

Self Supporting Low Voltage Aerial Cables (3 Phases , 5 Cores)

Construction : Phase and Lighting conductor : Stranded and Compacted Aluminum According to IEC 60228 (ISIRI 3084)
 Neutral and Messenger : Stranded Aluminum Alloy
 Insulation : Black Cross-Linked Polyethylene (XLPE)

Standard : Tavanir Work-Instruction



Cable Type 3x(Phase) +(Lighting) +(Neutral and Messenger)	Phase Cores			Lighting Core			Neutral and Messenger core			Approx. outer diameter	Approx. weight per kilometer	Current Capacity	DC Resistance of Phases at 20°C	Messenger Breaking Load min.
	Conductor Dia.	Insulation Thickness	Insulated Core Dia.	Conductor Dia.	Insulation Thickness	Insulated Core Dia.	Conductor Dia.	Insulation Thickness	Insulated Core Dia.					
No.xmm ²	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	A	Ω / km	kN
3x35+16+50	7	1.6	10.2	4.8	1.2	7.2	9.45	1.6	12.7	28	682	102	0.868	15.3
3x50+16+50	8.1	1.6	11.3	4.8	1.2	7.2	9.45	1.6	12.7	29.5	805	124	0.641	15.3
3x70+16+70	9.7	1.8	13.3	4.8	1.2	7.2	10.8	1.8	14.4	33.5	1080	158	0.443	20
3x95+25+70	11.2	1.8	14.8	6.1	1.4	8.9	10.8	1.8	14.4	37	1350	190	0.320	20
3x120+25+70	12.8	1.8	16.4	6.1	1.4	8.9	10.8	1.8	14.4	40	1555	240	0.253	20

Self Supporting Low Voltage Aerial Cables (3 Phases , 6 Cores)

Construction : Phase , Lighting , Neutral Conductor : Stranded and Compacted Aluminum According to IEC 60228 (ISIRI 3084)
 Messenger : Stranded Galvanized Steel Wire
 Insulation : Black Cross-Linked Polyethylene (XLPE)

Standard : Tavanir Work-Instruction



Cable Type 3x(Phase) +(Neutral) + (Lighting) + (Messenger)	Phase Cores			Neutral Core			Lighting Core			Messenger core			Approx. outer diameter	Approx. weight per kilometer	Current Capacity	DC Resistance of Phases at 20°C	Messenger Breaking Load min.
	Conductor Dia.	Insulation Thickness	Insulated Core Dia.	Conductor Dia.	Insulation Thickness	Insulated Core Dia.	Conductor Dia.	Insulation Thickness	Insulated Core Dia.	Conductor Dia.	Insulation Thickness	Insulated Core Dia.					
No.xmm ²	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	A	Ω / km	kN
3x35+35+25+25	7	1.6	10.2	7	1.6	10.2	6.1	1.4	8.9	5.8	1.2	8.2	29	824	102	0.868	33.8
3x50+50+25+25	8.1	1.6	11.3	8.1	1.6	11.3	6.1	1.4	8.9	5.8	1.2	8.2	31	990	124	0.641	33.8
3x70+70+25+25	9.7	1.8	13.3	9.7	1.8	13.3	6.1	1.4	8.9	5.8	1.2	8.2	35	1260	158	0.443	33.8
3x95+95+25+25	11.2	1.8	14.8	11.2	1.8	14.8	6.1	1.4	8.9	5.8	1.2	8.2	38	1574	190	0.320	33.8
3x120+120+25+25	12.8	1.8	16.4	12.8	1.8	16.4	6.1	1.4	8.9	5.8	1.2	8.2	41	1850	240	0.253	33.8

Self Supporting Low Voltage Aerial Cables (1 Phases , With lighting core and Without lighting core)

Construction : Phase , Lighting , Neutral Conductor : Stranded and Compacted Aluminum According to IEC 60228 (ISIRI 3084)

Messenger : Stranded Galvanized Steel Wire

Insulation : Black Cross-Linked Polyethylene (XLPE)

Standard : Tavanir Work-Instruction



Cable Type 1x(Phase) +(Neutral) + (Lighting) + +(Messenger)	Phase Cores			Neutral Core			Lighting Core			Messenger core			Approx. outer diameter	Approx. weight per kilometer	Current Capacity	DC Resistance of Phases at 20°C	Messenger Breaking Load min.
	Conductor Dia.	Insulation Thickness	Insulated Core Dia.	Conductor Dia.	Insulation Thickness	Insulated Core Dia.	Conductor Dia.	Insulation Thickness	Insulated Core Dia.	Conductor Dia.	Insulation Thickness	Insulated Core Dia.					
No.xmm ²	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	A	Ω	kN
1x25+25+16+16	6.1	1.4	8.9	6.1	1.4	8.9	4.8	1.2	7.2	4.7	1.2	7.1	19.5	392	83	1.20	21.35
1x35+35+16+25	7	1.6	10.2	7	1.6	10.2	4.8	1.2	7.2	5.8	1.2	8.2	22	523	102	0.868	33.8
1x16+16+16	4.8	1.2	7.2	4.8	1.2	7.2	-	-	-	4.7	1.2	7.1	15.5	260	71.6	1.91	21.35
1x25+25+16	6.1	1.4	8.9	6.1	1.4	8.9	-	-	-	4.7	1.2	7.1	18	327	83	1.20	21.35

Technical Characteristics

A : Technical Characteristics of Phase , Lighting and Neutral Aluminum Cores

No.	Characteristics	Unit	Cross-Section							
1	Nominal Conductor Cross-Section	mm ²	16	25	35	50	70	95	120	
2	Conductor Wire No.	-	7	7	7	7	19	19	19	
3	Nominal Conductor Wire Diameter (Before Stranding)	mm	1.72	2.2	2.6	3.00	2.20	2.60	2.83	
4	Compacted Conductor Dia.	Min	mm	4.6	5.8	6.8	7.9	9.7	11.0	12
		Max	mm	4.8	6.1	7.3	8.4	10.2	12.0	13
5	Outer Core Dia. (with insulation)	Min	mm	7	8.6	10	11.1	13.3	14.6	15.6
		Max	mm	7.5	9.2	10.8	11.9	14.1	15.8	16.7
6	Min. Insulation Mean Thickness	mm	1.2	1.4	1.6	1.6	1.8	1.8	1.8	
7	Max. Insulation Mean Thickness	mm	1.5	1.7	2	2	2.2	2.4	2.4	
8	Min. Insulation Thickness At Any Point	mm	0.98	1.16	1.34	1.34	1.52	1.52	1.52	
9	Conductor DC Resistance at 20 °C	Ω/km	1.91	1.2	0.868	0.641	0.443	0.320	0.253	

B : Technical Characteristics of Neutral and Messenger Aluminum Alloy Core

No.	Characteristics		unit	Cross-Section	
1	Nominal Conductor Cross-Section		mm ²	50	70
2	Conductor Wire No.		-	7	7
3	Nominal Conductor Wire Diameter (Before Stranding)		mm	3.15	3.61
4	Non-Compacted Neutral and Messenger conductor Dia. (Without Insulation)	Min	mm	9.2	10.7
		Max	mm	9.6	11
5	Outer Core Dia. (with insulation)	Min	mm	12.4	13.9
		Max	mm	13	14.4
6	Minimum Breaking Load		N	15300	20000
7	Min. Insulation Mean Thickness		mm	1.6	1.6
8	Max. Insulation Mean Thickness		mm	1.9	1.9
9	Min. Insulation Thickness At Any Point		mm	1.34	1.34
10	Conductor DC Resistance at 20 °C		Ω/km	0.630	0.5

C : Technical Characteristics of Messenger Galvanized Steel Core

No.	Characteristics		unit	Cross-Section	
1	Nominal Messenger Cross-Section (Non Compacted)		mm ²	16	25
2	Messenger Wire No.		-	7	7
3	Nominal Messenger Wire Diameter (Before Stranding)		mm	1.57	1.93
4	Core Dia. (without insulation)	Min	mm	4.61	5.7
		Max	mm	4.81	5.9
5	Core Dia. (with insulation)	Min	mm	7.5	8.8
		Max	mm	8	9.3
6	Minimum Breaking Load		kN	21.35	33.8
7	Min. Insulation Mean Thickness		mm	1.2	1.2
8	Max. Insulation Mean Thickness		mm	1.4	1.5
9	Min. Insulation Thickness At Any Point		mm	1	1.1
10	Direction of lay of messenger (internal layer)		-	Left-hand	Left-hand
11	Direction of lay of messenger (external Layer)		-	Right-hand	Right-hand