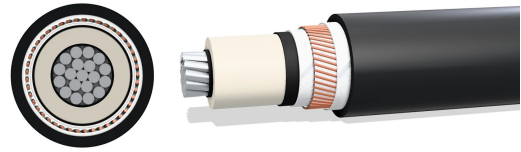


Application

NA2XS(F)2Y is a single-core, cross-linked polyethylene (XLPE) insulated medium-voltage power cable with an aluminium conductor, for public and industrial distribution and utility networks. NA2XS(F)2Y is the German type to HD 620 S3:2023, section 10-C

(VDE 0276-620); the Belgian EAXeCWB is specified in section 10-B

of the same HD 620 and is a comparable but not identical cable. The compacted stranded aluminium conductor carries an extruded semi-conductive conductor screen, the XLPE insulation and an extruded semi-conductive insulation screen; a concentric copper wire screen (CWS) with a counter-helix copper tape forms the metallic screen and earth/short-circuit path. The (F) design is longitudinally watertight: swellable water-blocking tapes in the screen area stop water travelling along the cable if the sheath is damaged, and a polyethylene (2Y) outer sheath completes the cable. It is suitable for direct burial, installation in ducts and in air, and is available for the 6/10, 8.7/15, 12/20, 18/30 and 20.8/36 kV voltage classes (dimensions per class in the tables below).



CONSTRUCTION

Conductor	Circular stranded, compacted aluminium, class 2 (RM) acc. to IEC 60228.
Conductor screen	Extruded semi-conductive compound, bonded to the insulation.
Insulation	Cross-linked polyethylene (XLPE); nominal thickness per voltage class (3.4 mm at 6/10 kV, 4.5 mm at 8.7/15 kV, 5.5 mm at 12/20 kV, 8.0 mm at 18/30 kV, 8.8 mm at 20.8/36 kV).
Insulation screen	Extruded semi-conductive compound, bonded to the insulation.
Metallic screen	Concentric copper wire screen (CWS) with a counter-helix copper tape; nominal screen cross-section 16 to 50 mm ² according to conductor size, shown in the size designation 1×conductor/screen.
Longitudinal water barrier	(F): semi-conductive swellable water-blocking tape under the copper wire screen; over the screen a further water-blocking tape or a separating tape, depending on manufacturer (longitudinally watertight). No metallic laminate: the radially watertight version with an Al/PE laminated sheath is designated (FL).
Outer sheath	Polyethylene (2Y / MDPE), black or red; halogen-free, UV-resistant.
Metre marking	Yes.

ELECTRICAL & THERMAL PROPERTIES

Voltage classes U_o/U (U_m)	6/10 (12) kV, test 21 kV; 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 72.8 kV (AC, 5 min).
Standard	HD 620 S3:2023 part 10-C / DIN VDE 0276-620 for 6/10, 12/20 and 18/30 kV; IEC 60502-2 for 8.7/15 kV; 20.8/36 kV constructed following DIN VDE 0276-620. Conductors acc. to IEC 60228.
Conductor	Aluminium, class 2 (RM) acc. to IEC 60228.
Metallic screen	Copper wire screen (CWS) with counter-helix.
Max. conductor temperature	+90 °C (normal operation).
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
6/10 kV (Um 12 kV, test 21 kV, XLPE 3.4 mm)

Nominal c.s.a. (mm ²)	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
50	0.641	23	550
70	0.443	24	650
95	0.32	26	750
120	0.253	27	850
150	0.206	29	1100
185	0.164	31	1200
240	0.125	33	1400
300	0.1	36	1600
400	0.0778	39	2000
500	0.0605	42	2500
630	0.0469	46	3000

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

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	29.1	860
70	0.443	30.4	1040
95	0.32	32.2	1260
120	0.253	33.4	1500
150	0.206	35.1	1620
185	0.164	36.7	1770
240	0.125	38.8	1980
300	0.1	40.9	2200
400	0.0778	43.8	2510
500	0.0605	47.3	2940
630	0.0469	51.3	3460

18/30 kV (Um 36 kV, test 63 kV, XLPE 8.0 mm)

Nominal c.s.a. (mm ²)	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
50	0.641	37	1250
70	0.443	38	1500
95	0.32	40	1700
120	0.253	42	1800
150	0.206	43	2050
185	0.164	45	2150
240	0.125	47	2400
300	0.1	50	2700
400	0.0778	53	3200
500	0.0605	56	3555
630	0.0469	58	3790

20.8/36 kV (Um 42 kV, test 72.8 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: aluminium conductor, XLPE insulation with inner/outer semi-conducting layers, concentric copper wire screen (CWS) with counter-helix, longitudinal water barrier (F), PE outer sheath. Conductor resistances are the IEC 60228 class-2 aluminium nominal values at 20 °C; outer diameters and weights are nominal manufacturer values per voltage class. All values are indicative and non-binding.