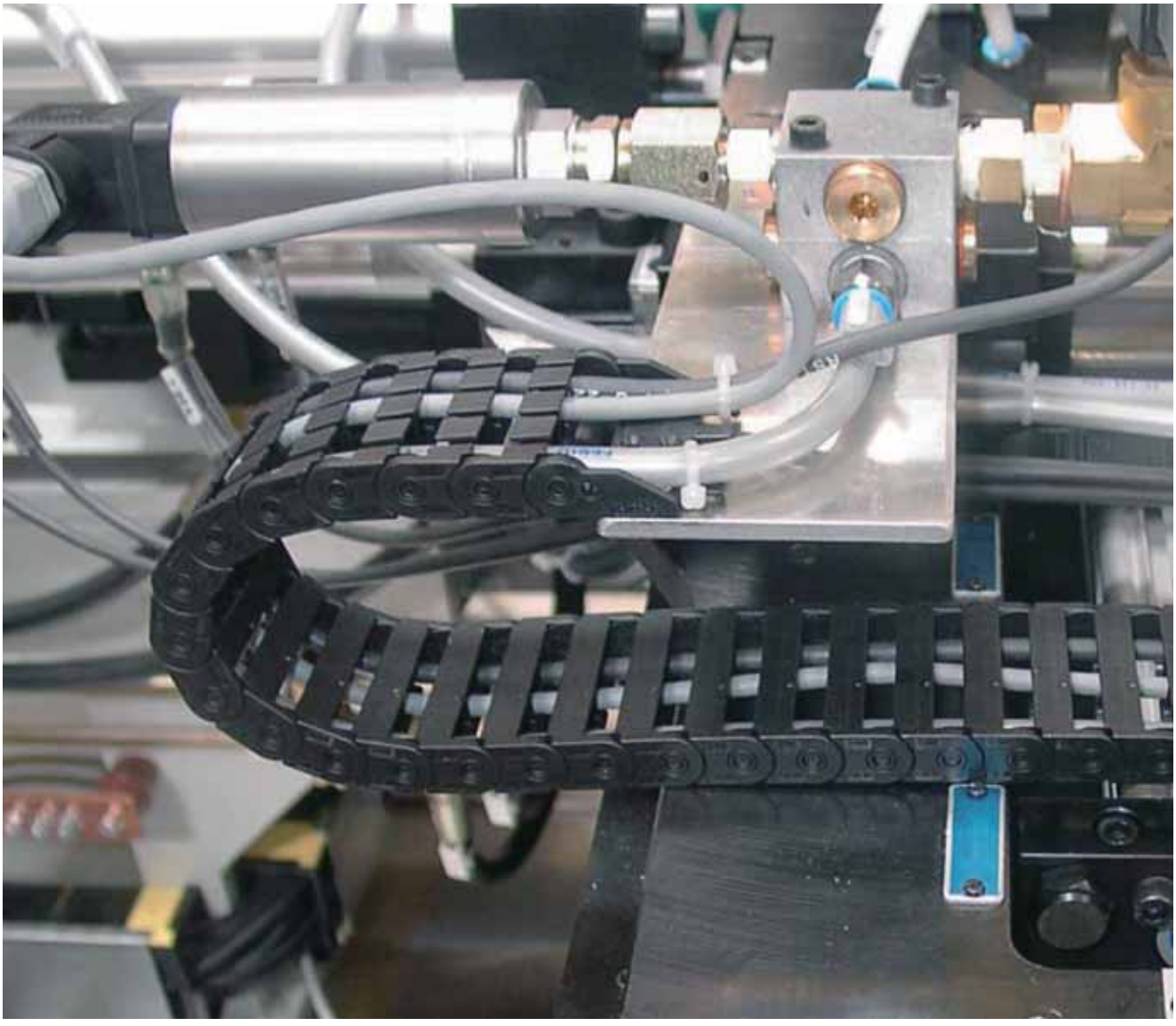
Control, Drag Chain & Servo Cables



Caleb Cable offers a wide range of flexible control cables, drag chain cables and servo motor cables.

The sheath material can be PVC, LSZH, PUR, and TPE, etc, according to the application requirements.

The flexible control, drag chain and servo cables can be used as a connecting cables for the automation and process control industry. It can also be used as a flexible cable to supply power for the machinery and equipments on the production lines and conveyors.

Control, Drag Chain & Servo Cables

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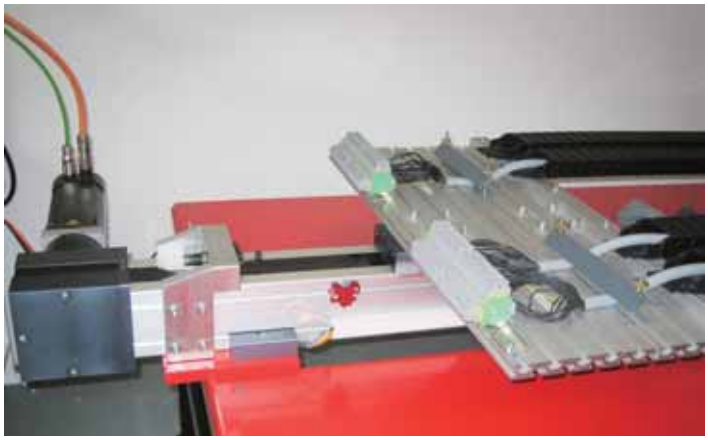
Drag Chain Selection



The layout of the cable drag chain is done by taking the following criteria into account:

1. The number and outer diameter of the conduits and cables that are to be carried;

2. The total weight of the cables and conduits;

3. The height and width of the assembly;

4. The minimum bend radius of the cables and conduits without straining them.

In addition, please check if a guide channel is necessary for guidance of the cable drag chain.

Installation manual for cable installation in drag chains

Tips for cable installation in drag chain:

1. The cables must be installed with guide stays, dividers or in separate hole stays so as to move freely in the drag tray guides, as free space for the cables in the guide stay should be at least 10% of the cable diameter.

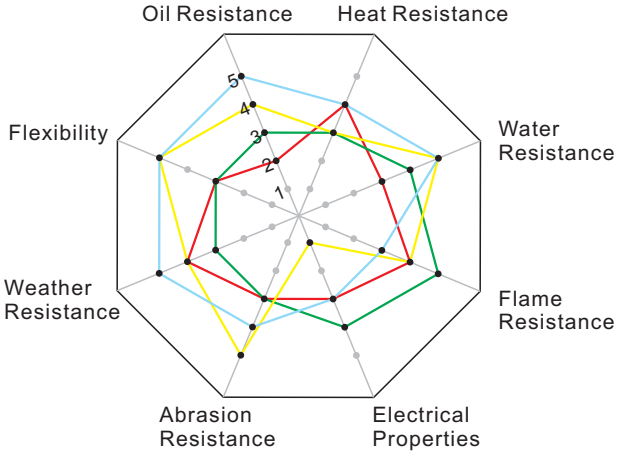
2. Always ensure that the cable can follow the motion of the drag trays without being stressed or jammed.

3. If the cables are to be installed in layers, then it is critical to ensure the cables are bent and unbent in unison without blocking one another however the drag tray moves.

Characteristics of insulation and sheath materials for drag chain cable

Characteristics		PVC	PUR	TPE
Temperature		-20℃ ~ +105 ℃	-55℃ ~ +80 ℃	-50℃ ~ +100 ℃
Corrosion resistance		medium	very good	good
Abrasion resistance		good	very good	good
Halogen free		no	yes	yes
Weather	Weather resistance	medium in black	very good	very good
	Cold resistance	moderate	very good	very good
Resistance	Oil resistant	medium	good	very good
	Jacket flame retardant	yes	yes	yes
	Coolant	no	yes	no
Max. movement distance		100 m	450 m	450 m
Min. bending radius		7.5 x cable dia.	7.5 x cable dia.	5.0 x cable dia.
Max. speed		5 m/s	5 m/s	5 m/s
Max. acceleration		50 m/s^2	50 m/s	50 m/s
Endurance (cycles for reference)		5 Million	10 Million	10 Million
Flexibility		medium	very good	very good

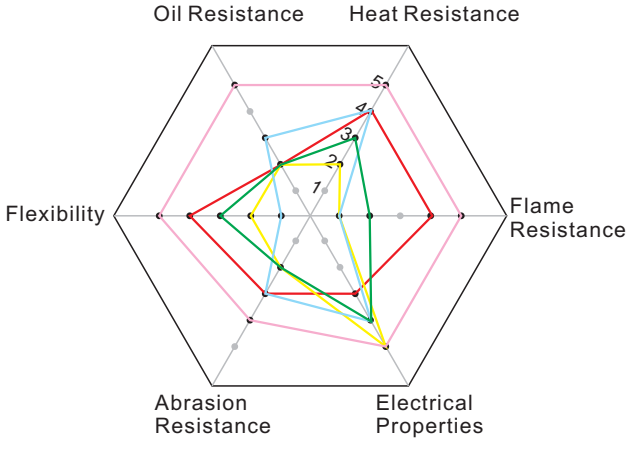
Characteristics Chart of Sheath Materials



PVC
LSZH
PUR
TPE

1 Poor
2 Fair
3 Good
4 Excellent
5 Outstanding

Characteristics Chart of Insulation Materials



PVC
Solid PE
Foam PE
PP
FEP

1 Poor
2 Fair
3 Good
4 Excellent
5 Outstanding

Insulation color for control cables with earth core

There are up to 102 color combinations to identify the various cores, which consists of 11 basic colors and specific combinations of color rings for core no. 12 and onwards.

3 to 5 core cables
Color identification according to VDE 0293 for flexible cables
3 cores = green-yellow/brown/blue
4 cores = green-yellow/brown/black/grey
5 cores = green-yellow/blue/brown/black/grey

6 and more core cables

No. Basic-Ring-Color		
0 green-yellow	36 transparent-blue	69 transparent-white-black
1 white	37 beige-blue	70 beige-white-black
2 black		
3 blue	38 grey-brown	71 brown-white-blue
4 brown	39 red-brown	72 grey-white-blue
5 grey	40 violet-brown	73 red-white-blue
6 red	41 pink-brown	74 violet-white-blue
7 violet	42 orange-brown	75 pink-white-blue
8 pink	43 transparent-brown	76 orange-white-blue
9 orange	44 beige-brown	77 transparent-white-blue
10 transparent		78 beige-white-blue
	45 red-grey	
11 beige	46 violet-grey	79 grey-white-brown
12 black-white	47 pink-grey	80 red-white-brown
13 blue-white	48 orange-grey	81 violet-white-brown
14 brown-white	49 transparent-grey	82 pink-white-brown
15 grey-white	50 beige-grey	83 orange-white-brown
16 red-white		84 transparent-white-brown
17 violet-white	51 orange-red	85 beige-white-brown
18 pink-white	52 transparent-red	
19 orange-white	53 beige-red	86 red-white-grey
20 transparent-white		87 violet-white-grey
21 beige-white	54 pink-violet	88 pink-white-grey
	55 orange-violet	89 orange-white-grey
22 blue-black	56 transparent-violet	90 transparent-white-grey
23 brown-black	57 beige-violet	91 beige-white-grey
24 grey-black		
25 red-black	58 transparent-pink	92 blue-white-red
26 violet-black	59 beige-pink	93 brown-white-red
27 pink-black	60 transparent-orange	94 violet-white-red
28 orange-black	61 beige-orange	95 pink-white-red
29 transparent-black		96 orange-white-red
30 beige-black	62 blue-white-black	
	63 brown-white-black	97 brown-white-violet
31 brown-blue	64 grey-white-black	98 orange-white-violet
32 grey-blue	65 red-white-black	
33 red-blue	66 violet-white-black	99 brown-black-blue
34 pink-blue	67 pink-white-black	100 grey-black-blue
35 orange-blue	68 orange-white-black	101 red-black-blue

Insulation color for control cables without earth core

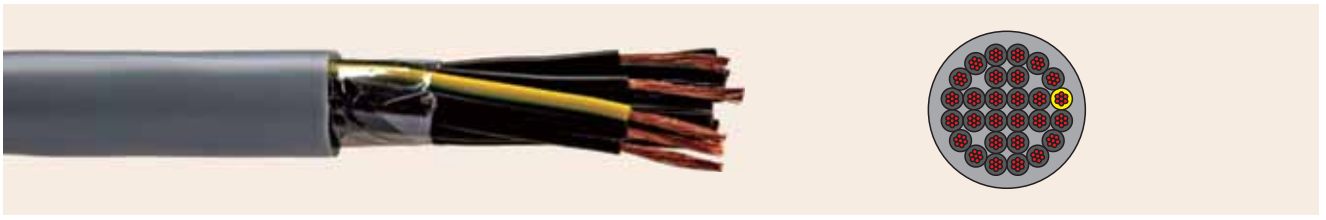
There are up to 101 color combinations to identify the various cores, which consists of 11 basic colors and specific combinations of color rings for core no. 12 and onwards.

2 to 5 core cables
color identification according to VDE 0293 for flexible cables
2 cores = brown/blue
3 cores = brown/black/grey
4 cores = blue/brown/black/grey
5 cores = blue/brown/black/grey/black

6 and more core cables

No. Basic-Ring-Color		
1 white	36 transparent-blue	69 transparent-white-black
2 black	37 beige-blue	70 beige-white-black
3 blue		
4 brown	38 grey-brown	71 brown-white-blue
5 grey	39 red-brown	72 grey-white-blue
6 red	40 violet-brown	73 red-white-blue
7 violet	41 pink-brown	74 violet-white-blue
8 pink	42 orange-brown	75 pink-white-blue
9 orange	43 transparent-brown	76 orange-white-blue
10 transparent	44 beige-brown	77 transparent-white-blue
11 beige		78 beige-white-blue
	45 red-grey	
12 black-white	46 violet-grey	79 grey-white-brown
13 blue-white	47 pink-grey	80 red-white-brown
14 brown-white	48 orange-grey	81 violet-white-brown
15 grey-white	49 transparent-grey	82 pink-white-brown
16 red-white	50 beige-grey	83 orange-white-brown
17 violet-white		84 transparent-white-brown
18 pink-white	51 orange-red	85 beige-white-brown
19 orange-white	52 tranparent-red	
20 transparent-white	53 beige-red	86 red-white-grey
21 beige-white		87 violet-white-grey
	54 pink-violet	88 pink-white-grey
22 blue-black	55 orange-violet	89 orange-white-grey
23 brown-black	56 tranparent-violet	90 transparent-white-grey
24 grey-black	57 beige-violet	91 beige-white-grey
25 red-black	58 transparent-pink	
26 violet-black	59 beige-pink	92 blue-white-red
27 pink-black	60 transparent-orange	93 brown-white-red
28 orange-black	61 beige-orange	94 violet-white-red
29 transparent-black		95 pink-white-red
30 beige-black	62 blue-white-black	96 orange-white-red
	63 brown-white-black	
31 brown-blue	64 grey-white-black	97 brown-white-violet
32 grey-blue	65 red-white-blackviolet-	98 orange-white-violet
33 red-blue	66 white-black	99 brown-black-blue
34 pink-blue	67 pink-white-black	100 grey-black-blue
35 orange-blue	68 orange-white-black	101 red-black-blue

YY 500



Technical data

- Special PVC control cables
- **Temperature range**
  flexing -5 ℃ to + 80 ℃
  fixed installation -40 ℃ to + 80 ℃
- **Nominal voltage** 300/500 V
- **Test voltage** 3000 V
- **Minimum bending radius**
  flexing 7.5 x cable diameter
  fixed installation 4 x cable diameter

Cable structure

- Bare copper, fine wire conductors
- Special PVC core insulation
- Black cores with white figure imprints or color coded
- Green-yellow earth core in the outer layer
  (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Special PVC outer sheath

Properties

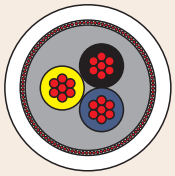
- Extensively oil resistant
- Chemical resistance
- PVC self-extinguishing and flame retardant
  IEC 60332-1

Application

These cables are designed for flexible uses and free movements under medium mechanical stress. Applications under tensile stress or forced movements are not recommended.

AWG-no.	NO. Cores x Cross-sec. mm^2	Insulation Diameter mm	Outer Diameter mm
20	2 x 0.5	2.0	4.6
20	3 x 0.5	2.0	5.2
20	4 x 0.5	2.0	6.0
20	5 x 0.5	2.0	7.6
20	7 x 0.5	2.0	8.5
20	12 x 0.5	2.0	10.8
20	18 x 0.5	2.0	12.8
20	25 x 0.5	2.0	14.5
12	3 x 4.0	4.6	12.0
12	4 x 4.0	4.6	14.0
10	3 x 6.0	5.2	12.8
10	5 x 6.0	5.2	15.2
8	7 x 10.0	6.5	23.5
4	4 x 25.0	10.6	28.2
2	4 x 35.0	11.8	31.5
1	4 x 50.0	15.0	40.5

CY 500



Technical data

- Special PVC sheathed cable
- **Temperature range**
  flexing -5 °C to + 80 °C
  fixed installation -40 °C to + 80°C
- **Nominal voltage** 300/500 V
- **Test voltage** 3000 V
- **Minimum bending radius**
  flexing 10 x cable diameter
  fixed installation 5 x cable diameter

Cable structure

- Bare copper conductor
- Core insulation of special PVC
- Black cores with continuous white numbering according
- Green-yellow earth core in the outer layer (3 cores and above)
- Separating foil
- Tinned copper braided screening, coverage approx. 85%
- Core wrapping from fleece guarantees good stripping capability
- PVC outer sheath

Relevant standard

- **Conductor**
  Stranding to VDE 0275 Class 5.
- **Cores** VDE 0812.
- **Sheath** VDE 0250 and 0251, BS 6500.

Application

These cables are designed for data and control signaling in electronics, machines, computer systems, etc. The dense screening offers a strong protection against interference to ensure accurate transmission of signals.

AWG-no.	NO. Cores x Cross-sec. mm^2	Insulation Diameter mm	Braiding Coverage	Outer Diameter mm
20	2 x 0.5	2.0	85%	7.0
20	3 x 0.5	2.0	85%	7.2
20	4 x 0.5	2.0	85%	7.8
20	5 x 0.5	2.0	85%	8.4
20	7 x 0.5	2.0	85%	9.5
20	12 x 0.5	2.0	85%	11.4
20	18 x 0.5	2.0	85%	14.4
20	25 x 0.5	2.0	85%	15.2
12	3 x 4.0	4.6	85%	13.0
12	4 x 4.0	4.6	85%	15.0
10	3 x 6.0	5.2	85%	14.6
10	5 x 6.0	5.2	85%	17.4
8	7 x 10.0	6.5	85%	25.3
4	4 x 25.0	10.6	85%	30.3
2	4 x 35.0	11.8	85%	33.9
1	4 x 50.0	15.0	85%	42.8

PVC Control Cables

Caleb Cable

SY 500

Technical data

- Special PVC control cables
- **Temperature range**
  flexing -5 ℃ to + 80 ℃
  fixed installation -40 ℃ to + 80 ℃
- **Nominal voltage** 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
  min. 20 MOhm x km
- **Minimum bending radius**
  flexing 20 x cable diameter
  fixed installation 6 x cable diameter

Cable structure

- **Conductor:**
  Flex wire strands of plain annealed copper.
  Insulation: PVC or LSF
- **Assembly:** Cores twisted together in layers
- **Core Identification:**
  Number coded, black cores with white number + green/yellow or color coded
- **Bedding:** PVC
- **Armor:** Galvanised steel wire armor
- **Sheath:** PVC Transparent.

Properties

- Extensively oil resistant
- Chemical resistance
- Flexible

Application

These are used as measurement and control cables in tooling machinery, plant installations, power stations and in data equipment. The armoring provides the best protection against mechanical damage. The transparent sheath allows convenient visual checks of the cable conditions.

AWG-no.	NO. Cores x Cross-sec. mm^2	Insulation Diameter mm	Armoring Coverage	Outer Diameter mm
20	2 x 0.5	2.0	80%	8.0
20	3 x 0.5	2.0	80%	9.2
20	4 x 0.5	2.0	80%	9.6
20	5 x 0.5	2.0	80%	10.0
20	7 x 0.5	2.0	80%	11.4
20	12 x 0.5	2.0	80%	13.6
20	18 x 0.5	2.0	80%	15.6
20	25 x 0.5	2.0	80%	19.2
12	3 x 4.0	4.6	80%	16.2
12	4 x 4.0	4.6	80%	17.8
10	3 x 6.0	5.2	80%	16.2
10	5 x 6.0	5.2	80%	21.6
8	7 x 10.0	6.5	80%	29.3
4	4 x 25.0	10.6	80%	34.9
2	4 x 35.0	11.8	80%	37.1
1	4 x 50.0	15.0	80%	44.8

PVC Control Cables

YY 750

Technical data

- Special PVC control cables
- **Temperature range**
  flexing -5 °C to + 80 °C
  fixed installation -40 °C to + 80 °C
- **Nominal voltage** 450/750 V
- **Test voltage** 4000 V
- **Minimum bending radius**
  flexing 7.5 x cable diameter
  fixed installation 4 x cable diameter

Cable structure

- Bare copper, fine wire conductors
- Special PVC core insulation
- Black cores with white figure imprints or color coded
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Special PVC outer sheath

Properties

- Extensively oil resistant
- Chemical resistance
- PVC self-extinguishing and flame retardant IEC 60332-1

Application

These cables are designed for flexible uses and free movements under medium mechanical stress. Applications under tensile stress or forced movements are not recommended.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	5.6	9.6	48.0
20	3 x 0.5	5.9	14.5	65.0
20	4 x 0.5	6.7	20.0	81.0
20	5 x 0.5	7.3	24.0	98.0
20	7 x 0.5	8.8	34.0	123.0
20	8 x 0.5	9.6	38.0	155.0
20	10 x 0.5	10.6	48.0	180.0
20	22 x 0.5	11.1	58.0	208.0
18	2 x 0.75	6.1	15.0	60.0
18	3 x 0.75	6.5	22.0	78.0
18	4 x 0.75	7.1	29.0	104.0
18	5 x 0.75	7.9	36.0	116.0
18	7 x 0.75	9.5	51.0	148.0
18	8 x 0.75	10.2	58.0	160.0
18	10 x 0.75	11.4	72.0	195.0
18	12 x 0.75	11.6	87.0	248.0

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
17	2 x 1	6.4	20.0	80.0
17	3 G 1	6.8	29.0	92.0
17	3 x 1	6.8	29.0	92.0
17	4 G 1	7.5	39.0	122.0
17	4 x 1	7.5	39.0	122.0
17	5 G 1	8.4	48.0	137.0
17	7 G 1	10.0	68.0	186.0
16	2 x 1.5	7.4	29.0	90.0
16	3 G 1.5	8.0	43.0	120.0
16	3 x 1.5	8.0	43.0	120.0
16	4 G 1.5	8.7	58.0	155.0
16	4 x 1.5	8.7	58.0	155.0
16	5 G 1.5	9.8	72.0	177.0
16	7 G 1.5	11.9	101.0	220.0

YY 1000

Technical data

- Special PVC control cables Adapted to DIN VDE 0262/12.95 and DIN VDE 0281 part 13, with insulation thickness for 1 kV type
- **Temperature range**
  flexing -5 ℃ to + 80 ℃
  fixed installation -40 ℃ to + 80 ℃
- **Nominal voltage** 0.6/1 kV
- **Test voltage** 4000 V
- **Minimum bending radius**
  flexing 7.5 x cable diameter
  fixed installation 4 x cable diameter

Cable structure

- Bare copper, fine wire conductors
- Special PVC core insulation
- Black cores with white figure imprints or color coded
- Green-yellow earth core in the outer layer (3 cores and above)
- Special PVC outer sheath

Properties

- Extensively oil resistant, chemical resistance
- PVC self-extinguishing and flame retardant IEC 60332-1

Application

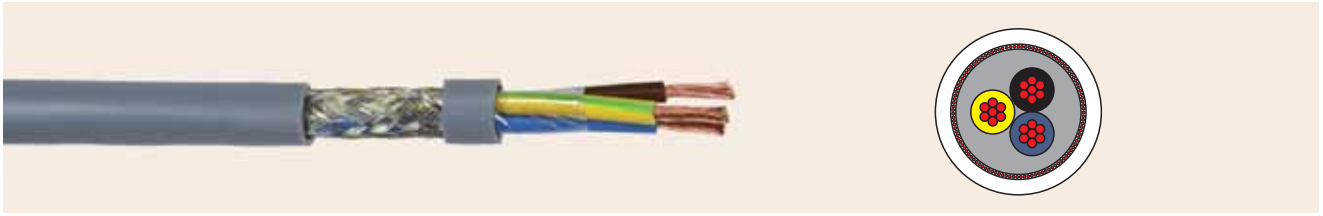
These wiring cables are used for measurement and control purposes in tooling machinery, conveyor belts and production lines, for plant installations, air conditioning and in steel production plants and rolling mills.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	6.3	9.6	56.0
20	3 G 0.5	6.7	14.4	68.0
20	3 x 0.5	6.7	14.4	68.0
20	4 G 0.5	7.2	19.0	100.0
20	4 x 0.5	7.2	19.0	100.0
20	5 G 0.5	8.0	24.0	117.0
20	5 x 0.5	8.0	24.0	117.0
20	6 G 0.5	8.9	29.0	126.0
20	7 G 0.5	8.9	33.6	138.0
20	7 x 0.5	8.9	33.6	138.0
20	8 G 0.5	10.2	38.0	150.0
20	8 x 0.5	10.2	38.0	150.0
20	10 G 0.5	11.2	48.0	176.0

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
18	2 x 0.75	6.6	14.4	66.0
18	3 G 0.75	7.0	21.6	74.0
18	3 x 0.75	7.0	21.6	74.0
18	4 G 0.75	7.6	29.0	126.0
18	4 x 0.75	7.6	29.0	126.0
18	5 G 0.75	8.4	36.0	140.0
18	5 x 0.75	8.4	36.0	140.0
18	6 G 0.75	9.3	43.0	170.0
18	6 x 0.75	9.3	43.0	170.0
18	7 G 0.75	9.3	50.0	190.0
18	7 x 0.75	9.3	50.0	190.0
18	8 G 0.75	10.9	58.0	212.0
18	8 x 0.75	10.9	58.0	212.0
18	9 G 0.75	11.8	65.0	227.0
18	10 G 0.75	11.8	72.0	238.0

CY 1000



Technical data

- Special control cables with thermoplastic PVC insulation on the basis of DIN VDE 0262/12.95 and DIN VDE 0281 part 13
- **Temperature range**
  flexing -5 °C to + 80°C
  fixed installation -40 °C to + 90°C
- **Nominal voltage** 0.6/1 kV
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
  min. 20 MOhm x km
- **Minimum bending radius**
  flexing 10 x cable diameter
  fixed installation 5 x cable diameter

Cable structure

- Bare copper, fine wire conductors
- Special PVC core insulation
- Black cores with sequential numbering imprinted in white or color coded
- PVC-insulated inner sheath
- Braided screen of tinned Cu wires, coverage approx. 85%
- Special PVC outer sheath

Properties

- Extensively oil resistant
- PVC self-extinguishing and flame retardant IEC 60332-1

Application

These wiring cables are used for measurement and control purposes in tooling machinery, conveyor belts and production lines, for plant installations, air conditioning and in steel production plants and rolling mills. These cables are designed for flexible uses and free movements under medium mechanical stress in dry or moist conditions.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km	AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	8.5	41.0	129.0	17	2 x 1	9.4	54.0	150.0
20	3 G 0.5	8.8	45.0	150.0	17	3 G 1	9.8	64.0	163.0
20	4 G 0.5	9.6	54.0	170.0	17	4 G 1	10.4	76.0	200.0
20	5 G 0.5	10.2	66.0	199.0	17	5 G 1	11.4	89.0	239.0
20	7 G 0.5	11.1	79.0	235.0	17	7 G 1	12.5	114.0	289.0
20	12 G 0.5	14.0	137.0	320.0	17	12 G 1	15.7	186.0	464.0
20	18 G x 0.5	16.2	156.0	428.0	17	18 G 1	18.4	284.0	628.0
20	25 G 0.5	19.0	250.0	503.0	17	25 G 1	21.8	387.0	855.0
18	2 x 0.75	8.8	46.0	143.0	16	2 x 1.5	10.4	64.0	162.0
18	3 G 0.75	9.3	57.0	155.0	16	3 G 1.5	11.1	82.0	187.0
18	4 G 0.75	9.9	63.0	190.0	16	4 G 1.5	11.8	99.0	240.0
18	5 G 0.75	10.8	76.0	228.0	16	5 G 1.5	13.1	123.0	289.0
18	7 G 0.75	11.5	100.0	323.0	16	7 G 1.5	14.2	148.0	383.0
18	12 G 0.75	14.6	175.0	410.0	16	12 G 1.5	18.4	274.0	592.0
18	18 G x 0.75	17.1	240.0	560.0	16	18 G x 1.5	21.5	386.0	806.0
18	25 G 0.75	20.3	306.0	730.0	16	25 G 1.5	25.0	531.0	1241.0

H05VV5-F

Technical data

- Control cable, special PVC with oil resistant outer jacket to DIN VDE 0281 part 13, HD 21.13S1 and IEC 60227/75
- **Temperature range**
  flexing -5 °C to + 70 °C
  fixed installation -40 °C to + 70°C
- **Nominal voltage** 300/500 V
- **Test voltage** 2000 V, 5 min.
- **Minimum bending radius**
  flexing 7.5 x cable diameter
  fixed installation 4 x cable diameter

Cable structure

- Bare copper, fine wire stranded conductor
- Special PVC core insulation
- Black cores with white figure imprint to DIN VDE 0293
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers
- Special PVC outer jacket

Properties

- PVC self-extinguishing and flame retardant
- Oil resistant to HD/EN 60811-2-1

Application

These cables are designed for flexible uses and free movements under medium mechanical stress. They are also used as control and connecting cables to machines, tooling machinery, conveyor belts and production lines. Applications under tensile stress or forced movements or open air conditions are not recommended.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm²	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	5.9	9.7	46.0
20	3 G 0.5	6.2	14.7	54.0
20	4 G 0.5	6.7	19.0	65.0
20	5 G 0.5	7.4	24.0	80.0
20	6 G 0.5	8.4	29.0	104.0
20	7 G 0.5	9.1	33.6	119.0
20	8 G 0.5	9.6	38.0	134.0
20	9 G 0.5	10.6	43.0	136.0
20	10 G 0.5	10.8	48.0	166.0
20	12 G 0.5	11.2	58.0	186.0
20	14 G 0.5	11.7	67.0	215.0
20	18 G 0.5	13.0	86.0	251.0
20	25 G 0.5	16.0	120.0	349.0
20	27 G 0.5	16.1	129.6	373.0
20	34 G 0.5	17.7	163.0	480.0
20	36 G 0.5	17.7	172.0	510.0
20	41 G 0.5	19.8	196.0	570.0
20	50 G 0.5	21.5	240.0	658.0

AWG-no.	NO. Cores x Cross-sec. mm²	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
18	2 x 0.75	6.3	14.1	52.0
18	3 G 0.75	6.7	21.6	68.0
18	4 G 0.75	7.3	29.0	82.0
18	5 G 0.75	8.3	36.0	107.0
18	6 G 0.75	9.0	43.0	132.0
18	7 G 0.75	9.7	50.0	145.0
18	8 G 0.75	10.4	58.0	189.0
18	9 G 0.75	11.5	65.0	194.0
18	12 G 0.75	12.0	86.0	231.0
18	14 G 0.75	12.4	101.0	274.0
18	18 G 0.75	14.0	130.0	313.0
18	25 G 0.75	17.0	180.0	461.0
18	27 G 0.75	17.1	195.0	493.0
18	34 G 0.75	19.1	245.0	614.0
18	36 G 0.75	19.1	259.0	646.0
18	41 G 0.75	21.3	295.0	730.0
18	50 G 0.75	23.2	360.0	896.0

Caleb Cable

H05VVC4V5-K

Technical data

- Control cable, special PVC with oil resistant outer jacket to DIN VDE 0281 part 13, HD 21.13S1 and IEC 60227/74
- **Temperature range**
  flexing -5 °C to + 70 °C
  fixed installation -40 °C to + 70 °C
- **Nominal voltage** 300/500 V
- **Test voltage**
  core/core 2 kV, 5 min
  core/screen 2 kV, 5 min
- **Minimum bending radius**
  flexing 10 x cable diameter
  fixed installation 5 x cable diameter

Cable structure

- Bare copper, fine wire stranded conductor
- Special PVC core insulation
- Black cores with white figure imprint to DIN VDE 0293
- Green-yellow earth core in the outer layer (3 cores and above)
- Special PVC outer jacket

Properties

- PVC self-extinguishing and flame retardant
- Oil resistant to HD/EN 60811-2-1

Application

These cables are designed for flexible uses and free movements under medium mechanical stress. They are also used as control and connecting cables to machines, tooling machinery, conveyor belts and production lines. Applications under tensile stress or forced movements or open air conditions are not recommended.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	8.0	41.0	92.0
20	3 G 0.5	8.4	45.0	109.0
20	4 G 0.5	9.1	54.0	126.0
20	5 G 0.5	10.1	66.0	156.0
20	6 G 0.5	10.7	73.0	176.0
20	7 G 0.5	11.4	79.0	192.0
20	8 G 0.5	12.5	82.0	211.0
20	9 G 0.5	12.5	94.0	230.0
20	12 G 0.5	13.5	137.0	280.0
20	14 G 0.5	14.2	142.0	302.0
20	18 G 0.5	15.8	156.0	384.0
20	25 G 0.5	18.6	250.0	556.0
20	27 G 0.5	18.6	255.0	599.0
20	34 G 0.5	20.8	316.0	634.0
20	36 G 0.5	20.8	320.0	620.0
20	41 G 0.5	23.0	348.0	770.0
20	50 G 0.5	25.0	407.0	970.0

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
18	2 x 0.75	8.3	46.0	102.0
18	3 G 0.75	8.8	57.0	115.0
18	4 G 0.75	9.8	63.0	150.0
18	5 G 0.75	10.8	76.0	173.0
18	6 G 0.75	11.4	82.0	195.0
18	7 G 0.75	12.1	100.0	235.0
18	8 G 0.75	12.7	112.0	268.0
18	9 G 0.75	13.8	130.0	285.0
18	12 G 0.75	14.3	175.0	327.0
18	14 G 0.75	14.4	190.0	362.0
18	18 G 0.75	16.9	240.0	488.0
18	25 G 0.75	20.0	306.0	654.0
18	27 G 0.75	20.0	326.0	708.0
18	34 G 0.75	22.1	346.0	821.0
18	36 G 0.75	22.1	358.0	899.0
18	41 G 0.75	23.9	403.0	970.0
18	50 G 0.75	26.8	470.0	1160.0

H03VV-F

Technical data

- PVC-control cables to DIN VDE 0281 part 5 and IEC 60227-5, HD 21.5 S3
- **Temperature range**
  flexing -5 °C to + 70 °C
  fixed installation -40 °C to + 70 °C
- **Nominal voltage** 300/300 V
- **Test voltage** 2000 V
- **Minimum bending radius**
  flexing 7.5 x cable diameter

Cable structure

- Bare copper, fine wire conductors
- PVC core insulation
- Cores color coded to DIN VDE 0293-308
  6 and more cores number coded
  1x green-yellow earth core incl.
- Green-yellow earth-core, 3 cores and above
- PVC outer jacket

Properties

- PVC self-extinguishing and flame retardant IEC 60332-1

Application

These cables are suitable for use in small appliances under low mechanical stress, such as connection in household appliances, e.g. kitchen devices, lightings, office equipment, etc.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	5.1	9.6	40.0
20	3 G 0.5	5.5	14.4	49.0
20	4 G 0.5	6.0	19.2	61.0
18	2 x 0.75	5.4	14.4	49.0
18	3 G 0.75	5.7	21.6	59.0
18	4 G 0.75	6.3	29.0	72.0
18	5 G 0.75	7.1	36.0	87.0
18	6 G 0.75	7.8	43.0	98.0
18	7 G 0.75	7.8	50.0	108.0

H05VV-F

Technical data

- PVC-control cables to DIN VDE0281 part 5 and IEC 60227-5, HD 21.5 S3
- **Temperature range**
  flexing -5 °C to + 70 °C
  fixed installation -40 °C to + 70 °C
- **Nominal voltage** 300/500 V
- **Test voltage** 2000 V
- **Minimum bending radius**
  flexing 7.5 x cable diameter

Cable structure

- Bare copper, fine wire conductors
- PVC core insulation
- Cores color coded to DIN VDE 0293-308
  1x green-yellow earth core incl.
- Green-yellow earth core, 3 cores and above
- PVC outer jacket

Properties

- PVC self-extinguishing and flame retardant IEC 60332-1

Application

These cables are suitable for use under medium mechanical stress for household appliances in damp conditions, e.g. refrigerators, washing machines, etc.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
18	2 x 0.75	6.4	14.4	50.0
18	3 G 0.75	6.8	21.6	60.0
18	4 G 0.75	7.4	29.0	73.0
18	4 G. 0.75	8.3	36.0	88.0
17	2 x 1	6.8	19.0	57.0
17	3 G 1	7.2	29.0	73.0
17	4 G 1	8.0	38.0	85.0
17	5 G 1	8.8	48.0	105.0
17	7 G 1	9.8	67.0	131.0
16	2 x 1.5	7.6	29.0	82.0
16	3 G 1.5	8.2	43.0	95.0
16	4 G 1.5	9.2	58.0	117.0
16	5 G 1.5	9.3	72.0	144.0
16	7 G 1.5	10.8	101.0	183.0
14	3 G 2.5	10.1	72.0	152.0
14	4 G 2.5	11.2	96.0	192.0
14	5 G 2.5	12.4	120.0	243.0
14	7 G 2.5	12.9	168.0	316.0
12	3 G 4	11.3	115.0	235.0
12	4 G 4	12.5	154.0	300.0
12	5 G 4	13.7	192.0	361.0
10	4 G 6	13.9	230.0	490.0

PUR YY 500

Technical data

- Special PUR cables adapted to DIN VDE 0245, 0281
- **Temperature range**
  flexing -5 °C to + 80 °C
  fixed installation -40 °C to + 80 °C
- **Nominal voltage** 300/500 V
- **Test voltage** 4000 V
- **Minimum bending radius**
  flexing 7.5 x cable diameter
  fixed installation 4 x cable diameter

Cable structure

- Bare copper, fine wire conductors
- Special PVC core insulation
- Black cores with continuous white numbering according to DIN VDE 0293
- Special full-polyurethane outer jacket

Properties

- Resistant to
  UV-radiation, oxygen, ozone and hydrolysis microbes

Application

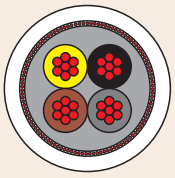
These cables are designed for flexible uses and free movements under medium mechanical stress. The PUR jacket enables the cable to be with the good abrasion and tear resistant features, making it suitable to be used in the machinery, tool making and plant industry.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	4.8	9.6	45.0
20	3 G 0.5	5.1	14.4	55.0
20	3 x 0.5	5.1	14.4	55.0
20	4 G 0.5	5.7	19.0	65.0
20	4 x 0.5	5.7	19.0	65.0
18	2 x 0.75	5.4	14.4	44.0
18	3 G 0.75	5.7	21.6	53.0
18	3 x 0.75	5.7	21.6	53.0
18	4 G 0.75	6.2	29.0	64.0
18	4 x 0.75	6.2	29.0	64.0
17	2 x 1	5.7	19.0	53.0
17	3 G 1	6.0	29.0	63.0
17	3 x 1	6.0	29.0	63.0
17	4 G 1	6.6	38.0	75.0
17	4 x 1	6.6	38.0	75.0

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
16	2 x 1.5	6.2	29.0	68.0
16	3 G 1.5	6.6	43.0	87.0
16	3 x 1.5	6.6	43.0	87.0
16	4 G 1.5	7.2	58.0	106.0
16	4 x 1.5	7.2	58.0	106.0
14	3 x 2.5	7.8	48.0	110.0
14	3 G 2.5	8.3	72.0	146.0
14	4 G 2.5	9.2	96.0	183.0
12	4 G 4	11.0	154.0	291.0
12	5 G 4	12.7	192.0	355.0
10	4 G 6	13.4	230.0	468.0
10	5 G 6	14.9	288.0	570.0
8	4 G 10	16.9	384.0	720.0

PUR CY 500



Technical data

Special polyurethane sheathed cable

- **Temperature range**
  flexing -5 °C to + 80 °C
  fixed installation -40 °C to + 80 °C
- **Nominal voltage** 300/500 V
- **Test voltage** 3000 V
- **Minimum bending radius**
  flexing 10 x cable diameter
  fixed installation 5 x cable diameter

Cable structure

- Bare copper conductor
- Core insulation of special PVC
- Black cores with continuous white numbering according
- Green-yellow earth core in the outer layer (3 cores and above)
- Separating foil
- Tinned copper braided screening, coverage approx. 85%
- Core wrapping from fleece guarantees good stripping capability
- PUR outer sheath

Properties

- Resistant to
  UV-radiation;
  Oxygen;
  Ozone;
  Microbes.

Application

These cables are designed for data and control signaling in electronics, machines, computer systems, etc. The dense screening offers a strong protection against interference to ensure accurate transmission of signals. The PUR jacket enables the cable to be with the good abrasion and tear resistant features, making it suitable to be used in the machinery, tool making and plant industry.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	5.3	35.0	47.0
20	3 x 0.5	5.6	42.0	57.0
20	3 G 0.5	5.6	42.0	57.0
20	4 G 0.5	6.2	47.0	60.0
20	4 x 0.5	6.2	47.0	60.0
20	5 x 0.5	6.5	56.0	75.0
20	5 G 0.5	6.5	56.0	75.0
20	7 G 0.5	7.5	69.0	97.0
20	7 x 0.5	7.5	69.0	97.0

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
18	2 x 0.75	5.8	40.0	60.0
18	3 x 0.75	6.1	52.0	67.0
18	3 G 0.75	6.1	52.0	67.0
18	4 G 0.75	6.5	60.0	76.0
18	4 x 0.75	6.5	60.0	76.0
18	5 x 0.75	7.1	71.0	92.0
18	5 G 0.75	7.1	71.0	92.0
18	7 G 0.75	8.3	91.0	131.0
18	7 x 0.75	8.3	91.0	131.0

PUR YY 750

Technical data

Special PUR control cable

- **Temperature range**
  flexing
  -40 ℃ to + 80 ℃
  (up to +100℃ for short periods)
- **Nominal voltage**
  300/500 V up to 1 mm^2
  450/750 V as of 1,5 mm^2
- **Test voltage**
  2000 V up to 1 mm^2
  2500 V as of 1.5 mm^2
- **Minimum bending radius**
  flexing 10 x cable diameter
  fixed installation 5 x cable diameter

Cable structure

- Bare copper, fine wire conductors
- PUR core insulation
- color coded to DIN VDE 0293-308 and as 5 of 6 cores number coded
- For two cores: brown, blue
- Green-yellow earth core in the outer layer (3 cores and above)
- PUR outer jacket

Properties

- High flexibility at low temperature
- High abrasion resistance
- Resistant to
  Oils and fats;
  Non-alcoholic fuels and kerosene;
  Atmospheric influences, UV-radiation;
  Oxygen and ozone;
  Microbes and rotting;
  Sea and waste water, vibrations.

Application

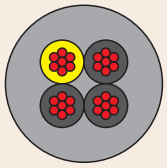
These cables are designed for flexible uses and free movements under medium mechanical stress. The PUR jacket enables the cable to be with the good abrasion and tear resistant features, making them suitable to be used in the machinery, tool making and plant industry.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
18	2 x 0.75	6.3	15.0	44.0
18	3 G 0.75	6.8	22.0	55.0
18	4 G 0.75	7.4	29.0	70.0
17	2 x 1	6.8	20.0	50.0
17	3 G 1	7.2	29.0	65.0
17	4 G 1	7.8	38.0	87.0
16	2 x 1.5	8.2	29.0	70.0
16	3 G 1.5	8.7	43.0	95.0
16	4 G 1.5	9.7	58.0	120.0
14	2 x 2.5	9.8	48.0	110.0
14	3 G 2.5	10.5	72.0	150.0
14	4 G 2.5	11.6	96.0	180.0

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
12	3 G 4	12.2	115.0	220.0
12	4 G 4	13.4	154.0	280.0
10	4 G 6	15.8	230.0	400.0
8	4 G 10	20.6	384.0	640.0
6	4 G 16	23.6	614.0	920.0
4	4 G 25	29.4	960.0	1400.0
2	4 G 35	33.1	1344.0	1870.0
1	4 G 50	38.4	1920.0	2700.0

LSZH YY 500



Technical data

- Halogen-free flexible control cable
- **Temperature range**
  flexing -15 °C to + 70 °C
  fixed installation -40 °C to + 70 °C
- **Nominal voltage** 300/500 V
- **Test voltage** 2000 V
- **Minimum bending radius**
  flexing approx. 12.5 x cable diameter
  fixed installation approx. 4 x cable diameter

Cable structure

- Bare copper, fine wire conductors
- Core insulation of halogen-free compound
- Black cores with white continuous numbering to DIN VDE 0293
- Green-yellow earth core in the outer layer (3 cores and above)
- Halogen-free sheath compound
- Outer jacket color grey
- LSZH = Low Smoke Zero Halogen-free.

Properties

- Flame test to IEC 60332-1

Application

These cables are designed for flexible uses and free movements under medium mechanical stress. The low smoke, zero halogen and flame retardant features make the cables suitable to be used where fire, smoke emission and toxic fumes create a potential threat to life and equipment.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	4.8	9.6	43.0
20	3 G 0.5	5.1	14.4	50.0
20	3 x 0.5	5.1	14.4	50.0
20	4 G 0.5	5.7	19.0	60.0
20	4 x 0.5	5.7	19.0	60.0
20	5 G 0.5	6.2	24.0	71.0
20	5 x 0.5	6.2	24.0	71.0
20	7 G 0.5	7.4	33.6	84.0
20	8 G 0.5	8.0	38.0	101.0
20	10 G 0.5	8.8	48.0	121.0
20	12 G 0.5	9.1	58.0	142.0
20	16 G 0.5	10.0	76.0	183.0

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	18 G 0.5	10.7	86.0	204.0
20	20 G 0.5	11.2	96.0	227.0
20	25 G 0.5	12.7	120.0	283.0
20	30 G 0.5	13.5	144.0	324.0
20	34 G 0.5	14.5	163.0	367.0
20	37 G 0.5	15.0	178.0	381.0
20	41 G 0.5	15.8	197.0	417.0
20	42 G 0.5	15.8	202.0	454.0
20	50 G 0.5	17.3	240.0	519.0
20	61 G 0.5	19.4	293.0	635.0
20	65 G 0.5	19.4	312.0	649.0

LSZH CY 500

Technical data

- Halogen-free core flexible control cable adapted to DIN VDE 0281 part 14 and DIN VDE 0281 part 13
- **Temperature range**
  flexing -15 ℃ to + 70 ℃
  fixed installation -40 ℃ to + 70 ℃
- **Nominal voltage** 300/500 V
- **Test voltage** 2000 V
- **Minimum bending radius**
  flexing approx. 12.5 x cable diameter
  fixed installation approx. 4 x cable diameter

Cable structure

- Bare copper, fine wire conductors
- Core insulation of halogen-free compound
- Black cores with white continuous numbering to DIN VDE 0293
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores laid up in layers with optimal lay-length
- Separating layer
- Screen braid of tinned copper wires, coverage approx. 85%
- Jacket color grey
- LSZH = Low Smoke Zero Halogen-free.

Application

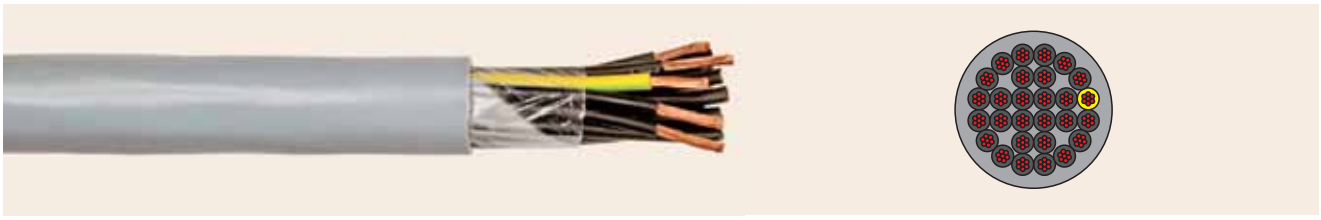
These cables are designed for data and control signaling in electronics, machines, computer systems, etc. The dense screening offers a strong protection against interference to ensure accurate transmission of signals. The low smoke, zero halogen and flame retardant features make the cables suitable to be used where fire, smoke emission and toxic fumes create a potential threat to life and equipment.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	5.7	35.0	46.0
20	3 G 0.5	6.0	42.0	56.0
20	3 x 0.5	6.0	42.0	56.0
20	4 G 0.5	6.5	47.0	62.0
20	4 x 0.5	6.5	47.0	62.0
20	5 G 0.5	7.0	56.0	75.0
20	7 G 0.5	7.9	69.0	98.0
20	12 G 0.5	9.6	408.0	158.0
20	18 G 0.5	11.2	145.0	216.0
20	25 G 0.5	13.4	240.0	315.0

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
18	2 x 0.75	6.1	40.0	60.0
18	3 G 0.75	6.4	52.0	68.0
18	3 x 0.75	6.4	52.0	68.0
18	4 G 0.75	6.9	60.0	78.0
18	4 x 0.75	6.9	60.0	78.0
18	5 G 0.75	7.4	71.0	95.0

LSZH YY 1000



Technical data

- Flexible control cable
- **Temperature range**
  flexing -15 ℃ to + 70℃
  fixed -40 ℃ to + 70 ℃
- **Nominal voltage** 0.6/1 kV
- **Test voltage** 4000 V
- **Minimum bending radius**
  for permanent bending
  approx. 15 x cable diameter

Cable structure

- Bare copper, fine wire conductor
- Polymer core insulation
- Black cores with continuous white numbering according to DIN VDE 0293
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Sheath color black
- LSZH = Low Smoke Zero Halogen-free.

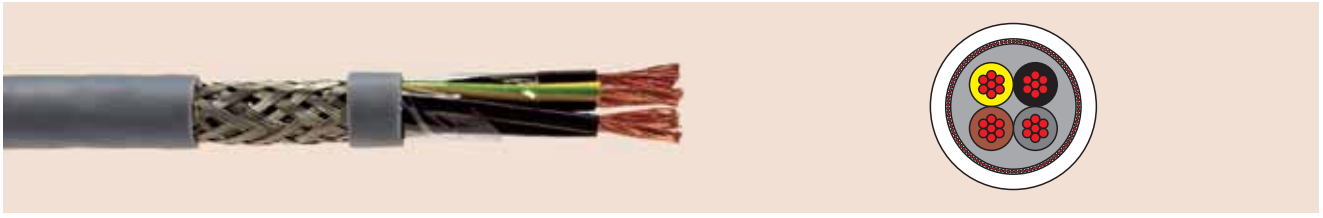
Application

These cables are designed for flexible uses and free movements under medium mechanical stress. The low smoke, zero halogen and flame retardant features make the cables suitable to be used where fire, smoke emission and toxic fumes create a potential threat to life and equipment.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km	AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	6.4	9.6	57.0	18	2 x 0.75	6.8	14.4	68.0
20	3 G 0.5	6.8	14.4	69.0	18	3 G 0.75	7.2	21.6	77.0
20	3 x 0.5	6.8	14.4	69.0	18	3 x 0.75	7.2	21.6	77.0
20	4 G 0.5	7.6	19.0	104.0	18	4 G 0.75	8.0	29.0	136.0
20	4 x 0.5	7.6	19.0	104.0	18	4 x 0.75	8.0	29.0	136.0
20	5 G 0.5	8.2	24.0	121.0	18	5 G 0.75	8.8	36.0	152.0
20	5 x 0.5	8.2	24.0	121.0	18	5 x 0.75	8.8	36.0	152.0
20	7 G 0.5	9.8	33.6	145.0	18	7 G 0.75	10.7	50.0	208.0
20	10 G 0.5	11.6	48.0	186.0	18	10 G 0.75	12.7	72.0	250.0
20	12 G 0.5	12.2	58.0	224.0	18	12 G 0.75	13.1	86.0	271.0
20	18 G 0.5	14.4	86.0	292.0	18	18 G 0.75	15.6	130.0	387.0
20	25 G 0.5	17.2	120.0	357.0	18	25 G 0.75	18.9	180.0	498.0

LSZH CY 1000



Technical data

- Flexible control cable, core construction adapted to E DIN VDE 0281 Part 14 and DIN VDE 0281 Part 13
- **Temperature range**
  flexing -5 °C to + 70 °C
  fixed -40 °C to + 70 °C
- **Nominal voltage** 0.6/1 kV
- **Test voltage** 4000 V
- **Minimum bending radius**
  for permanent bending
  approx. 15 x cable diameter

Cable structure

- Bare copper, fine wire conductor
- Polymer core insulation
- Black cores with continuous white numbering according to DIN VDE 0293
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Inner sheath
- Tinned copper braided screening, coverage approx. 85%
- Free-free polymer sheath
- LSZH = Low Smoke Zero Halogen-free.

Application

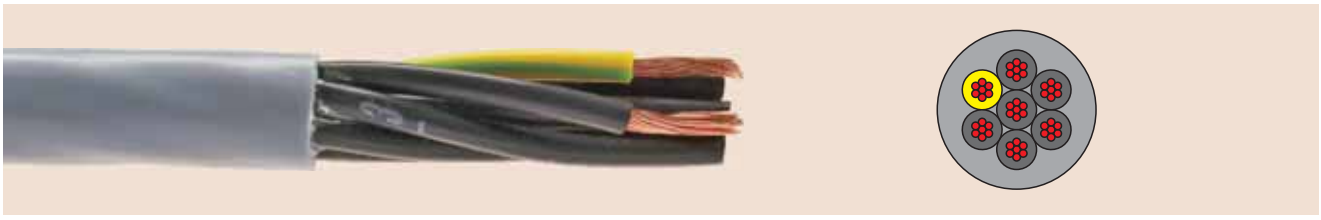
These cables are designed for data and control signaling in electronics, machines, computer systems, etc. The dense screening offers a strong protection against interference to ensure accurate transmission of signals. The low smoke, zero halogen and flame retardant features make the cables suitable to be used where fire, smoke emission and toxic fumes create a potential threat to life and equipment.

G = Green-yellow earth core

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	3 G 0.5	1.6	45.0	150.0
20	4 G 0.5	9.4	54.0	170.0
20	5 G 0.5	10.1	66.0	199.0
18	3 G 0.75	9.0	57.0	155.0
18	4 G 0.75	9.9	63.0	190.0
18	5 G 0.75	10.8	76.0	228.0
17	3 G 1	9.8	64.0	163.0
17	4 G 1	10.8	76.0	200.0
17	5 G 1	12.1	89.0	239.0

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
16	3 G 1.5	10.9	82.0	187.0
16	4 G 1.5	12.2	99.0	240.0
16	5 G 1.5	13.3	123.0	289.0
14	3 G 2.5	12.2	148.0	298.0
14	4 G 2.5	13.4	169.0	345.0
14	5 G 2.5	14.9	220.0	427.0
12	3 G 4	15.1	178.0	397.0
12	4 G 4	16.7	234.0	527.0
12	5 G 4	18.6	284.0	700.0

Highflex Control Cable



Technical data

- Special drag chain cables for high mechanical stress
- **Temperature range**
  For PVC Sheath:
  flexible -5 ℃ to + 80 ℃
  fixed installation -30 ℃ to 80 ℃
  For TPE and PUR Sheath:
  flexible -30 ℃ to +105 ℃
  fixed installation -50 ℃ to 105 ℃
- **Nominal voltage** 300/500 V
- **Test voltage** 3000V
- **Minimum bending radius**
  For PVC and PUR Sheath:
  flexing 7.5 x cable diameter
  fixed installation 4 x cable diameter
  For TPE Sheath:
  flexing 5 x cable diameter
  fixed installation 3 x cable diameter
- **Max. movement distance**
  100 m for PVC type
  450 m for PUR and TPE type
- **Min. cycle**
  5 million times for PVC type
  10 million times for PUR and TPE type

Cable structure

- Bare copper or tinned copper
- 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
- Screen: 85% coverage of copper braiding (Optional)
- Sheath: PVC/PUR/TPE

Properties

- Low-adhesion
- High property of alternating bending strength
- High resistant to mechanical strain
- Long life durabilities due to low friction-resistance
- Better chemical resistance
- Oil resistance
- High stability
- Halogen free for PUR and TPE type
- UV and ozone resistance for PUR and TPE type
- Tear and abrasion resistance for PUR and TPE type
- Microbe-resistance TPE type

Application

These highly flexible cables are used for permanent application in drag chains for long distances, high and slow speed of movements.

Highflex Control Cable

Cable without screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	4.3	9.6	40
20	3 G 0.5	4.6	14.4	45
20	4 G 0.5	5.0	24.0	57
20	5 G 0.5	5.4	33.6	66
20	7 G 0.5	8.9	58.0	81
20	12 G 0.5	9.7	86.0	133
20	18 G 0.5	11.8	120.0	169
20	25 G 0.5	13.9		274
18	4 G 0.75	5.6	29.0	63
18	5 G 0.75	6.3	36.0	79
18	7 G 0.75	10.3	50.0	107
18	12 G 0.75	11.0	86.0	169
18	18 G 0.75	13.9	130.0	247
18	25 G 0.75	15.9	180.0	366
18	36 G 0.75	19.6	259.0	540
18	42 G 0.75	21.5	302.0	630

Cable with screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
20	2 x 0.5	6.2	30.0	88.0
20	3 G 0.5	6.7	36.0	101.0
20	4 G 0.5	7.2	42.0	116.0
20	5 G 0.5	7.6	48.0	146.0
20	7 G 0.5	11.4	64.0	181.0
20	9 G 0.5	11.4	80.0	219.0
20	12 G 0.5	12.4	105.0	271.0
20	18 G 0.5	14.7	137.0	374.0
20	25 G 0.5	17.1	210.0	542.0
18	2 x 0.75	6.8	40.0	96.0
18	3 G 0.75	7.3	48.0	110.0
18	4 G 0.75	7.8	55.0	140.0
18	5 G 0.75	8.3	66.0	161.0
18	7 G 0.75	12.7	85.0	227.0
18	12 G 0.75	13.7	135.0	317.0
18	18 G 0.75	17.1	190.0	486.0
18	25 G 0.75	19.5	275.0	651.0

G = Green-yellow earth core

Flex P300

Technical data

- Flexible power cables for low-speed movement application; UL 2517
- **Rated temperature** 105 ℃
- **Nominal voltage** 300 V
- **Minimum bending radius** fixed 6 x cable diameter

Cable structure

- Bare copper, fine wire, highly flexible
- Flexible PVC core insulation
- Color-coded or number-coded cores
- Sheath: PVC

Properties

- Left/right bending resistance
- Oil resistance
- Twist resistance
- 45° left/right vibration resistance
- Suitable for low-speed movement application

Application

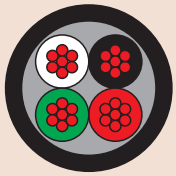
Flex P300 cable is a flexible power cable to be used in the drag chain application. It's suitable to be used under the shift and bending stresses in the machines; it's also suitable to be used as a mobile connecting cables for the electrical equipments.

Flexing Tester

Flex P300

AWG-no.	NO.cores x cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
22	2 x 0.30	65/0.08	1.65	5.3
22	3 x 0.30	65/0.08	1.65	5.6
22	4 x 0.30	65/0.08	1.65	6.0
22	6 x 0.30	65/0.08	1.65	7.0
22	8 x 0.30	65/0.08	1.65	8.0
22	10 x 0.30	65/0.08	1.65	9.1
22	12 x 0.30	65/0.08	1.65	9.2
22	16 x 0.30	65/0.08	1.65	10.0
22	20 x 0.30	65/0.08	1.65	11.0
22	30 x 0.30	65/0.08	1.65	12.8
20	2 x 0.50	108/0.08	1.96	5.9
20	3 x 0.50	108/0.08	1.96	6.2
20	4 x 0.50	108/0.08	1.96	6.7
20	6 x 0.50	108/0.08	1.96	7.9
20	8 x 0.50	108/0.08	1.96	9.1
20	10 x 0.50	108/0.08	1.96	10.3
20	12 x 0.50	108/0.08	1.96	10.5
20	16 x 0.50	108/0.08	1.96	11.4
20	20 x 0.50	108/0.08	1.96	12.6
20	30 x 0.50	108/0.08	1.96	15.6
18	2 x 0.75	77/0.12	2.42	7.0
18	3 x 0.75	77/0.12	2.42	7.4
18	4 x 0.75	77/0.12	2.42	8.0
18	6 x 0.75	77/0.12	2.42	9.7
18	8 x 0.75	77/0.12	2.42	11.1
18	10 x 0.75	77/0.12	2.42	12.3
18	12 x 0.75	77/0.12	2.42	12.5
18	16 x 0.75	77/0.12	2.42	13.8
18	20 x 0.75	77/0.12	2.42	15.8
18	30 x 0.75	77/0.12	2.42	18.5
16	2 x 1.25	123/0.12	2.74	7.7
16	3 x 1.25	123/0.12	2.74	8.1
16	4 x 1.25	123/0.12	2.74	9.0
16	6 x 1.25	123/0.12	2.74	10.6
16	8 x 1.25	123/0.12	2.74	12.3
16	10 x 1.25	123/0.12	2.74	13.0
16	12 x 1.25	123/0.12	2.74	13.8
16	16 x 1.25	123/0.12	2.74	15.9
14	2 x 2.00	84/0.18	3.11	8.6
14	3 x 2.00	84/0.18	3.11	9.1
14	4 x 2.00	84/0.18	3.11	9.9
14	6 x 2.00	84/0.18	3.11	11.7

Highflex P300



Technical data

- Highly flexible power cables for high-speed movement application
- **Rated temperature** 75 ℃
- **Nominal voltage** 300 V
- **Minimum bending radius**
  flexing 6 x cable diameter
  fixed installation 6 x cable diameter

Cable structure

- Bare copper, fine wire, highly flexible
- Flexible PVC core insulation
- Color-coded or number-coded cores
- Optional filler and tape
- Optional Screen: 85% coverage copper braiding
- Sheath: PVC

Properties

- Left/right bending resistance
- Oil resistance
- Twist resistance
- 45° left/right vibration resistance
- Suitable for high-speed movement application

Application

Highflex P300 cable is a highly flexible power cable to be used in the drag chain application. It's suitable to be used under the shift and bending stresses in the machines; it's also suitable to be used as a mobile connecting cables for the electrical equipments.

Cable without screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
20	2 x 0.50	7/7/0.12	2.10	6.30
20	3 x 0.50	7/7/0.12	2.10	6.60
20	4 x 0.50	7/7/0.12	2.10	7.20
20	6 x 0.50	7/7/0.12	2.10	8.40
20	8 x 0.50	7/7/0.12	2.10	9.70
20	10 x 0.50	7/7/0.12	2.10	10.80
20	12 x 0.50	7/7/0.12	2.10	11.00
20	16 x 0.50	7/7/0.12	2.10	12.00
20	20 x 0.50	7/7/0.12	2.10	13.20
20	30 x 0.50	7/7/0.12	2.10	15.80
18	2 x 0.75	7/10/0.12	2.50	7.10
18	3 x 0.75	7/10/0.12	2.50	7.50
18	4 x 0.75	7/10/0.12	2.50	8.10
18	6 x 0.75	7/10/0.12	2.50	9.60
18	8 x 0.75	7/10/0.12	2.50	11.10
18	10 x 0.75	7/10/0.12	2.50	12.50
18	12 x 0.75	7/10/0.12	2.50	12.70
18	16 x 0.75	7/10/0.12	2.50	14.10

Highflex P300

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
16	2 x 1.25	7/16/0.12	2.85	7.80
16	3 x 1.25	7/16/0.12	2.85	8.20
16	4 x 1.25	7/16/0.12	2.85	9.00
16	6 x 1.25	7/16/0.12	2.85	10.70
16	8 x 1.25	7/16/0.12	2.85	12.40
16	10 x 1.25	7/16/0.12	2.85	14.10
16	12 x 1.25	7/16/0.12	2.85	14.40
16	16 x 1.25	7/16/0.12	2.85	15.70
14	2 x 2.00	7/25/0.12	3.30	8.70
14	3 x 2.00	7/25/0.12	3.30	9.20
14	4 x 2.00	7/25/0.12	3.30	10.10
14	6 x 2.00	7/25/0.12	3.30	12.00
14	8 x 2.00	7/25/0.12	3.30	14.20
14	10 x 2.00	7/25/0.12	3.30	15.50
14	12 x 2.00	7/25/0.12	3.30	16.20

Cable with screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
20	2 x 0.50	7/7/0.12	2.10	7.10
20	3 x 0.50	7/7/0.12	2.10	7.40
20	4 x 0.50	7/7/0.12	2.10	8.00
20	6 x 0.50	7/7/0.12	2.10	9.20
20	8 x 0.50	7/7/0.12	2.10	10.50
20	10 x 0.50	7/7/0.12	2.10	11.60
20	12 x 0.50	7/7/0.12	2.10	11.80
20	16 x 0.50	7/7/0.12	2.10	12.80
20	20 x 0.50	7/7/0.12	2.10	14.00
20	30 x 0.50	7/7/0.12	2.10	16.70
18	2 x 0.75	7/10/0.12	2.50	7.90
18	3 x 0.75	7/10/0.12	2.50	8.30
18	4 x 0.75	7/10/0.12	2.50	8.90
18	6 x 0.75	7/10/0.12	2.50	10.40
18	8 x 0.75	7/10/0.12	2.50	11.90
18	10 x 0.75	7/10/0.12	2.50	13.50
18	12 x 0.75	7/10/0.12	2.50	13.30
18	16 x 0.75	7/10/0.12	2.50	14.80
16	2 x 1.25	7/16/0.12	2.85	8.60
16	3 x 1.25	7/16/0.12	2.85	9.00
16	4 x 1.25	7/16/0.12	2.85	9.80
16	6 x 1.25	7/16/0.12	2.85	11.50
16	8 x 1.25	7/16/0.12	2.85	13.20
16	10 x 1.25	7/16/0.12	2.85	14.80
16	12 x 1.25	7/16/0.12	2.85	15.10
16	16 x 1.25	7/16/0.12	2.85	16.60
14	2 x 2.00	7/25/0.12	3.30	9.50
14	3 x 2.00	7/25/0.12	3.30	10.00
14	4 x 2.00	7/25/0.12	3.30	10.90
14	6 x 2.00	7/25/0.12	3.30	12.80
14	8 x 2.00	7/25/0.12	3.30	14.90
14	10 x 2.00	7/25/0.12	3.30	16.90
14	12 x 2.00	7/25/0.12	3.30	17.20

Flex P600

Technical data

- Flexible power cables for low-speed movement application
- **Rated temperature** 105 ℃
- **Nominal voltage** 600 V
- **Minimum bending radius**
  Fixed installation 4 x cable diameter

Cable structure

- Bare copper, fine wire, highly flexible
- Flexible PVC core insulation
- Color-coded or number cores
- Optional tape
- Sheath: PVC

Properties

- Heat resistance
- Left/right bending resistance
- Oil resistance
- Twist resistance
- 45° left/right vibration resistance
- Suitable for low-speed movement application

Application

Flex P600 cable is a flexible power cable to be used in the drag chain application. It's suitable to be used under the shift and bending stresses in the machines; it's also suitable to be used as a mobile connecting cables for the electrical equipments.

Flex P600

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
18	2 x 0.75	67/0.12	2.7	8.8
18	3 x 0.75	67/0.12	2.7	9.2
18	4 x 0.75	67/0.12	2.7	9.9
18	6 x 0.75	67/0.12	2.7	12.0
18	8 x 0.75	67/0.12	2.7	14.0
18	10 x 0.75	67/0.12	2.7	15.5
18	12 x 0.75	67/0.12	2.7	16.0
18	16 x 0.75	67/0.12	2.7	17.5
18	20 x 0.75	67/0.12	2.7	19.5
18	30 x 0.75	67/0.12	2.7	22.5
16	2 x 1.25	112/0.12	3.1	9.6
16	3 x 1.25	112/0.12	3.1	10.5
16	4 x 1.25	112/0.12	3.1	11.5
16	6 x 1.25	112/0.12	3.1	13.5
16	8 x 1.25	112/0.12	3.1	15.5
16	10 x 1.25	112/0.12	3.1	17.5
16	12 x 1.25	112/0.12	3.1	18.5
16	16 x 1.25	112/0.12	3.1	19.5
16	20 x 1.25	112/0.12	3.1	21.5
16	30 x 1.25	112/0.12	3.1	25.5
14	1 x 2.00	79/0.18	3.4	6.6
14	2 x 2.00	79/0.18	3.4	10.5
14	3 x 2.00	79/0.18	3.4	11.0
14	4 x 2.00	79/0.18	3.4	12.0
14	6 x 2.00	79/0.18	3.4	14.5
14	8 x 2.00	79/0.18	3.4	16.5
14	10 x 2.00	79/0.18	3.4	19.0
14	12 x 2.00	79/0.18	3.4	20.0
14	16 x 2.00	79/0.18	3.4	21.0
14	20 x 2.00	79/0.18	3.4	23.5
14	30 x 2.00	79/0.18	3.4	28.0
12	1 x 3.50	68/0.26	4.3	7.5
12	2 x 3.50	68/0.26	4.1	12.0
12	3 x 3.50	68/0.26	4.1	13.0
12	4 x 3.50	68/0.26	4.1	14.0
10	1 x 5.50	105/0.26	5.1	8.3
10	2 x 5.50	105/0.26	5.1	14.5
10	3 x 5.50	105/0.26	5.1	15.0
10	4 x 5.50	105/0.26	5.1	16.5
8	1 x 8.00	154/0.26	6.3	9.7
8	2 x 8.00	154/0.26	6.1	16.5
8	3 x 8.00	154/0.26	6.1	17.5
8	4 x 8.00	154/0.26	6.1	19.5
6	1 x 14.00	88/0.45	7.9	11.5
6	2 x 14.00	88/0.45	7.9	20.5
6	3 x 14.00	88/0.45	7.9	22.0
6	4 x 14.00	88/0.45	7.9	24.0
4	1 x 22.00	7/20/0.45	10.2	14.5
4	2 x 22.00	7/20/0.45	10.2	26.0
4	3 x 22.00	7/20/0.45	10.2	28.0
4	4 x 22.00	7/20/0.45	10.2	30.5

Highflex P600

Technical data

- Highly flexible power cables for high-speed movement application
- **Temperature range**
  -5 ℃ to + 75 ℃
- **Nominal voltage** 600 V
- **Minimum bending radius**
  flexing 6 x cable diameter
  fixed installation 6 x cable diameter

Cable structure

- Bare copper, fine wire, highly flexible
- Flexible PVC core insulation
- Color-coded or number-coded cores
- Filler and tape
- Optional screen: 85% coverage copper braiding
- Sheath: PVC

Properties

- Heat resistance
- Left/right bending resistance
- Oil resistance
- 45° left/right vibration resistance
- Twist resistance
- Suitable for high-speed movement application

Application

Highflex P600 cable is a highly flexible power cable to be used in the drag chain application. It's suitable to be used under the shift and bending stresses in the machines; it's also suitable to be used as a mobile connecting cables for the electrical equipments.

Cable without Screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
18	2 x 0.75	7/10/0.12	2.90	9.30
18	3 x 0.75	7/10/0.12	2.90	9.80
18	4 x 0.75	7/10/0.12	2.90	10.70
18	6 x 0.75	7/10/0.12	2.90	12.60
18	8 x 0.75	7/10/0.12	2.90	14.60
18	10 x 0.75	7/10/0.12	2.90	15.90
18	12 x 0.75	7/10/0.12	2.90	16.40
18	16 x 0.75	7/10/0.12	2.90	18.10
16	2 x 1.25	7/16/0.12	3.25	10.00
16	3 x 1.25	7/16/0.12	3.25	10.70
16	4 x 1.25	7/16/0.12	3.25	11.60
16	6 x 1.25	7/16/0.12	3.25	13.90
16	8 x 1.25	7/16/0.12	3.25	16.10
16	10 x 1.25	7/16/0.12	3.25	17.50
16	12 x 1.25	7/16/0.12	3.25	18.00
14	2 x 2	7/25/0.12	3.70	11.10
14	3 x 2	7/25/0.12	3.70	11.70
14	4 x 2	7/25/0.12	3.70	12.80
14	6 x 2	7/25/0.12	3.70	15.40
14	8 x 2	7/25/0.12	3.70	17.90
14	10 x 2	7/25/0.12	3.70	19.50
14	12 x 2	7/25/0.12	3.70	20.10

Highflex P600

Cable with screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
18	2 x 0.75	7/10/0.12	2.90	9.90
18	3 x 0.75	7/10/0.12	2.90	10.60
18	4 x 0.75	7/10/0.12	2.90	11.30
18	6 x 0.75	7/10/0.12	2.90	13.20
16	2 x 1.25	7/16/0.12	3.25	10.80
16	3 x 1.25	7/16/0.12	3.25	11.30
16	4 x 1.25	7/16/0.12	3.25	12.40
16	6 x 1.25	7/16/0.12	3.25	14.50

Torsion Strength Tester

Caleb Cable

Superflex P600

Technical data

- Extremely flexible power cable for drag chain application
- **Temperature range**
  -40 ℃ to + 80 ℃
- **Nominal voltage** 600 V
- **Minimum bending radius**
  flexing 6 x cable diameter
  fixed installation 4 x cable diameter

Cable structure

- Tinned copper, fine wire, extremely flexible
- ETFE core insulation
- Color-coded cores
- Green-yellow earth core (3 cores and above)
- Filler and tape
- Optional screen: 85% coverage of tinned copper braiding
- Sheath: PUR

Properties

- High property of alternating bending strength
- Long life durabilities due to low friction-resistance
- Better chemical resistance
- Oil resistance
- High resistant to mechanical strain
- UV and ozone resistance
- Tear and abrasion resistance
- Suitable for drag chain application

Application

Superflex P600 cable is an extremely flexible power cable to be used in the drag chain application. It's suitable to be used under the shift and bending stresses in the machines; it's also suitable to be used as a mobile connecting cables for the electrical equipments.

Superflex P600

Cable without screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
22	2 x 0.30	7/10/0.08	1.20	5.3
22	3 x 0.30	7/10/0.08	1.20	5.4
22	4 x 0.30	7/10/0.08	1.20	5.7
22	6 x 0.30	7/10/0.08	1.20	6.5
22	8 x 0.30	7/10/0.08	1.20	7.3
22	10 x 0.30	7/10/0.08	1.20	8.0
20	2 x 0.50	7/15/0.08	1.80	5.6
20	3 x 0.50	7/15/0.08	1.80	5.6
20	4 x 0.50	7/15/0.08	1.80	6.1
20	6 x 0.50	7/15/0.08	1.80	6.9
18	2 x 0.75	7/25/0.03	1.90	6.3
18	3 x 0.75	7/25/0.03	1.90	6.5
18	4 x 0.75	7/25/0.08	1.90	7.0
18	6 x 0.75	7/25/0.08	1.90	8.0
16	2 x 1.25	7/40/0.08	2.16	7.1
16	3 x 1.25	7/40/0.08	2.16	7.4
16	4 x 1.25	7/40/0.08	2.16	8.0
16	6 x 1.25	7/40/0.08	2.16	9.2
14	2 x 2.00	7/71/0.08	2.76	8.3
14	3 x 2.00	7/71/0.08	2.76	8.7
14	4 x 2.00	7/71/0.08	2.76	9.4
14	6 x 2.00	7/71/0.08	2.76	11.0
12	4 x 3.50	7/100/0.08	3.16	10.4
10	4 x 5.50	7/157/0.08	3.86	12.1

Cable with screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
18	2 x 0.75	7/25/0.08	1.76	7.10
18	3 x 0.75	7/25/0.08	1.76	7.30
18	4 x 0.75	7/25/0.08	1.76	7.80
18	6 x 0.75	7/25/0.08	1.76	8.80
16	2 x 1.25	7/40/0.08	2.16	7.90
16	3 x 1.25	7/40/0.08	2.16	8.20
16	4 x 1.25	7/40/0.08	2.16	8.80
16	6 x 1.25	7/40/0.08	2.16	10.10
14	2 x 2.00	7/71/0.08	2.76	9.10
14	3 x 2.00	7/71/0.08	2.76	6.60
14	4 x 2.00	7/71/0.08	2.76	10.30
14	6 x 2.00	7/71/0.08	2.76	12.20
12	4 x 3.50	7/100/0.08	3.16	11.60
10	4 x 5.50	7/157/0.08	3.86	13.30

Flex S30

Technical data

- Flexible power cables for high-speed movement application; UL 20276
- **Rated temperature** 80 ℃
- **Nominal voltage** 30 V
- **Minimum bending radius** fixed 6 x cable diameter

Cable structure

- Tinned copper, fine wire, flexible
- Flexible PVC core insulation
- Optional filler and tape
- Optional screen: 80% coverage of tinned copper braiding
- Sheath: PVC

Properties

- Left/right bending resistance
- Oil resistance
- Twist resistance
- 45° left/right vibration resistance
- Suitable for low speed movement application

Application

Flex S30 cable is a flexible signal cable to be used in the drag chain application. It's suitable to be used under the shift and bending stresses in the machines; it's also suitable to be used as a mobile connecting cables for the electrical equipments.

Cable without screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
26	2 x 0.12	7/0.16	0.88	3.7
26	3 x 0.12	7/0.16	0.88	3.8
26	4 x 0.12	7/0.16	0.88	4.1
26	6 x 0.12	7/0.16	0.88	4.6
26	8 x 0.12	7/0.16	0.88	5.1
26	10 x 0.12	7/0.16	0.88	5.5
26	12 x 0.12	7/0.16	0.88	5.6
26	14 x 0.12	7/0.16	0.88	5.8
26	16 x 0.12	7/0.16	0.88	6.1
26	20 x 0.12	7/0.16	0.88	6.6
24	2 x 0.20	7/0.20	1.11	4.2
24	3 x 0.20	7/0.20	1.11	4.3
24	4 x 0.20	7/0.20	1.11	4.6
24	6 x 0.20	7/0.20	1.11	5.3
24	8 x 0.20	7/0.20	1.11	5.9
24	10 x 0.20	7/0.20	1.11	6.4
24	12 x 0.20	7/0.20	1.11	6.5
24	14 x 0.20	7/0.20	1.11	7.0
24	16 x 0.20	7/0.20	1.11	7.3
24	20 x 0.20	7/0.20	1.11	8.0

Flex S30

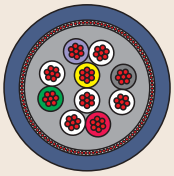
Cable without screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
22	2 x 0.30	7/0.26	1.38	4.7
22	3 x 0.30	7/0.26	1.38	4.9
22	4 x 0.30	7/0.26	1.38	5.3
22	6 x 0.30	7/0.26	1.38	6.1
22	8 x 0.30	7/0.26	1.38	6.9
22	10 x 0.30	7/0.26	1.38	7.5
22	12 x 0.30	7/0.26	1.38	7.8
22	14 x 0.30	7/0.26	1.38	8.2
22	16 x 0.30	7/0.26	1.38	8.6
22	20 x 0.30	7/0.26	1.38	9.4

Cable with screen

AWG-no.	NO. Pairs x Cross-sec. mm^2	Conductor Consturction mm	Insulation Diameter mm	Outer Diameter mm
26	1 x 0.12	7/0.16	0.88	4.30
26	3(core) x 0.12	7/0.16	0.88	4.40
26	2 x 0.12	7/0.16	0.88	5.10
26	4 x 0.12	7/0.16	0.88	5.60
26	5 x 0.12	7/0.16	0.88	6.00
26	6 x 0.12	7/0.16	0.88	6.40
26	7 x 0.12	7/0.16	0.88	6.90
26	8 x 0.12	7/0.16	0.88	7.80
26	10 x 0.12	7/0.16	0.88	8.30
26	12 x 0.12	7/0.16	0.88	8.50
26	15 x 0.12	7/0.16	0.88	9.50
26	18 x 0.12	7/0.16	0.88	10.10
26	20 x 0.12	7/0.16	0.88	11.00
24	1 x 0.20	7/0.20	1.11	4.70
24	3(core) x 0.20	7/0.20	1.11	4.90
24	2 x 0.20	7/0.20	1.11	5.80
24	3 x 0.20	7/0.20	1.11	6.40
24	4 x 0.20	7/0.20	1.11	6.90
24	5 x 0.20	7/0.20	1.11	7.40
24	6 x 0.20	7/0.20	1.11	7.90
24	7 x 0.20	7/0.20	1.11	7.90
24	8 x 0.20	7/0.20	1.11	9.30
24	10 x 0.20	7/0.20	1.11	10.10
24	12 x 0.20	7/0.20	1.11	10.30
24	15 x 0.20	7/0.20	1.11	11.30
24	18 x 0.20	7/0.20	1.11	11.90
24	20 x 0.20	7/0.20	1.11	13.20
22	1 x 0.30	7/0.26	1.38	5.30
22	3(core) x 0.30	7/0.26	1.38	5.50
22	2 x 0.30	7/0.26	1.38	6.60
22	3 x 0.30	7/0.26	1.38	7.40
22	4 x 0.30	7/0.26	1.38	8.00
22	5 x 0.30	7/0.26	1.38	8.60
22	6 x 0.30	7/0.26	1.38	9.50
22	7 x 0.30	7/0.26	1.38	9.50
22	8 x 0.30	7/0.26	1.38	11.10
22	10 x 0.30	7/0.26	1.38	11.80
22	12 x 0.30	7/0.26	1.38	12.30

Highflex S30



Technical data

- Flexible power cables for high-speed movement application; UL 20276
- **Rated temperature** 80 ℃
- **Nominal voltage** 30 V
- **Minimum bending radius**
  fixed 6 x cable diameter
  flexing 6 x cable diameter

Cable structure

- Bare copper, fine wire, highly flexible
- Flexible PVC core insulation
- Optional filler and tape
- Screen: 85% coverage of copper braiding
- Sheath: PVC

Properties

- Left/right bending resistance
- Oil resistance
- Twist resistance
- 45° left/right vibration resistance
- Suitable for high speed movement application

Application

Highflex S30 cable is a highly flexible signal cable to be used in the drag chain application. It's suitable to be used under the shift and bending stresses in the machines; it's also suitable to be used as a mobile connecting cables for the electrical equipments.

Abrasion Tester

Highflex S30

AWG-no.	NO. Pairs x Cross-sec. mm^2	Conductor Consturction mm	Insulation Diameter mm	Outer Diameter mm
26	1 x 0.12	30/0.08	0.97	4.20
26	2 x 0.12	30/0.08	0.97	5.30
26	3 x 0.12	30/0.08	0.97	6.20
26	4 x 0.12	30/0.08	0.97	6.60
26	5 x 0.12	30/0.08	0.97	7.20
26	6 x 0.12	30/0.08	0.97	7.70
26	8 x 0.12	30/0.08	0.97	8.90
26	10 x 0.12	30/0.08	0.97	9.00
26	12 x 0.12	30/0.08	0.97	9.70
26	15 x 0.12	30/0.08	0.97	10.60
24	1 x 0.2	48/0.08	1.19	4.60
24	2 x 0.2	48/0.08	1.19	6.10
24	3 x 0.2	48/0.08	1.19	7.00
24	4 x 0.2	48/0.08	1.19	7.60
24	5 x 0.2	48/0.08	1.19	8.40
24	6 x 0.2	48/0.08	1.19	8.90
24	8 x 0.2	48/0.08	1.19	10.30
24	10 x 0.2	48/0.08	1.19	11.30
24	15 x 0.2	48/0.08	1.19	12.40
22	1 x 0.3	72/0.08	1.36	4.90
22	2 x 0.3	72/0.08	1.36	6.60
22	3 x 0.3	72/0.08	1.36	7.60
22	4 x 0.3	72/0.08	1.36	8.20
22	5 x 0.3	72/0.08	1.36	9.10
22	6 x 0.3	72/0.08	1.36	9.70
22	8 x 0.3	72/0.08	1.36	11.40
22	10 x 0.3	72/0.08	1.36	12.40
22	15 x 0.3	72/0.08	1.36	13.90
20	1 x 0.5	119/0.08	1.65	5.50
20	2 x 0.5	119/0.08	1.65	7.30
20	3 x 0.5	119/0.08	1.65	8.80
20	4 x 0.5	119/0.08	1.65	9.50
20	5 x 0.5	119/0.08	1.65	10.30
20	6 x 0.5	119/0.08	1.65	11.30
20	8 x 0.5	119/0.08	1.65	13.00

Flex S300

Technical data

- Flexible power cables for low-speed movement application; UL 2517
- **Rated temperature** 105℃
- **Nominal voltage** 300 V
- **Minimum bending radius** fixed 6 x cable diameter

Cable structure

- Bare copper, fine wire flexible
- Flexible PVC core insulation
- Tape
- Screen: 85% coverage of tinned copper braiding
- Sheath: PVC

Properties

- Left/right bending resistance
- Oil resistance
- Twist resistance
- 45°left/right vibration resistance
- Suitable for low speed movement application

Application

Flex S300 cable is a flexible signal cable to be used in the drag chain application. It's suitable to be used under the shift and bending stresses in the machines; it's also suitable to be used as a mobile connecting cables for the electrical equipments.

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
22	2 x 0.30	65/0.08	1.65	6.1
22	3 x 0.30	65/0.08	1.65	6.4
22	4 x 0.30	65/0.08	1.65	6.8
22	6 x 0.30	65/0.08	1.65	7.8
22	8 x 0.30	65/0.08	1.65	8.8
22	10 x 0.30	65/0.08	1.65	9.9
20	2 x 0.50	108/0.08	1.96	6.7
20	3 x 0.50	108/0.08	1.96	7.0
20	4 x 0.50	108/0.08	1.96	7.5
20	6 x 0.50	108/0.08	1.96	8.7
20	8 x 0.50	108/0.08	1.96	10.0
20	10 x 0.50	108/0.08	1.96	11.2
18	2 x 0.75	77/0.12	2.42	7.6
18	3 x 0.75	77/0.12	2.42	8.0
18	4 x 0.75	77/0.12	2.42	8.6
18	6 x 0.75	77/0.12	2.42	10.2
18	8 x 0.75	77/0.12	2.42	11.6
18	10 x 0.75	77/0.12	2.42	13.3
16	2 x 1.25	123/0.12	2.74	8.3
16	3 x 1.25	123/0.12	2.74	8.7
16	4 x 1.25	123/0.12	2.74	9.4
16	6 x 1.25	123/0.12	2.74	11.1
16	8 x 1.25	123/0.12	2.74	13.1
16	10 x 1.25	123/0.12	2.74	14.8
14	2 x 2.0	84/0.18	3.11	9.0
14	3 x 2.0	84/0.18	3.11	9.5
14	4 x 2.0	84/0.18	3.11	10.4

Highflex S300

Technical data

- Extremely flexible data cables for drag chain movement application; UL 2464
- **Rated temperature** 80 ℃
- **Nominal voltage** 300 V
- **Minimum bending radius**
  fixed installation 6 x cable diameter
  flexing 6 x cable diameter

Cable structure

- Tinned copper, fine wire, extremely flexible
- Flexible PVC core insulation
- Optional tape
- Optional screen: 85% coverage of tinned copper braiding
- Sheath: PVC

Properties

- Left/right bending resistance
- Oil resistance
- Twist resistance
- 45° left/right vibration resistance
- Suitable for high speed movement application

Application

Highflex S300 cable is a highly flexible signal cable to be used in the drag chain application. It's suitable to be used under the shift and bending stresses in the machines; it's also suitable to be used as a mobile connecting cables for the electrical equipments.

Horizontal Swag Tester

Highflex S300

Cable without screen

AWG-no.	NO. Cores x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
24	2 x 0.20	45/0.08	1.12	41
24	3 x 0.20	45/0.08	1.12	42
24	4 x 0.20	45/0.08	1.12	45
24	6 x 0.20	45/0.08	1.12	52
24	8 x 0.20	45/0.08	1.12	59
24	10 x 0.20	45/0.08	1.12	63
24	12 x 0.20	45/0.08	1.12	65
24	16 x 0.20	45/0.08	1.12	71
24	20 x 0.20	45/0.08	1.12	78
22	2 x 0.30	65/0.08	1.28	44
22	3 x 0.30	65/0.08	1.28	46
22	4 x 0.30	65/0.08	1.28	49
22	6 x 0.30	65/0.08	1.28	57
22	8 x 0.30	65/0.08	1.28	65
22	10 x 0.30	65/0.08	1.28	70
22	12 x 0.30	65/0.08	1.28	72
20	20 x 0.30	65/0.08	1.28	86
20	2 x 0.50	108/0.08	1.50	48
20	4 x 0.50	108/0.08	1.50	55
20	6 x 0.50	108/0.08	1.50	63
20	8 x 0.50	108/0.08	1.50	73
20	10 x 0.50	108/0.08	1.50	78

Cable with screen

AWG-no.	NO. Pairs x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
24	1 x 0.20	45/0.08	1.12	4.7
24	2 x 0.20	45/0.08	1.12	6.1
24	3 x 0.20	45/0.08	1.12	6.4
24	4 x 0.20	45/0.08	1.12	6.9
24	5 x 0.20	45/0.08	1.12	7.4
24	6 x 0.20	45/0.08	1.12	7.9
24	8 x 0.20	45/0.08	1.12	9.1
24	10 x 0.20	45/0.08	1.12	9.8
24	13 x 0.20	45/0.08	1.12	10.2
24	20 x 0.20	45/0.08	1.12	12.2
22	1 x 0.30	65/0.08	1.28	5.0
22	2 x 0.30	65/0.08	1.28	6.6
22	3 x 0.30	65/0.08	1.28	7.0
22	4 x 0.30	65/0.08	1.28	7.5
22	5 x 0.30	65/0.08	1.28	8.1
22	6 x 0.30	65/0.08	1.28	8.7
22	10 x 0.30	65/0.08	1.28	10.8
20	1 x 0.50	108/0.08	1.50	5.4
20	2 x 0.50	108/0.08	1.50	7.4
20	3 x 0.50	108/0.08	1.50	8.1
20	4 x 0.50	108/0.08	1.50	8.4
20	5 x 0.50	108/0.08	1.50	9.1

Superflex S300

Technical data

- Extremely flexible data cables for drag chain movement application;
  UL 2103: 1 Pair; UL 2517 for two or more pairs
- **Rated temperature** 105 ℃
- **Nominal voltage** 300 V
- **Minimum bending radius**
  fixed installation 4 x cable diameter
  flexing 7.5 x cable diameter

Cable structure

- Tinned copper, fine wire, extremely flexible
- Flexible ETFE core insulation
- Sheath: PVC

Properties

- Left/right bending resistance
- Oil resistance
- Twist resistance
- 45° left/right vibration resistance
- Suitable for drag chain movement application

Application

Superflex S300 cable is an extremely flexible signal cable to be used in the drag chain application. It's suitable to be used under the shift and bending stresses in the machines; it's also suitable to be used as a mobile connecting cables for the electrical equipments.

Drag Chain Bending Tester

Superflex S300

Cable without screen

AWG-no.	NO. Pairs x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
24	1 x 0.20	40/0.08	1.0	3.5
24	2 x 0.20	40/0.08	1.0	5.7
24	3 x 0.20	40/0.08	1.0	6.2
24	5 x 0.20	40/0.08	1.0	7.2
24	6 x 0.20	40/0.08	1.0	7.7
24	8 x 0.20	40/0.08	1.0	8.8
24	10 x 0.20	40/0.08	1.0	10.5
24	15 x 0.20	40/0.08	1.0	11.0
24	20 x 0.20	40/0.08	1.0	12.0
22	1 x 0.30	3/20/0.08	1.3	4.1
22	2 x 0.30	3/20/0.08	1.3	6.8
22	3 x 0.30	3/20/0.08	1.3	7.3
22	5 x 0.30	3/20/0.08	1.3	8.7
22	6 x 0.30	3/20/0.08	1.3	9.5
22	8 x 0.30	3/20/0.08	1.3	11.0
22	10 x 0.30	3/20/0.08	1.3	12.5
22	15 x 0.30	3/20/0.08	1.3	14.0
22	20 x 0.30	3/20/0.08	1.3	15.5
20	1 x 0.50	3/33/0.08	1.6	4.7
20	2 x 0.50	3/33/0.08	1.6	7.9
20	3 x 0.50	3/33/0.08	1.6	8.9
20	5 x 0.50	3/33/0.08	1.6	11.0
20	6 x 0.50	3/33/0.08	1.6	11.5
20	8 x 0.50	3/33/0.08	1.6	13.5
20	10 x 0.50	3/33/0.08	1.6	16.0
20	15 x 0.50	3/33/0.08	1.6	17.0
20	20 x 0.50	3/33/0.08	1.6	19.5

Cable with screen

AWG-no.	NO. Pairs x Cross-sec. mm^2	Conductor Construction mm	Insulation Diameter mm	Outer Diameter mm
24	1 x 0.20	40/0.08	1.0	4.0
24	2 x 0.20	40/0.08	1.0	6.2
24	3 x 0.20	40/0.08	1.0	6.7
24	5 x 0.20	40/0.08	1.0	7.7
24	6 x 0.20	40/0.08	1.0	8.2
24	8 x 0.20	40/0.08	1.0	9.3
24	10 x 0.20	40/0.08	1.0	11.0
24	15 x 0.20	40/0.08	1.0	11.5
24	20 x 0.20	40/0.08	1.0	12.5
22	1 x 0.30	3/20/0.08	1.3	4.6
22	2 x 0.30	3/20/0.08	1.3	7.3
22	3 x 0.30	3/20/0.08	1.3	7.8
22	5 x 0.30	3/20/0.08	1.3	9.2
22	6 x 0.30	3/20/0.08	1.3	10.0
22	8 x 0.30	3/20/0.08	1.3	11.5
22	10 x 0.30	3/20/0.08	1.3	13.0
22	15 x 0.30	3/20/0.08	1.3	14.5
22	20 x 0.30	3/20/0.08	1.3	16.0
20	1 x 0.50	3/33/0.08	1.6	5.4
20	2 x 0.50	3/33/0.08	1.6	8.4
20	3 x 0.50	3/33/0.08	1.6	9.4
20	5 x 0.50	3/33/0.08	1.6	11.5
20	6 x 0.50	3/33/0.08	1.6	12.5
20	8 x 0.50	3/33/0.08	1.6	15.0
20	10 x 0.50	3/33/0.08	1.6	16.5
20	15 x 0.50	3/33/0.08	1.6	17.5
20	20 x 0.50	3/33/0.08	1.6	20.0

Servo100

Technical data

- **Temperature range**
  flexing -40 ℃ to + 75 ℃
  fixed -50 ℃ to + 80 ℃
- **Nominal voltage** 48 V
- **Test voltage** 1000 V
- **Specific insulation resistance**
  > 20 GOhm x cm
- **Minimum bending radius**
  fixed 4 x cable diameter
  flexing 12 x cable diameter

Cable structure

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Cores twisted in short lay lengths
- Tinned copper screen braiding or as wrapping(with drain wire)
- Tape
- Polyurethane sheath (PUR)

Properties

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant according to IEC 60332-1-2
- Flexible down to -40 °C

Application

The cable is used as a connecting cable between servo controller and generators in automation process and production lines in dry or wet environments.

NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
9 x 0.5	9.4	73.0	114

Servo101

Technical data

- **Temperature range**
  flexing -5 ℃ to + 80 ℃
  fixed -40 ℃ to + 80 ℃
- **Nominal voltage**
  Supply cores: 0.6/1 kV
  Control core pairs: 250 V
- **Specific insulation resistance**
  > 20 GOhm x cm
- **Minimum bending radius**
  fixed 6 x cable diameter
  flexing 20 x cable diameter

Cable structure

- Fine strands of bare copper wires
- Core insulation: PVC
- Control pairs 0.34 mm² color coded, from 0.5 mm² black with consecutive imprinted numbering.
- Control pair screened with Al foil and tinned copper wires braiding
- The model with one control pair is without Al foil.
- PVC outer sheath

Properties

- Stationary application
- Occasional flexing
- In dry, damp or wet interiors under medium mechanical load conditions
- Outdoor use only with UV protection and in accordance with the temperature range.
- Flame retardant (IEC 60332-1-2)

Application

The cable is used as a connecting cable between servo controller and motors in automation process and production lines in dry or wet environments.

NO. Cores x Cross-sec. mm²	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
4 G 0.75 + 2 x (2 x 0.34)	9.5	91.9	120
4 G 1.5 + 2 x (2 x 0.75)	12.1	100.6	185
4 G 2.5 + (2 x 2 x 0.75)	13.9	142.1	327
4 G 4 + (2 x 0.75 + 2 x 1.0)	15.8	217.8	423
4 G 6 + (2 x 0.75 + 2 x 1.0)	16.7	294.6	544
4 G 16 + (2 x 2 x 1.0)	23.5	668.8	1168
4 G 1.5 + (2 x 0.75)	11.7	98.0	149
5 G 1.5 + (2 x 0.75)	12.7	110.0	160
7 G 1.5 + (2 x 0.75)	12.4	144.8	210
4 G 2.5 + (2 x 0.75)	13.1	138.8	227
7 G 2.5 + (2 x 0.75)	15.2	215.7	334

Servo102

Technical data

- **Temperature range**
  flexing -0 ℃ to + 80 ℃
  fixed installation -40 ℃ to + 80 ℃
- **Nominal voltage**
  IEC: power cores: 0.6/1 kV
  Control cores: 300 V
  UL: with control pairs: 600 V
  without control pairs: depends on its final application
- **Test voltage**
  Cores: 4000 V
  Control cores: 750 V
- **Specific insulation resistance**
  > 20 GOhm x cm
- **Minimum bending radius**
  flxed 4 x cable diameter
  flexing 12 x cable diameter

Cable structure

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Depending on design, cores together, without/with one or with two double screened control core pairs, twisted together in short lay length
- Tape
- Tinned copper braid
- Polyurethane sheath (PUR)

Properties

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1

Application

The cable is used as a connecting cable between servo controller and motors in automation process and production lines in dry or wet environments.

NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
4 G 1.5	9.7	87.1	153
4 G 2.5	11.2	135.0	219
4 G 4	12.7	197.5	301
4 G 6	14.9	298.3	437
4 G 10	18.7	472.3	675
4 G 16	24.2	751.9	1106
4 G 25	27.9	1161.6	1628
4 G 35	33.0	1576.1	2186
4 G 50	39.1	1967.2	3126
4 G 1.5 + 2 X (2 X 0.75)	15.3	177.9	397
4 G 2.5 + 2 X (2 X 0.75)	15.3	215.8	455
4 G 4.0 + (2 X 0.75) + (2 X 1.0)	16.8	294.8	576
4 G 10 + (2 X 0.75 + 2 X 1.0)	21.9	573.3	970
4 G 16 + (2 X 2 X 1.0)	26.3	835.6	1347
4 G 1.5 + (2 X 2 X1.0)	14.0	159.8	340
4 G 2.5 + (2 X 1.0)	14.8	200.5	404

Servo103

Technical data

- **Temperature range**
  flexing -0 ℃ to + 80 ℃
  fixed installation -50 ℃ to + 80 ℃
- **Nominal voltage**
  IEC: power cores: 0.6/1 kV
  Control cores: 250 V
  UL: with control pairs: 600 V
  without control pairs: depends on its final application
- **Test voltage**
  Cores: 4000 V
  Control cores: 750 V
- **Specific insulation resistance**
  > 20 GOhm x cm
- **Minimum bending radius**
  flxed 3 x cable diameter
  flexing 5 x cable diameter

Cable structure

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Depending on design, cores together, without/with one or with two double screened control core pairs, twisted together in short lay length
- Tape
- Polyurethane sheath (PUR)

Properties

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Flexible down to -40 °C

Application

The cable is used as a connecting cable between servo controller and motors in automation process and production lines in dry or wet environments.

NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
4 G 1.5 + (2 x 1.0)	13.0	81.4	166
4 G 2.5 + (2 x 1.0)	13.4	119.8	185
4 G 4 + (2 x 1.0)	14.8	177.4	243
4 G 6 + (2 x 1.0)	16.4	254.4	292
4 G 10 + (2 x 1.0)	20.8	412.4	690
4 G 0.75	9.7	28.8	103
4 G 2.5	11.7	96.0	191
4 G 4	13.7	153.6	278
4 G 6	15.1	230.4	376
4 G 16	26.5	614.4	1058
4 G 25	30.5	960.0	1535
4 G 35	34.5	1344.0	2035

Servo104

Technical data

- **Temperature range**
  flexing -40 ℃ to + 80 ℃
  fixed installation -50 ℃ to + 80 ℃
- **Nominal voltage** 0.6/1 kV
- **Test voltage** 4000 V
- **Specific insulation resistance**
  > 20 GOhm x cm
- **Minimum bending radius**
  flxed 4 x cable diameter
  flexing 7.5 x cable diameter

Cable structure

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: based on TPE
- Cores twisted in extremely short lay length
- Tape
- Tinned copper braid
- Polyurethane sheath (PUR)

Properties

- Its low capacity design allows longer cable lengths between the frequency converter and motor
- Oil resistant
- Halogen-free and flame retardant (IEC 60332-1-2)
- Low adhesive surface
- Designed for up to 5 million bending change cycles in the power chain

Application

The cable is used as a connecting cable between servo controller and motors in automation process and production lines in dry or wet environments.

NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
4 G 1.5	10.6	92.0	167
4 G 2.5	12.5	139.0	234
4 G 4	14.5	221.0	348
4 G 6	15.9	307.0	442
4 G 10	20.6	482.0	691
4 G 16	23.8	725.0	982
4 G 25	28.7	1136.0	1498
4 G 35	34.0	1605.0	2114
5 G 1,5	11.8	115.5	213

Servo105

Technical data

- **Temperature range**
  flexing -5 ℃ to + 80 ℃
  fixed installation -40 ℃ to + 70 ℃
- **Nominal voltage** 0.6/1 kV
- **Test voltage** 4000 V
- **Specific insulation resistance**
  > 20 GOhm x cm
- **Minimum bending radius**
  flxed 4 x cable diameter
  flexing 15 x cable diameter

Cable structure

- Fine strands of bare copper wires
- Core insulation: Polyethylene (PE)
- Cores twisted
- Al-foil
- Tinned copper wire braiding
- PVC sheath

Properties

- Its low capacity design allows longer cable lengths between the frequency converter and motor
- In dry, wet and damp interiors
- The black version can also be used outdoors in direct UV rays. Direct burial in the ground is also possible.
- Flame retardant (IEC 60332-1-2)

Application

The cable is used as a connecting cable between servo controller and motors in automation process and production lines in dry or wet environments.

NO. Cores x Cross-sec. mm^2	Outer Diameter mm	Copper Weight kg/km	Cable Weight kg/km
4 G 1.5	11.4	95.0	230
4 G 2.5	12.4	150.0	300
4 G 4	15.6	235.0	485
4 G 6	17.0	320.0	630
4 G 10	19.6	533.0	860
4 G 16	22.1	789.0	1290
4 G 25	26.3	1236.0	1860
4 G 35	29.5	1662.0	2610
4 G 50	35.8	2345.0	2950
4 G 70	40.3	3196.0	3950
4 G 95	46.5	4316.0	5300
4 G 120	53.2	5435.0	6600
4 G 150	57.3	6394.0	7043