



## AJ-2Y2YDB2Y S(H115)/S(H145)/S(H95)

### Applications

The cables are designed for transmission of service tensions up to 600 VDC / 420 V<sub>eff</sub> AC100Hz in railway signalling networks, and are suitable for installation in ducts or laying directly into the ground.

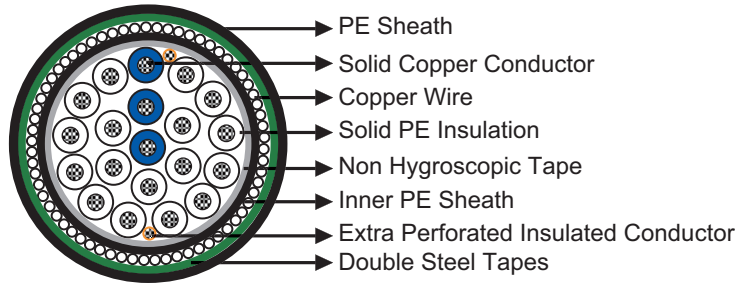


### Standards

- Dlk 1.013.107y
- Dlk 1.013.107y
- Dlk 1.013.108y (for 1.4/1.8mm conductor H95 type)
- Dlk 1.013.110y

### Construction

- Conductors: Solid annealed copper, 0.9, 1.4 or 1.8 mm nominal diameter.
- Insulation: Solid polyethylene.
- Stranding: Single conductors are helically stranded in concentric layers. Cables from 14 conductors on have two extra conductors of 0.5mm with perforated insulation (surveillance conductors).
- Core Wrapping: Plastic tape(s) with overlapping.
- Inner Sheath: Low density polyethylene.
- Electrostatic Shield: One layer of helically applied copper wires (0.9, 1.2, 1.4 or 1.8mm).
- Electromagnetic Shield: Two helically applied steel tapes (0.5 or 0.8mm thick, depending on required reduction factor).
- Outer Sheath: Low density polyethylene.



### Type Codes

AJ-	outdoor cable with protection against inductive influences
2Y	solid PE conductor insulation
2Y	inner PE sheath
D	copper wire concentric screen
B	steel tape armor
2Y	outer PE sheath
S	signal cable
LG	layer stranding
H (n)	operating capacity

## Electrical Characteristics at 20°C

Nominal Conductor Diameter	mm	0.9	1.4	1.8
Maximum Conductor Resistance	Ω/km	28.9	11.9	7.2
Minimum Insulation Resistance @500 V DC (1min)	MΩ.km	10000	10000	10000
Maximum Mutual Capacitance @800Hz (AC)	nF/km	115	145/95*	145/95*
Dielectric Strength, conductor to conductor (DC voltage 1min)	V	3535	3535	3535
Surveillance Conductors				
Loop resistance, maximum	Ω/km	190	190	190
Insulation resistance				
- dry cable core, minimum	MΩ.km	1000	1000	1000
- wet cable core, maximum	KΩ.km	30	30	30
Nominal Reduction Factor @ 100 V/km, 16 2/3 Hz				
rk 401 series		0.15	0.15	0.15
rk 501 series		0.35	0.35	0.35
rk 601 series		0.55	0.55	0.55
Operating Voltage AC/DC	V	420/600	420/600	420/600
Test Voltage@50 Hz 1 min				
Core to Core	V <sub>eff</sub>	2500	2500	2500
Core to Screen	V <sub>eff</sub>	2500	2500	2500

\*The value "95" is only for cables with 1.4/1.8mm conductors according to Dlk 1.013.108y.

## Mechanical and Thermal Properties

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

## Dimensions and Weight

AJ-2Y2YDB2Y n × 1 × 0.9 S(H115)

Cable Code	Number of conductors (n)	Nominal Sheath Thickness mm		Nominal Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
0.9mm Conductor, 1.55mm Insulated Wire rk 601 Series					
RS107y-2Y2YDB2Y-10C0.9-S(H115)-R6	10	1.3	1.2	19.0	520
RS107y-2Y2YDB2Y-20C0.9-S(H115)-R6	20	1.3	1.2	20.0	650
RS107y-2Y2YDB2Y-30C0.9-S(H115)-R6	30	1.3	1.2	22.0	780
RS107y-2Y2YDB2Y-50C0.9-S(H115)-R6	50	1.3	1.2	25.0	1010
RS107y-2Y2YDB2Y-80C0.9-S(H115)-R6	80	1.3	1.2	29.0	1330
RS107y-2Y2YDB2Y-120C0.9-S(H115)-R6	120	1.3	1.3	32.0	1740
RS107y-2Y2YDB2Y-160C0.9-S(H115)-R6	160	1.3	1.3	35.0	2310
RS107y-2Y2YDB2Y-200C0.9-S(H115)-R6	200	1.3	1.3	38.0	2520
0.9mm Conductor, 1.55mm Insulated Wire rk 501 Series					
RS107y-2Y2YDB2Y-10C0.9-S(H115)-R5	10	1.3	1.2	19.0	600
RS107y-2Y2YDB2Y-20C0.9-S(H115)-R5	20	1.3	1.2	20.0	740
RS107y-2Y2YDB2Y-30C0.9-S(H115)-R5	30	1.3	1.2	22.0	890
RS107y-2Y2YDB2Y-50C0.9-S(H115)-R5	50	1.3	1.3	25.0	1150
RS107y-2Y2YDB2Y-80C0.9-S(H115)-R5	80	1.3	1.3	29.0	1480
RS107y-2Y2YDB2Y-120C0.9-S(H115)-R5	120	1.5	1.3	32.0	1910
RS107y-2Y2YDB2Y-160C0.9-S(H115)-R5	160	1.5	1.3	35.0	2530
RS107y-2Y2YDB2Y-200C0.9-S(H115)-R5	200	1.5	1.5	38.0	2730



## AJ-2Y2YDB2Y n x 1 x 1.4/1.8 S(H145)

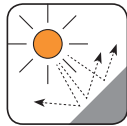
Cable Code	Number of conductors (n)	Nominal Sheath Thickness mm		Nominal Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
1.4mm Conductor, 2.2mm Insulated Wire rk 601 Series					
RS107y-2Y2YDB2Y-10C1.4-S(H145)-R6	10	1.3	1.2	21	670
RS107y-2Y2YDB2Y-20C1.4-S(H145)-R6	20	1.3	1.2	23.5	940
RS107y-2Y2YDB2Y-30C1.4-S(H145)-R6	30	1.3	1.2	27	1180
RS107y-2Y2YDB2Y-50C1.4-S(H145)-R6	50	1.3	1.2	31	1650
RS107y-2Y2YDB2Y-80C1.4-S(H145)-R6	80	1.3	1.2	35	2270
RS107y-2Y2YDB2Y-120C1.4-S(H145)-R6	120	1.3	1.3	41	3110
RS107y-2Y2YDB2Y-160C1.4-S(H145)-R6	160	1.3	1.3	46	3900
RS107y-2Y2YDB2Y-200C1.4-S(H145)-R6	200	1.3	1.3	49	4670
1.4mm Conductor, 2.2mm Insulated Wire rk 501 Series					
RS107y-2Y2YDB2Y-10C1.4-S(H145)-R5	10	1.3	1.2	21	780
RS107y-2Y2YDB2Y-20C1.4-S(H145)-R5	20	1.3	1.2	23.5	1070
RS107y-2Y2YDB2Y-30C1.4-S(H145)-R5	30	1.3	1.2	26	1320
RS107y-2Y2YDB2Y-50C1.4-S(H145)-R5	50	1.3	1.3	31	1810
RS107y-2Y2YDB2Y-80C1.4-S(H145)-R5	80	1.3	1.3	35	2460
RS107y-2Y2YDB2Y-120C1.4-S(H145)-R5	120	1.5	1.3	42	3380
RS107y-2Y2YDB2Y-160C1.4-S(H145)-R5	160	1.5	1.3	46	4190
RS107y-2Y2YDB2Y-200C1.4-S(H145)-R5	200	1.5	1.5	49	5000
1.4mm Conductor, 2.2mm Insulated Wire rk 401 Series					
RS107y-2Y2YDB2Y-10C1.4-S(H145)-R4	10	1.3	1.2	23	960
RS107y-2Y2YDB2Y-20C1.4-S(H145)-R4	20	1.3	1.2	25.6	1260
RS107y-2Y2YDB2Y-30C1.4-S(H145)-R4	30	1.3	1.3	28	1940
RS107y-2Y2YDB2Y-50C1.4-S(H145)-R4	50	1.3	1.3	33	2450
RS107y-2Y2YDB2Y-80C1.4-S(H145)-R4	80	1.5	1.3	38	3280
RS107y-2Y2YDB2Y-120C1.4-S(H145)-R4	120	1.5	1.5	44	4290
RS107y-2Y2YDB2Y-160C1.4-S(H145)-R4	160	1.5	1.5	48	5200
RS107y-2Y2YDB2Y-200C1.4-S(H145)-R4	200	1.5	1.5	52	6060
1.8mm Conductor, 2.7mm Insulated Wire rk 601 Series					
RS107y-2Y2YDB2Y-10C1.8-S(H145)-R6	10	1.3	1.2	23	850
RS107y-2Y2YDB2Y-20C1.8-S(H145)-R6	20	1.3	1.2	27	1260
RS107y-2Y2YDB2Y-30C1.8-S(H145)-R6	30	1.3	1.3	30	1620
RS107y-2Y2YDB2Y-50C1.8-S(H145)-R6	50	1.3	1.3	36	2080
RS107y-2Y2YDB2Y-80C1.8-S(H145)-R6	80	1.5	1.3	41	3310
RS107y-2Y2YDB2Y-120C1.8-S(H145)-R6	120	1.5	1.5	48	4570
RS107y-2Y2YDB2Y-160C1.8-S(H145)-R6	160	1.5	1.5	54	5950
RS107y-2Y2YDB2Y-200C1.8-S(H145)-R6	200	1.5	1.5	58	6970
1.8mm Conductor, 2.7mm Insulated Wire rk 501 Series					
RS107y-2Y2YDB2Y-10C1.8-S(H145)-R5	10	1.3	1.2	23	970
RS107y-2Y2YDB2Y-20C1.8-S(H145)-R5	20	1.3	1.2	27	1410
RS107y-2Y2YDB2Y-30C1.8-S(H145)-R5	30	1.3	1.3	30	1780
RS107y-2Y2YDB2Y-50C1.8-S(H145)-R5	50	1.3	1.3	36	2520
RS107y-2Y2YDB2Y-80C1.8-S(H145)-R5	80	1.5	1.3	42	3570
RS107y-2Y2YDB2Y-120C1.8-S(H145)-R5	120	1.5	1.5	49	5950
RS107y-2Y2YDB2Y-160C1.8-S(H145)-R5	160	1.5	1.5	55	6170
RS107y-2Y2YDB2Y-200C1.8-S(H145)-R5	200	1.5	1.5	59	7380
1.8mm Conductor, 2.7mm Insulated Wire rk 401 Series					
RS107y-2Y2YDB2Y-10C1.8-S(H145)-R4	10	1.3	1.2	25	1160
RS107y-2Y2YDB2Y-20C1.8-S(H145)-R4	20	1.3	1.2	29	1700
RS107y-2Y2YDB2Y-30C1.8-S(H145)-R4	30	1.3	1.3	32	2400
RS107y-2Y2YDB2Y-50C1.8-S(H145)-R4	50	1.3	1.3	38	3350
RS107y-2Y2YDB2Y-80C1.8-S(H145)-R4	80	1.5	1.3	44	3310
RS107y-2Y2YDB2Y-120C1.8-S(H145)-R4	120	1.5	1.5	51	4900
RS107y-2Y2YDB2Y-160C1.8-S(H145)-R4	160	1.5	1.5	57	7340
RS107y-2Y2YDB2Y-200C1.8-S(H145)-R4	200	1.5	1.5	61	8650

AJ-2Y2YDB2Y n x 1 x 1.4/1.8 S(H95)

Cable Code	Number of conductors (n)	Nominal Sheath Thickness mm		Nominal Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
1.4mm Conductor, 2.7mm Insulated Wire rk 501 Series					
RS108y-2Y2YDB2Y-10C1.4-S(H95)-R5	10	1.3	1.2	22.0	900
RS108y-2Y2YDB2Y-14C1.4-S(H95)-R5	14	1.3	1.2	24.0	1010
RS108y-2Y2YDB2Y-20C1.4-S(H95)-R5	20	1.3	1.2	27.0	1220
RS108y-2Y2YDB2Y-30C1.4-S(H95)-R5	30	1.3	1.2	30.0	1520
RS108y-2Y2YDB2Y-50C1.4-S(H95)-R5	50	1.3	1.3	35.0	2090
1.4mm Conductor, 2.7mm Insulated Wire rk 401 Series					
RS108y-2Y2YDB2Y-30C1.4-S(H95)-R4	30	1.3	1.2	32.0	2150
RS108y-2Y2YDB2Y-50C1.4-S(H95)-R4	50	1.3	1.3	38.0	2900
1.8mm Conductor, 3.4mm Insulated Wire rk 501 Series					
RS108y-2Y2YDB2Y-10C1.8-S(H95)-R5	10	1.3	1.2	25.0	1130
RS108y-2Y2YDB2Y-14C1.8-S(H95)-R5	14	1.3	1.2	27.0	1330
RS108y-2Y2YDB2Y-20C1.8-S(H95)-R5	20	1.3	1.2	30.0	1620
RS108y-2Y2YDB2Y-30C1.8-S(H95)-R5	30	1.3	1.3	34.0	2340
RS108y-2Y2YDB2Y-50C1.8-S(H95)-R5	50	1.3	1.3	42.0	3020
1.8mm Conductor, 3.4mm Insulated Wire rk 401 Series					
RS108y-2Y2YDB2Y-30C1.8-S(H95)-R4	30	1.3	1.3	37.0	2880
RS108y-2Y2YDB2Y-50C1.8-S(H95)-R4	50	1.3	1.3	44.0	3950



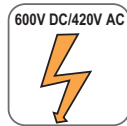
Anti Induction



UV Resistant



Water Resistant



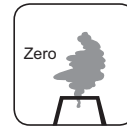
Rated Voltage



Laid In Ducts



Buried in Ground



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

