



Application

Used for wiring in switchboard panels, distributors, electrical equipments, also for fixed protected installation in lighting or controlgear. The cables shall be installed in tubes, surface mounted or embedded conduits or similar closed systems.

Construction

- **Plain annealed copper** acc. to IEC 60228
 - U type: solid class 1
 - R type: rigid stranded class 2
 - K type: flexible class 5
- **Insulation compound**
 - V type: PVC compound
 - Z type: Low Smoke Halogen Free (LSHF)
- **Core identification:** Black, Blue, Brown, Grey, Red, White, Green/Yellow

Technical Data

- **Operating temperature:**
 - during installation -5°C to 70°C
 - fixed installed -30°C to 70°C
- **Voltage rating:**
 - 1mm² & below 300/500V
 - 1.5mm² & above 450/750V
- **Test voltage:**
 - 300/500V min. 2000V
 - 450/750V min. 2500V
- **Insulation resistance:** min. 10 MΩ x km
- **Min. bending radius:**
 - OD<8mm 4 x D
 - 8mm<OD<12mm 5 x D
 - OD>12mm 6 x D
- **Flame retardant** acc. to IEC 60332-1

Upon Request

- 600/1000V voltage rating
- Higher operating temp. at 90°C or 105°C
- Tinned copper conductor
- Anti-termite, anti-rodent material

Geometrical Data Sheet (Flexible Type)

No of cores x Nominal area (mm ²)	Overall Diameter approx. (mm)	Cable Weight approx. (kg/km)	No of cores x Nominal area (mm ²)	Overall Diameter approx. (mm)	Cable Weight approx. (kg/km)
1 x 0.50	2.2	10	1 x 25	9.5	255
1 x 0.75	2.4	13	1 x 35	10.7	350
1 x 1.0	2.6	15	1 x 50	12.8	515
1 x 1.5	3.1	20	1 x 70	14.8	675
1 x 2.5	3.7	35	1 x 95	17.0	890
1 x 4.0	4.3	50	1 x 120	18.6	1145
1 x 6.0	4.8	70	1 x 150	20.6	1420
1 x 10	6.5	110	1 x 185	22.8	1715
1 x 16	7.6	175	1 x 240	26.2	2310

Electrical Data Sheet

Nominal area (mm ²)	Stranded Class 2 Conductor Resistance at 20°C (Ω/km)	Flexible Class 5 Conductor Resistance at 20°C (Ω/km)	Current Carrying Capacity In open air at 30°C (A)
0.5	36.0	39.0	-
0.75	24.5	26.0	15
1.0	18.1	19.5	19
1.5	12.1	13.3	24
2.5	7.41	7.98	32
4	4.61	4.95	42
6	3.08	3.30	54
10	1.83	1.91	73
16	1.15	1.21	98
25	0.727	0.780	129
35	0.524	0.554	158
50	0.387	0.386	198
70	0.268	0.272	245
95	0.193	0.206	292
120	0.153	0.161	344
150	0.124	0.129	391
185	0.0991	0.106	448
240	0.0754	0.0801	528



Application

Used as signal, measuring and control cables for data transmission in tool making and machine industries. Resistant to medium mechanical stress, used for fixed installation or occasional flexing without tensile load. Space saving due to good flexibility and small cable diameter. The screening protects signals from interference in EMI environments.

Construction

- Fine bare copper wire, class 5 acc. to IEC 60228
- PVC insulation compound
- Black cores with white numbering, or colour code acc. to DIN 47100
- Cores stranded in layers with optimal lay length
- Binded with polyester (PET) tape
- Tinned copper wire braid with 85% coverage
- PVC outer sheath with flame retardant
- Jacket colour grey (RAL 7001)

Technical Data

- **Operating temperature:**
 - during installation -5°C to 70°C
 - fixed installed -30°C to 70°C
- **Voltage rating:** 300/500V
- **Test voltage:** min. 2000V
- **Insulation resistance:** min. 20 MΩ x km
- **Min. bending radius:**
 - during installation 10 x D
 - fixed installed 5 x D
- **Flame retardant** acc. to IEC 60332-1

Upon Request

- 600/1000V voltage rating
- Twisted pair option (TP)
- Higher operating temp. at 105°C
- Low smoke halogen free (LSHF) sheathing & insulation acc. to IEC 60754 & IEC 61034
- Anti-termite, anti-rodent material

Geometrical Data Sheet

No of cores x Nominal area (mm ²)	Overall Diameter approx. (mm)	Cable Weight approx. (kg/km)	No of cores x Nominal area (mm ²)	Overall Diameter approx. (mm)	Cable Weight approx. (kg/km)
2 x 0.34	4.9	31	30 x 0.34	12.3	282
3 x 0.34	5.1	38	34 x 0.34	13.2	311
4 x 0.34	5.7	46	42 x 0.34	14.8	371
5 x 0.34	6.2	54	50 x 0.34	15.7	459
7 x 0.34	6.8	70	2 x 0.5	5.7	39
10 x 0.34	8.3	114	3 x 0.5	5.9	50
12 x 0.34	8.5	127	4 x 0.5	6.4	57
14 x 0.34	8.9	141	5 x 0.5	6.9	71
16 x 0.34	9.4	155	7 x 0.5	7.6	91
18 x 0.34	10.2	186	10 x 0.5	9.6	135
20 x 0.34	10.7	195	12 x 0.5	9.8	157
25 x 0.34	11.7	247	14 x 0.5	10.3	180

Geometrical Data Sheet

No of cores x Nominal area (mm ²)	Overall Diameter approx. (mm)	Cable Weight approx. (kg/km)	No of cores x Nominal area (mm ²)	Overall Diameter approx. (mm)	Cable Weight approx. (kg/km)
16 x 0.5	11.0	203	4 x 1.5	8.1	145
18 x 0.5	11.5	217	5 x 1.5	9.0	178
20 x 0.5	12.2	240	7 x 1.5	9.8	225
25 x 0.5	13.5	314	10 x 1.5	12.6	327
30 x 0.5	14.4	360	12 x 1.5	12.9	353
34 x 0.5	15.6	410	14 x 1.5	13.5	398
42 x 0.5	17.1	515	16 x 1.5	14.8	445
50 x 0.5	18.4	563	18 x 1.5	15.5	513
2 x 0.75	5.8	58	20 x 1.5	16.3	600
3 x 0.75	6.2	68	25 x 1.5	18.2	710
4 x 0.75	6.9	86	30 x 1.5	19.2	805
5 x 0.75	7.4	115	34 x 1.5	20.8	896
7 x 0.75	8.2	149	42 x 1.5	22.7	1140
10 x 0.75	10.3	187	50 x 1.5	24.7	1385
12 x 0.75	10.8	217	2 x 2.5	8.4	140
14 x 0.75	11.5	240	3 x 2.5	9.0	177
16 x 0.75	12.0	285	4 x 2.5	9.9	215
18 x 0.75	12.9	303	5 x 2.5	10.9	253
20 x 0.75	13.5	341	7 x 2.5	11.9	344
25 x 0.75	15.2	420	10 x 2.5	15.5	512
30 x 0.75	16.1	475	12 x 2.5	16.1	552
34 x 0.75	17.5	542	2 x 4	9.8	185
42 x 0.75	19.0	720	3 x 4	10.5	245
50 x 0.75	20.5	792	4 x 4	11.6	310
2 x 1.0	6.3	75	5 x 4	12.8	385
3 x 1.0	6.8	96	7 x 4	14.1	490
4 x 1.0	7.5	113	2 x 6	11.5	268
5 x 1.0	8.1	142	3 x 6	12.3	305
7 x 1.0	8.9	175	4 x 6	13.7	415
10 x 1.0	11.5	242	5 x 6	15.3	509
12 x 1.0	11.9	260	7 x 6	16.8	672
14 x 1.0	12.6	287	2 x 10	15.0	305
16 x 1.0	13.4	352	3 x 10	16.3	500
18 x 1.0	13.8	380	4 x 10	18.2	703
20 x 1.0	14.9	413	5 x 10	19.8	826
25 x 1.0	16.5	504	7 x 10	21.7	1182
30 x 1.0	17.5	584			
34 x 1.0	18.9	681			
42 x 1.0	20.5	830			
50 x 1.0	22.1	1010			
2 x 1.5	7.0	93			
3 x 1.5	7.5	113			



Application

Used as measuring and control cables in industrial machineries, conveyer belts, air-conditioning systems, offices equipments etc. Resistant to medium mechanical stress, used for fixed installation or occasional flexing without tensile load. Space saving and economical due to good flexibility and small cable diameter.

Construction

- Fine bare copper wire, class 5 acc. to IEC 60228
- PVC Insulation compound
- Black cores with white numbering
JZ: with green-yellow (G) in outer layer;
OZ: without green-yellow (X)
- Cores stranded in layers with optimal lay length
- PVC outer sheath with flame retardant
- Jacket colour grey (RAL 7001)

Technical Data

- **Operating temperature:**
 - during installation -5°C to 70°C
 - fixed installed -30°C to 70°C
- **Voltage rating:** 300/500V
- **Test voltage:** min. 2000V
- **Insulation resistance:** min. 20 MΩ x km
- **Min. bending radius:**
 - during installation 10 x D
 - fixed installed 4 x D
- **Flame retardant** acc. to IEC 60332-1

Upon Request

- 600/1000V voltage rating
- Higher operating temp. at 105°C
- **JB/OB:** colour code acc. to DIN 47100
- Low smoke halogen free (LSHF) sheathing & insulation acc. to IEC 60754 & IEC 61034
- Anti-termite, anti-rodent material

Geometrical Data Sheet

No of cores x Nominal area (mm ²)	Overall Diameter approx. (mm)	Cable Weight approx. (kg/km)
2 x 0.5	4.8	35
3 x 0.5	5.1	41
4 x 0.5	5.7	52
5 x 0.5	6.1	60
7 x 0.5	6.7	77
10 x 0.5	8.6	101
12 x 0.5	9.0	125
14 x 0.5	9.5	131
16 x 0.5	10.2	151
18 x 0.5	10.6	182
21 x 0.5	11.4	215
25 x 0.5	12.7	252

No of cores x Nominal area (mm ²)	Overall Diameter approx. (mm)	Cable Weight approx. (kg/km)
30 x 0.5	13.3	304
34 x 0.5	14.5	330
42 x 0.5	15.6	405
50 x 0.5	17.2	490
2 x 0.75	5.3	42
3 x 0.75	5.5	51
4 x 0.75	6.2	63
5 x 0.75	6.8	78
7 x 0.75	7.5	95
10 x 0.75	9.6	150
12 x 0.75	9.9	165
14 x 0.75	10.8	174

Geometrical Data Sheet

No of cores x Nominal area (mm ²)	Overall Diameter approx. (mm)	Cable Weight approx. (kg/km)	No of cores x Nominal area (mm ²)	Overall Diameter approx. (mm)	Cable Weight approx. (kg/km)
16 x 0.75	11.1	195	4 x 2.5	9.1	159
18 x 0.75	11.9	240	5 x 2.5	10.1	199
21 x 0.75	12.5	288	7 x 2.5	11.2	258
25 x 0.75	14.0	330	10 x 2.5	14.2	310
30 x 0.75	14.8	345	12 x 2.5	15.2	361
34 x 0.75	16.2	435	14 x 2.5	16.1	414
42 x 0.75	17.7	562	16 x 2.5	17.1	467
50 x 0.75	19.2	770	18 x 2.5	18.0	519
2 x 1.0	5.7	52	21 x 2.5	19.2	602
3 x 1.0	6.0	65	25 x 2.5	21.5	841
4 x 1.0	6.5	78	30 x 2.5	23.0	952
5 x 1.0	7.3	95	34 x 2.5	25.0	1180
7 x 1.0	8.0	120	42 x 2.5	27.1	1340
10 x 1.0	10.3	180	2 x 4	8.9	127
12 x 1.0	10.8	235	3 x 4	9.9	169
14 x 1.0	11.5	238	4 x 4	10.9	242
16 x 1.0	11.9	266	5 x 4	12.1	302
18 x 1.0	12.9	298	7 x 4	13.4	407
21 x 1.0	13.7	366	12 x 4	18.1	660
25 x 1.0	15.3	400	2 x 6	10.6	179
30 x 1.0	16.3	421	3 x 6	11.6	267
34 x 1.0	17.7	535	4 x 6	13.0	340
42 x 1.0	19.3	706	5 x 6	14.5	424
50 x 1.0	21.0	775	7 x 6	16.0	600
2 x 1.5	6.3	65	2 x 10	14.3	314
3 x 1.5	6.8	80	3 x 10	15.5	465
4 x 1.5	7.4	102	4 x 10	17.3	577
5 x 1.5	8.2	125	5 x 10	19.0	717
7 x 1.5	8.9	166	2 x 16	17.0	416
10 x 1.5	11.5	243	3 x 16	18.3	825
12 x 1.5	12.0	272	4 x 16	20.3	1022
14 x 1.5	12.8	323	5 x 16	22.5	1370
16 x 1.5	13.5	361	3 x 25	21.8	1250
18 x 1.5	14.5	402	4 x 25	24.3	1582
21 x 1.5	15.3	484	5 x 25	26.9	1998
25 x 1.5	17.1	555	3 x 35	24.8	1700
30 x 1.5	18.2	622	4 x 35	27.7	2106
34 x 1.5	19.9	705	5 x 35	30.7	2635
42 x 1.5	21.7	944			
50 x 1.5	23.5	1110			
2 x 2.5	7.7	99			
3 x 2.5	8.3	128			