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HELUKABEL TRONIC (LiYY) 10x0,25 QMM / 18036 001042209

CE



## Technical data

- Special PVC data cables, adapted to DIN VDE 0812
- **Temperature range**  
flexing -5 °C to +80 °C  
fixed installation -40 °C to +80 °C
- **Nominal voltage**  
(not for purposes of high current and power installation)  
0,14 mm<sup>2</sup> = 350 V  
≥0,25 mm<sup>2</sup> = 500 V
- **Test voltage**  
up to 0,25 mm<sup>2</sup> 1200 V  
from 0,34 mm<sup>2</sup> 2000 V
- **Breakdown voltage**  
up to 0,25 mm<sup>2</sup> 2400 V  
from 0,34 mm<sup>2</sup> 4000 V
- **Insulation resistance**  
min. 20 MOhm x km
- **Capacitance** (approx.-value) at 800 Hz  
0,14 mm<sup>2</sup> 120 pF/m  
≥0,25 mm<sup>2</sup> 150 pF/m
- **Inductance** approx. 0,65 mH/km
- **Impedance** approx. 78 Ohm
- **Minimum bending radius**  
flexing 7,5x cable ø  
fixed installation 4x cable ø
- **Radiation resistance**  
up to 80x10<sup>6</sup> cJ/kg (up to 80 Mrad)

## Cable structure

- Bare copper, fine wire conductors, bunch stranded 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
- Colour coded to DIN 47100, but without colour repetition
- Cores stranded in layers with optimal lay-length
- Special PVC outer sheath TM2, to DIN VDE 0281 part 1
- Colour grey (RAL 7001)
- with meter marking, change-over in 2011

## Properties

- Extremely 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

- AWG sizes are approximate equivalent values. The actual cross-section is in mm<sup>2</sup>.
- HELUKABEL®-TRONIC is also available in paired version (e.g. HELUKABEL®-PAAR-TRONIC 20x2x0,14 mm<sup>2</sup>).
- **screened analogue type:**  
**TRONIC-CY (LiY-CY)**, see page B 9

## Application

These 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. 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. |
|----------|----------------------------------------|--------------------|---------------------|------------------------|---------|
| 18001    | 2 x 0,14                               | 3,3                | 2,7                 | 13,0                   | 26      |
| 18002    | 3 x 0,14                               | 3,5                | 4,0                 | 16,0                   | 26      |
| 18003    | 4 x 0,14                               | 3,7                | 5,4                 | 19,0                   | 26      |
| 18004    | 5 x 0,14                               | 4,0                | 6,7                 | 22,0                   | 26      |
| 18005    | 6 x 0,14                               | 4,3                | 8,1                 | 25,0                   | 26      |
| 18006    | 7 x 0,14                               | 4,3                | 9,4                 | 28,0                   | 26      |
| 18007    | 8 x 0,14                               | 5,1                | 10,7                | 35,0                   | 26      |
| 18008    | 10 x 0,14                              | 5,6                | 13,4                | 41,0                   | 26      |
| 18009    | 12 x 0,14                              | 5,7                | 16,1                | 48,0                   | 26      |
| 18010    | 14 x 0,14                              | 6,0                | 18,8                | 53,0                   | 26      |
| 18011    | 16 x 0,14                              | 6,5                | 21,5                | 59,0                   | 26      |
| 18012    | 18 x 0,14                              | 6,8                | 24,2                | 65,0                   | 26      |
| 18013    | 20 x 0,14                              | 7,1                | 26,9                | 70,0                   | 26      |
| 18014    | 21 x 0,14                              | 7,1                | 28,2                | 77,0                   | 26      |
| 18015    | 24 x 0,14                              | 7,5                | 32,3                | 87,0                   | 26      |
| 18117    | 25 x 0,14                              | 7,7                | 33,6                | 91,0                   | 26      |
| 18016    | 27 x 0,14                              | 7,7                | 36,3                | 97,0                   | 26      |
| 18017    | 30 x 0,14                              | 8,5                | 40,3                | 108,0                  | 26      |
| 18018    | 32 x 0,14                              | 8,8                | 43,0                | 114,0                  | 26      |
| 18019    | 36 x 0,14                              | 9,3                | 48,4                | 126,0                  | 26      |
| 18020    | 40 x 0,14                              | 9,6                | 54,0                | 139,0                  | 26      |
| 18021    | 42 x 0,14                              | 9,9                | 56,0                | 146,0                  | 26      |
| 18022    | 44 x 0,14                              | 10,4               | 59,0                | 153,0                  | 26      |
| 18023    | 48 x 0,14                              | 10,5               | 65,0                | 164,0                  | 26      |
| 18024    | 52 x 0,14                              | 11,0               | 70,0                | 173,0                  | 26      |
| 18025    | 56 x 0,14                              | 11,3               | 75,0                | 187,0                  | 26      |
| 18026    | 61 x 0,14                              | 11,6               | 82,0                | 204,0                  | 26      |
| 18027    | 80 x 0,14                              | 13,0               | 108,0               | 280,0                  | 26      |
| 18028    | 100 x 0,14                             | 14,7               | 135,0               | 370,0                  | 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. |
|----------|----------------------------------------|--------------------|---------------------|------------------------|---------|
| 18029    | 2 x 0,25                               | 3,8                | 4,8                 | 18,0                   | 24      |
| 18030    | 3 x 0,25                               | 3,9                | 7,2                 | 22,0                   | 24      |
| 18031    | 4 x 0,25                               | 4,3                | 9,6                 | 26,0                   | 24      |
| 18032    | 5 x 0,25                               | 4,7                | 12,0                | 30,0                   | 24      |
| 18033    | 6 x 0,25                               | 5,3                | 14,4                | 36,0                   | 24      |
| 18034    | 7 x 0,25                               | 5,3                | 16,8                | 42,0                   | 24      |
| 18035    | 8 x 0,25                               | 5,7                | 19,2                | 49,0                   | 24      |
| 18036    | 10 x 0,25                              | 6,6                | 24,0                | 57,0                   | 24      |
| 18037    | 12 x 0,25                              | 6,8                | 28,8                | 66,0                   | 24      |
| 18038    | 14 x 0,25                              | 7,2                | 33,6                | 75,0                   | 24      |
| 18039    | 16 x 0,25                              | 7,6                | 38,4                | 84,0                   | 24      |
| 18040    | 18 x 0,25                              | 8,1                | 43,2                | 72,0                   | 24      |
| 18114    | 19 x 0,25                              | 8,1                | 46,0                | 84,0                   | 24      |
| 18041    | 20 x 0,25                              | 8,6                | 48,0                | 101,0                  | 24      |
| 18042    | 21 x 0,25                              | 8,6                | 50,0                | 107,0                  | 24      |
| 18043    | 24 x 0,25                              | 9,4                | 60,0                | 120,0                  | 24      |
| 18118    | 25 x 0,25                              | 9,5                | 61,0                | 132,0                  | 24      |
| 18044    | 27 x 0,25                              | 9,5                | 65,0                | 140,0                  | 24      |
| 18045    | 30 x 0,25                              | 10,3               | 72,0                | 156,0                  | 24      |
| 18046    | 32 x 0,25                              | 10,9               | 77,0                | 164,0                  | 24      |
| 18047    | 36 x 0,25                              | 11,3               | 86,0                | 182,0                  | 24      |
| 18115    | 37 x 0,25                              | 11,3               | 89,0                | 190,0                  | 24      |
| 18048    | 40 x 0,25                              | 11,6               | 96,0                | 200,0                  | 24      |
| 18049    | 42 x 0,25                              | 12,0               | 101,0               | 211,0                  | 24      |
| 18050    | 44 x 0,25                              | 12,6               | 106,0               | 225,0                  | 24      |
| 18051    | 48 x 0,25                              | 12,7               | 115,0               | 245,0                  | 24      |
| 18052    | 52 x 0,25                              | 13,3               | 125,0               | 263,0                  | 24      |
| 18053    | 56 x 0,25                              | 13,9               | 134,0               | 280,0                  | 24      |
| 18054    | 61 x 0,25                              | 14,3               | 146,0               | 305,0                  | 24      |

Continuation ►

# TRONIC (LiYY) flexible, colour coded to DIN 47100, meter marking



| Part no. | No. cores x cross-sec. mm² | Outer Ø approx. mm | Cop. weight kg / km | Weight approx. kg / km | AWG-No. |
|----------|----------------------------|--------------------|---------------------|------------------------|---------|
| 18055    | 80 x 0,25                  | 16,5               | 192,0               | 450,0                  | 24      |
| 18056    | 100 x 0,25                 | 18,2               | 240,0               | 590,0                  | 24      |
| 18057    | 2 x 0,34                   | 4,2                | 6,5                 | 22,0                   | 22      |
| 18058    | 3 x 0,34                   | 4,4                | 9,8                 | 30,0                   | 22      |
| 18059    | 4 x 0,34                   | 4,8                | 13,1                | 43,0                   | 22      |
| 18060    | 5 x 0,34                   | 5,4                | 16,3                | 54,0                   | 22      |
| 18061    | 6 x 0,34                   | 5,9                | 19,6                | 58,0                   | 22      |
| 18062    | 7 x 0,34                   | 5,9                | 22,8                | 61,0                   | 22      |
| 18063    | 8 x 0,34                   | 7,0                | 26,1                | 73,0                   | 22      |
| 18064    | 10 x 0,34                  | 7,6                | 32,6                | 82,0                   | 22      |
| 18065    | 12 x 0,34                  | 7,7                | 39,2                | 102,0                  | 22      |
| 18066    | 14 x 0,34                  | 8,4                | 45,7                | 108,0                  | 22      |
| 18067    | 16 x 0,34                  | 8,8                | 52,0                | 126,0                  | 22      |
| 18068    | 18 x 0,34                  | 9,3                | 59,0                | 143,0                  | 22      |
| 18069    | 20 x 0,34                  | 9,9                | 65,0                | 160,0                  | 22      |
| 18070    | 21 x 0,34                  | 9,9                | 69,0                | 166,0                  | 22      |
| 18071    | 24 x 0,34                  | 10,5               | 78,0                | 186,0                  | 22      |
| 18096    | 25 x 0,34                  | 10,7               | 82,0                | 192,0                  | 22      |
| 18072    | 27 x 0,34                  | 10,7               | 88,0                | 206,0                  | 22      |
| 18073    | 30 x 0,34                  | 11,8               | 98,0                | 226,0                  | 22      |
| 18074    | 32 x 0,34                  | 11,8               | 104,0               | 245,0                  | 22      |
| 18075    | 36 x 0,34                  | 12,9               | 118,0               | 285,0                  | 22      |
| 18116    | 37 x 0,34                  | 12,9               | 121,0               | 292,0                  | 22      |
| 18076    | 40 x 0,34                  | 13,3               | 131,0               | 318,0                  | 22      |
| 18077    | 42 x 0,34                  | 14,0               | 137,0               | 330,0                  | 22      |
| 18078    | 44 x 0,34                  | 14,0               | 144,0               | 370,0                  | 22      |
| 18079    | 48 x 0,34                  | 14,7               | 157,0               | 405,0                  | 22      |
| 18080    | 52 x 0,34                  | 15,4               | 170,0               | 430,0                  | 22      |
| 18081    | 53 x 0,34                  | 15,4               | 183,0               | 440,0                  | 22      |
| 18082    | 61 x 0,34                  | 16,3               | 199,0               | 610,0                  | 22      |
| 18083    | 80 x 0,34                  | 18,8               | 264,0               | 880,0                  | 22      |
| 18084    | 100 x 0,34                 | 21,0               | 327,0               | 1050,0                 | 22      |

| Part no. | No. cores x cross-sec. mm² | Outer Ø approx. mm | Cop. weight kg / km | Weight approx. kg / km | AWG-No. |
|----------|----------------------------|--------------------|---------------------|------------------------|---------|
| 18085    | 2 x 0,5                    | 4,6                | 9,6                 | 40,0                   | 20      |
| 18086    | 3 x 0,5                    | 4,8                | 14,4                | 46,0                   | 20      |
| 18087    | 4 x 0,5                    | 5,4                | 19,2                | 55,0                   | 20      |
| 18088    | 5 x 0,5                    | 5,9                | 24,0                | 64,0                   | 20      |
| 18089    | 6 x 0,5                    | 6,4                | 28,8                | 73,0                   | 20      |
| 18090    | 7 x 0,5                    | 6,4                | 33,6                | 81,0                   | 20      |
| 18091    | 8 x 0,5                    | 7,2                | 38,4                | 97,0                   | 20      |
| 18092    | 10 x 0,5                   | 8,4                | 48,0                | 116,0                  | 20      |
| 18093    | 12 x 0,5                   | 8,4                | 58,0                | 135,0                  | 20      |
| 18103    | 16 x 0,5                   | 10,0               | 77,0                | 168,0                  | 20      |
| 18101    | 20 x 0,5                   | 11,2               | 96,0                | 213,0                  | 20      |
| 18094    | 24 x 0,5                   | 11,8               | 116,0               | 241,0                  | 20      |
| 18102    | 30 x 0,5                   | 13,2               | 144,0               | 303,0                  | 20      |
| 18095    | 40 x 0,5                   | 15,2               | 192,0               | 391,0                  | 20      |
| 18104    | 2 x 0,75                   | 5,2                | 14,4                | 47,0                   | 18      |
| 18097    | 3 x 0,75                   | 5,4                | 21,6                | 54,0                   | 18      |
| 18098    | 4 x 0,75                   | 5,9                | 29,0                | 66,0                   | 18      |
| 18099    | 5 x 0,75                   | 6,7                | 36,0                | 80,0                   | 18      |
| 18100    | 7 x 0,75                   | 7,3                | 50,0                | 110,0                  | 18      |
| 18105    | 8 x 0,75                   | 8,6                | 58,0                | 125,0                  | 18      |
| 18106    | 10 x 0,75                  | 9,6                | 72,0                | 148,0                  | 18      |
| 18107    | 12 x 0,75                  | 9,7                | 86,0                | 176,0                  | 18      |
| 18108    | 16 x 0,75                  | 11,1               | 115,0               | 220,0                  | 18      |
| 18109    | 20 x 0,75                  | 12,4               | 144,0               | 276,0                  | 18      |
| 18110    | 2 x 1                      | 5,5                | 19,2                | 56,0                   | 17      |
| 18111    | 3 x 1                      | 5,8                | 29,0                | 71,0                   | 17      |
| 18112    | 2 x 1,5                    | 6,2                | 29,0                | 75,0                   | 16      |
| 18113    | 3 x 1,5                    | 6,7                | 43,0                | 90,0                   | 16      |

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



Standardised process control and visualisation of an extrusion system at our Windsbach factory.