# MULTISPEED® 500-PVC UL/CSA high flexible, safety

against high bending in drag chain systems, oil-resistant, low torsion, meter marking





#### **Technical data**

- Special drag chain cables for high mechanical stress in adapted to DIN VDE 0281 part 13 and E DIN VDE 0245 and UL-Std. 758 AWM Style 21179
- Temperature range flexing -5 °C to +80 °C fixed installation -30 °C to +80 °C
- Nominal voltage VDE U<sub>0</sub>/U 300/500 V
  UI 600 V
- Test voltage 3000 V
- Insulation resistance min. 100 MOhm x km
- 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, Unilay with short pitch length
- Special TPE core insulation
- Black cores with continuous white numbering
- Green-yellow earth core (3 cores and above)
- Stranding:
  - <7 cores: cores stranded in a layer with optimal lay-length around a filler as per construction
  - ≥7 cores: cores stranded with optimal lay-length to bunch-construction with low torsion strength, optimal selected short lay-length around a filler
- Special-PVC outer sheath, especially resistant against fatigue strength, extruded as filler with pressure
- Sheath colour black (RAL 9005)
- with meter marking, change-over in 2011

#### **Properties**

- 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) VW-1, FT1
- Low-adhesion
- Ozon and UV resistant
- High property of alternating bending strength
- Long life durabilities due to low friction-resistance
- Better chemical resistance
- Oil resistance to DIN EN 60811-2-1
- High stability
- Higher economical solution
- Reduced ø, results low weight of moving materials
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

### Note

- G = with green-yellow earth core; x = without green-yellow earth core (OZ).
- AWG sizes are approximate equivalent values. The actual cross-section is in mm<sup>2</sup>.
- screened analogue type:

MULTISPEED® 500-C-PVC UL/CSA, see page N 84

## **Application**

UL/CSA approved HELUKABEL® MULTISPEED 500-PVC are installed there, where the extreme requirements for the cables are necessary. Designed for the export-orientated machinery manufacturer, specifically for USA and Canada. The selected materials and lay-up technique permit these high flexible cables for permanent application in drag chains for long distances, high and slow speed of movements. These high flexible PVC control cables are suitable for shift- and bending stresses in machines and machine tool constructions. These are installed in dry, open air and moist rooms with free movement without tensile stress or forced movements. For applications which go beyond standard solutions (for example for composting appliances or high shelf conveyors with extremely high processing speeds etc.) we recommend for our especially developed enquiry sheet for energy guiding systems. Before installation in cable trays please read the instructions. Further technical details see selection table for drag chain cables, see lead text.

24295 2 x 0,5 20 4,8 9,6 40,0   24296 3 G 0,5 20 5,1 14,4 45,0   24297 4 G 0,5 20 5,5 19,0 57,0   24298 5 G 0,5 20 6,0 24,0 66,0   24299 7 G 0,5 20 9,1 33,6 81,0   24300 12 G 0,5 20 10,0 58,0 133,0   24301 18 G 0,5 20 12,2 86,0 194,0   24302 25 G 0,5 20 14,3 120,0 274,0   24303 4 G 0,75 19 6,1 29,0 63,0   24304 5 G 0,75 19 6,6 36,0 79,0   24305 7 G 0,75 19 10,5 50,0 107,0   24306 12 G 0,75 19 11,4 86,0 169,0	
24297     4 G 0,5     20     5,5     19,0     57,0       24298     5 G 0,5     20     6,0     24,0     66,0       24299     7 G 0,5     20     9,1     33,6     81,0       24300     12 G 0,5     20     10,0     58,0     133,0       24301     18 G 0,5     20     12,2     86,0     194,0       24302     25 G 0,5     20     14,3     120,0     274,0       24303     4 G 0,75     19     6,1     29,0     63,0       24304     5 G 0,75     19     6,6     36,0     79,0       24305     7 G 0,75     19     10,5     50,0     107,0	
24298     5 G 0,5     20     6,0     24,0     66,0       24299     7 G 0,5     20     9,1     33,6     81,0       24300     12 G 0,5     20     10,0     58,0     133,0       24301     18 G 0,5     20     12,2     86,0     194,0       24302     25 G 0,5     20     14,3     120,0     274,0       24303     4 G 0,75     19     6,1     29,0     63,0       24304     5 G 0,75     19     6,6     36,0     79,0       24305     7 G 0,75     19     10,5     50,0     107,0	
24299     7 G 0,5     20     9,1     33,6     81,0       24300     12 G 0,5     20     10,0     58,0     133,0       24301     18 G 0,5     20     12,2     86,0     194,0       24302     25 G 0,5     20     14,3     120,0     274,0       24303     4 G 0,75     19     6,1     29,0     63,0       24304     5 G 0,75     19     6,6     36,0     79,0       24305     7 G 0,75     19     10,5     50,0     107,0	
24300     12 G 0,5     20     10,0     58,0     133,0       24301     18 G 0,5     20     12,2     86,0     194,0       24302     25 G 0,5     20     14,3     120,0     274,0       24303     4 G 0,75     19     6,1     29,0     63,0       24304     5 G 0,75     19     6,6     36,0     79,0       24305     7 G 0,75     19     10,5     50,0     107,0	
24301 18 G 0,5 20 12,2 86,0 194,0   24302 25 G 0,5 20 14,3 120,0 274,0   24303 4 G 0,75 19 6,1 29,0 63,0   24304 5 G 0,75 19 6,6 36,0 79,0   24305 7 G 0,75 19 10,5 50,0 107,0	
24302     25 G O,5     20     14,3     120,0     274,0       24303     4 G O,75     19     6,1     29,0     63,0       24304     5 G O,75     19     6,6     36,0     79,0       24305     7 G O,75     19     10,5     50,0     107,0	
24303 4 G 0,75 19 6,1 29,0 63,0   24304 5 G 0,75 19 6,6 36,0 79,0   24305 7 G 0,75 19 10,5 50,0 107,0	
24304 5 G 0,75 19 6,6 36,0 79,0 24305 7 G 0,75 19 10,5 50,0 107,0	
24305 7 G 0,75 19 10,5 50,0 107,0	
2/306 12 0 0 75 19 11 / 86 0 169 0	
24300 12 0 0,73 13 11,4 00,0 103,0	
24307 18 G 0,75 19 14,2 130,0 247,0	
24308 25 G 0,75 19 16,3 180,0 366,0	
24309 36 G 0,75 19 20,1 259,0 540,0	
24310 42 G 0,75 19 22,2 302,0 630,0	
24311 3 G 1 18 5,9 29,0 69,0	
24312 4 G 1 18 6,4 38,4 86,0	
24313 5 G 1 18 7,0 48,0 101,0	
24314 7 G 1 18 11,2 67,0 140,0	

C ← The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No.cores x cross-sec. mm <sup>2</sup>	AWG-No.	Outer Ø approx.	Cop. weight kg/km	Weight approx. kg/km	
24315	12 G 1	18	12,3	115,0	227,0	
24316	18 G 1	18	15,1	173,0	351,0	
24317	25 G 1	18	17,6	240,0	489,0	
24318	3 G 1,5	16	6,7	43,0	88,0	
24319	4 G 1,5	16	7,3	58,0	110,0	
24320	5 G 1,5	16	8,0	72,0	130,0	
24321	7 G 1,5	16	13,2	101,0	182,0	
24322	12 G 1,5	16	14,4	173,0	319,0	
24323	18 G 1,5	16	17,7	259,0	420,0	
24324	25 G 1,5	16	20,5	360,0	604,0	
24325	4 G 2,5	14	8,9	96,0	172,0	
24326	5 G 2,5	14	9,9	120,0	219,0	
24327	7 G 2,5	14	16,1	168,0	303,0	
24328	12 G 2,5	14	17,8	288,0	504,0	
24329	18 G 2,5	14	21,8	432,0	754,0	
24330	25 G 2,5	14	24,4	600,0	940,0	

Dimensions and specifications may be changed without prior notice. (RN05)

