

MULTISPEED® 500-C-PUR UL/CSA safety against

high bending in drag chain systems, low torsion, halogen-free, EMC-preferred type, meter marking



Technical data

- Special drag chain cables for high mechanical stress in adapted to DIN VDE 0281 part 13, DIN VDE 0282 part 10 and E DIN VDE 0245 and UL-Std. 758 AWM Style 20939
- **Temperature range**
flexing -30 °C to +80 °C
fixed installation -50 °C to +80 °C
- **Nominal voltage**
VDE U₀/U 300/500 V
UL 600 V
- **Test voltage** 3000 V
- **Insulation resistance**
min. 100 MΩm x km
- **Minimum bending radius**
flexing 7,5x cable ø
fixed installation 4x cable ø
- **Coupling resistant**
max. 250 Ωm/km
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 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-TPE-O inner sheath, extruded as filler with pressure, grey RAL 7001
- Tinned copper braided screen, coverage 85% max., with optimal pitch
- Special-PUR outer sheath
- Sheath colour black (RAL 9005)
- with meter marking, change-over in 2011

Properties

- PUR-jacket 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
- High resistant to mechanical strain
- Long life durability due to low friction-resistance
- High tensile strength, abrasion- and impact resistance at low temperature
- Tear resistance
- High stability
- Oil resistance
- Better chemical resistance
- UV and ozone resistance
- 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 mm².
- **unscreened analogue type:**
MULTISPEED® 500-PUR UL/CSA,
see page N 89

Application

UL/CSA approved HELUKABEL® MULTISPEED 500-C-PUR 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 cables are installed in dry, moist and wet rooms and in open air with free movement without tensile stress or forced movements. These robust and abrasion resistant special control cables are installed there, where the problems appear for the application in permanent stresses e.g. in energy drag chains, industry robotics, production lines, automatic control systems and permanent movable machinery parts for multi-shift operation. These cables are installed everywhere, where high requirements for the flexibility, abrasion, oxygen and chemical resistance are necessary.

These screened cables are particularly suitable for the interference-free transmission in instrumentation and control engineering applications. Before installation in cable trays please read the instructions. Further technical details see selection table for drag chain cables, see lead text.

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 ²	AWG-No.	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km
24410	2 x 0,5	20	6,6	30,0	90,0
24411	3 G 0,5	20	6,9	36,0	104,0
24412	4 G 0,5	20	7,3	42,0	118,0
24413	5 G 0,5	20	7,8	48,0	148,0
24414	7 G 0,5	20	11,3	64,0	184,0
24415	9 G 0,5	20	11,4	80,0	219,0
24416	12 G 0,5	20	12,6	105,0	276,0
24417	18 G 0,5	20	15,0	137,0	378,0
24418	25 G 0,5	20	17,5	210,0	547,0

Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km
24419	2 x 0,75	19	6,8	40,0	100,0
24420	3 G 0,75	19	7,4	48,0	117,0
24421	4 G 0,75	19	8,0	55,0	143,0
24422	5 G 0,75	19	8,5	66,0	167,0
24423	7 G 0,75	19	12,9	85,0	229,0
24424	12 G 0,75	19	14,4	135,0	319,0
24425	18 G 0,75	19	17,5	190,0	492,0
24426	25 G 0,75	19	19,9	275,0	659,0

Continuation ▶

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Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km
24427	2 x 1	18	7,1	50,0	120,0
24428	3 G 1	18	7,7	59,0	140,0
24429	4 G 1	18	8,3	70,0	167,0
24430	5 G 1	18	9,1	84,0	201,0
24431	7 G 1	18	14,0	106,0	256,0
24432	12 G 1	18	15,0	174,0	417,0
24433	18 G 1	18	18,7	240,0	557,0
24434	25 G 1	18	21,4	332,0	766,0
24333	36 G 1	18	26,1	436,0	840,0
24435	3 G 1,5	16	8,6	75,0	170,0

Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km
24436	4 G 1,5	16	9,4	90,0	204,0
24437	5 G 1,5	16	10,4	108,0	236,0
24438	7 G 1,5	16	16,0	157,0	309,0
24439	12 G 1,5	16	17,6	240,0	509,0
24440	18 G 1,5	16	21,3	355,0	718,0
24441	25 G 1,5	16	24,8	448,0	944,0
24334	36 G 1,5	16	30,3	592,0	1070,0
24442	4 G 2,5	14	11,3	134,0	280,0
24443	5 G 2,5	14	12,3	175,0	346,0
24444	7 G 2,5	14	19,9	229,0	410,0

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

Bundling, binding, fastening

- Plastic helix
- Cable tie
- Hook and loop cable tie
- Mounting block



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