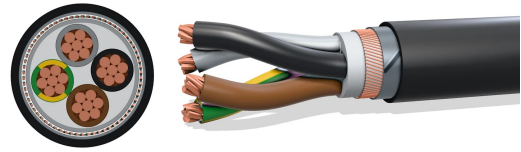


Application

EXAVB is a Belgian armoured power and distribution cable for a rated voltage of 0.6/1 kV, built to NBN HD 603-6E. It has a bare copper conductor, XLPE insulation, a common core covering, a protective circuit of copper wires, a steel armour and a flame-retardant black PVC outer sheath. The armour is size-dependent: round galvanised steel wires up to and including 10 mm², and a double steel tape from 16 mm² upwards. The cable is used in domestic and industrial installations where there is a risk of mechanical damage, in air, in cable ducts, in pipes and in the ground, with or without additional protection. It is the armoured member of the HD 603 distribution family and should not be confused with XFVB, the armoured installation cable to HD 604, which has a grey sheath, a shorter bending radius and may not be laid unprotected in the ground.



CONSTRUCTION

1. Conductor	Bare copper, solid class 1 or stranded class 2 acc. to IEC/EN 60228. Sector-shaped stranded conductors from 70 mm ² upwards.
2. Insulation	Cross-linked polyethylene (XLPE).
3. Core covering	Common covering over the laid-up cores.
4. Protective circuit	Copper wires over the core assembly. This copper protective circuit must NOT be used as the earthing conductor. Use the green/yellow core (G version) or a separate protective conductor.
5. Armour	Round galvanised steel wires of 1.2 mm up to and including 10 mm ² ; double galvanised steel tape of 2 × 0.5 mm from 16 mm ² , and 2 × 0.7 mm on the largest sizes. Single-core cables for AC use a non-magnetic copper armour instead of steel, to avoid the losses and heating that a magnetic armour would cause.
6. Outer sheath	Flame-retardant polyvinyl chloride (PVC), black.
Core identification	Colours acc. to HD 308 (S2). Available with and without a green/yellow earth core; the designation G indicates a green/yellow core, X indicates none.

ELECTRICAL & THERMAL PROPERTIES

Rated voltage Uo/U	0.6/1 kV.
Standard	NBN HD 603-6E; conductors acc. to IEC/EN 60228.
Max. conductor temperature	+90 °C.
Max. short-circuit temperature	+250 °C (max. 5 s).
Flame-retardant	Bunched-cable test acc. to IEC 60332-3-24; single cable acc. to IEC 60332-1-2. Belgian classification NBN C 30-004 F2.
Reaction to fire (CPR)	Cca-s3,d2,a3 acc. to EN 50575 / EN 50399, declared under AVCP system 1+. The class binding for a delivery is the one on its Declaration of Performance, which Q Cables can provide on request.

INSTALLATION DATA

Applications	In air, in cable ducts, in pipes, and in the ground with or without additional protection. For domestic and industrial installations where there is a risk of mechanical damage.
Min. bending radius	15 × outer diameter.
Min. installation temperature	+5 °C.
Reference conditions for the current ratings	The current ratings in the electrical table are nominal values for laying in the ground and for laying in free air. No ambient temperature, laying depth or soil thermal resistivity is specified with them, so they must be recalculated for the actual installation conditions.

DIMENSIONS & TECHNICAL DATA

Cores × mm ²	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
2 × 1.5	12.1	13.2	358
2 × 2.5	7.41	14.0	410
2 × 4	4.61	14.8	476
2 × 6	3.08	15.8	565
2 × 10	1.83	17.4	715
2 × 16 *	1.15	21.0	961
2 × 25 *	0.727	24.6	1331
2 × 35 *	0.524	27.0	1638
3 × 1.5	12.1	13.6	386
3 × 2.5	7.41	14.5	457
3 × 4	4.61	15.4	538
3 × 6	3.08	16.5	645
3 × 10	1.83	18.6	844
3 × 16	1.15	22.4	1153
3 × 25	0.727	25.8	1580
3 × 35	0.524	28.4	1971
3 × 50	0.387	32.2	2610
3 × 70	0.268	32.7	2889
3 × 95	0.193	35.7	3730
3 × 120	0.153	38.4	4518
3 × 150	0.124	43.7	5712
3 × 185	0.0991	48.3	7009
3 × 240	0.0754	53.6	8820
3 × 300	0.0601	58.2	10875
3 × 16 + 1 × 10 *	1.15	23.3	1269
3 × 25 + 1 × 16	0.727	26.8	1575
3 × 35 + 1 × 16	0.524	29.1	1905
3 × 35 + 1 × 25 *	0.524	29.9	2017
3 × 50 + 1 × 25	0.387	32.8	2534
3 × 70 + 1 × 35	0.268	36.0	3322
3 × 95 + 1 × 50	0.193	40.2	4323
3 × 120 + 1 × 70	0.153	45.0	5637
3 × 150 + 1 × 70	0.124	50.0	6634
3 × 185 + 1 × 95	0.0991	54.7	8189
3 × 240 + 1 × 120	0.0754	61.2	10285
3 × 300 + 1 × 150	0.0601	67.1	12671
4 × 1.5	12.1	14.3	430
4 × 2.5	7.41	15.3	512
4 × 4	4.61	16.3	607
4 × 6	3.08	17.5	735
4 × 10	1.83	19.8	983
4 × 16	1.15	23.9	1353
4 × 25	0.727	27.6	1692
4 × 35	0.524	30.4	2125
4 × 50	0.387	34.0	2795

Cores × mm ²	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
4 × 70	0.268	36.0	3649
4 × 95	0.193	40.6	4808
4 × 120	0.153	45.0	6117
4 × 150	0.124	50.0	7380
4 × 185	0.0991	54.7	9053
4 × 240	0.0754	61.2	11441
4 × 300	0.0601	67.5	14225
5 × 2.5 *	7.41	16.3	576
5 × 4 *	4.61	17.4	697
5 × 6 *	3.08	18.7	843
5 × 10 *	1.83	21.7	1176
5 × 16 *	1.15	25.7	1579
5 × 25 *	0.727	30.1	2227

Layer thicknesses

Cores × mm ²	Insulation (mm)	Steel wire armour (mm)	Steel tape armour (mm)	Outer sheath (mm)
2 × 1.5	0.7	1.2	-	1.8
2 × 2.5	0.7	1.2	-	1.8
2 × 4	0.7	1.2	-	1.8
2 × 6	0.7	1.2	-	1.8
2 × 10	0.7	1.2	-	1.8
2 × 16 *	0.7	-	2 × 0.5	2.0
2 × 25 *	0.9	-	2 × 0.5	2.0
2 × 35 *	0.9	-	2 × 0.5	2.0
3 × 1.5	0.7	1.2	-	1.8
3 × 2.5	0.7	1.2	-	1.8
3 × 4	0.7	1.2	-	1.8
3 × 6	0.7	1.2	-	1.8
3 × 10	0.7	1.2	-	2.0
3 × 16	0.7	-	2 × 0.5	2.0
3 × 25	0.9	-	2 × 0.5	2.0
3 × 35	0.9	-	2 × 0.5	2.0
3 × 50	1.0	-	2 × 0.5	2.0
3 × 70	1.1	-	2 × 0.5	2.2
3 × 95	1.1	-	2 × 0.5	2.2
3 × 120	1.2	-	2 × 0.5	2.2
3 × 150	1.4	-	2 × 0.7	2.4
3 × 185	1.6	-	2 × 0.7	2.6
3 × 240	1.7	-	2 × 0.7	2.8
3 × 300	1.8	-	2 × 0.7	3.0
3 × 16 + 1 × 10 *	0.7/0.7	-	2 × 0.5	2.0
3 × 25 + 1 × 16	0.9/0.7	-	2 × 0.5	2.0
3 × 35 + 1 × 16	0.9/0.7	-	2 × 0.5	2.0
3 × 35 + 1 × 25 *	0.9/0.9	-	2 × 0.5	2.0
3 × 50 + 1 × 25	1.0/0.9	-	2 × 0.5	2.2
3 × 70 + 1 × 35	1.1/0.9	-	2 × 0.5	2.2
3 × 95 + 1 × 50	1.1/1.0	-	2 × 0.5	2.2
3 × 120 + 1 × 70	1.2/1.1	-	2 × 0.7	2.4
3 × 150 + 1 × 70	1.4/1.1	-	2 × 0.7	2.6
3 × 185 + 1 × 95	1.6/1.1	-	2 × 0.7	2.8
3 × 240 + 1 × 120	1.7/1.2	-	2 × 0.7	3.0
3 × 300 + 1 × 150	1.8/1.4	-	2 × 0.7	3.2
4 × 1.5	0.7	1.2	-	1.8
4 × 2.5	0.7	1.2	-	1.8
4 × 4	0.7	1.2	-	1.8
4 × 6	0.7	1.2	-	1.8
4 × 10	0.7	1.2	-	2.0
4 × 16	0.7	-	2 × 0.5	2.0
4 × 25	0.9	-	2 × 0.5	2.0
4 × 35	0.9	-	2 × 0.5	2.0
4 × 50	1.0	-	2 × 0.5	2.2
4 × 70	1.1	-	2 × 0.7	2.2

Cores × mm ²	Insulation (mm)	Steel wire armour (mm)	Steel tape armour (mm)	Outer sheath (mm)
4 × 95	1.1	-	2 × 0.7	2.4
4 × 120	1.2	-	2 × 0.7	2.4
4 × 150	1.4	-	2 × 0.7	2.6
4 × 185	1.6	-	2 × 0.7	2.8
4 × 240	1.7	-	2 × 0.7	3.0
4 × 300	1.8	-	2 × 0.7	3.4
5 × 2.5 *	0.7	1.2	-	1.8
5 × 4 *	0.7	1.2	-	1.8
5 × 6 *	0.7	1.2	-	1.8
5 × 10 *	0.7	1.2	-	2.0
5 × 16 *	0.7	-	2 × 0.5	2.0
5 × 25 *	0.9	-	2 × 0.5	2.0

Electrical data and current-carrying capacity per cross-section

Cross-section (mm ²)	R DC @20°C (Ω/km)	R AC @90°C (Ω/km)	Short-circuit current 1 s (kA)	In ground (A)	In free air (A)
2.5	7.41	9.45	0.358	40	32
4	4.61	5.88	0.572	50	42
6	3.08	3.93	0.858	65	54
10	1.83	2.33	1.43	90	75
16	1.15	1.47	2.29	120	100
25	0.727	0.927	3.58	150	127
35	0.524	0.668	5.01	175	157
50	0.387	0.493	7.15	205	192
70	0.268	0.342	10.0	265	246
95	0.193	0.246	13.6	315	299
120	0.153	0.195	17.2	360	346
150	0.124	0.158	21.5	405	399
185	0.0991	0.126	26.5	460	456
240	0.0754	0.0961	34.3	530	538
300	0.0601	0.0766	42.9	590	620

Sizes marked * are adapted sizes within the range. Outer diameters and weights are approximate nominal values. Conductor resistances are the IEC 60228 class 1/2 maxima, which are identical for solid and stranded conductors and agree with the published values for this type. Outer diameters of this construction vary by up to about one millimetre and weights by several percent between production runs, so the outer diameter should be verified before gland sizes are fixed. All values are indicative and non-binding.