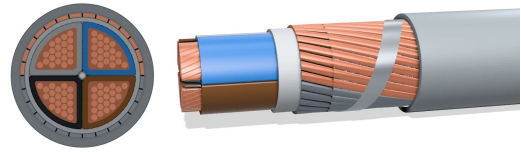


Application

VG-YMvKas Dca is a 0.6/1 kV power cable made to HD 604 part 4 section D, for fixed installation indoors and outdoors, for direct burial in free-draining soil and for installations with a risk of mechanical damage. It has a stranded class 2 copper conductor, XLPE insulation, a PVC filler, an armour of galvanised round or flat steel wires (round on the smaller, flat on the larger sizes, depending on manufacturer) together with copper wires as earth continuity conductor (ECC), held by a galvanised steel tape, and a PVC outer sheath. There is no green/yellow core: the protective earth is carried by the earth continuity conductor in the armour. The cable is available with 1 to 5 cores from 1.5 to 400 mm². Single-core cables have a magnetic steel armour. In AC circuits the armour heats up through induced currents, so single-core cables are intended for DC circuits; for AC use multicore cables.



CONSTRUCTION

Conductor	Stranded copper, class 2 acc. to IEC 60228.
Insulation	Cross-linked polyethylene (XLPE).
Filler	Polyvinyl chloride (PVC).
Armour	Galvanised round or flat steel wires with copper wires as earth continuity conductor (ECC), held by a galvanised steel tape.
Outer sheath	Polyvinyl chloride (PVC).
Core identification	Colour-coded acc. to HD 308 or numbered, to order. There is NO green/yellow earth core: the protective earth runs through the earth continuity conductor (ECC) in the armour.

ELECTRICAL & THERMAL PROPERTIES

Rated voltage Uo/U	0.6/1 kV.
Test voltage	3.5 kV AC.
Standard	HD 604 part 4 section D; conductors acc. to IEC 60228.
Flame-retardant	Acc. to IEC 60332-1-2 and IEC 60332-3-24.
Reaction to fire (CPR)	Dca-s2,d2,a3 acc. to EN 50575, all sizes.
Approval	DEKRA K42D-1-1:2017 and DEKRA K42D-1-4-D:2017 (formerly KEMA-KEUR).
Temperature range	-20 °C to +90 °C (conductor); +250 °C in short circuit.
Min. bending radius	15 × overall diameter.
Earthing	Through the earth continuity conductor in the armour. Equivalent copper cross-section per size in the table after the dimensions.

DIMENSIONS & TECHNICAL DATA

Cores × mm ²	Insulation (mm)	Ø under armour (mm)	Overall Ø (mm)	Weight (kg/km)	Cond. R @20°C (Ω/km)
1×1.5	0.7	4.4	10.2	210	12.1
1×2.5	0.7	4.7	10.5	232	7.41
1×4	0.7	5.2	11.0	261	4.61
1×6	0.7	5.7	11.5	294	3.08
1×10	0.7	6.8	13.0	431	1.83
1×16	0.7	7.7	13.9	525	1.15
1×25	0.9	9.3	15.5	656	0.727
1×35	0.9	10.3	16.5	775	0.524
1×50	1.0	11.8	18.7	1039	0.387
1×70	1.1	13.5	21.3	1439	0.268
1×95	1.1	15.3	24.1	1933	0.193
1×120	1.2	17.1	25.9	2225	0.153
1×150	1.4	18.8	27.5	2603	0.124
1×185	1.6	20.9	29.7	3076	0.0991
1×240	1.7	23.8	32.8	3752	0.0754
1×300	1.8	26.6	35.6	4493	0.0601
1×400	2.0	29.7	39.0	5414	0.0470
2×1.5	0.7	7.6	13.4	355	12.1
2×2.5	0.7	8.4	14.2	403	7.41
2×4	0.7	9.3	15.1	476	4.61
2×6	0.7	10.3	16.1	546	3.08
2×10	0.7	12.4	18.2	748	1.83
2×16	0.7	14.4	20.2	960	1.15
2×25	0.9	18.1	23.6	1357	0.727
2×35	0.9	20.1	25.6	1665	0.524
2×50	1.0	23.4	28.9	2112	0.387
2×70	1.1	26.8	32.5	2744	0.268
2×95	1.1	30.8	36.7	3570	0.193
3×1.5	0.7	8.1	13.9	387	12.1
3×2.5	0.7	8.9	14.7	444	7.41
3×4	0.7	9.9	15.7	523	4.61
3×6	0.7	11.0	16.8	622	3.08
3×10	0.7	13.2	19.0	852	1.83
3×16	0.7	15.4	21.3	1141	1.15
3×25	0.9	19.3	24.8	1599	0.727
3×35	0.9	21.5	27.0	1960	0.524
3×50	1.0	25.7	31.2	2405	0.387
3×70	1.1	29.6	35.5	3180	0.268
3×95	1.1	33.9	40.0	4146	0.193
3×120	1.2	37.8	45.3	5478	0.153
3×150	1.4	41.9	49.8	6666	0.124
3×185	1.6	46.3	54.4	8007	0.0991
3×240	1.7	52.8	61.3	10023	0.0754
3×300	1.8	58.8	67.7	12333	0.0601
4×1.5	0.7	8.8	14.6	420	12.1

Cores × mm ²	Insulation (mm)	Ø under armour (mm)	Overall Ø (mm)	Weight (kg/km)	Cond. R @20°C (Ω/km)
4×2.5	0.7	9.7	15.5	493	7.41
4×4	0.7	10.8	16.6	593	4.61
4×6	0.7	12.0	17.8	713	3.08
4×10	0.7	14.6	20.5	1008	1.83
4×16	0.7	17.0	22.9	1334	1.15
4×25	0.9	21.5	27.0	1922	0.727
4×35	0.9	23.9	29.4	2390	0.524
4×50	1.0	28.6	34.3	2988	0.387
4×70	1.1	32.9	40.2	4417	0.268
4×95	1.1	37.4	44.9	5665	0.193
4×120	1.2	42.4	50.3	6957	0.153
4×150	1.4	46.6	54.7	8355	0.124
4×185	1.6	51.5	60.0	10094	0.0991
4×240	1.7	59.1	68.0	12838	0.0754
4×300	1.8	65.6	74.9	15734	0.0601
5×1.5	0.7	9.6	15.4	463	12.1
5×2.5	0.7	10.6	16.4	548	7.41
5×4	0.7	11.8	17.6	665	4.61
5×6	0.7	13.2	19.0	812	3.08
5×10	0.7	16.0	21.9	1151	1.83
5×16	0.7	18.7	24.6	1548	1.15
5×25	0.9	24.1	30.0	2190	0.727
5×35	0.9	26.8	32.5	2744	0.524
5×50	1.0	31.4	37.3	3579	0.387
5×70	1.1	36.4	42.7	4787	0.268
5×95	1.1	41.5	49.4	6845	0.193

Earth continuity conductor: equivalent copper cross-section of armour and ECC (mm²). Values from previous manufacturer data, to be confirmed for the current supply; other sizes on request.

Nominal c.s.a. (mm ²)	Equivalent Cu c.s.a., armour + ECC (mm ²)
10	10
16	16
25	16
35	16
50	25
70	35
95	50
120	70
150	70
185	95
240	120

Current-carrying capacity (A) acc. to NEN 1010 (IEC 60364-5-52), copper, XLPE 90 °C, one multicore cable. Method C: clipped direct on a wall. Method E: in free air or on a perforated cable tray. Method D1: in a duct in the ground. Method D2: direct in the ground. Reference: 30 °C in air, 20 °C and 2.5 K·m/W in the ground. Not for single-core cables.

2 loaded conductors: 2-core, single-phase AC or DC

Size (mm ²)	C	E	D1	D2
1.5	24	26	25	27
2.5	33	36	33	35
4	45	49	43	46
6	58	63	53	58
10	80	86	71	77
16	107	115	91	100
25	138	149	116	129
35	171	185	139	155
50	209	225	164	183
70	269	289	203	225
95	328	352	239	270
120	382	410	271	306
150	441	473	306	343
185	506	542	343	387
240	599	641	395	448
300	693	741	446	502

3 loaded conductors: 3-, 4- and 5-core, three-phase AC

Size (mm ²)	C	E	D1	D2
1.5	22	23	21	23
2.5	30	32	28	30
4	40	42	36	39
6	52	54	44	49
10	71	75	58	65
16	96	100	75	84
25	119	127	96	107
35	147	158	115	129
50	179	192	135	153
70	229	246	167	188
95	278	298	197	226
120	322	346	223	257
150	371	399	251	287
185	424	456	281	324
240	500	538	324	375
300	576	621	365	419

Voltage drop (mV/A/m) acc. to BS 7671:2018, multicore cables. Up to 16 mm² only the impedance z is given.

Size (mm ²)	2-core DC	1-ph AC r	1-ph AC x	1-ph AC z	3-ph AC r	3-ph AC x	3-ph AC z
1.5	31	-	-	31	-	-	27
2.5	19	-	-	19	-	-	16
4	12	-	-	12	-	-	10
6	7.9	-	-	7.9	-	-	6.8
10	4.7	-	-	4.7	-	-	4.0
16	2.9	-	-	2.9	-	-	2.5
25	1.85	1.85	0.160	1.90	1.60	0.140	1.65
35	1.35	1.35	0.155	1.35	1.15	0.135	1.15
50	0.98	0.99	0.155	1.00	0.86	0.135	0.87
70	0.67	0.67	0.150	0.69	0.59	0.130	0.60
95	0.49	0.50	0.150	0.52	0.43	0.130	0.45
120	0.39	0.40	0.145	0.42	0.34	0.130	0.37
150	0.31	0.32	0.145	0.35	0.28	0.125	0.30
185	0.25	0.26	0.145	0.29	0.22	0.125	0.26
240	0.195	0.20	0.140	0.24	0.175	0.125	0.21
300	0.155	0.16	0.140	0.21	0.140	0.120	0.185
400	0.120	0.13	0.140	0.190	0.115	0.120	0.165

Dimensions and weights are the manufacturer's approximate values; conductor resistances are the IEC 60228 maxima at 20 °C. Current ratings are the NEN 1010 table values for one circuit and must be corrected for other installation conditions; voltage drop acc. to BS 7671:2018. All values are indicative and non-binding.