

## 7 Overhead Lines

### 7.1 Aerial Bundled Cables (ABC) with messenger neutral core

Application: Aerial bundled cables are mainly used for secondary overhead lines on poles or as feeders to residential premises

#### Engineering Specifications

Type	: Al/XLPE
Standard	: NF C 33-209
Nominal Voltage	: 600/1000V
Insulating Sheath	: XLPE compound
Packing	: The ABC are delivered on non-returnable wooden drums



ABC – 3xA mm<sup>2</sup> Al/XLPE + NxAm<sup>2</sup> Al alloy/XLPE + KxAmm<sup>2</sup> Cu/XLPE  
(A-Cross sectional area of conductor, N-Neutral (Al alloy), K-no of cores for public lighting)

#### Technical Information

Nominal Area of Conductor	No / Stranding wire diameter			Insulation Thickness			Conductor DC Resistance			Max. Breaking Strength			Nominal Drum Length	Drum size
	Phase	Neutral	Street lighting	Phase	Neutral	Street lighting	Phase	Neutral	Street lighting	Phase	Neutral	Street lighting		
mm <sup>2</sup>	x/mm	x/mm	x/mm	mm	mm	mm	Ω/km	Ω/km	Ω/km	daN	daN	daN	m	
3x25 + N 54.6 + 1x16	7/2.14	7/3.15	7/1.7	1.4	1.6	1.2	1.2	0.63	1.91	300	1660	190	1000	Kel 28
3x35 + N 54.6 + 1x16	7/2.52	7/3.15	7/1.7	1.6	1.6	1.2	0.868	0.63	1.91	420	1660	190	1000	Kel 30
3x50 + N 54.6 + 1x16	7/3.0	7/3.15	7/1.7	1.6	1.6	1.2	0.641	0.63	1.91	600	1660	190	700	Kel 29
3x70 + N 54.6 + 1x16	12/2.74	7/3.15	7/1.7	1.8	1.6	1.2	0.443	0.63	1.91	840	1660	190	650	Kel 29
3x70 + N 54.6 + 1x25	12/2.74	7/3.15	7/2.14	1.8	1.6	1.4	0.443	0.63	1.20	840	1660	300	600	Kel 29
3x70 + N 70 + 1x16	12/2.74	7/3.5	7/1.7	1.8	1.5	1.2	0.443	0.50	1.91	840	2050	190	600	Kel 29
3x95 + N 70 + 1x16	19/2.52	7/3.5	7/1.7	1.8	1.5	1.2	0.320	0.50	1.91	1140	2050	190	500	Kel 28
3x120 + N 70 + 1x16	19/2.83	7/3.5	7/1.7	1.8	1.5	1.2	0.253	0.50	1.91	1440	2050	190	450	Kel 28
3x120 + N 95 + 1x16	19/2.83	7/4.16	7/1.7	1.8	1.6	1.2	0.253	0.343	1.91	1440	2750	190	425	Kel 28
3x150 + N 70 + 1x16	19/3.15	7/3.5	7/1.7	1.7	1.5	1.2	0.206	0.50	1.91	1800	2050	190	400	Kel 28
3x150 + N 95 + 1x16	19/3.15	7/4.16	7/1.7	1.7	1.6	1.2	0.206	0.343	1.91	1800	2750	190	400	Kel 28

Nominal Area of Conductor	Current carrying capacity		Voltage Drop	Min Bending Radius (Bundle)	Approximate overall diameter	Approximate Weight
	Phase conductor	Street lighting conductor				
	A	A	mV/A/m	mm	mm	kg/km
3x25 + N 54.6 + 1x16	112	83	2.2	229	30	580.7
3x35 + N 54.6 + 1x16	138	83	1.65	229	33	687.8
3x50 + N 54.6 + 1x16	168	83	1.27	229	36	801.6
3x70 + N 54.6 + 1x16	213	83	0.87	243	37.5	1042.3
3x70 + N 54.6 + 1x25	213	111	0.87	243	40	1077.3
3x70 + N 70 + 1x16	213	83	0.87	243	41	1079.9
3x95 + N 70 + 1x16	258	83	0.67	266	44	1262.8
3x120 + N 70 + 1x16	300	83	0.55	284	46	1417.1
3x120 + N 95 + 1x16	300	83	0.55	284	47	1480.3
3x150 + N 70 + 1x16	344	83	0.46	315	48	1727.5
3x150 + N 95 + 1x16	344	83	0.46	315	49	1790.7