A-2Y(L)2Yv S(H45)

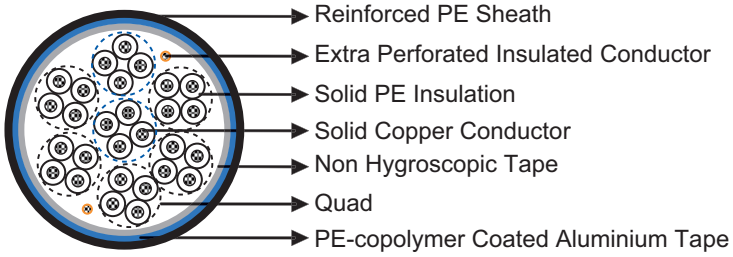
Applications

The cables are designed for transmission of low frequent signals up to 90 KHz through symmetric circuits in railway networks, and are suitable for laying directly into the ground or in ducts.

Standards

- Dlk 1.013.109y
- Dlk 1.013.110y

Construction



- Conductors: Solid annealed copper, 0.9 or 1.4 mm nominal diameter.
- Insulation: Solid polyethylene.
- Cabling Element: Four insulated conductors are twisted together to form a quad.
- Stranding: Quads are helically stranded in concentric layers. Cables from 7 quads on, have two extra conductors of 0.5mm with perforated insulation (surveillance conductors).
- Core Wrapping: Plastic tape(s) with overlapping.
- Moisture Barrier: One laminated sheath made of aluminium tape (0.15mm) coated with PE-Copolymer on at least one side is applied with longitudinally overlap.
- Outer Sheath: Polyethylene, with reinforced radial thickness.

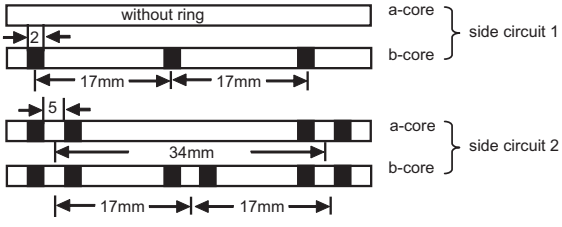
Type Codes

A–	outdoor cable	2Y	solid PE conductor insulation
(L)2Yv	laminated sheath with increased wall thickness	S	signal cable
LG	layer stranding	H(n)	operating capacity

Ring marking of Quad

The single core is identified by black ring markings:

Side Circuit 1	a-wire	without marking
	b-wire	1 mark distance 17mm
Side Circuit 2	a-wire	2 marks distance 34mm
	b-wire	2 marks distance 17mm



Electrical Characteristics at 20℃

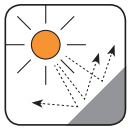
Nominal Conductor Diameter	mm	0.9	1.4
Maximum Conductor Resistance	Ω/km	56.6	23.4
Minimum Insulation Resistance @500 V DC (1min)	MΩ.km	10000	10000
Maximum Conductor Capacitance @800Hz (AC)	nF/km	45	45
Maximum Capacitance Unbalance @800Hz			
K_1 (100% / 50% all values)	pF/km	650/150	650/150
$K_{9\text{-}12}$ neighboured quads	pF/km	500/150	500/150
$K_{9\text{-}12}$ over-neighboured quads	pF/km	150	150
$ea_{1/2}$	pF/km	1300	1300
Minimum Far-end Crosstalk Attenuation @90KHz			
100% / 80% all values	dB/km	58/62	33/45
Maximum Attenuation @90KHz	dB/km	3.3	2.6
Dielectric Strength, conductor to conductor (DC voltage 1min)	V	3535	3535
Surveillance Conductors			
Loop resistance, maximum	Ω/km	190	190
Insulation resistance			
- dry cable core, minimum	MΩ.km	1000	1000
- wet cable core, maximum	KΩ.km	30	30
Operating Voltage AC/DC	V	420/600	420/600
Test Voltage @50 Hz 1 min			
Core to Core	V_{eff}	2500	2500
Core to Screen	V_{eff}	2500	2500

Mechanical and Thermal Properties

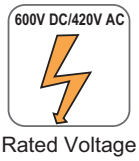
- Minimum Bending Radius: 7.5×OD
- Temperature Range: -40℃ to +60℃ (during operation); -10℃ +60℃ (during installation)

Dimensions and Weight

Cable Code	Number of Quads	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
0.9mm Conductor, 1.8mm Insulated Wire				
RS109y-2Y(L)2Yv-1Q0.9-S(H45)	1	2.0	10.0	95
RS109y-2Y(L)2Yv-3Q0.9-S(H45)	3	2.0	15.0	200
RS109y-2Y(L)2Yv-5Q0.9-S(H45)	5	2.0	17.0	280
RS109y-2Y(L)2Yv-7Q0.9-S(H45)	7	2.0	19.0	360
RS109y-2Y(L)2Yv-10Q0.9-S(H45)	10	2.0	22.0	480
RS109y-2Y(L)2Yv-14Q0.9-S(H45)	14	2.0	25.0	620
RS109y-2Y(L)2Yv-20Q0.9-S(H45)	20	2.0	28.0	830
RS109y-2Y(L)2Yv-30Q0.9-S(H45)	30	2.2	34.0	1200
RS109y-2Y(L)2Yv-40Q0.9-S(H45)	40	2.2	38.0	1550
1.4mm Conductor, 2.8mm Insulated Wire				
RS109y-2Y(L)2Yv-1Q1.4-S(H45)	1	2.0	12.0	150
RS109y-2Y(L)2Yv-3Q1.4-S(H45)	3	2.0	19.0	350
RS109y-2Y(L)2Yv-5Q1.4-S(H45)	5	2.0	22.0	530
RS109y-2Y(L)2Yv-7Q1.4-S(H45)	7	2.0	24.0	690
RS109y-2Y(L)2Yv-10Q1.4-S(H45)	10	2.0	29.0	950
RS109y-2Y(L)2Yv-14Q1.4-S(H45)	14	2.2	33.0	1280
RS109y-2Y(L)2Yv-20Q1.4-S(H45)	20	2.2	39.0	1750
RS109y-2Y(L)2Yv-30Q1.4-S(H45)	30	2.2	46.0	2550
RS109y-2Y(L)2Yv-40Q1.4-S(H45)	40	2.2	53.0	3320

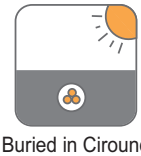

UV Resistant


Water Resistant



Rated Voltage


Laid In Ducts


Buried in Ciround

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1