | 77.0 |
| 20010 | 14 x 0.14 | 26 | 6.6 | 32.0 | 79.0 |
| 20011 | 16 x 0.14 | 26 | 6.9 | 43.2 | 89.0 |
| 20012 | 18 x 0.14 | 26 | 7.2 | 51.0 | 103.0 |
| 20013 | 20 x 0.14 | 26 | 7.6 | 55.0 | 116.0 |
| 20014 | 21 x 0.14 | 26 | 7.6 | 56.0 | 120.0 |
| 20015 | 24 x 0.14 | 26 | 8.4 | 62.0 | 131.0 |
| 20091 | 25 x 0.14 | 26 | 8.4 | 61.0 | 136.0 |
| 20016 | 27 x 0.14 | 26 | 8.4 | 65.0 | 142.0 |
| 20017 | 30 x 0.14 | 26 | 8.8 | 69.0 | 157.0 |
| 20018 | 32 x 0.14 | 26 | 9.1 | 76.0 | 163.0 |
| 20019 | 36 x 0.14 | 26 | 9.4 | 83.0 | 182.0 |
| 20020 | 40 x 0.14 | 26 | 10.3 | 88.0 | 209.0 |
| 20021 | 42 x 0.14 | 26 | 10.3 | 94.0 | 217.0 |
| 20022 | 44 x 0.14 | 26 | 10.6 | 110.0 | 226.0 |
| 20023 | 48 x 0.14 | 26 | 10.8 | 115.0 | 240.0 |
| 20024 | 52 x 0.14 | 26 | 11.0 | 124.0 | 270.0 |
| 20025 | 56 x 0.14 | 26 | 11.5 | 132.0 | 320.0 |
| 20026 | 61 x 0.14 | 26 | 11.8 | 146.0 | 370.0 |
| 20029 | 2 x 0.25 | 24 | 4.4 | 15.8 | 31.0 |
| 20030 | 3 x 0.25 | 24 | 4.6 | 18.6 | 36.0 |
| 20031 | 4 x 0.25 | 24 | 5.2 | 22.0 | 40.0 |
| 20032 | 5 x 0.25 | 24 | 5.5 | 26.5 | 51.0 |
| 20083 | 6 x 0.25 | 24 | 5.9 | 32.4 | 58.0 |
| 20033 | 7 x 0.25 | 24 | 5.9 | 35.0 | 64.0 |
| 20034 | 8 x 0.25 | 24 | 6.9 | 42.1 | 82.0 |
| 20035 | 10 x 0.25 | 24 | 7.4 | 49.9 | 85.0 |
| 20036 | 12 x 0.25 | 24 | 7.6 | 58.0 | 90.0 |
| 20037 | 14 x 0.25 | 24 | 8.0 | 62.0 | 98.0 |
| 20038 | 16 x 0.25 | 24 | 8.5 | 67.0 | 110.0 |
| 20039 | 18 x 0.25 | 24 | 8.9 | 78.0 | 142.0 |
| 20086 | 19 x 0.25 | 24 | 8.9 | 79.0 | 146.0 |
| 20040 | 20 x 0.25 | 24 | 9.3 | 88.0 | 152.0 |
| 20041 | 21 x 0.25 | 24 | 9.3 | 91.0 | 150.0 |
| 20042 | 24 x 0.25 | 24 | 10.4 | 96.0 | 163.0 |
| 20092 | 25 x 0.25 | 24 | 10.4 | 99.0 | 169.0 |
| 20043 | 27 x 0.25 | 24 | 10.4 | 122.0 | 176.0 |
| 20044 | 30 x 0.25 | 24 | 11.0 | 132.0 | 189.0 |
| 20045 | 32 x 0.25 | 24 | 11.5 | 138.0 | 204.0 |
| 20046 | 36 x 0.25 | 24 | 11.9 | 146.0 | 219.0 |
| 20087 | 37 x 0.25 | 24 | 11.9 | 152.0 | 230.0 |
| 20047 | 40 x 0.25 | 24 | 13.2 | 157.0 | 247.0 |
| 20048 | 42 x 0.25 | 24 | 13.2 | 160.0 | 269.0 |
| 20049 | 44 x 0.25 | 24 | 13.6 | 162.0 | 292.0 |
| 20050 | 48 x 0.25 | 24 | 13.8 | 168.0 | 317.0 |
| 20051 | 52 x 0.25 | 24 | 14.2 | 175.0 | 330.0 |
| 20052 | 56 x 0.25 | 24 | 14.5 | 189.0 | 343.0 |
| 20053 | 61 x 0.25 | 24 | 15.1 | 204.0 | 365.0 |
| 20056 | 2 x 0.34 | 22 | 4.6 | 18.0 | 30.0 |
| 20057 | 3 x 0.34 | 22 | 5.0 | 22.0 | 37.0 |
| 20058 | 4 x 0.34 | 22 | 5.4 | 28.0 | 48.0 |
| 20059 | 5 x 0.34 | 22 | 5.8 | 31.0 | 54.0 |
| 20085 | 6 x 0.34 | 22 | 6.2 | 45.0 | 61.0 |
| 20060 | 7 x 0.34 | 22 | 6.2 | 51.0 | 67.0 |
| 20061 | 8 x 0.34 | 22 | 7.3 | 54.0 | 81.0 |
| 20062 | 10 x 0.34 | 22 | 7.8 | 65.0 | 103.0 |
| 20063 | 12 x 0.34 | 22 | 8.2 | 70.0 | 110.0 |
| 20064 | 14 x 0.34 | 22 | 8.6 | 81.0 | 153.0 |
| 20065 | 16 x 0.34 | 22 | 9.0 | 88.0 | 159.0 |
| 20066 | 18 x 0.34 | 22 | 9.4 | 103.0 | 172.0 |
| 20089 | 19 x 0.34 | 22 | 9.4 | 106.0 | 181.0 |
| 20067 | 20 x 0.34 | 22 | 10.1 | 112.0 | 191.0 |
| 20068 | 21 x 0.34 | 22 | 10.1 | 116.0 | 199.0 |
| 20069 | 24 x 0.34 | 22 | 11.0 | 129.0 | 229.0 |
| 20093 | 25 x 0.34 | 22 | 11.0 | 120.0 | 241.0 |
| 20070 | 27 x 0.34 | 22 | 11.0 | 138.0 | 258.0 |
| 20071 | 30 x 0.34 | 22 | 11.8 | 158.0 | 290.0 |
| 20072 | 32 x 0.34 | 22 | 12.2 | 163.0 | 305.0 |
| 20073 | 36 x 0.34 | 22 | 12.6 | 178.0 | 330.0 |
| 20090 | 37 x 0.34 | 22 | 12.6 | 192.0 | 348.0 |
| 20074 | 40 x 0.34 | 22 | 14.0 | 198.0 | 364.0 |
| 20075 | 42 x 0.34 | 22 | 14.0 | 203.0 | 389.0 |
| 20076 | 44 x 0.34 | 22 | 14.4 | 214.0 | 414.0 |
| 20077 | 48 x 0.34 | 22 | 14.8 | 227.0 | 420.0 |
| 20078 | 52 x 0.34 | 22 | 15.2 | 242.0 | 450.0 |
| 20079 | 56 x 0.34 | 22 | 15.6 | 267.0 | 480.0 |
| 20080 | 61 x 0.34 | 22 | 16.0 | 295.0 | 520.0 |
| 16002 | 2 x 0.5 | 20 | 5.4 | 29.0 | 45.0 |
| 16003 | 3 x 0.5 | 20 | 5.7 | 39.0 | 55.0 |
| 16004 | 4 x 0.5 | 20 | 6.1 | 46.0 | 61.0 |
| 16005 | 5 x 0.5 | 20 | 6.8 | 52.0 | 76.0 |
| 16006 | 6 x 0.5 | 20 | 7.3 | 66.0 | 89.0 |
| 16007 | 7 x 0.5 | 20 | 7.3 | 68.0 | 98.0 |
| 16008 | 8 x 0.5 | 20 | 8.6 | 80.0 | 117.0 |
| 16009 | 10 x 0.5 | 20 | 9.2 | 93.0 | 135.0 |
| 16010 | 12 x 0.5 | 20 | 9.5 | 117.0 | 157.0 |
| 16011 | 14 x 0.5 | 20 | 10.1 | 122.0 | 190.0 |
| 16012 | 16 x 0.5 | 20 | 10.6 | 129.0 | 210.0 |
| 16013 | 18 x 0.5 | 20 | 11.1 | 152.0 | 217.0 |
| 16526 | 19 x 0.5 | 20 | 11.1 | 156.0 | 246.0 |
| 16014 | 20 x 0.5 | 20 | 11.9 | 173.0 | 275.0 |
| 16015 | 24 x 0.5 | 20 | 13.4 | 236.0 | 337.0 |
| 16016 | 25 x 0.5 | 20 | 13.4 | 250.0 | 351.0 |
| 16527 | 27 x 0.5 | 20 | 13.4 | 265.0 | 373.0 |
| 16017 | 30 x 0.5 | 20 | 14.1 | 297.0 | 396.0 |
| 16018 | 32 x 0.5 | 20 | 14.8 | 301.0 | 431.0 |
| 16164 | 34 x 0.5 | 20 | 15.3 | 312.0 | 440.0 |
| 16019 | 36 x 0.5 | 20 | 15.3 | 320.0 | 445.0 |
| 16528 | 37 x 0.5 | 20 | 15.3 | 325.0 | 458.0 |
| 16020 | 40 x 0.5 | 20 | 16.7 | 345.0 | 470.0 |
| 16021 | 50 x 0.5 | 20 | 18.1 | 407.0 | 570.0 |
| 16022 | 61 x 0.5 | 20 | 19.3 | 508.0 | 650.0 |
| 16026 | 2 x 0.75 | 19 | 5.9 | 38.0 | 59.0 |
| 16027 | 3 x 0.75 | 19 | 6.2 | 50.0 | 66.0 |
| 16028 | 4 x 0.75 | 19 | 6.9 | 57.0 | 77.0 |
| 16029 | 5 x 0.75 | 19 | 7.5 | 70.0 | 93.0 |
| 16030 | 6 x 0.75 | 19 | 8.3 | 87.0 | 113.0 |
| 16031 | 7 x 0.75 | 19 | 8.3 | 96.0 | 130.0 |
| 16032 | 8 x 0.75 | 19 | 9.5 | 110.0 | 145.0 |
| 16033 | 10 x 0.75 | 19 | 10.4 | 140.0 | 180.0 |
| 16034 | 12 x 0.75 | 19 | 10.7 | 151.0 | 202.0 |
| 16035 | 14 x 0.75 | 19 | 11.2 | 167.0 | 225.0 |
| 16036 | 16 x 0.75 | 19 | 12.0 | 183.0 | 275.0 |
| 16037 | 18 x 0.75 | 19 | 12.6 | 207.0 | 292.0 |
| 16529 | 19 x 0.75 | 19 | 12.6 | 221.0 | 322.0 |
| 16038 | 20 x 0.75 | 19 | 13.6 | 238.0 | 362.0 |
| 16039 | 24 x 0.75 | 19 | 15.1 | 270.0 | 435.0 |
| 16040 | 25 x 0.75 | 19 | 15.1 | 278.0 | 415.0 |
| 16041 | 27 x 0.75 | 19 | 15.1 | 287.0 | 467.0 |
| 16042 | 30 x 0.75 | 19 | 15.9 | 315.0 | 486.0 |

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# 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. mm² | AWG, approx. | Outer Ø mm, approx. | Cu factor per km | Weight kg/km, approx. |
|---|---|---|---|---|---|
| 16043 | 32 x 0.75 | 19 | 16.7 | 330.0 | 530.0 |
| 16163 | 34 x 0.75 | 19 | 17.3 | 350.0 | 570.0 |
| 16044 | 36 x 0.75 | 19 | 17.3 | 370.0 | 600.0 |
| 16530 | 37 x 0.75 | 19 | 17.3 | 386.0 | 640.0 |
| 16045 | 40 x 0.75 | 19 | 19.0 | 395.0 | 680.0 |
| 16120 | 42 x 0.75 | 19 | 19.0 | 408.0 | 714.0 |
| 16047 | 61 x 0.75 | 19 | 22.0 | 555.0 | 900.0 |
| 16475 | 2 x 1 | 18 | 6.2 | 46.0 | 65.0 |
| 16476 | 3 x 1 | 18 | 6.8 | 56.0 | 80.0 |
| 16477 | 4 x 1 | 18 | 7.3 | 69.0 | 98.0 |
| 16478 | 5 x 1 | 18 | 7.9 | 89.0 | 127.0 |
| 16479 | 6 x 1 | 18 | 8.7 | 105.0 | 144.0 |
| 16480 | 7 x 1 | 18 | 8.7 | 111.0 | 158.0 |
| 16481 | 8 x 1 | 18 | 10.2 | 130.0 | 197.0 |
| 16482 | 10 x 1 | 18 | 11.0 | 140.0 | 232.0 |
| 16483 | 12 x 1 | 18 | 11.6 | 168.0 | 260.0 |
| 16484 | 14 x 1 | 18 | 12.1 | 198.0 | 302.0 |
| 16485 | 16 x 1 | 18 | 12.7 | 218.0 | 346.0 |
| 16486 | 19 x 1 | 18 | 13.7 | 268.0 | 412.0 |
| 16487 | 24 x 1 | 18 | 16.0 | 320.0 | 493.0 |
| 16488 | 27 x 1 | 18 | 16.0 | 360.0 | 562.0 |
| 16489 | 37 x 1 | 18 | 18.5 | 485.0 | 790.0 |
| 16500 | 2 x 1.5 | 16 | 7.4 | 63.0 | 88.0 |
| 16501 | 3 x 1.5 | 16 | 7.8 | 76.0 | 100.0 |
| 16502 | 4 x 1.5 | 16 | 8.7 | 98.0 | 126.0 |
| 16503 | 5 x 1.5 | 16 | 9.4 | 116.0 | 160.0 |
| 16504 | 6 x 1.5 | 16 | 10.4 | 140.0 | 192.0 |
| 16505 | 7 x 1.5 | 16 | 10.4 | 152.0 | 208.0 |
| 16506 | 8 x 1.5 | 16 | 12.2 | 172.0 | 244.0 |
| 16507 | 10 x 1.5 | 16 | 13.6 | 193.0 | 315.0 |
| 16508 | 12 x 1.5 | 16 | 14.0 | 254.0 | 338.0 |
| 16509 | 14 x 1.5 | 16 | 14.9 | 272.0 | 383.0 |
| 16510 | 16 x 1.5 | 16 | 15.6 | 285.0 | 424.0 |
| 16511 | 19 x 1.5 | 16 | 16.6 | 387.0 | 506.0 |
| 16512 | 24 x 1.5 | 16 | 19.8 | 448.0 | 690.0 |
| 16513 | 27 x 1.5 | 16 | 19.8 | 506.0 | 781.0 |
| 16514 | 37 x 1.5 | 16 | 22.6 | 682.0 | 941.0 |

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