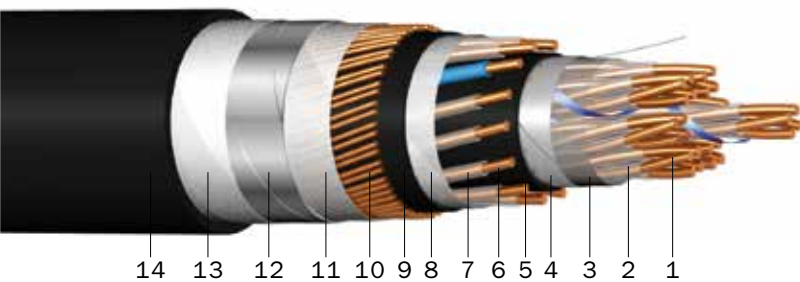


AJ-2Y(L)2Y2YDB2Y

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 | Copper conductor, round solid (RE)
- 7 | Core insulation (PE), cores stranded with single direction of lay
- 8 | Inner protective covering (plastic tape)
- 9 | Inner sheath (PE black)
- 10 | Concentric screen (copper wires)
- 11 | Inner protective covering (plastic tape)
- 12 | Armour (galvanized steel tape)
- 13 | Inner protective covering (plastic tape)
- 14 | Sheath (PE black, UV resistant)

TECHNICAL DATA

- Standard:**
DB AG No.: 416.0118
- Rated voltage:**
600 V (DC)
420 V (AC, RMS)
- Test voltage:**
Core-core, core-screen: 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.: 416.0118
- Certificate:**
VDE Germany

APPLICATION

For special use in safety devices and for simultaneous LF transmission up to 40 kHz and electricity transmission.

ELECTRICAL PARAMETERS OF STAR QUADS

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.	(pF/500 m)	650.0	650.0
k_{9-12} max., adjacent quads	(pF/500 m)	500.0	500.0
k_{9-12} max., remote quads	(pF/500 m)	150.0	150.0
$e_{1/2}$ and $e_{a1/2}$ max.	(pF/500 m)	1,300.0	1,300.0
Crosstalk attenuation min. at 40 kHz			
Quad – mean value	(dB/1,000 m)	65.0	65.0
Minimum single value	(dB/1,000 m)	60.0	60.0
Adjacent quads – mean value	(dB/1,000 m)	65.0	65.0
Minimum single value	(dB/1,000 m)	60.0	60.0
Remote quads – mean value	(dB/1,000 m)	70.0	70.0
Minimum single value	(dB/1,000 m)	60.0	60.0
Quads in adjacent layers – mean value	(dB/1,000 m)	75.0	75.0
Minimum single value	(dB/1,000 m)	65.0	65.0
Wave impedance at 40 kHz	(Ω)	130 ± 12%	130 ± 12%
Wave attenuation at 40 kHz max.	(dB/1,000 m)	2.6	1.5

AJ-2Y(L)2Y2YDB2Y

ELECTRICAL PARAMETERS OF STRANDED CORES

Conductor diameter	(mm)	0.90	1.40	1.80
Conductor resistance, max.	(Ω /km)	28.9	11.9	7.2
Insulation resistance, min.	(M Ω .km)	10,000	10,000	10,000
Mutual capacitance at 800 Hz, max.	(nF/km)	120	120	120

Number of quads x conductor diameter + number of cores 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)
AJ-2Y(L)2Y2YDB2Y				
1 x 4 x 0.9 + 4 x 1 x 1.4	600	27.0	1,100	1,000 D
7 x 4 x 1.4 + 10 x 1 x 1.8	600	43.0	2,400	1,000 D
1 x 4 x 0.9 + 4 x 1 x 1.4	500	27.0	1,150	1,000 D
7 x 4 x 1.4 + 10 x 1 x 1.8	500	44.0	2,660	1,000 D
1 x 4 x 0.9 + 4 x 1 x 1.4	400	29.0	1,870	1,000 D
7 x 4 x 1.4 + 10 x 1 x 1.8	400	46.0	3,820	1,000 D

Subject to technical changes.