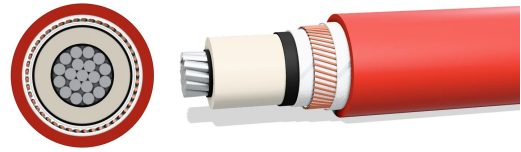


Application

EAXeCWB is a single-core medium-voltage distribution cable for the Belgian distribution grid: an aluminium conductor, cross-linked polyethylene (XLPE) insulation, a copper wire screen (CWS) with copper counter-helix, and a polyethylene (PE) outer sheath. It is a Belgian type to HD 620 S3:2023 section 10-B, broadly comparable to but not identical with the German/Dutch NA2XS(F)2Y, which is specified in section 10-C of the same HD 620 (VDE 0276-620). The 'e' denotes the longitudinally watertight metallic screen and the 'W' the polyethylene outer sheath: semi-conductive swellable water-blocking tapes under and over the wire screen stop water from travelling along the cable. EAXeCWB is intended for fixed installation, direct burial and duct laying in distribution networks; the watertight screen and PE sheath suit permanently wet ground conditions. It is available for the 8.7/15, 12/20, 18/30 and 20.8/36 kV voltage classes (dimensions per class in the tables below).



CONSTRUCTION

Conductor	Round stranded (RM) aluminium, class 2 acc. to IEC 60228.
Conductor screen	Extruded semi-conductive cross-linked compound over the conductor.
Insulation	Cross-linked polyethylene (XLPE) acc. to HD 620 S3:2023; nominal wall per voltage class (4.5 mm at 8.7/15 kV, 5.5 mm at 12/20 kV, about 8 mm at 18/30 kV, 8.8 mm at 20.8/36 kV).
Insulation screen	Extruded semi-conductive cross-linked compound, strippable.
Metallic screen	Copper wire screen (CWS) with a copper counter-helix tape, made longitudinally watertight (the 'e' in the designation) by semi-conductive swellable water-blocking tapes applied under and over the wire screen. Nominal screen 16 mm ² (25/35 mm ² for larger conductors, per design).
Outer sheath	Polyethylene (PE), red or black, UV-resistant. The EAXeCGB variant has the same screen with a flame-retardant halogen-free (HFFR) outer sheath instead of PE.

ELECTRICAL & THERMAL PROPERTIES

Voltage classes U₀/U (U_m)	8.7/15 (17.5) kV, test 30.5 kV; 12/20 (24) kV, test 42 kV; 18/30 (36) kV, test 63 kV; 20.8/36 (42) kV, test 73 kV (a.c., 3.5 U ₀ , routine test acc. to IEC 60502-2).
Standard	HD 620 S3:2023 section 10-B (Belgian types); IEC 60502-2 for 8.7/15 to 18/30 kV. Conductor IEC 60228.
Conductor	Aluminium, round stranded class 2 (RM) acc. to IEC 60228.
Metallic screen	Copper wire screen with copper counter-helix; longitudinally watertight (e).
Max. conductor temperature	+90 °C (continuous, XLPE).
Max. short-circuit temperature	+250 °C (max. 5 s).
Min. bending radius, single core	15 × overall diameter.
Reaction to fire (CPR)	Fca (EN 50575), the class declared for this construction under AVCP system 4 on the manufacturer Declarations of Performance. The CPR makes no distinction by rated voltage, so MV cables fall within its scope; the class binding for a delivery is the one on its Declaration of Performance, which Q Cables can provide on request. Halogen-free flame-retardant MV versions up to B2ca-s1a,d1,a1 are available on request.

DIMENSIONS, WEIGHTS & RATINGS PER VOLTAGE CLASS

8.7/15 kV (Um 17.5 kV, test 30.5 kV, XLPE 4.5 mm)

Nominal c.s.a. (mm ²)	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
50	0.641	25.8	663
70	0.443	27.6	770
95	0.32	29.1	865
120	0.253	30.7	979
150	0.206	33.3	1202
185	0.164	34.2	1310
240	0.125	36.6	1516
300	0.1	39.1	1745
400	0.0778	42.1	2171
500	0.0605	45.3	2543
630	0.0469	50.4	3137
800	0.0367	55.4	3826

12/20 kV (Um 24 kV, test 42 kV, XLPE 5.5 mm)

Nominal c.s.a. (mm ²)	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
50	0.641	27	700
70	0.443	28	800
95	0.32	30	900
120	0.253	31	1000
150	0.206	33	1300
185	0.164	35	1400
240	0.125	38	1600
300	0.1	40	1900
400	0.0778	43	2250
500	0.0605	46	2750
630	0.0469	51	3250
800	0.0367	57.6	3965
1000	0.0291	64.4	4850

18/30 kV (Um 36 kV, test 63 kV, XLPE about 8 mm)

Nominal c.s.a. (mm ²)	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
50	0.641	32	1000
70	0.443	34	1100
95	0.32	36	1300
120	0.253	37	1400
150	0.206	39	1600
185	0.164	41	1800
240	0.125	43	2000
300	0.1	46	2250
400	0.0778	49	2750
500	0.0605	52	3250
630	0.0469	56	3750
800	0.0367	63.4	4575
1000	0.0291	71.3	5580

20.8/36 kV (Um 42 kV, test 73 kV, XLPE 8.8 mm)

Nominal c.s.a. (mm ²)	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
70	0.443	38.4	1318
95	0.32	40.1	1467
120	0.253	41.8	1601
150	0.206	43.5	1829
185	0.164	45.5	2019
240	0.125	47.9	2265
300	0.1	51.1	2590
400	0.0778	54.7	2973
500	0.0605	57.5	3502
630	0.0469	61.4	4082
800	0.0367	65.6	4747
1000	0.0291	71.3	5636

Green code AL/XLPE/CWS/PE, for EAXeCWB (PE outer sheath); the halogen-free EAXeCGB differs only in the outer sheath (G). Outer diameters and weights are nominal manufacturer values for the single-core aluminium construction per voltage class; conductor resistances are the IEC 60228 class-2 aluminium nominals at 20 °C. The copper wire screen cross-section is selected per design and voltage class. All values are indicative and non-binding.