

Eminent Cable Control Flex

Control, Data and Automation Cables



We introduce ourselves as an established manufacturer of Specialty Cables required in the field of Communication, Data Transmission, Instrumentation and Automation. Our focused interest is towards producing high-quality products that are value for your money. As a commitment to quality we have invested substantially in state of the art infrastructure, understanding and meeting customer's requirements.



We have been certified for **ISO 9001:2008** for Design and manufacture of "Copper Communication Cables and Power Distribution Cables"

Our end-users including OEMs and Projects in industry sectors including automotive, machine tools, electrical equipment, food and other process industries, engineering material handling construction mining railways defence, information technology & data processing and others.

www.magnitechcables.com



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PVC sheath and coloured cores



Eminent

CONTROL FLEX - E10

RoHS CE



■ Technical data



Core identification code
Based on: VDE 0293-308



Based on
IEC 60227-5
HD 21.5 S3; VDE 0281 Part 5
HD 21.13 S1; VDE 0281 Part 13



Specific insulation resistance
 $\geq 20 \text{ GOhm} \times \text{cm}$



Conductor
fine wire base to
VDE 0295 K1.5/IEC 60228 C1.5



Minimum bending radius
occasional flexing: 15 x cable diameter
fixed installation: 4 x cable diameter



Rated voltage
up to 1,5 sqmm: Uo/U: 300/500 V
fixed, protected insulation: Uo/U:
600/1000V



Test voltage
4000V



Protective conductor
G=with protective conductor GN/YE
X=without protective conductor



Range of temperature
occasional flexing: -5 °C to +70 °C
fixed installation: -15 °C to + 80 °C

* Plant engineering and construction Industrial machinery Air-conditioning installations Power station

* Dry or damp interiors under medium Mechanical load conditions

* Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load

- * Bare copper wire bunched conductor
- * PVC insulation
- * Core Colour
- * Cores twisted in layers
- * PVC outer sheath, grey RAL(7001)

* Using **RoHS** compliances compounds
* **CE**

- * Space-saving installation due to small cable diameters
- * High electrical performance due to 4 Kv test voltage Increased flexibility due short-twisted Conductor layers

- * Flame-retardant acc. to IEC 60332-1-2
- * Good chemical resistance

Part Number	Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index Kg/km	Weight kg/km approx
CONTROL FLEX - E10; Uo / U: 300 / 500 V				
801068	8 G 1.0	10.5	77.0	194
801610	10 G 1.0	11.9	96.0	246
801612	12 G 1.0	12.3	115.0	272
801616	16 G 1.0	13.6	154.0	343
801618	18 G 1.0	14.4	173.0	390
801620	20 G 1.0	15.6	192.0	443
801625	25 G 1.0	17.2	240.0	546
800072	2 X 1.5	7.5	29	90
801073	3 G 1.5	8.1	43.0	113
800073	3 X 1.5	8.1	43.0	113
801074	4 G 1.5	9.1	58.0	143
800074	4 X 1.5	9.1	58.0	143
801075	5 G 1.5	9.9	72.0	178
800075	5 X 1.5	9.9	72.0	178
801077	7 G 1.5	10.8	101.0	216
801078	8 G 1.5	12.1	115.0	264
801712	12 G 1.5	14.6	173.0	387
801714	14 G 1.5	15.3	202.0	436
801718	18 G 1.5	17.1	259.0	547
801725	25 G 1.5	20.0	360.0	753
CONTROL FLEX - E10; Uo / U: 450 / 750 V				
800082	2 X 2.5	8.9	47.8	134
800083	3 X 2.5	9.7	71.9	168
800084	4 X 2.5	11.0	95.8	220
800085	5 X 2.5	12.0	119.6	273
800087	7 X 2.5	13.3	166.8	338
800088	8 X 2.5	15.5	189.8	436
800092	2 X 4	10.2	76.5	187
800093	3 X 4	11.2	114.8	253
800094	4 X 4	12.3	154.0	296
800095	5 X 4	13.9	192.0	384
800097	7 X 4	15.5	268.0	486
800102	2 X 6	11.4	108.0	242
800103	3 X 6	12.8	172.8	321
800104	4 X 6	14.0	230.0	401
800105	5 X 6	15.7	287.0	518
800107	7 X 6	17.7	402.0	665
800112	2 X 10	14.5	185.6	399
800113	3 X 10	15.9	286.5	517
800114	4 X 10	17.7	384.0	658
800115	5 X 10	20.0	480.0	857
800123	3 X 16	19.2	458.9	785
800124	4 X 16	21.4	614.0	1020

* Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

* Other sizes can be manufactured on demand

We Carry Signals

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Control Cables



PVC sheath and coloured cores



CONTROL FLEX - E10 CY

■ Technical data		
 Core identification code Based on: VDE 0293-308	 Conductor fine wire base to VDE 0295 K1.5/IEC 60228 C1.5	 Test voltage 4000V
 Based on IEC 60227-5 HD 21.5 S3; VDE 0281 Part 5 HD 21.13 S1; VDE 0281 Part 13	 Protective conductor G=with protective conductor GN/YE X=without protective conductor	 Minimum bending radius occasional flexing: 20 x cable diameter fixed installation: 6 x cable diameter
 Specific insulation resistance > 20 GOhm x cm	 Range of temperature occasional flexing:-5 ° C to +70 ° C fixed installation: -15 ° C to + 80 ° C	 Rated voltage up to 1.5 sqmm: Uo/U: 300/500 V starting at 1.5 sqmm: Uo/U: 450/750 fixed, protected insulation: Uo/U: 600/1000V

■ Application range

- * Plant engineering and construction Industrial machinery
- * Conveying and transport systems Servo drives
- * In EMI critical environment (Electromagnetic interference)
- * Data and Control Cables in Machinery, Computer System

■ Approvals (Norm references)

- * Using RoHS complainces compounds
- * CE

■ Benefits

- * Space-saving installation due to small cable diameters
- * High electrical performance due to 4 Kv test voltage

■ Product Make-UP

- * Bare copper wires bunched conductor
- * PVC insulation
- * PVC inner sheath, grey
- * Screen made of tinned copper wire braid
- * PVC outer sheath, transparent

■ Product features

- * Flame-retardant acc. to IEC 60332-1-2
- * Good chemical resistance
- * High coverage degree of the screen low transfer impedance (max. 250 ohm/km at 30 Mhz)
- * The screen density assures disturbance free transmission of all signals and impulses
- * The applied clear transparent PVC outer sheath accentuates the Optical view of the tinned copper braid.

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
CONTROL FLEX - E10 CY; Uo / U: 300 / 500 V				
700042	2 X 0.5	7.4	41	87
701043	3 G 0.5	7.7	46	97
701044	4 G 0.5	8.1	55	110
701045	5 G 0.5	8.8	66	131
701047	7 G 0.5	9.3	80	149
700052	2 X 0.75	8.0	46	104
701053	3 G 0.75	8.3	57	117
701054	4 G 0.75	8.8	64	135
701055	5 G 0.75	9.6	77	161
701057	7 G 0.75	10.2	102	185
700062	2 X 1.0	8.5	56	120
701063	3 G 1.0	8.9	65	137
701064	4 G 1.0	9.5	78	159
701065	5 G 1.0	10.3	89	191
701067	7 G 1.0	11.0	113	221
CONTROL FLEX - E10 CY; Uo / U: 450 / 750 V				
700072	2 X 1.5	10.1	65	166
701073	3 G 1.5	10.5	79	189
701074	4 G 1.5	11.3	97	222
701075	5 G 1.5	12.1	116	264
701077	7 G 1.5	13.0	149	309
700082	2 X 2.5	11.7	87	227
701083	3 G 2.5	12.3	146	262
701084	4 G 2.5	13.2	167	311
701085	5 G 2.5	14.4	200	381
701087	7 G 2.5	15.5	288	448
700094	4 G 4.0	14.9	237	411
701095	5 G 4.0	16.1	328	496
701104	4 G 6.0	16.4	318	524
701105	5 G 6.0	18.1	441	652
701113	3 G 10	18.9	414	680
701114	4 G 10	20.5	558	826
701115	5 G 10	22.2	714	1012
701123	3 G 16	21.6	607	939
701124	4 G 16	23.4	804	1154

* Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
* Other sizes can be manufactured on demand

We Carry Signals



CONTROL FLEX - E11

■ **Technical data**

Core identification code
Black with white number
Based on: VDE 0293

Conductor
fine wire base to
VDE 0295 K1.5/IEC 60228 C1.5

Rated voltage
Uo/U: 300/500 V

Protective conductor
G=with protective conductor GN/YE
X=without protective conductor

Specific insulation resistance
> 20 GOhm x cm

Minimum bending radius
occasional flexing: 15 x cable diameter
fixed installation: 4 x cable diameter

Test voltage
4000V

Range of temperature
occasional flexing: -5 ° C to +70 ° C
fixed installation: -15 ° C to + 80 ° C

- **Benefits**

 - * Space-saving installation due to small cable diameters
 - * High electrical performance due to 4 Kv test voltage
- **Approvals (Norm references)**

 - * Using **RoHS** compliances compounds
 - * **CE**
- **Product features**

 - * Flame-retardant acc. to IEC 60332-1-2
 - * Good chemical resistance
- **Product Make-UP**

 - * Bare copper wire bunched conductor
 - * PVC insulation
 - * Cores twisted in layers
 - * PVC outer sheath, grey RAL(7001)
- **Application range**

 - * Plant engineering and construction Industrial machinery, Air conditioning installations, Power station
 - * Dry or damp interiors under medium Mechanical load conditions
 - * Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
CONTROL FLEX - E11; Uo / U: 300 / 500 V				
400042	2 X 0.5	5.2	9.6	41
401043	3 G 0.5	5.5	14.4	47
400043	3 X 0.5	5.5	15.0	47
401044	4 G 0.5	5.9	19.2	57
400044	4 X 0.5	5.9	19.2	57
401045	5 G 0.5	6.6	24.0	73
400045	5 X 0.5	6.6	24.0	73
401046	6 G 0.5	7.1	29.0	85
401047	7 G 0.5	7.1	33.6	87
400047	7 X 0.5	7.1	33.6	87
400048	8 X 0.5	7.9	36.0	105
401410	10 G 0.5	8.8	48.0	131
401412	12 G 0.5	9.1	58.0	144
401414	14 G 0.5	9.5	67.0	162
401416	16 G 0.5	11	86.4	226
401421	21 G 0.5	11.5	101.0	238
401424	24 G 0.5	12.9	120.0	278
401430	30 G 0.5	14.9	144.0	382
400052	2 X 0.75	5.8	14.4	52
401053	3 G 0.75	6.1	21.6	62
400053	3 X 0.75	6.1	21.6	62
401054	4 G 0.75	6.7	28.8	75
400054	4 X 0.75	6.7	28.8	75
401055	5 G 0.75	7.4	36.0	97
400055	5 X 0.75	7.4	36.0	97
401056	6 G 0.75	8.0	39.4	115
401057	7 G 0.75	8.0	50.0	116
400057	7 X 0.75	8.0	50.0	116
400058	8 G 0.75	8.9	52.5	140
401059	9 G 0.75	9.6	65.0	161
401510	10 G 0.75	10.0	72.0	176
401512	12 G 0.75	10.3	86.0	196
400512	12 X 0.75	10.3	86.0	196
401515	15 G 0.75	11.4	108.0	241
400515	15 X 0.75	11.4	108.0	241
401516	16 G 0.75	11.6	115.2	250
401518	18 G 0.75	12.0	130.2	275
401521	21 G 0.75	13.3	151.0	330
401525	25 G 0.75	14.6	180.0	398
400062	2 X 1.0	6.3	19.2	64
401063	3 G 1.0	6.7	28.8	77
400063	3 X 1.0	6.7	28.8	77
401064	4 G 1.0	7.3	38.4	94
400064	4 X 1.0	7.3	38.4	94
401065	5 G 1.0	7.9	48.0	116
400065	5 X 1.0	7.9	48.0	116
401066	6 G 1.0	8.6	58.0	140
401067	7 G 1.0	8.6	67.0	140



CONTROL FLEX - E11

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
CONTROL FLEX - E11; Uo / U: 300 / 500 V				
400067	7 X 1.0	8.6	67.0	140
401068	8 G 1.0	9.8	77.0	176
401069	9 G 1.0	10.5	86.0	189
401610	10 G 1.0	11.1	96.0	222
401612	12 G 1.0	11.4	115.0	246
400612	12 X 1.0	11.4	115.0	246
401614	14 G 1.0	11.7	134.0	270
401616	16 G 1.0	12.7	153.6	312
401618	18 G 1.0	13.4	173.0	354
400618	18 X 1.0	13.4	173.0	354
401620	20 G 1.0	14.5	192.0	402
400620	20 X 1.0	14.5	192.0	402
401625	25 G 1.0	16.0	240.0	495
400072	2 X 1.5	7.1	29.0	82
401073	3 G 1.5	7.5	43.0	100
400073	3 X 1.5	7.5	43.0	100
401074	4 G 1.5	8.2	58.0	123
400074	4 X 1.5	8.2	58.0	123
401075	5 G 1.5	8.9	72.0	153
400075	5 X 1.5	8.9	72.0	153
401076	6 G 1.5	9.2	86.4	165
401077	7 G 1.5	9.7	101.0	187
400077	7 X 1.5	9.7	101.0	187
400078	8 G 1.5	11.1	115.0	233
400078	8 X 1.5	11.1	115.0	233
401079	9 G 1.5	11.9	130.0	251
401710	10 G 1.5	12.1	143.0	273
401711	11 G 1.5	12.1	158.0	298
401712	12 G 1.5	13.3	173.0	343
400712	12 X 1.5	13.3	173.0	343
401714	14 G 1.5	14.0	202.0	386
401716	16 G 1.5	13.9	230.0	419
401718	18 G 1.5	15.6	259.0	484
401721	21 G 1.5	16.2	302.0	536
401725	25 G 1.5	18.2	360.0	666
401726	26 G 1.5	17.8	374.4	680
400082	2 X 2.5	8.1	48.0	115
401083	3 G 2.5	8.6	72.0	142
401084	4 G 2.5	9.5	96.0	177
401085	5 G 2.5	10.4	120.0	222
401086	6 G 2.5	11.3	135.6	269
401087	7 G 2.5	11.3	168.0	274
400088	8 G 2.5	12.9	171.5	340
401812	12 G 2.5	15.6	288.0	501
401814	14 G 2.5	16.4	336.0	567
401818	18 G 2.5	18.2	432.0	725
401825	25 G 2.5	21.4	600.0	986
400093	3 X 4	10.41	114.8	216
400094	4 X 4	11.43	154.0	269
400095	5 X 4	12.52	192.0	328
400097	7 X 4	14.09	268.0	433
400103	3 X 6	12.56	172.0	315
400104	4 X 6	13.78	230.0	394
400105	5 X 6	15.10	287.0	480
400107	7 X 6	16.71	402.0	621
400113	3 X 10	15.06	286.5	484
400114	4 X 10	16.59	384.0	611
400115	5 X 10	18.23	480.0	748
400123	3 X 16	17.96	458.9	716
400124	4 X 16	20.63	614.0	949

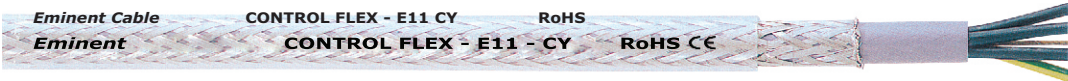
* Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

* Other sizes can be manufactured on demand

Control Cables



PVC sheath and numbered cores



CONTROL FLEX - E11 CY

Technical data

Core identification code
Black with white numbers based on:
VDE 0293

Conductor stranding
fine wire base on
VDE 0295 K1.5/IEC 60228 C1.5

Rated voltage
U_o/U: 300/500 V

Protective conductor
G=with protective conductor GN/YE
X=without protective conductor

Specific insulation resistance
> 20 GOhm x cm

Minimum bending radius
occasional flexing: 20 x cable diameter
fixed installation: 6 x cable diameter

Test voltage
4000V

Range of temperature
occasional flexing:-5 ° C to +70 ° C
fixed installation: -15 ° C to + 80 ° C

Benefits

- * Space-saving installation due to small cable diameters
- * High electrical performance due to 4 Kv test voltage

Product Make-UP

- * Bare copper wire bunched conductor
- * PVC insulation
- * PVC inner sheath, grey
- * Screen made of tinned copper wire braid
- * PVC outer sheath, transparent

Product features

- * Flame-retardant acc. to IEC 60332-1-2
- * Good chemical resistance
- * High coverage degree of the screen low transfer impedance (max. 250 ohm/km at 30 Mhz)
- * The screen density assures disturbance free transmission of all signals and impulses
- * The applied clear transparent PVC outer sheath accentuates the Optical view of the tinned copper braid.

Application range

- * Plant engineering and construction
Industrial machinery, Air conditioning installations, Power station
- * Conveying and Transport systems
- * Servo drives
- * In EMI critical environment
(Electromagnetic interference)

Approvals (Norm references)

- * Using RoHS compliances compounds
- * **CE**

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
CONTROL FLEX - E11 CY; U _o / U: 300 / 500 V				
500042	2 X 0.5	7.4	41.0	87
501043	3 G 0.5	7.7	45.5	97
500043	3 X 0.5	7.7	45.5	97
501044	4 G 0.5	8.1	55.0	110
500044	4 X 0.5	8.1	55.0	110
501045	5 G 0.5	8.8	66.0	131
500045	5 X 0.5	8.8	66.0	131
501046	6 G 0.5	9.3	72.0	149
501047	7 G 0.5	9.3	80.5	149
500047	7 X 0.5	9.3	80.5	149
500048	8 X 0.5	10.3	85.6	177
501410	10 G 0.5	11.4	96.0	217
501412	12 G 0.5	11.6	138.5	232
500412	12 X 0.5	11.6	138.5	232
500414	14 X 0.5	12.3	144.0	260
500416	16 X 0.5	12.8	149.3	283
501418	18 G 0.5	13.7	156.4	325
504425	25 G 0.5	15.6	250.0	419
501430	30 G 0.5	16.7	297	483
500052	2 X 0.75	8.0	46.0	104
501053	3 G 0.75	8.3	57.9	117
500053	3 X 0.75	8.3	57.9	117
501054	4 G 0.75	8.8	64.0	135
500054	4 X 0.75	8.8	64.0	135
501055	5 G 0.75	9.6	77.4	161
500055	5 X 0.75	9.6	77.4	161
501056	6 G 0.75	10.2	81.0	184
501057	7 G 0.75	10.2	102.0	185
500057	7 X 0.75	10.2	102.0	185
500058	8 X 0.75	11.1	109.0	216
500510	10 X 0.75	12.4	134.0	268
501512	12 G 0.75	12.9	177.0	295
500512	12 X 0.75	12.9	177.0	295
500514	14 X 0.75	13.6	192.0	331
500516	16 X 0.75	14.2	206.0	362
501518	18 G 0.75	15.0	243.0	408
500518	18 X 0.75	15.0	243.0	408
501525	25 G 0.75	17.4	307.3	541
501530	30 G 0.75	18.7	318.0	628
500062	2 X 1.0	8.5	56.0	120
501063	3 G 1.0	8.9	65.3	137
500063	3 X 1.0	8.9	65.3	137
501064	4 G 1.0	9.5	78.1	159
500064	4 X 1.0	9.5	78.1	159
501065	5 G 1.0	10.3	89.4	191
501066	6 G 1.0	11.0	96.0	221
501067	7 G 1.0	11.0	113.3	221

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
CONTROL FLEX - E11 CY; U _o / U: 300 / 500 V				
500068	8 X 1.0	12.4	126.0	273
500610	10 X 1.0	13.7	151.0	331
501612	12 G 1.0	14.0	188.1	358
500614	14 X 1.0	14.8	197.7	401
501616	16 G 1.0	15.7	216.0	450
501618	18 G 1.0	16.4	286.0	500
501625	25 G 1.0	19.2	388.5	674
501630	30 G 1.0	20.7	426.0	783
500072	2 X 1.5	9.3	65.0	145
501073	3 G 1.5	9.7	83.0	166
500073	3 X 1.5	9.7	83.0	166
501074	4 G 1.5	10.4	100.0	194
500074	4 X 1.5	10.4	100.0	194
501075	5 G 1.5	11.3	125.0	236
500075	5 X 1.5	11.3	125.0	236
501076	6 G 1.5	12.1	136.0	275
501077	7 G 1.5	12.1	149.0	277
500077	7 X 1.5	12.1	149.0	277
500078	8 x 1.5	13.7	178.0	341
500710	10 X 1.5	15.1	225.0	417
501712	12 G 1.5	15.7	280.0	462
500714	14 X 1.5	16.4	305.0	511
500716	16 X 1.5	17.4	336.0	575
501718	18 G 1.5	18.6	389.0	656
501725	25 G 1.5	21.8	535.0	888
501730	30 G 1.5	23.0	596.0	1009
500082	2 X 2.5	10.5	112.0	192
501083	3 G 2.5	11.0	146.0	223
501084	4 G 2.5	11.9	167.0	265
501085	5 G 2.5	13.0	200.0	325
501086	6 G 2.5	14.3	256.0	395
501087	7 G 2.5	14.3	288.0	399
501812	12 G 2.5	18.6	477.3	667
500092	2 X 4.0	12.8	120.0	284
501093	3 G 4.0	13.5	163.0	331
501094	4 G 4.0	14.9	237.0	411
501095	5 G 4.0	16.1	280.0	496
500102	2 X 6.0	14.4	180.0	365
501103	3 G 6.0	15.2	270.0	433
501104	4 G 6.0	16.4	318.0	524
501105	5 G 6.0	18.1	441.0	652
500112	2 X 10	17.1	256.0	533
501113	3 G 10	18.1	362.4	646
501114	4 G 10	20.1	558.0	807
501115	5 G 10	22.2	595.0	1012
500122	2 G 16	20.0	390.0	753
501124	4 G 16	23.4	804.0	1154

* Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
* other sizes can be manufactured on demand

We Carry Signals



CONTROL FLEX - E11 SY

Technical data



Core identification code
Black with white numbers based on:
VDE 0293



Conductor
fine wire base to
VDE 0295 K1.5/IEC 60228 C1.5



Rated voltage
U_o/U: 300/500 V



Protective conductor
G=with protective conductor GN/YE
X=without protective conductor



Specific insulation resistance
> 20 GOhm x cm



Minimum bending radius
occasional flexing: 20 x cable diameter
fixed installation: 6 x cable diameter



Test voltage
4000V



Range of temperature
occasional flexing: -5 °C to +70 °C
fixed installation: -15 °C to + 80 °C

Benefits

- * Space-saving installation due to small cable diameters
- * High electrical performance due to 4 Kv test voltage

Approvals (Norm references)

- * Using RoHS compliances compounds
- * CE

Product Make-UP

- * Bare copper wire bunched conductor
- * PVC insulation
- * PVC inner sheath, grey
- * Oxidation protected steel wire braid
- * PVC outer sheath, transparent

Product features

- * Flame-retardant acc. to IEC 60332-1-2
- * Good chemical resistance

Application range

- * Plant engineering and construction
Industrial machinery, Air conditioning installations
- * Fixed installation as well as occasional flexing At free, non-continuously recurring movement without tensile load
- * Area with increased mechanical stress requirements
- * The galvanized coating on the steel wire braiding not only helps protect against corrosion, but also notably improves the soldering performance.
- * The clear transparent PVC outer sheath gives the cable in addition on optical revaluation.

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
CONTROL FLEX - E11 SY; U _o / U: 300 / 500 V				
600042	2 X 0.5	8.0	10.0	99
601043	3 G 0.5	8.3	15.0	107
601044	4 G 0.5	8.7	19.2	107
601045	5 G 0.5	9.4	24.0	119
601046	6 G 0.5	9.9	29.5	157
601047	7 G 0.5	9.9	33.6	119
601048	8 G 0.5	10.9	41.3	190
601410	10 G 0.5	12.0	48.0	232
601412	12 G 0.5	12.2	58.0	247
601414	14 G 0.5	12.9	67.0	275
601416	16 G 0.5	13.4	76.5	297
601418	18 G 0.5	14.3	86.4	337
601425	25 G 0.5	16.2	120.0	432
601430	30 G 0.5	17.3	144.0	503
600052	2 X 0.75	8.6	14.4	114
601053	3 G 0.75	8.9	21.8	126
601054	4 G 0.75	9.4	28.8	143
601055	5 G 0.75	10.2	36.0	169
601056	6 G 0.75	10.8	43.0	194
601057	7 G 0.75	10.8	50.4	205
601058	8 G 0.75	11.7	58.0	234
601510	10 G 0.75	13.0	72.0	282
601512	12 G 0.75	13.5	86.4	309
601514	14 G 0.75	14.2	100.4	343
601516	16 G 0.75	14.8	115.0	374
601518	18 G 0.75	15.6	129.6	422
601525	25 G 0.75	18.0	180.0	564
601530	30 G 0.75	19.3	220.0	648
600062	2 X 1.0	9.1	19.2	130
601063	3 G 1.0	9.5	29.0	145
601064	4 G 1.0	10.1	38.4	166
601065	5 G 1.0	10.9	48.0	204
601066	6 G 1.0	11.6	57.9	236
601067	7 G 1.0	11.6	67.0	237
601068	8 G 1.0	13.0	77.0	285
601610	10 G 1.0	14.3	96.0	343
601612	12 G 1.0	14.6	115.0	372
601614	14 G 1.0	15.4	134.0	415

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
CONTROL FLEX - E11 SY; U _o / U: 300 / 500 V				
601616	16 G 1.0	16.3	154.6	474
601618	18 G 1.0	17.0	173.0	522
601625	25 G 1.0	19.8	240.0	693
601630	30 G 1.0	21.3	291.0	799
600072	2 X 1.5	9.9	29.0	155
601073	3 G 1.5	10.3	43.0	175
601074	4 G 1.5	11.0	58.0	211
601075	5 G1.5	11.9	72.0	251
601076	6 G 1.5	12.7	86.6	288
601077	7 G 1.5	12.7	101.0	289
601078	8 G 1.5	14.3	115.0	353
601710	10 G 1.5	15.7	146.0	411
601712	12 G 1.5	16.3	173.0	486
601714	14 G 1.5	17.0	202.0	534
601716	16 G 1.5	18.0	231.0	595
601718	18 G 1.5	19.2	259.0	677
601725	25 G 1.5	22.4	360.0	912
601730	30 G 1.5	23.6	434.0	1030
600082	2 X 2.5	11.1	48.0	204
601083	3 G 2.5	11.6	72.0	234
601084	4 G 2.5	12.5	96.0	277
601085	5 G 2.5	13.6	120.0	337
601086	6 G 2.5	14.9	144.0	409
601087	7 G 2.5	14.9	168.0	413
601812	12 G 2.5	19.2	288.0	685
600092	2 X 4.0	13.4	76.8	124
601093	3 G 4.0	14.0	115.2	343
601094	4 G 4.0	15.5	154.0	425
601095	5 G 4.0	16.7	192.0	516
600102	2 X 6.0	15.0	115.0	379
601103	3 G 6.0	15.8	172.5	447
601104	4 G 6.0	17.0	230.0	542
601105	5 G 6.0	18.7	288.0	669
600112	2 X 10	17.7	192.0	555
601113	3 G 10	18.7	288.0	665
601114	4 G 10	20.7	384.0	826
601115	5 G 10	22.8	480.0	1036
600122	2 X 16	20.6	307.0	777
601124	4 G 16	24.0	614.0	1173

* Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
* other sizes can be manufactured on demand



CONTROL FLEX H

Technical data				
 Core identification code Black with white numbers based on: VDE 0293	 Conductor fine wire base to VDE 0295 C1.5/IEC 60228 C1.5	 Range of temperature occasional flexing: -25 ° C to +70 ° C fixed installation: -15 ° C to + 70 ° C	 Rated voltage U _o /U: 300/500 V	
 Based on HD 21.13 S1; VDE 0281 Part 13	 Minimum bending radius occasional flexing: 15 x cable diameter fixed installation: 4 x cable diameter	 Protective conductor G=with protective conductor GN/YE X=without protective conductor	 Test voltage 4000V	
 Specific insulation resistance > 10 GOhm x cm				

Application range	Product features	Product Make-UP
* Public facilities * Airport, railway station * Plant engineering and construction Industrial machinery, Air conditioning * Particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards * Especially in wet area of machine tools and transfer lines under normal mechanical	* Flame retardant based on IEC 60332-1-2 (flame spread on single cable) * Halogen-free based on IEC 60754-1(amount of halogen acid gas) Corrosiveness of combustion gasses based on IEC 60754-2 (degree of acidity) * Flexible down to -15 deg. C * Highly flame-retardant	* Bare copper wire bunched conductor * Halogen-free core insulation * Halogen-free sheath - grey
		Approvals (Norm references) * Using RoHS compliances compounds * CE

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
CONTROL FLEX - H; U _o / U: 300 / 500 V				
1400072	2 X 1.5	7.1	29.0	82
1401073	3 G 1.5	7.5	43.0	100
1401074	4 G 1.5	8.2	58.0	123
1401075	5 G 1.5	8.9	72.0	153
1401077	7 G 1.5	9.7	101.0	187
1401712	12 G 1.5	12.9	173.0	330
1401718	18 G 1.5	15.2	259.0	468
1401725	25 G 1.5	17.8	360.0	648
1400082	2 X 2.5	8.1	48.0	115
1401083	3 G 2.5	8.6	72.0	142
1401084	4 G 2.5	9.5	96.5	177
1401085	5 G 2.5	10.6	120.0	227
1401087	7 G 2.5	11.7	168.0	285
1401812	12 G 2.5	15.4	288.0	493
1401094	4 G 4.0	11.4	154.0	268
1401104	4 G 6.0	13.8	230.0	392

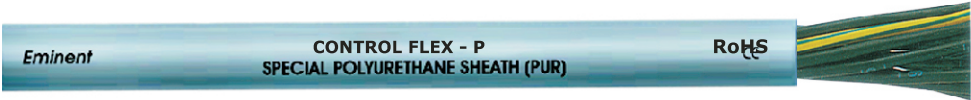
* Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

* other sizes can be manufactured on demand

Control Cables



Increased mechanical and chemical resistance



CONTROL FLEX P

PUR Insulated, Numbered, PUR Sheath

■ **Technical data**

Core identification code
Black with white numbers based on:
VDE 0293

Conductor Stranding
fine wire base to
VDE 0295 C1.5/IEC 60228 C1.5

Protective conductor
G=with protective conductor GN/YE
X=without protective conductor

Rated voltage
U₀/U: 300/500 V

Specific insulation resistance
> 20 GOhm x cm

Minimum bending radius
occasional flexing: 15 x cable diameter
fixed installation: 4 x cable diameter

Range of temperature
Flexing:-40 ° C to +90 ° C
fixed installation: -50 ° C to + 90 ° C

Test voltage
3000V

- **Benefits**

 - * Protects against water and dirt
 - * Fire: low corrosive smoke emission
 - * Cold flexible
 - * Wear-resistant
- **Approvals (Norm references)**

 - * Using **RoHS** complinaces compounds
 - * **CE**
- **Product Make-UP**

 - * Tinned copper wire bunched conductor
 - * Core insulation: PUR
 - * Special polyurethane sheath (PUR)
 - * Silver grey (RAL 7001)
- **Product features**

 - * Oil resistant and adhesion-free
 - * Abrasion and cut resistant
 - * Halogen-free
 - * Flame-retardant (IEC 60332.1-2)
- **Application range**

 - * Construction machinery
 - * Machine tools
 - * Especially in wet area of machine tools and transfer lines under normal mechanical
 - * Production plants
 - * Indoors and outdoors

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
CONTROL FLEX - P; U ₀ / U: 300 / 500 V				
1600042	2 X 0.5	6.2	9.6	46
1601043	3 G 0.5	6.5	14.4	54
1601044	4 G 0.5	7.1	19.2	65
1601045	5 G 0.5	7.9	24.0	83
1601047	7 G 0.5	8.5	33.6	98
1601412	12 G 0.5	11.3	58.0	173
1601418	18 G 0.5	13.1	86.4	239
1601425	25 G 0.5	15.2	120.0	325
1600052	2 X 0.75	6.6	14.4	54
1601053	3 G 0.75	7.0	21.6	65
1601054	4 G 0.75	7.6	28.8	79
1601055	5 G 0.75	8.4	36.0	101
1601057	7 G 0.75	9.1	50.4	121
1601512	12 G 0.75	12.2	86.4	215
1601518	18 G 0.75	14.1	129.6	299
1601525	25 G 0.75	16.4	180.0	409
1600062	2 X 1.0	7.3	19.2	69
1601063	3 G 1.0	7.8	29.0	82
1601064	4 G 1.0	8.5	38.4	101
1601065	5 G 1.0	9.2	48.0	126
1601067	7 G 1.0	10.4	67.0	160
1601612	12 G 1.0	13.7	115.0	277
1601618	18 G 1.0	16.0	173.0	397
1601625	25 G 1.0	18.6	240.0	535
1600072	2 X 1.5	7.9	29.0	83
1601073	3 G 1.5	8.3	43.0	101
1601074	4 G 1.5	9.1	58.0	125
1601075	5 G 1.5	9.9	72.0	156
1601077	7 G 1.5	10.8	101.0	191
1601712	12 G 1.5	14.8	173.0	348
1601718	18 G 1.5	17.5	259.0	499
1601725	25 G 1.5	20.8	360.0	703
1601083	3 G 2.5	9.7	72.0	147
1601084	4 G 2.5	10.6	96.0	183
1601085	5 G 2.5	12.0	120.0	239
1601087	7 G 2.5	13.1	168.0	294
1601812	12 G 2.5	18.0	288.0	537

* Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
* other sizes can be manufactured on demand

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Control Cables



Increased mechanical and chemical resistance



CONTROL FLEX CP

PUR Insulated, Numbered, Shielded, PUR sheath

■ **Technical data**

Core identification code
Black with white numbers based on:
VDE 0293

Based on
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Minimum bending radius
occasional flexing: 15 x cable diameter

Protective conductor
G=with protective conductor GN/YE
X=without protective conductor

Range of temperature
occasional flexing:-25 ° C to +90 ° C
fixed installation: -30 ° C to + 90 ° C

Rated voltage
Uo/U: 300/500 V

Test voltage
3000V

Conductor
fine wire base to
VDE 0295 C1.5

■ **Benefits**

- * Protects against water and dirt
- * Fire: low corrosive smoke emission
- * EMC compliant
- * Wear-resistant

■ **Product features**

- * Oil resistant and adhesion-free
- * Abrasion and cut resistant
- * Halogen-free
- * Flame-retardant (IEC 60332.1-2)

■ **Product Make-UP**

- * Tinned copper wire bunched conductor
- * Core insulation: PUR
- * Inner Sheath : PUR
- * Screen made of tinned copper wire braid
- * Special polyurethane sheath (PUR)
- * Silver grey (RAL 7001)

■ **Approvals (Norm references)**

- * Using **RoHS** compliances compounds
- * **CE**

■ **Application range**

- * Construction machinery
- * Machine tools
- * Especially in wet area of machine tools and transfer lines under normal mechanical
- * Production plants
- * Indoors and outdoors

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
CONTROL FLEX - CP; Uo / U: 300 / 500 V				
1501043	3 G 0.5	8.9	44	112
1501044	4 G 0.5	9.5	52	126
1501045	5 G 0.5	10.1	61	146
1501047	7 G 0.5	11.1	75	174
1501412	12 G 0.5	13.7	131	267
1501418	18 G 0.5	15.9	168	363
1501425	25 G 0.5	18.0	212	463
1500052	2 X 0.75	9.0	45	112
1501053	3 G 0.75	9.4	52	126
1501054	4 G 0.75	10.0	67	145
1501055	5 G 0.75	11.0	75	179
1501057	7 G 0.75	11.9	96	207
1501512	12 G 0.75	14.5	160	313
1501525	25 G 0.75	20.0	283	587
1500062	2 X 1.0	9.3	49	122
1501063	3 G 1.0	9.7	60	140
1501064	4 G 1.0	10.4	78	161
1501065	5 G 1.0	11.5	88	198
1501067	7 G 1.0	12.4	115	235
1501612	12 G 1.0	15.7	201	371
1501618	18 G 1.0	18.2	267	512
1501625	25 G 1.0	21.0	351	678
1500072	2 X 1.5	10.3	68	151
1501073	3 G 1.5	10.7	83	172
1501074	4 G 1.5	11.5	102	202
1501075	5 G 1.5	12.3	119	240
1501077	7 G 1.5	13.4	186	287
1501712	12 G 1.5	18.0	264	498
1501718	18 G 1.5	20.9	379	687
1501725	25 G 1.5	23.8	534	899
1501083	3 G 2.5	12.1	121	229
1501084	4 G 2.5	13.0	145	273
1501085	5 G 2.5	14.6	205	347
1501087	7 G 2.5	16.1	259	421
1501812	12 G 2.5	21.0	407	704

* Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
* other sizes can be manufactured on demand

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www.magnitechcables.com

9

Eminent

DISTRONIC - LiYY

RoHS 



DISTRONIC - LiYY

■ **Technical data**



Core identification code
DIN 47100



Conductor
Strand, fine wire
0.34 sqmm, 7 wire



Specific insulation resistance
> 20 GOhm x cm



Peak working voltage
250 V (not for power applications)



Test voltage
at 0.14 sqmm: 1200 V
> 0.14 sqmm: 1500 V



Mutual capacitance
Approx. 120 nF / km



Based on
VDE 0812



Inductivity
Approx. 0.65 mH / km



Range of temperature
Flxed installation:-15 ° C to +80 ° C
Flexing : -5 ° C to + 70 ° C



Minimum bending radius
Flexing: 15 x cable diameter

- **Benefits**

 - * Considering economic minimum quantities the outer sheath can also be produced in special colours on request which match the special colour design of a device for example.
 - * Highly resistant against acids, lyes and certain Oils at room temperature.
- **Approvals (Norm references)**

 - * Using **RoHS** complainces compounds
 - * **CE**
- **Product Make-UP**

 - * Bare copper wire bunched conductor
 - * PVC core insulation and outer sheath
 - * Cores twisted
 - * Colour: grey

■ **Application range**

 - * LiYY is also used as a control and signal* cable in electronics of computer system, electronic control equipment, office machines, balances, etc.
 - * Dry and damp indoors
- **Product features**

 - * Despite the large number of cores, LiYY data Cables have small outer diameters.
 - * Core colour code in accordance with DIN 47100 excepting for extruded secondary colour line in place of ring printing but no colour repetition
 - Flame-retardant acc. to IEC 60332-1-2

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
DISTRONIC LiYY Uo / U: 300 / 500 V				
1300012	2 X 0.14	3.4	2.7	13
1300013	3 X 0.14	3.6	4.0	16
1300014	4 X 0.14	3.8	5.4	19
1300015	5 X 0.14	4.1	6.7	23
1300017	7 X 0.14	4.7	9.4	31
1300018	8 X 0.14	5.2	10.2	35
1300110	10 X 0.14	5.8	13.5	42
1300112	12 X 0.14	6.1	16.2	51
1300114	14X 0.14	6.4	18.9	57
1300116	16X 0.14	6.7	21.6	63
1300120	20 X 0.14	7.4	27.1	76
1300121	21 X 0.14	7.6	28.4	82
1300125	25 X 0.14	8.4	33.6	96
1300130	30X 0.14	8.8	40.5	111
1300022	2 X 0.25	4.1	4.8	20
1300023	3 X 0.25	4.3	7.2	24
1300024	4 X 0.25	4.6	9.6	29
1300025	5 X 0.25	5.2	12.0	38
1300027	7 X 0.25	5.6	16.8	46
1300028	8 X 0.25	6.3	19.2	55
1300210	10 X 0.25	7.0	24.0	66
1300212	12 X 0.25	7.2	28.8	75
1300214	14 X 0.25	7.5	33.6	84
1300216	16 X 0.25	7.9	38.4	93
1300218	18 X 0.25	8.3	43.2	104
1300220	20 X 0.25	9.1	48.0	121
1300225	25 X 0.25	9.9	60.0	144
1300230	30 X 0.25	10.5	72.0	166
1300032	2 X 0.34	4.5	6.6	25
1300033	3 X 0.34	4.8	9.9	31
1300034	4 X 0.34	5.2	13.1	38
1300035	5 X 0.34	5.8	16.5	49
1300037	7 X 0.34	6.4	22.8	63
1300038	8 X 0.34	7.5	26.1	79
1300310	10 X 0.34	7.9	32.6	86
1300312	12 X 0.34	8.1	39.1	97
1300314	14 X 0.34	8.5	45.7	110

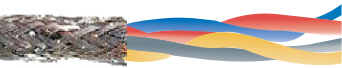
Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
DISTRONIC LiYY Uo / U: 300 / 500 V				
1300316	16 X 0.34	8.9	52.0	122
1300320	20 X 0.34	9.8	65.2	148
1300321	21 X 0.34	10.2	68.6	163
1300325	25 X 0.34	11.2	81.6	190
1300330	30 X 0.34	11.9	98.0	220
1300042	2 X 0.50	5.1	9.6	31
1300043	3 X 0.50	5.3	14.4	39
1300044	4 X 0.50	5.7	19.2	47
1300045	5 X 0.50	6.2	24.0	58
1300047	7 X 0.50	7.1	33.6	79
1300048	8 X 0.50	8.1	38.4	94
1300410	10 X 0.50	9.1	48.0	113
1300412	12 X 0.50	9.2	58.0	128
1300416	16 X 0.50	10.4	77.0	166
1300420	20 X 0.50	11.6	96.0	207
1300425	25 X 0.50	12.8	120.0	249
1300430	30 X 0.50	13.7	144.0	296
1300052	2 X 0.75	5.6	14.4	39
1300053	3 X 0.75	5.9	21.6	50
1300054	4 X 0.75	6.4	28.8	63
1300055	5 X 0.75	7.2	36.0	81
1300057	7 X 0.75	7.8	50.0	101
1300058	8 X 0.75	8.9	58.0	120
1300510	10 X 0.75	10.0	72.0	145
1300512	12 X 0.75	10.7	86.0	177
1300516	16 X 0.75	11.8	115.0	224
1300520	20 X 0.75	13.1	144.0	273
1300525	25 X 0.75	14.4	180	331
1300062	2 X 1.0	6.2	19.2	48
1300063	3 X 1.0	6.6	29.0	63
1300064	4 X 1.0	7.2	39.5	78
1300065	5 X 1.0	8.0	48.0	101
1300072	2 X 1.5	7.2	29.0	65
1300073	3 X 1.5	7.6	43.0	85
1300074	4 X 1.5	8.3	58.2	107
1300075	5 X 1.5	9.2	68.5	138

* Please specify the desired packaging size (e.g. 100 m coils)
* other sizes can be manufactured on demand

Eminent

DISTRONIC - LiYCY

RoHS 



DISTRONIC - LiYCY

Technical data



Core identification code
DIN 47100, without colour repetition



Range of temperature
fixed installation: -15 ° C to + 80 ° C



Minimum bending radius
Flexing: 15 x cable diameter
fixed, insulation: 6 x cable diameter



Conductor
Strand, fine wire
0.34 sqmm, 7 wire



Inductivity
Approx. 0.65 mH / km



Mutual capacitance
C / C approx. 140 nF / km
C / S approx. 190 nF / km



Peak working voltage
250 V (not for power applications)



Specific insulation resistance
> 20 GOhm x cm



Based on
VDE 0812



Test voltage
at 0.14 sqmm: 1200 V
> 0.14 sqmm: 1500 V

Application range

- * Used for computer system, MSR technology, Office machinery, scales screened cables with small dimensions.
- * Dry and damp indoors

Product Make-UP

- * Bare copper wire bunched conductor
- * PVC core insulation and outer sheath
- * Screen made of tinned copper wire braid
- * Colour: grey

Product features

- * Core colour code in accordance with DIN 47100 excepting for extruded secondary colour line in place of ring printing.
- * Flame-retardant acc. to IEC 60332-1-2

Approvals (Norm references)

- * Using RoHS compliances compounds
- * 

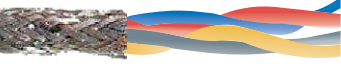
Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
DISTRONIC LiYCY ; Uo / U: 300 / 500 V				
1100012	2 X 0.14	4.1	12.0	26
1100013	3 X 0.14	4.2	13	29
1100014	4 X 0.14	4.5	14.3	34
1100015	5 X 0.14	4.8	15.5	40
1100016	6 X 0.14	5.3	18.2	48
1100017	7 X 0.14	5.3	19.0	49
1100018	8 X 0.14	6.0	21.2	58
1100110	10 X 0.14	6.6	28.5	68
1100112	12X 0.14	6.8	30.4	75
1100114	14X 0.14	7.1	32.0	82
1100115	15 X 0.14	7.4	37.8	88
1100116	16 X 0.14	7.4	43.0	91
1100118	18 X 0.14	7.7	48.8	99
1100120	20X 0.14	8.1	53.9	106
1100121	21X 0.14	8.3	55.5	114
1100125	25X 0.14	9.0	63.0	130
1100128	28X 0.14	9.5	66.1	142
1100130	30X 0.14	9.5	69.0	148
1100022	2 X 0.25	4.8	16.0	35
1100023	3 X 0.25	5.0	21.0	40
1100024	4 X 0.25	5.3	24.0	47
1100025	5 X 0.25	5.9	29.0	58
1100026	6 X 0.25	6.3	30.0	66
1100027	7 X 0.25	6.3	37.0	68
1100028	8 X 0.25	7.0	42.0	79
1100210	10 X 0.25	7.7	46.0	93
1100212	12 X 0.25	7.9	53.0	102
1100214	14 X 0.25	8.2	59.0	113
1100215	15 X 0.25	8.6	61.0	121
1100216	16 X 0.25	8.6	64.0	125
1100218	18 X 0.25	9.0	83.0	136
1100220	20 X 0.25	9.4	88.0	147
1100221	21 X 0.25	9.8	93.0	160
1100225	25 X 0.25	10.6	114.0	184
1100228	28 X 0.25	11.1	126.0	202
1100230	30 X 0.25	11.2	132.0	208
1100032	2 X 0.34	5.2	21.0	42
1100033	3 X 0.34	5.5	27.0	48
1100034	4 X 0.34	5.9	28.0	58
1100035	5 X 0.34	6.5	30.0	70
1100036	6 X 0.34	7.1	45.0	84
1100037	7 X 0.34	7.1	48.0	87
1100038	8 X 0.34	8.2	52.0	106
1100310	10 X 0.34	8.6	74.0	116
1100312	12 X 0.34	8.8	80.0	128
1100314	14 X 0.34	9.2	86.0	143
1100315	15 X 0.34	9.6	90.0	152
1100316	16 X 0.34	9.6	94.0	157

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DISTRONIC - LiYCY

RoHS 

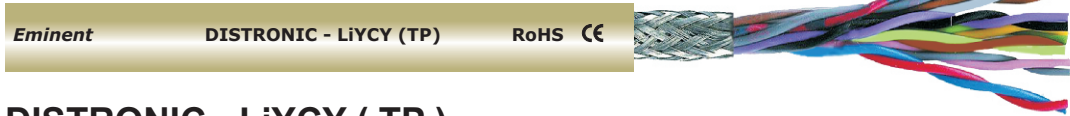


DISTRONIC - LiYCY

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
DISTRONIC LiYCY : Uo / U: 300 / 500 V				
1100318	18 X 0.34	10.0	103.0	175
1100320	20 X 0.34	10.5	112.0	186
1100321	21 X 0.34	10.9	116.0	202
1100325	25 X 0.34	11.9	135.0	233
1100328	28 X 0.34	12.5	153.0	256
1100330	30 X 0.34	12.6	159.0	267
1100042	2 X 0.50	5.9	29.0	52
1100043	3 X 0.50	6.2	38.0	61
1100044	4 X 0.50	6.6	43.0	72
1100045	5 X 0.50	7.3	51.0	89
1100046	6 X 0.50	7.8	59.0	102
1100047	7 X 0.50	7.8	65.0	106
1100048	8 X 0.50	8.8	70.0	125
1100410	10 X 0.50	9.7	88.0	147
1100412	12 X 0.50	9.9	99.0	165
1100414	14 X 0.50	10.6	110.0	188
1100415	15 X 0.50	11.1	115.0	199
1100416	16 X 0.50	11.1	121.0	206
1100418	18 X 0.50	12.0	134.0	241
1100420	20 X 0.50	12.5	149.0	258
1100421	21 X 0.50	12.5	157.0	265
1100425	25 X 0.50	13.7	211.0	307
1100428	28 X 0.50	14.8	230.0	349
1100430	30 X 0.50	14.8	243.0	364
1100052	2 X 0.75	6.5	38.0	63
1100053	3 X 0.75	6.8	49.0	77
1100054	4 X 0.75	7.3	58.0	91
1100055	5 X 0.75	8.1	67.0	113
1100056	6 X 0.75	8.7	76.0	130
1100057	7 X 0.75	8.7	100.0	136
1100058	8 X 0.75	9.6	109.0	155
1100510	10 X 0.75	10.7	130.0	186
1100512	12 X 0.75	11.2	154.0	214
1100514	14 X 0.75	11.9	171.0	243
1100515	15 X 0.75	12.5	179.0	261
1100516	16 X 0.75	12.5	189.0	271
1100518	18 X 0.75	13.3	195.0	307
1100520	20 X 0.75	14.0	116.0	331
1100521	21 X 0.75	14.0	225.0	341
1100525	25 X 0.75	15.5	280.0	405
1100528	28 X 0.75	16.7	298.0	460
1100530	30 X 0.75	16.8	312.0	481
1100062	2 X 1.0	7.0	43.0	75
1100063	3 X 1.0	7.4	56.0	92
1100064	4 X 1.0	8.0	68.0	110
1100065	5 X 1.0	8.8	79.0	137
1100066	6 X 1.0	9.5	92.0	159
1100067	7 X 1.0	9.5	106.0	167
1100068	8 X 1.0	10.7	118.0	195
1100610	10 X 1.0	12.0	140.0	234
1100612	12 X 1.0	12.3	168.0	263
1100614	14 X 1.0	13.1	192.0	302
1100615	15 X 1.0	13.7	208.0	321
1100616	16 X 1.0	13.8	221.0	334
1100618	18 X 1.0	14.5	252.0	375
1100620	20 X 1.0	15.2	279.0	406
1100621	21 X 1.0	15.2	293.0	419
1100625	25 X 1.0	17.1	335.0	504
1100628	28 X 1.0	18.5	374.0	571
1100630	30 X 1.0	18.6	401.0	599
1100072	2 X 1.5	8.0	58.0	96
1100073	3 X 1.5	8.4	74.0	118
1100074	4 X 1.5	9.1	108.0	143
1100075	5 X 1.5	9.8	129.0	173
1100076	6 X 1.5	10.8	142.0	208
1100077	7 X 1.5	10.8	154.0	218
1100078	8 X 1.5	12.0	164.0	248
1100710	10 X 1.5	13.4	188.0	300
1100712	12 X 1.5	13.9	254.0	347
1100714	14 X 1.5	14.7	292.0	392
1100715	15 X 1.5	15.5	311.0	418
1100716	16 X 1.5	15.5	331.0	436
1100718	18 X 1.5	16.7	350.0	506
1100720	20 X 1.5	17.5	368.0	546
1100721	21 X 1.5	17.5	388.0	565
1100725	25 X 1.5	20.1	463.0	698
1100728	28 X 1.5	21.2	517.0	768
1100730	30 X 1.5	21.3	550.0	806

* Please specify the desired packaging size (e.g. 100 m coils)

* other sizes can be manufactured on demand



DISTRONIC - LiYCY (TP)

■ **Technical data**

**Core identification code**
DIN 47100 excepting for extruded secondary colour line in place of ring printing.

**Mutual capacitance**
0.14 mm²
C / C approx. 140 nF / km
C / S approx. 150 nF / km
≥ 0.25 mm²
C / C approx. 150 nF / km
C / S approx. 230 nF / km

**Peak working voltage**
250 V (not for power applications)

**Based on**
VDE 0814 (DIN) 47414) or VDE 0812

**Specific insulation resistance**
> 20 GOhm x cm

**Coupling**
(1 kHz) approx. 300 pf at 100 m

**Inductivity**
Approx. 0.65 mH / km

**Conductor**
Fine copper wire stranding

**Minimum bending radius**
Flexing: 15 x cable diameter
fixed, insulation: 6 x cable diameter

**Test voltage**
at 0.14 sqmm: 1200 V
> 0.14 sqmm: 1500 V

**Range of temperature**
fixed installation: -15 ° C to + 80 ° C
flexing: -5 ° C to + 70 ° C

■ **Benefits**

* Data transmission with good screening, twisted pairs (TP) decouples the Cable circuits.

■ **Product Make-UP**

* Bare copper wire bunched conductor

* PVC core insulation

* Cores twisted in pairs with optimal lay-length

* Screen braiding made from tinned copper wire

* Outer sheath : Special PVC grey

■ **Approvals (Norm references)**

* Using **RoHS** compliances compounds

* **CE**

■ **Application range**

* Good protection against the capacitive influence due to electric field (e.g. power cable)

* Dry and damp indoors

* LiYCY (TP) is well suited for use in areas subjected to signal interference

■ **Product features**

* Excellent screening against electrical Interference

* The twisted pairs are covered with an impervious copper braid

* The Twisted pairs conformed favourable cross-talk attenuation values

* Flame-retardant acc. to IEC 60332-1-2

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
DISTRONIC - LiYCY (TP); Uo / U: 300 / 500 V				
300121	1 X 2 X 0.14	4.5	13.9	31
300122	2 X 2 X 0.14	5.4	20.1	43
300123	3 X 2 X 0.14	6.2	26.0	55
300124	4 X 2 X 0.14	6.8	31.6	65
300126	6 X 2 X 0.14	7.8	41.7	84
300128	8 X 2 X 0.14	8.7	51.4	102
301210	10 X 2 X 0.14	9.5	59.8	123
301212	12 X 2 X 0.14	10.2	67.3	138
301216	16 X 2 X 0.14	11.4	86.4	172
301220	20 X 2 X 0.14	12.4	101.3	202
301225	25 X 2 X 0.14	13.6	117.6	235
300221	1 X 2 X 0.25	4.8	16.3	35
300222	2 X 2 X 0.25	6.3	26.8	59
300223	3 X 2 X 0.25	7.1	34.9	74
300224	4 X 2 X 0.25	7.8	43.1	89
300226	6 X 2 X 0.25	9.0	56.6	114
300228	8 X 2 X 0.25	10.4	72.1	151
302210	10 X 2 X 0.25	11.3	84.7	174
302212	12 X 2 X 0.25	12.1	96.4	197
302216	16 X 2 X 0.25	13.5	122.6	243
302225	25 X 2 X 0.25	16.1	176.7	339
300421	1X 2 X 0.50	6.0	27.0	53
300422	2X 2 X 0.50	7.7	48.1	84
300423	3X 2 X 0.50	8.8	73.7	109
300424	4X 2 X 0.50	9.7	82.0	133
300426	6X 2 X 0.50	11.3	110.0	176
300428	8X 2 X 0.50	13.1	139.0	231
304212	12X 2 X 0.50	15.5	198.3	314
304216	16X 2 X 0.50	17.5	240.0	387
300521	1X 2 X 0.75	6.6	35.0	65
300522	2X 2 X 0.75	8.5	58.0	107
300523	3X 2 X 0.75	9.9	84.0	140
300524	4X 2 X 0.75	11.0	108.0	172
300525	5X 2 X 0.75	12.0	128.0	203
300526	6X 2 X 0.75	13.3	146.0	242
300528	8X 2 X 0.75	14.9	180.0	301
305212	12X 2 X 0.75	17.6	261.0	410
300621	1X 2 X 1.0	7.4	68.0	79
300622	2X 2 X 1.0	9.3	84.0	124
300623	3X 2 X 1.0	10.8	96.0	166
300624	4X 2 X 1.0	12.5	121.0	217
300625	5X 2 X 1.0	13.6	161.0	254

* Please specify the desired packaging size (e.g. 100 m coils)
* other sizes can be manufactured on demand

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DISTRONIC - Li2YCY (TP)

RoHS 



DISTRONIC - Li2YCY (TP)

Technical data



Core identification code
DIN 47100 excepting for extruded secondary colour line in place of ring printing.



Mutual capacitance
Li2YCY (TP) At 800 Hz: max. 60 nF / km (valid starting at 4 pair)



Peak working voltage
Li2YCY (TP) 250 V (not for power applications)



Based on
Li2YCY (TP) VDE 0812



Specific insulation resistance
> 5 GOhm x km



Minimum bending radius
fixed, insulation: 7.5 x cable diameter



Range of temperature
fixed installation: -15 ° C to + 70 ° C



Inductivity
Li2YCY (TP) Approx. 0.65 mH / km



Conductor
Li2YCY (TP) Stranded copper conductor, Based on VDE 0881, 7 wire



Test voltage
Li2YCY (TP)
C / C : 2000 V
C / S : 1000 V



Loop resistance
Li2YCY (TP)
0.22 sqmm max. 186 Ohm / km
0.34 sqmm max. 115 Ohm / km
0.50 sqmm max. 78.4 Ohm / km



Characteristic impedance
100 Ohm + - 15

Cable attenuation / attenuation
Li2YCY (TP)

(recommended values): 0.22 sqmm.
100 kHz 9.0 dB / km
1 MHz 25.0 dB / km
(recommended values): 0.34 sqmm.
100 kHz 6.6 dB / km
1 MHz 20.0 dB / km
(recommended values): 0.50 sqmm.
100 kHz 6.0 dB / km
1 MHz 18.0 dB / km

Short-range crosstalk attenuation
UP to 1 MHz min. 50 dB
UP to 10 MHz min. 40 dB

Application range

- * Li2YCY (TP) is particularly suitable for wiring from data systems at transmission rates up to 10 Megabit per second.
- * Cables of this kind are designed for fixed installation in dry and damp interiors and for conditional flexible use.

Approvals (Norm references)

- * Using **RoHS** compliances compounds
- * 
- * **Product features**
- * Flame-retardant acc. to IEC 60332-1-2

Product Make-UP

- * **Li2YCY (TP)**
- * Stranded conductor, 7-wire, bare
- * PE core insulation
- * Screen braiding made from copper wire
- * PVC outer sheath
- * Colour: Grey

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
DISTRONIC - Li2YCY - (TP); Uo / U: 300 / 500 V				
100021	1 X 2 X 0.22	5.3	18.2	38
100022	2 X 2 X 0.22	6.6	26.4	54
100023	3 X 2 X 0.22	7.3	34.2	67
100024	4 X 2 X 0.22	8.1	43.0	82
100028	8 X 2 X 0.22	10.6	70.2	133
100210	10 X 2 X 0.22	11.5	81.1	152
100321	1 X 2 X 0.34	5.8	20.6	45
100322	2 X 2 X 0.34	7.3	34.2	68
100323	3X 2 X 0.34	8.1	44.5	85
100324	4 X 2 X 0.34	9.1	54.0	106
100328	8 X 2 X 0.34	11.7	90.4	166
103210	10 X 2 X 0.34	13.2	107.9	207
100421	1 X 2 X 0.50	6.8	27.2	59
100422	2 X 2 X 0.50	8.7	44.4	89
100423	3 X 2 X 0.50	10.0	60.7	120
100424	4 X 2 X 0.50	11.1	74.8	145
100425	5 X 2 X 0.50	12.0	90.1	170
100428	8 X 2 X 0.50	14.8	129.3	250
104210	10 X 2 X 0.50	16.2	153.0	292

* Please specify the desired packaging size (e.g. 100 m coils)
* other sizes can be manufactured on demand

Eminent

DISTRONIC - Li2YCY PiMF

RoHS CE



DISTRONIC - Li2YCY PiMF

Pair in Metal Foil

Technical data



Core identification code
DIN 47100 excepting for extruded secondary colour line in place of ring printing.



Mutual capacitance
At 800 Hz: 0.22 sqmm max. 70 nF / km
0.34 sqmm max. 70 nF / km
0.50 sqmm max. 75 nF / km
1.0 sqmm max. 85 nF / km



Peak working voltage
250 V (not for power applications)



Insulation resistance
> 5 GOhm x km



Inductivity
Approx. 0.4 mH / km



Minimum bending radius
fixed, insulation: 10 x cable diameter



Test voltage
C / C : 2000 V
C / S : 1000 V



Range of temperature
fixed installation: -30 ° C to + 70 ° C



Characteristic impedance
0.22 sqmm approx. 80 Ohm
0.34 sqmm approx. 85 Ohm
0.50 sqmm approx. 80 Ohm
1.0 sqmm approx. 75 Ohm



Loop resistance
0.22 sqmm max. 186 Ohm / km
0.34 sqmm max. 115 Ohm / km
0.50 sqmm max. 78.4 Ohm / km
1.0 sqmm max. 39.0 Ohm / km



Conductor
7 or fine wired strand based on VDE 0881.
Cable attenuation / attenuation
(Guideline values): 0.22 sqmm.
100 kHz 11.5 dB / km
1 MHz 46.0 dB / km
(Guideline values): 0.34 sqmm.
100 kHz 9.0 dB / km
1 MHz 38.0 dB / km
(Guideline values): 0.50 sqmm.
100 kHz 7.0 dB / km
1 MHz 35.0 dB / km
(Guideline values): 1.0 sqmm.
100 kHz 5.0 dB / km
1 MHz 20.0 dB / km
Short-range crosstalk attenuation
UP to 1 MHz min. 75 dB

Benefits

- * Data cable with low capacitance, pair screening and overall copper braiding.

Product features

- * Flame-retardant acc. to IEC 60332-1-2

Approvals (Norm references)

- * Using RoHS compliances compounds
- * CE

Application range

- * DISTRONIC Li2YCY PiMF with individual screening of the pairs is particularly suitable for wiring data systems and controls in large industrial plants, for the transmission of sensitive signals and high bit rates for enhanced requirements in near-end cross-talk attenuation and high electrical interference in the circuits.
- * For measurement value transmission and serial 2 wire interfaces.
- * Cables of this type are intended for limited flexible use, and for fixed installation in dry and damp interiors.

Product Make-UP

- * Stranded 7- wire bare copper conductor
- * PE core insulation
- * Foil wrapping, static screening of aluminium laminated plastic film with drain wire
- * PVC outer sheath
- * Colour : grey

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
DISTRONIC - Li2YCY (PiMF) ; Uo / U: 300 / 500 V				
200021	1 X 2 X 0.22	5.5	21.2	46
200022	2 X 2 X 0.22	6.8	32.2	68
200023	3 X 2 X 0.22	7.7	43.1	89
200024	4 X 2 X 0.22	8.5	55.2	111
200028	8 X 2 X 0.22	11.1	94.8	196
200210	10 X 2 X 0.22	12.0	111.6	234
200321	1 X 2 X 0.34	5.8	23.6	51
200322	2 X 2 X 0.34	7.3	40.2	80
200323	3 X 2 X 0.34	8.3	53.7	105
200324	4 X 2 X 0.34	9.3	66.2	133
200328	8 X 2 X 0.34	12.4	115.1	240
203210	10 X 2 X 0.34	13.5	138.7	288
200421	1 X 2 X 0.50	6.8	30.2	65
200422	2 X 2 X 0.50	8.7	50.4	103
200423	3 X 2 X 0.50	10.2	70.0	144
200424	4 X 2 X 0.50	11.3	87.2	177
200425	5 X 2 X 0.50	12.3	105.5	212
200528	8 X 2 X 0.50	15.2	154.2	324
205210	10 X 2 X 0.50	16.6	184.0	389
200621	1 X 2 X 1.0	7.5	42.3	85
200622	2 X 2 X 1.0	9.7	73.5	139
200623	3 X 2 X 1.0	11.7	101.8	199
200624	4 X 2 X 1.0	13.1	127.7	246
206210	10 X 2 X 1.0	19.3	278.2	542

* Please specify the desired packaging size (e.g. 100 m coils)
* other sizes can be manufactured on demand

Cables for Profibus - DP/FIP



DISTRONIC - BUS L2/FIP

■ **Technical data**

 **Mutual capacitance**
(800 Hz): max. 30nF/km

 **Peak working voltage**
250 V (not for power applications)

 **Test voltage**
Core / core: 1500V

 **Conductor resistance**
(loop): max. 110 Ohm/km

 **Characteristic impedance**
150 +/- 15 Ohm

■ **Product features**

- * These bus cables can be used for PROFIBUS-DP as well as for PROFIBUS - FMS and FIP
- * Flame-retardant acc. to IEC 60332-1-2

■ **Product Make-UP**

- * Different versions with “conventional” or with “Fast Connect” (FC) cable design.
- * PE: for the food and beverage industry
- * Solid copper wire
- * Special flame retardant sheath

■ **Application range**

- * For stationary installation of Bus Systems
100-120 Ohm impedance
- * Dry and damp indoors
- * For the information exchange between different automation system a well as for communication with the connected decentralized field units, serial field bus systems are used.

■ **Approvals (Norm references)**

- * Using **RoHS** complainces compounds
- * **CE**

Part Number	Article designation	Number of pairs and conductor diameter in mm	Outer diameter in mm approx	Copper index Kg./km	Weight kg./km approx
For fixed installation - conventional cable assembly					
9001321	BUS- L2 / FIP	1 X 2 X 0.64	8.0	30.1	57
For fixed installation - “Fast connect” cable assembly					
9011321	BUS- L2 / FIP FC	1 X 2 X 0.64	8.0	26.0	76

* Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
* other sizes can be manufactured on demand

Triad cable



DISTRONIC - TRIAD

Technical data

Core identification code
Blue , Black & Brown, with colour repetition & no.Print

Mutual capacitance
Approx. C to C 200 nF / km
C to S 400 nF / Km

Specific insulation resistance
> 20 G Ohm x cm

Inductivity
Approx. 0.65 mH / km

Minimum bending radius
fixed, insulation: 15 x cable diameter

Test voltage
at1.0 sqmm: 2000 V

Range of temperature
fixed installation: -15 ° C to + 70 ° C
fixing: -5 ° C to + 70 ° C

Based on
BS 5308

- Benefits**

 - Highly resistant against acids, lyes and certain oils at room temperature.

Product features

 - Good EMC Characteristic
 - Flexibility
 - Flame-retardant acc. to IEC 60332-1-2
- Product Make-UP**

 - Bare copper wire Flexible conductor
 - PVC core insulation and outer sheath
 - Individual/Overall screening with AL-Mylar Tape with drain wire
 - Colour: Grey
- Approvals (Norm references)**

 - Using **RoHS** compliances compounds
 - CE**

Part Number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index Kg./km	Weight kg./km approx
1200631	1 X 3 X 1.0	9.0	33.0	112
1200634	4 X 3 X 1.0	16.5	118.0	340
1200636	6 X 3 X 1.0	20.2	174.5	475
1200638	8 X 3 X 1.0	22.8	231.5	605
1200731	1 X 3 X 1.5	9.5	47.6	136
1200734	4 X 3 X 1.5	18.1	175.8	438
1200736	6 X 3 X 1.5	22.2	262.5	614
1200738	8 X 3 X 1.5	25.3	350.5	775

* Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
* other sizes can be manufactured on demand

- We can also supply Individual, Overall screen with al-mylar tape & overall copper braiding / armouring on request.
- We can also supply Pair cable with Individual, Overall screen through al-mylar on request.
- We can also supply flexible / conventional armoured cable.

PHOTOVOLTAIC CABLE (SOLAR)



The Eminent Solar PV cable range has been specifically designed by “Magni Tech Speciality Cables Pvt. Ltd.” to withstand the most demanding conditions. Its excellent properties make it the best cable for all Low Voltage installations. Given their special properties, Eminent Solar PV cables constitute the ideal solution for connection between panels and connection boxes of a solar photovoltaic installation, being able to function at room temperature up to 90°C. Moreover, photovoltaic installations tend to be exposed to all possible atmospheric weather and in all their intensity, especially to ultraviolet radiation, humidity and sudden changes in temperature. For this reason, photovoltaic cables must have a specific weather resistance guarantee that guarantees their operation in time. The materials of the Eminent Solar PV cable have been especially designed to withstand the most demanding weather conditions without suffering important changes in their mechanical and electrical characteristics. To offer an adequate protection against attacks by rodents, and additional to any mechanical aggression.

APPLICATIONS :

These cables are designed for connecting photovoltaic power supply systems. These cables can be used indoor & outdoor for flexible & fixed installations with high mechanical strength in extreme weather conditions.

STANDARDS :

As per TUV Rheinland specification: 2 Pfg 1169/08.2007.

CONSTRUCTION DETAILS:

Conductor	Electrolytic Multi Stranded Tinned Copper conductor flexible as per IEC 60228 or IS :8130 / 84 Class 5
Insulation	Crosslinked Halogen Free & Flame Retardant
Insulation Colour	Natural
Sheath	Crosslinked Halogen Free & Flame Retardant
Sheath Colour	Black , Red & Blue

ELECTRICAL CHARACTERISTICS :

- Rated AC Voltage: 0.6/1.0 kV
- Rated DC Voltage : 1.5 kV
- Maximum permitted AC Voltage : 0.7/1.2 kV
- Maximum permitted DC Voltage : 1.8 Kv (Conductor/conductor, non earthed system, circuit not under load)
- Working Voltage: DC 1000 V
- Insulation Resistance:1000 M Ohm-Km
- Spark Test: 6000 Vac (8400 Vdc)
- Voltage Withstand: 6500 V as per EN50395 for 5 Min.
- Ampacity : According to requirements of cables for PV systems

THERMAL CHARACTERISTICS :

- Operating Temperature : -40°C to +90°C
- Maximum Temperature at conductor: 120°C
- Short Circuit Temperature : 250°C
- Thermal Endurance Test: According to EN 60216-2 (Temperature Index +120°C)
- High Temperature Pressure: Test according to EN 60811-3-1
- Damp-Heat Test: According to EN 60068-2-78 1000hrs at 90°C with 85% humidity

MECHANICAL CHARACTERISTICS :

- Minimum Bending Radius : For Fixed Installation - 6 x OD of cable & Occasional Flexing - 15 x OD of cable
- Tensile Strength: 6.5 N/mm² for Insulation & 8.0 N/mm² for sheathing – according to EN 60811
- Elongation :125% for Insulation & sheathing – according to EN 60811
- Dynamic Penetration : According to requirement of cables for PV Systems 2 Pfg 1169/08.2007 Annex. G
- Notch Propagation : According to 2 Pfg 1169/08.2007 Annex. G
- Shrinkage: 2% at 120°C according to EN60811-1-3
- Anticipated Period of use: 25 years

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PHOTOVOLTAIC CABLE (SOLAR)



CHEMICAL CHARACTERISTICS :

- Mineral Oil Resistance: according to EN 60811-2-1
- Ozone Resistance : according to EN 50396 part 8.1.3 Method B
- Weathering-UV Resistance : according to HD605/A1 DIN 53367
- Ammonia resistance: 30 days in saturated ammonia atmosphere (internal testing)
- Very good resistance to Oil and chemicals
- High wear and robust, abrasion resistant
- Acid & Alkaline Resistance: according to EN 60811-2-1 (Oxal acid & sodium hydroxide)

FIRE PERFORMANCE :

- Flame retardant : according to EN 60332-1-2
- Low Smoke Emission : < 20% as per ASTM D-2843
- Halogen Free: according to EN 50267-2-1/-2, IEC 60754-2
- Acid gas emission : <0.5% as per IEC 60754-1, p H minimum 4.3 as per IEC 60754-2, conductivity maximum 10 as per IEC 60754-2
- Toxicity according to EN 50305, ITC-index <3

Solar Cables used in Solar Farm installation are mainly categorized as given below :

- A . PV module to PV module and PV module to Array Junction Box
These cables though not exposed to direct sunlight are throughout the day time exposed to diffused/indirect sunlight and atmospheric temperatures in open air.
- TYPE 1
DC Solar cable are single core copper cable each for +ve & -ve. They are insulated and sheathed with cross linkable LSOH which has UV as well as Ozone protection properties. These cables are manufactured to meet requirement of TUV specification.
- TYPE 2
DC Solar cable are single core copper cable each for +ve & -ve. They are insulated with HR 105°C PVC Compound and sheathed with UV stabilized PVC ST2 Compound.
- TYPE 3
DC Solar cable are single core copper cable each for +ve & -ve. They are insulated with XLPE Compound and sheathed with UV stabilized PVC ST2 Compound.
- B. Array Junction Box to Main Junction Box and Main Junction Box to Inverter
These DC Solar cable which are not exposed to sunlight and are always routed through PVC Pipes which are laid underground. Choice of cable can be done from any one of the options given. Generally Option 3 is chosen for this route.
- C. Inverter to Transformer Primary
The Three phase AC output from Inverters is connected to the Transformer Primary through underground Armoured cables. These cables are copper or Aluminum XLPE insulated, GI armoured, UV stabilized PVC ST2.
- D. Transformer Secondary to RMU/Switchyard
The Three phase AC output from Transformer Secondary is connected to the RMU/Switchyard through Armoured cables. These cables are copper or Aluminum XLPE insulated, GI armoured, UV stabilized PVC ST2.
- E. RMU to Switchyard
The Three phase AC connection from the RMU is connected to the Switchyard through Armoured cables. These cables are copper or Aluminum XLPE insulated, GI armoured, UV stabilized PVC ST2.

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TYPE 1 :

DIMENTATIONS & CURRENT CARRYING CAPACITY OF SOLAR DC CABLES FROM PV MODULE TO ARRAY JUNCTION BOX AS PER TUV Specification-2 Pfg 1169/08.2007								
Single Core Size (Sq mm)	Wire Diameter Max. (mm)	XL-LOSH Insulation Thickness Nominal (mm)	XL- LOSH Sheath Thickness Nominal (mm)	Overall diameter Nominal (mm)	Conductor Resistance Max. (Tinned Copper) Ohm/Km	Current Carrying Capacity of DC Solar Cable with XL- LOSH Insulation & XL-LOSH Sheathing at 60 Deg.C		
						Single Cable in Air (Amp.)	Single Cable on Surface (Amp.)	Two adjacent Cable on Surface (Amp.)
1.5 Sq mm	0.26	0.7	0.9	5.0 ±1.0	13.70	30	29	24
2.5 Sq mm	0.26	0.7	0.9	5.5 ±1.0	8.21	41	39	33
4.0 Sq mm	0.31	0.7	0.9	6.0 ±1.0	5.09	55	52	44
6.0 Sq mm	0.31	0.7	0.9	6.5 ±1.0	3.39	70	67	57
ARRAY JUNCTION BOX TO MAIN JUNCTION BOX & MIB TO INVERTER AS PER TUV Specification 2 Pfg 1169/08.2007								
10 Sq mm	0.41	0.7	0.9	7.5 ±1.0	1.95	98	93	79
16 Sq mm	0.41	0.7	0.9	8.5 ±1.0	1.24	132	125	107
25 Sq mm	0.41	0.9	1.0	10.5 ±1.0	0.795	176	167	142
35 Sq mm	0.41	0.9	1.1	12.0 ±1.0	0.565	218	207	176
50 Sq mm	0.41	1.0	1.2	14.0 ±1.0	0.393	274	260	219
70 Sq mm	0.51	1.1	1.3	16.0 ±1.5	0.277	406	386	325
95 Sq mm	0.51	1.1	1.5	18.5 ±1.5	0.210	491	467	393
120 Sq mm	0.51	1.2	1.6	20.0 ±1.5	0.164	576	547	461
150 Sq mm	0.51	1.4	1.7	22.5 ±1.5	0.132	670	637	536
185 Sq mm	0.51	1.6	1.9	25.5 ±1.5	0.108	784	745	627
240 Sq mm	0.51	1.7	2.1	29.5 ±1.5	0.0817	944	897	755

TYPE 2 :

DIMENTATIONS OF SOLAR DC CABLES FROM PV MODULE TO ARRAY JUNCTION BOX (AS PER IS 694 & IS 1554 Part1 guideline)								
Single Core Size (Sq mm)	Wire Diameter Max. (mm)	HR105° C Insulation Thickness Nominal (mm)	UV-HR 105° C Sheath Thickness Nominal (mm)	Overall diameter Nominal (mm)	Conductor Resistance Max. (Bare Copper) Ohm/Km	FROM JUNCTION BOX TO INVERTER		
						Current Carrying Capacity of DC Solar Cable with HR 105°C Insulation & UV stabilized HR 105°C Sheathing at 40°C		
						Single Cable in Air (Amp.)	Single Cable on Surface (Amp.)	Two adjacent Cable on Surface (Amp.)
1.5 Sq mm	0.26	0.6	0.9	5.0 ±1.0	13.30	28	26	22
2.5 Sq mm	0.26	0.7	0.9	5.5 ±1.0	7.98	39	37	31
4.0 Sq mm	0.31	0.8	0.9	6.0 ±1.0	4.95	50	48	40
6.0 Sq mm	0.31	0.8	0.9	6.5 ±1.0	3.30	64	61	51

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TYPE 2 :

ARRAY JUNCTION BOX TO MAIN JUNCTION BOX & MIB TO INVERTER (AS PER IS 694 & IS 1554 Part1 guideline)								
Single Core Size (Sq mm)	Wire Diameter Max. (mm)	HR105° C Insulation Thickness Nominal (mm)	UV-HR 105° C Sheath Thickness Nominal (mm)	Overall diameter Nominal (mm)	Conductor Resistance Max. (Bare Copper) Ohm/Km	FROM JUNCTION BOX TO INVERTER		
						Current Carrying Capacity of DC Solar Cable with HR 105°C Insulation & UV stabilized HR 105°C Sheathing at 40°C		
						Single Cable in Air (Amp.)	Single Cable on Surface (Amp.)	Two adjacent Cable on Surface (Amp.)
10 Sqmm	0.41	1.0	0.9	8.0 ±1.0	1.91	89	84	71
16 Sq mm	0.41	1.0	0.9	9.5 ±1.0	1.21	119	113	95
25 Sq mm	0.41	1.2	1.0	11.0 ±1.0	0.780	150	143	120
35 Sq mm	0.41	1.2	1.1	12.5 ±1.0	0.554	191	182	153
50 Sq mm	0.41	1.4	1.3	15.0 ±1.0	0.386	253	240	202
70 Sq mm	0.51	1.4	1.4	17.0 ±1.5	0.272	374	355	299
95 Sq mm	0.51	1.6	1.5	19.5 ±1.5	0.206	451	429	361
120 Sq mm	0.51	1.6	1.6	21.0 ±1.5	0.161	530	504	424
150 Sq mm	0.51	1.8	1.8	23.5 ±1.5	0.129	618	587	494
185 Sq mm	0.51	2.0	1.9	26.5 ±1.5	0.106	721	685	577
240 Sq mm	0.51	2.2	2.2	30.5 ±1.5	0.0801	869	825	695

TYPE 3 :

DIMENTATIONS OF SOLAR DC CABLES FROM PV MODULE TO ARRAY JUNCTION BOX (AS PER IS 7098 Part1 guideline)								
Single Core Size (Sq mm)	Wire Diameter Max. (mm)	XLPE Insulation Thickness Nominal (mm)	UV-ST2 Sheath Thickness Nominal (mm)	Overall diameter Nominal (mm)	Conductor Resistance Max. (Bare Copper) Ohm/Km	FROM JUNCTION BOX TO INVERTER		
						Current Carrying Capacity of DC Solar Cable with XLPE Insulation & UV stabilized PVC ST2 Sheathing at 40°C		
						Single Cable in Air (Amp.)	Single Cable on Surface (Amp.)	Two adjacent Cable on Surface (Amp.)
1.5 Sq mm	0.26	0.7	0.9	5.0 ±1.0	13.30	25	24	20
2.5 Sq mm	0.26	0.7	0.9	5.5 ±1.0	7.98	35	33	28
4.0 Sq mm	0.31	0.7	0.9	6.0 ±1.0	4.95	45	43	36
6.0 Sq mm	0.31	0.7	0.9	6.5 ±1.0	3.30	58	55	46
ARRAY JUNCTION BOX TO MAIN JUNCTION BOX & MIB TO INVERTER (AS PER IS 7098 Part 1 guideline)								
10 Sq mm	0.41	0.7	0.9	7.5 ±1.0	1.91	80	76	64
16 Sq mm	0.41	0.7	0.9	8.5 ±1.0	1.21	106	101	85
25 Sq mm	0.41	0.9	1.0	10.5 ±1.0	0.780	135	128	108
35 Sq mm	0.41	0.9	1.1	12.0 ±1.0	0.554	173	164	138
50 Sq mm	0.41	1.0	1.2	14.0 ±1.0	0.386	226	215	181
70 Sq mm	0.51	1.1	1.3	16.0 ±1.5	0.272	336	319	269
95 Sq mm	0.51	1.1	1.5	18.5 ±1.5	0.206	406	386	325
120 Sq mm	0.51	1.2	1.6	21.0 ±1.5	0.161	476	452	381
150 Sq mm	0.51	1.4	1.7	23.5 ±1.5	0.129	555	527	444
185 Sq mm	0.51	1.6	1.9	25.5 ±1.5	0.106	649	616	519
240 Sq mm	0.51	1.7	2.1	29.5 ±1.5	0.0801	781	742	625

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TABLE 1: Conductor Resistances and Conductor Make-up

Technical Table

Conductor Resistances

Conductor resistance for copper conductor (extract from VDE 0295 and in accordance with international rules, e.g. IEC 60228).

Nominal Cross-sectional in mm²	Maximum Conductor Resistance at 20°C (Ohm/Km)			
	of Metal Coated Copper Wire		of Bare Copper Wire	
	Class 1 + 2	Class 5 + 6	Class 1 + 2	Class 5 + 6
0.14		142.0		138.0
0.25		82.0		79.0
0.34		59.0		57.0
0.5	36.7	40.1	36.0	39.0
0.75	24.8	26.7	24.5	26.0
1.0	18.2	20.0	18.1	19.5
1.5	12.2	13.7	12.1	13.3
2.5	7.56	8.21	7.41	7.98
4.0	4.70	5.09	4.61	4.95
6.0	3.11	3.39	3.08	3.30
10	1.84	1.95	1.83	1.91
16	1.16	1.24	1.15	1.21
25	0.734	0.795	0.727	0.780
35	0.529	0.565	0.524	0.554
50	0.391	0.393	0.387	0.386

Conductor make-up: Accordance with IEC 60228, VDE0295, IS:8130/84

Conductor make-up is specified by the maximum single wire diameter and the maximum conductor resistance.

Nominal Cross-sectional in mm²	Approximate no. of wire / Nominal wire diameter No. / mm		Approximate no. of wire / Nominal wire diameter No. / mm	
	Multi- Strands Conductors Class 2	Multi- Wires Conductors Class 2	Fine- Wire Conductors Class 5	Fine- Wire Conductors Class 6
0.14				18 X 0.10
0.25			14 X 0.15	32 X 0.10
0.34		7 X 0.25	19 X 0.15	42 X 0.10
0.5	7 X 0.30	7 X 0.30	16 X 0.20	28 X 0.15
0.75	7 X 0.37	7 X 0.37	24 X 0.20	42 X 0.15
1.0	7 X 0.43	19 X 0.26	32 X 0.20	56 X 0.15
1.5	7 X 0.52	19 X 0.32	37 X 0.230	84 X 0.15
2.5	7 X 0.67	37 X 0.29	61 X 0.230	140 X 0.15
4.0	7 X 0.85	61 X 0.29	61 X 0.288	224 X 0.15
6.0	7 X 1.05	91 X 0.29	91 X 0.288	192 X 0.20
10	7 X 1.35	91 X 0.37	91 X 0.376	320 X 0.20
16	7 X 1.70	145 X 0.37	144 X 0.376	512 X 0.20
25	7 X 2.13	183 X 0.42	196 X 0.40	800 X 0.20
35	7 X 2.52	183 X 0.50	276 X 0.40	1120 X 0.20
50	7 X 1.83	183 X 0.60	396 X 0.40	705 X 0.30

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TABLE 2-1: Power Rating



Technical Table

Power rating of wire and cables at ambient temperature up to 30 ° C

Nominal Cross-sectional in mm²	0.25	0.50	0.75	1.0	1.5	2.5	4.0	6.0	10	16	25	35	50
Power Rating in. Amp	4.5	9	12	15	18	26	34	44	61	82	108	135	168

TABLE 2-2 : Correction Factors

For ambient temperature different to 30° C

Rated Temperature of the conductor of wire and cable					
	60 ° C	70 ° C	80 ° C	85 ° C	90 ° C
Ambient Temperature in ° C	Correction factor, applicable to current value of table 2-1				
10	1.29	1.22	1.18	1.17	1.15
15	1.22	1.17	1.14	1.13	1.12
20	1.15	1.12	1.10	1.09	1.08
25	1.08	1.06	1.05	1.04	1.04
30	1.00	1.00	1.00	1.00	1.00
35	0.94	0.94	0.95	0.95	0.96
40	0.84	0.84	0.87	0.90	0.91
45	0.79	0.79	0.84	0.85	0.87
50	0.71	0.71	0.77	-	0.82
55	0.61	0.61	0.71	-	0.76
60	0.50	0.50	0.63	-	0.71
65	0.35	0.35	0.55	-	0.65
70	-	-	0.45	-	0.58
75	-	-	0.32	-	0.50
80	-	-	-	-	0.41
85	-	-	-	-	0.29

TABLE 2-3 : Correction Factors

For multiconductor cables and cords, having conductor size up to 10 mm²

Rated Temperature of the Conductor of Wire and Cable		
No. of current carrying Conductors	Correction factors for cables in free air	Correction factors for cables in earth (burial)
5	0.75	0.70
7	0.65	0.60
10	0.55	0.50
14	0.50	0.45
19	0.45	0.40
24	0.40	0.35
40	0.35	0.30
61	0.30	0.25

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