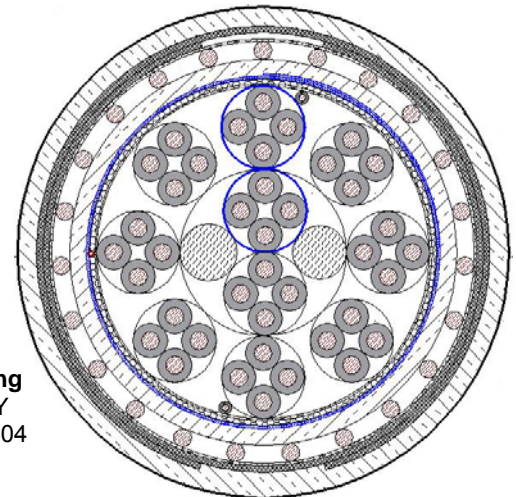
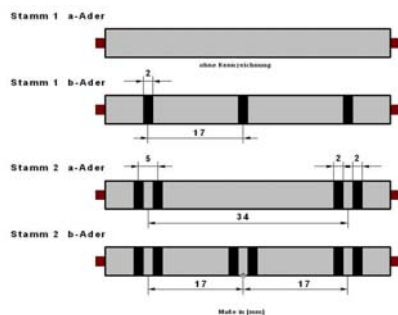




AJ-2Y(L)2YDB2Y n x 4 x 0.9 or 1.4 mm S (H45)

PE-insulated, halogen free SIGDRAK[®]-signalling cable, quads stranded in concentric layers, protected against interferences
According to specification Deutsche Bahn AG 416.0115
(formerly Dlk 1.013.109y)

© 2005
Changes reserved according
to technical progress.



Application

In railway applications for transmission of low frequent signals through symmetric circuits, laying directly into the ground or in ducts.

Colour Coding, Marking

Quads: naturally coloured with black ring marking according to specification 416.0116 (formerly Dlk 1.013.110y)
Marking/counter quad in each layer is marked with an open blue helix or tape

Construction

AJ-2Y(L)2YDB2Y	
Conductor	copper, solid, 0.9 or 1.4 mm, soft annealed
Insulation	PE (2Y)
Twisting	star quads twisted in concentric layers, two perforated pilot cores 0.5 mm if ≥ 7 quads
Cable core wrapping	suitable non-hygroscopic plastic tape(s)
Moisture barrier	laminated sheath formed by an aluminium tape (0.15 mm thick) coated on at least one side with copolymer, and bonded with black PE-sheath (2Y)
Armouring	screen of concentric positioned Cu-wires 0.9, 1.2, 1.4 or 1.8 mm plus two layers galvanized steel tape 0.5 or 0.8 mm, depending from required reduction factor
Outer sheath	PE (2Y), black



AJ-2Y(L)2YDB2Y n x 4 x 0.9 or 1.4 mm S (H45)

Mechanical and Thermal Properties

Admissible bending radius	un-armoured	$\geq 7.5 \times$ outer cable diameter
	armoured	$\geq 10 \times$ outer cable diameter
Temperature range	during operation	- 40°C to + 60°C
	during Installation	- 10°C to + 60°C

Electrical Properties

at 20°C ± 5°C

Conductor diameter	mm	0.9	1.4
Conductor loop resistance	Ω/km	≤ 56.6	≤ 23.4
Insulation resistance	$\text{G}\Omega \times \text{km}$	≥ 10	
Mutual capacitance at 800 Hz	nF/km	≤ 45 ¹⁾	
Capacitance unbalance at 800 Hz			
k_1 (100% / 50% all values)	pF/500m	$\leq 650 / \leq 150$	≤ 650
k_{9-12} neighboured quads	pF/500m	$\leq 500 / \leq 150$	≤ 500
k_{9-12} over-neighboured quads	pF/500m	≤ 150	
$e_{a1/2}$	pF/500m	≤ 1300	
Far-end crosstalk attenuation at 90 kHz			
100% / 80% all values	dB/km	$\geq 58 / \geq 62$	≥ 33
Attenuation at 90 kHz	dB/km	≤ 3.3	≤ 2.6
Test voltage – 50 Hz – 1 min			
core/core	V_{eff}	2500	
core/screen	V_{eff}	2500	

¹⁾ ≤ 52 nF/km for 1x4xØ and for central quads, where 1st layer consists only of one quad, as well as in the outer layer of armoured cables



AJ-2Y(L)2YDB2Y n x 4 x 0.9 or 1.4 mm S (H45)

Additional properties

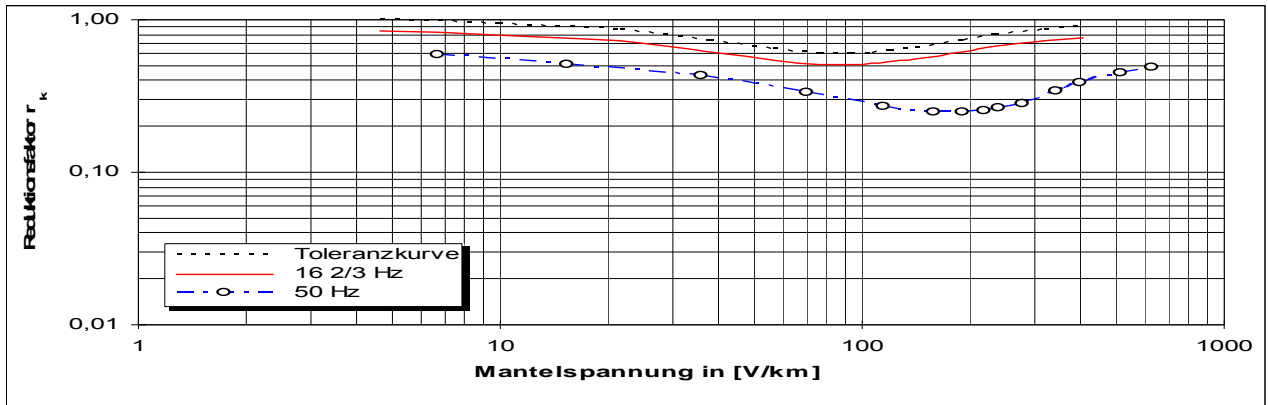
Dimension	r _k reduction factor class (16.34 Hz)	Outer diameter	Cable weight net	Standard supply length	Drum size	Transport weight gross	Copper content	Tensile strength max.	Fire load	SAP material number
		mm	kg/km	m	KTG	kg/drum	kg/km	N	MJ/m	
AJ-2Y(L)2YDB2Y n x 4 x 0.9 S (H45)										
3 x	600	21.0	650	1000	141	980	180	380	8	1006991
5 x	600	23.0	800	1000	141	1190	244	630	10	1006992
10 x	600	28.0	1130	1000	161	1710	400	1270	14	1006994
20 x	600	35.0	1670	1000	201	2680	693	2540	20	1006996
30 x	600	40.0	2180	1000	221	3510	979	3810	27	1006998
40 x	600	45.0	2650	1000	221	4090	1253	5080	33	1007000
10 x	400	31.0	1880	1000	161	2530	756	1270	15	1006995
20 x	400	38.0	2640	1000	201	3790	1176	2540	21	1006997
30 x	400	43.0	3310	500	161	2500	1583	3810	28	1006999
40 x	400	48.0	3880	500	201	3230	1838	5080	33	1007001
AJ-2Y(L)2YDB2Y n x 4 x 1.4 S (H45)										
3 x	500	25.0	1060	1000	161	1630	415	920	11	1007004
5 x	500	29.0	1360	1000	161	2040	582	1530	16	1007005
10 x	500	37.0	2040	1000	201	3170	977	3070	22	1007007
20 x	500	47.0	3180	500	201	2810	1687	6150	35	1007010
30 x	500	54.0	4220	500	201	3530	2394	9230	46	1007012
40 x	500	61.0	5180	500	221	4370	3056	12310	57	1007014
5 x	400	31.0	1950	1000	161	2750	786	1530	17	1007006
10 x	400	39.0	2880	1000	201	4160	1309	3070	22	1007008
20 x	400	49.0	4180	500	201	3490	2077	6150	36	1007011
30 x	400	56.0	5330	500	221	4440	2794	9230	47	1007013
40 x	400	63.0	6430	250	181	3100	3512	12310	57	1007015



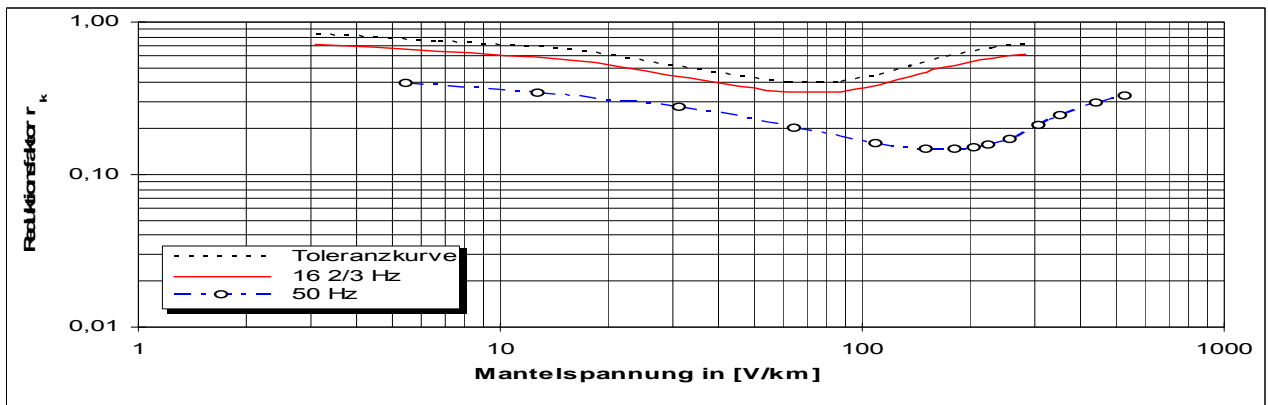
AJ-2Y(L)2YDB2Y n x 4 x 0.9 or 1.4 mm S (H45)

Typical Reduction Factor Curves according to 416.0116 (formerly Dlk 1.013.110y)

AJ-2Y(L)2YDB2Y 10 x 4 x 1.4 S (H45) 601



AJ-2Y(L)2YDB2Y 10 x 4 x 1.4 S (H45) 504



AJ-2Y(L)2YDB2Y 10 x 4 x 1.4 S (H45) 402

