

AJ-2Y(L)2YDB2Y

Signalling cable, screened, with inductive protection

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PE), cores star quaded, quads stranded in concentric layers
- 3 | Inner covering (plastic tape)
- 4 | Screen (plastic laminated aluminium foil, which is welded to the PE sheath + drain wire)
- 5 | Inner sheath (PE black)
- 6 | Concentric screen (copper wires)
- 7 | Inner protective covering (plastic tape)
- 8 | Armour (galvanized steel tape)
- 9 | Inner protective covering (plastic tape)
- 10 | Sheath (PE black, UV resistant)

TECHNICAL DATA

- Standard:**
DB AG No.: 416.0115
- Test voltage:**
Core-core: 2,500 VAC
- Temperature range:**
laying temperature: min. -10 °C
operating temperature: -40°C up to +60°C
- Bending radius (min.):**
multiple bending: 20 x Ø of cable
single bend: 15 x Ø of cable
- Core identification:**
DB AG No.: 416.0116
- Certificate:**
VDE Germany

APPLICATION

For general use as a underground cable in signalling devices.

ELECTRICAL PARAMETERS

Conductor diameter		(mm)	0.90	1.40
Loop resistance, max.		(Ω/km)	56.6	23.4
Insulation resistance, min.		(MΩ.km)	10,000	10,000
Mutual capacitance at 800 Hz, max.		(nF/km)	45	45
Capacitance unbalances at 800 Hz				
k_1 max. 100% of values		(pF/500 m)	650.0	650.0
k_1 max. 50% of values		(pF/500 m)	150.0	-
k_{9-12} max., immediately adjacent quads	100% of values	(pF/500 m)	500.0	500.0
k_{9-12} max., immediately adjacent quads	50% of values	(pF/500 m)	150.0	-
k_{9-12} max., remote quads resp. quads in different layers	100% of values	(pF/500 m)	150.0	150.0
$e_{1/2}$ and $e_{a1/2}$ max.	100% of values	(pF/500 m)	1,300.0	1,300.0
Far-end crosstalk attenuation at 90 kHz, min.	100% of line circuits	(dB/1,000 m)	58.0	33.0
Far-end crosstalk attenuation at 90 kHz, min.	80% of line circuits	(dB/1,000 m)	62.0	-
Wave attenuation at 90 kHz, max.		(dB/1,000 m)	3.3	2.6

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Number of quads x conductor diameter (mm)	Reduction factor r_k at 16.7 Hz	Outer diameter (mm) ca.	Total weight (kg/km) ca.	Standard lengths/ packing (m)
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3 x 4 x 0.9	600	21.0	800	1,000 D
5 x 4 x 0.9	600	23.0	1,010	1,000 D
10 x 4 x 0.9	600	28.0	1,430	1,000 D
20 x 4 x 0.9	600	35.0	2,130	1,000 D
30 x 4 x 0.9	600	40.0	2,800	1,000 D
40 x 4 x 0.9	600	45.0	3,380	1,000 D
10 x 4 x 0.9	400	31.0	2,250	1,000 D
20 x 4 x 0.9	400	38.0	3,240	1,000 D
30 x 4 x 0.9	400	43.0	4,080	500 D
40 x 4 x 0.9	400	48.0	4,800	500 D
3 x 4 x 1.4	500	25.0	1,350	1,000 D
5 x 4 x 1.4	500	29.0	1,760	1,000 D
10 x 4 x 1.4	500	37.0	2,620	1,000 D
20 x 4 x 1.4	500	47.0	4,040	500 D
30 x 4 x 1.4	500	54.0	5,330	500 D
40 x 4 x 1.4	500	61.0	6,550	500 D
5 x 4 x 1.4	500	31.0	2,470	1,000 D
10 x 4 x 1.4	400	39.0	3,610	1,000 D
20 x 4 x 1.4	400	49.0	5,260	500 D
30 x 4 x 1.4	400	56.0	6,690	500 D
40 x 4 x 1.4	400	63.0	8,070	250 D

Subject to technical changes.