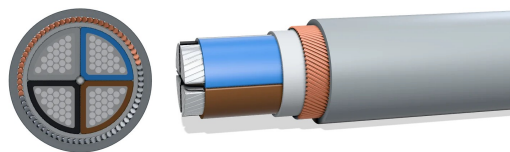


Application

VG-YMvKas Dca ALU is a 0.6/1 kV armoured power cable with aluminium conductors for general use in low-voltage installations up to 1 kV, for applications covered by NEN 1010. It is suited for direct burial, also in wet soil but not directly in water, and for installation above ground, for example as supply cable for mains and distribution boards where mechanical protection is required. Stranded class 2 aluminium conductors with XLPE insulation lie in a PVC inner sheath, surrounded by an armour of galvanised round steel wires with copper wires as earth continuity conductor (ECC), held by a galvanised steel counter-helix tape, and a grey PVC outer sheath. The aluminium conductors keep the cable light. Available with 3 and 4 cores from 35 to 300 mm².



CONSTRUCTION

Conductor	Stranded aluminium, class 2 acc. to IEC 60228, sector-shaped.
Insulation	Cross-linked polyethylene (XLPE).
Inner sheath	Polyvinyl chloride (PVC).
Armour	Galvanised round steel wires with bare round copper wires as earth continuity conductor (ECC), held by an open counter-helix of galvanised steel tape.
Outer sheath	Polyvinyl chloride (PVC), flame-retardant, UV-resistant, grey.
Core identification	Colour-coded acc. to HD 308. Standard version without green/yellow core: earth via the earth continuity conductor in the armour. Version with green/yellow core on request.

ELECTRICAL & THERMAL PROPERTIES

Rated voltage U₀/U	0.6/1 kV.
Test voltage	4 kV AC.
Max. conductor temperature	+90 °C; +250 °C in short circuit.
Operating temperature	0 °C to +80 °C.
Earthing	Through the earth continuity conductor in the armour; cross-section of the earth screen per size in the table.

INSTALLATION DATA

Min. installation temperature	0 °C.
Min. bending radius	16 × overall diameter.

STANDARDS & FIRE PERFORMANCE

Standards	HD 604 S1 and IEC 60502-1; conductors acc. to IEC 60228; core colours acc. to HD 308.
Flame-retardant	Acc. to IEC 60332-1-2.
Reaction to fire (CPR)	Dca-s2,d2,a3 acc. to EN 50575; Cca on request.

DIMENSIONS & TECHNICAL DATA

The figure after the slash is the cross-section of the earth screen in mm², as stated by the manufacturer. Conductor resistances are the IEC 60228 class 2 maxima for aluminium at 20 °C.

Cores × mm2 / earth screen mm2	Max. cond. R @20°C (Ω/km)	Overall Ø approx. (mm)	Weight approx. (kg/km)
3×35/16	0.868	24.6	1109
3×50/16	0.641	27.0	1344
3×70/20	0.443	31.7	1869
3×95/30	0.320	34.9	2272
3×95/35	0.320	35.7	2466
3×120/35	0.253	38.7	2944
3×150/45	0.206	43.0	3470
3×185/60	0.164	47.9	4518
3×240/75	0.125	53.3	5356
3×300/95	0.100	59.2	7041
4×35/16	0.868	27.2	1289
4×50/16	0.641	30.3	1593
4×70/20	0.443	35.4	2243
4×95/30	0.320	39.0	2718
4×120/35	0.253	44.1	3499
4×150/45	0.206	48.0	4150
4×185/60	0.164	53.8	5290
4×240/75	0.125	59.9	6432
4×300/95	0.100	66.1	8244

Current-carrying capacity (A) acc. to NEN 1010 (IEC 60364-5-52), aluminium, XLPE 90 °C, one multicore cable, three loaded conductors (three-phase AC). 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. Correct for grouping and other installation conditions.

Size (mm2)	C	E	D1	D2
35	112	120	90	98
50	136	146	106	117
70	174	187	130	144
95	211	227	154	172
120	245	263	174	197
150	283	304	197	220
185	323	347	220	250
240	382	409	253	290
300	440	471	286	326

Outer diameters and weights are approximate manufacturer values; conductor resistances are the IEC 60228 maxima at 20 °C. All values are indicative and non-binding.