

Control Cables according to UL AWM and CSA
Conductor cross section up to AWG 4/0 (120mm²)



Application

- UL and CSA approved Control Cable especially for the European and American market
- Suitable for fixed installation under medium mechanical load conditions as well as for flexing application at free, non-continuously recurring movement without tensile load or compulsory guidance
- Mainly in dry, damp and wet interiors (including water-oil mixtures), but not for outdoor use
- Especially in industrial and/or EMC-critical environments

Areas of application:

- Plant engineering and construction
- Machine tools
- Air conditioning installations
- Installations, equipment and devices

Amendment: Single conductor or multi-conductor Type **AWM** (Appliance Wiring Material) shall be permitted for industrial machinery (US) when part of a **listed assembly** suitable for the intended use only. NFPA 79 Edition 2007 §12.2.7.3 (Electrical Standard for Industrial Machinery)

Advantage

- The UL/CSA AWM approvals allows common installation with other cables, which are also carrying an operating voltage up to 600 V
- Economical one-way cable conduit system applicable
- Metrical and AWG specification of conductor cross section (fulfils both standards)

Worth knowing Accessories

- SKINTOP® and SKINDICHT® cable glands
- SILVYN® Cable Conduit Systems
- FLEXIMARK® Cable Marking
- Cable processing products see “Cable Accessories”

Comparable products:

- ÖLFLEX® 150 QUATTRO
- ÖLFLEX® CONTROL TM
- ÖLFLEX® Tray II
- ÖLFLEX® CONTROL M
- Appendix Table A2 “Highly Flexible FD Cables”

Technical notes:

- Flame retardant acc. to IEC 60332-1-2
- UL 1581 §1061 Cable Flame Test

Cable Make-up

ÖLFLEX® 191 / 191 CY

- Fine strands of bare copper wires
- PVC based core insulation
- Black cores with white numbers
- Cores twisted in layers
- Special PVC-based outer sheath compound
- Increased oil resistance
- Sheath colour RAL 7001 (silver grey)

ÖLFLEX® 191 CY

- As ÖLFLEX® 191, additionally:
- PVC inner sheath
 - Screen braiding made of tinned copper wires

Technical Data

Core identification code
Black cores with white numbers
acc. to VDE 0293

Approvals
UL AWM Style 21098
CSA AWM I A/B II A/B

Specific insulation resistance
> 20 GΩm x cm

Conductor stranding
Fine wire acc. to:
VDE 0295 Kl.5
IEC 60228 Cl.5

Minimum bending radius
ÖLFLEX® 191 / 191 CY
Flexing:
15 x cable diameter
Static:
4 x cable diameter
ÖLFLEX® 191 CY
Flexing:
20 x cable diameter
Static:
6 x cable diameter

Rated voltage
HAR: U₀/U=300/500 V
UL/CSA: 600 V

Test voltage
4000 V

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

Range of temperature
Occasional flexing:
HAR: -5 °C to +70 °C
UL/CSA: -5 °C to +90 °C
Fixed installation:
HAR: -40 °C to +70 °C
UL/CSA: -40 °C to +90 °C

Part number	Number of cores and mm ² per conductor	AWG	Outer diameter in mm approx.	Copper weight kg/km	Weight kg/km	Part number	Number of cores and mm ² per conductor	AWG	Outer diameter in mm approx.	Copper weight kg/km	Weight kg/km
ÖLFLEX® 191											
0011106	18 G 0.5	21	12,1	86,4	267	0011117	12 G 1	18	12,0	115,2	211
						0011118	18 G 1	18	14,4	172,8	309
						0011119	25 G 1	18	17,3	240,0	413
0011218	2 X 0.75	19	5,9	14,4	51	0011136	2 X 1.5	16	6,9	28,8	74
0011219	3 G 0.75	19	6,3	21,6	61	0011137	3 G 1.5	16	7,3	44,0	91
0011220	4 G 0.75	19	6,8	28,8	74	0011138	4 G 1.5	16	8,2	58,0	112
0011221	5 G 0.75	19	7,5	36,0	88	0011139	5 G 1.5	16	9,0	72,0	136
0011222	7 G 0.75	19	8,3	50,4	116	0011140	7 G 1.5	16	10,0	101,0	179
0011223	9 G 0.75	19	10,5	64,8	152	0011125	9 G 1.5	16	12,7	129,6	230
0011224	12 G 0.75	19	11,2	86,4	194	0011142	12 G 1.5	16	13,4	173,0	313
0011225	18 G 0.75	19	13,3	129,6	275	0011143	18 G 1.5	16	16,1	260,0	444
0011226	25 G 0.75	19	16,1	180,0	383	0011144	25 G 1.5	16	19,5	360,0	620
0011227	34 G 0.75	19	18,2	244,8	504	0011150	3 G 2.5	14	8,4	72,0	138
0011228	41 G 0.75	19	19,8	295,2	603	0011151	4 G 2.5	14	9,1	96,0	182
0011229	50 G 0.75	19	21,8	360,0	734	0011152	5 G 2.5	14	10,2	120,0	216
0011113	3 G 1	18	6,7	28,8	66	0011153	7 G 2.5	14	11,4	168,0	286
0011114	4 G 1	18	7,2	38,4	81	0011160	3 G 4	12	10,0	115,2	232
0011115	5 G 1	18	8,1	48,0	95						
0011116	7 G 1	18	8,9	67,2	125						

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0011161	4 G 4	12	10,9	154,0	295	0011184	12 G 1	18	14,6	175,7	342
0011162	5 G 4	12	12,2	192,0	354	0011185	18 G 1	18	16,5	241,7	472
0011167	7 G 4	12	13,5	268,8	540	0011186	25 G 1	18	19,2	341,7	648
0011165	4 G 6	10	13,0	231,0	398	0011302	2 X 1.5	16	8,9	64,7	156
0011166	5 G 6	10	14,5	288,0	479	0011187	3 G 1.5	16	9,3	89,1	166
0011169	4 G 10	8	16,7	384,0	648	0011188	4 G 1.5	16	10,1	96,6	191
0011170	5 G 10	8	18,7	480,0	782	0011189	5 G 1.5	16	11,0	111,2	222
0011172	4 G 16	6	21,4	615,0	1040	0011190	7 G 1.5	16	11,8	145,2	270
0011173	5 G 16	6	24,1	768,0	1254	0011191	12 G 1.5	16	16,0	257,0	464
0011175	4 G 25	4	25,6	960,0	1501	0011192	18 G 1.5	16	18,8	382,8	679
0011176	5 G 25	4	28,8	1.200,00	1853	0011193	25 G 1.5	16	22,9	546,2	952
0011178	4 G 35	2	28,9	1.344,00	2119	0011194	3 G 2.5	14	10,9	111,1	221
0011179	5 G 35	2	32,4	1.680,00	2606	0011195	4 G 2.5	14	11,9	140,6	269
0011205	4 G 50	1	35,7	1.920,00	2898	0011196	5 G 2.5	14	12,9	167,3	325
0011206	4 G 70	2/0	43,0	2.688,00	4052	0011197	7 G 2.5	14	14,1	240,0	421
0011207	4 G 95	3/0	47,2	3.648,00	5430	30010542	12 G 2.5	14	19,3	414,9	769
0011208	4 G 120	4/0	54,2	4.608,00	6290	30010543	18 G 2.5	14	23,9	626,1	1102
ÖLFLEX® 191 CY						30010544	4 G 4	12	13,6	236,7	462
3023436	3 G 0.5	21	7,9	46,9	122	30010545	5 G 4	12	16,7	277,8	535
3025753	4 G 0.5	21	9,0	47,4	162	30010546	7 G 4	12	18,6	393,4	735
3023437	25 G 0.5	21	17,3	224,7	441	30010548	4 G 6	10	16,9	317,1	574
0011230	2 X 0.75	19	8,1	38,4	102	3023130	5 G 6	10	19,0	413,7	737
0011231	3 G 0.75	19	8,5	47,2	115	30010547	7 G 6	10	20,7	563,8	950
0011232	4 G 0.75	19	9,0	55,8	131	3023131	4 G 10	8	21,0	550,4	946
0011233	5 G 0.75	19	9,9	66,4	155	30010639	4 G 16	6	29,6	819,1	1660
0011234	7 G 0.75	19	10,5	85,9	187	3023132	4 G 25.0	4	32,0	1.164,80	2047
0011235	12 G 0.75	19	14,0	145,0	312	30010928	4 G 35.0	2	36,7	1.682,80	3261
0011236	18 G 0.75	19	16,1	198,3	413	3026535	4 G 50.0	1	42,0	2342,0	3362
0011237	25 G 0.75	19	18,9	261,5	548	0011216	3 G 70.0	2/0	45,0	2.353,00	3770
0011202	2 X 1	18	8,0	48,0	126	3025946	4 G 70.0	2/0	47,4	3007,0	4490
0011180	3 G 1	18	8,4	55,8	122	0011217	3 G 95	3/0	45,1	3.098,00	4500
0011181	4 G 1	18	9,6	80,8	157	3025947	4 G 95	3/0	50,0	4010,0	5540
0011182	5 G 1	18	10,1	89,4	183	3026536	4 G 120	4/0	56,6	5012,0	6960
0011183	7 G 1	18	10,7	99,9	207						

G = with Protective Conductor GNYE; X = without Protective Conductor
Copper price basis: EUR 150 / 100 kg
Standard lengths: (76; 152; 305; 610) m
Packaging size: Coil < 30 kg, above automatically drum
Please specify the desired make-up (e.g. 1 x 610 m drum or 8 x 75 m coils)