



Control & signal cable

A-2Y(L)2Y2YB2Y

Railway Armoured Signalling and Telecom Cable

DIN VDE 0816 / DB star-quad railway signalling cable with Al/PE barrier & steel armour



DIN VDE 0816 / DB 416.0115

Star-Quad 0.9 / 1.2 / 1.4 mm

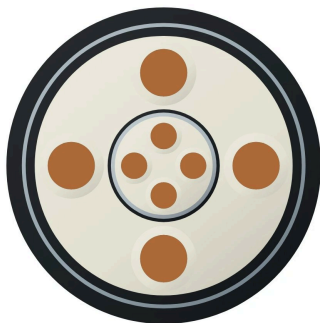
Al/PE Barrier + Steel Armour (B)

Application

A-2Y(L)2Y2YB2Y railway armoured signalling and telecom cable (DIN VDE 0816 / DB 416.0115) with solid copper star-quads (0.9, 1.2, 1.4 mm), 2Y PE insulation, '(L)2Y' Al/PE moisture barrier, 2Y PE bedding, double steel tape armour ('B'), and 2Y HDPE jacket.

Typical uses: Mainline & Regional Railway Signalling, Point Machine & Interlocking Links, Level-Crossing Control Circuits, Trackside Concrete Trough & Direct Burial, Metro & Light-Rail Wayside Telecoms

Construction



Cross-section, not to scale

- 1 Solid bare copper star-quads
- 2 2Y polyethylene core insulation
- 3 (L)2Y aluminum-laminated inner sheath
- 4 2Y PE intermediate bedding sheath
- 5 Double steel tape armour (B)
- 6 2Y black HDPE outer sheath

Technical data

Typical values

Loop resistance (+20 °C)	$\leq 56.6 \Omega/\text{km}$ (0.9 mm) · $\leq 23.4 \Omega/\text{km}$ (1.4 mm)
Insulation resistance	$\geq 5,000 \text{ M}\Omega \cdot \text{km}$ at +20 °C
Operating temperature (fixed)	-40 °C to +70 °C
Quad formation	Star-quads laid in concentric layers/units
Min. bending radius	15 × overall cable diameter
Radial moisture barrier	Al/PE laminated sheath (L)2Y + 2Y PE bed
UV & ground corrosion	Carbon-black stabilised PE (EN 50290-2-23)

Mutual capacitance (800 Hz)	$\leq 52 \text{ nF/km}$ (typical 48–50 nF/km)
AC dielectric test voltage	2,500 V AC (core/core & core/screen)
Installation temperature	-20 °C to +50 °C
Armouring	Double galvanised steel tape ('B')
Max. pulling tension	50 N/mm ² of total copper cross-section
Rodent & ballast impact	Double steel tape armour + HDPE jacket
Standards	DIN VDE 0816 & DB TL 416.0115

Sizes

12 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Cross-section / size	Conductor build	Wall ≈ mm	Outer Ø ≈ mm	Metal kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard A-2Y(L)2Y2YB2Y configurations 12 sizes							
☐ A-2Y(L)2Y2YB2Y 1×4×0.9	1×4×0.9	Solid / Stranded Cu	1.49	13.50	105.6	240.0	205
☐ A-2Y(L)2Y2YB2Y 2×4×0.9	2×4×0.9	Solid / Stranded Cu	1.76	16.00	145.2	330.0	240
☐ A-2Y(L)2Y2YB2Y 4×4×0.9	4×4×0.9	Solid / Stranded Cu	2.00	18.20	195.8	445.0	275
☐ A-2Y(L)2Y2YB2Y 6×4×0.9	6×4×0.9	Solid / Stranded Cu	2.25	20.50	246.4	560.0	310
☐ A-2Y(L)2Y2YB2Y 10×4×0.9	10×4×0.9	Solid / Stranded Cu	2.62	23.80	334.4	760.0	360
☐ A-2Y(L)2Y2YB2Y 14×4×0.9	14×4×0.9	Solid / Stranded Cu	2.92	26.50	418.0	950.0	400
☐ A-2Y(L)2Y2YB2Y 20×4×0.9	20×4×0.9	Solid / Stranded Cu	3.32	30.20	545.6	1,240.0	455
☐ A-2Y(L)2Y2YB2Y 1×4×1.4	1×4×1.4	Solid / Stranded Cu	1.74	15.80	154.0	350.0	240
☐ A-2Y(L)2Y2YB2Y 2×4×1.4	2×4×1.4	Solid / Stranded Cu	2.11	19.20	224.4	510.0	290
☐ A-2Y(L)2Y2YB2Y 4×4×1.4	4×4×1.4	Solid / Stranded Cu	2.42	22.00	316.8	720.0	330
☐ A-2Y(L)2Y2YB2Y 6×4×1.4	6×4×1.4	Solid / Stranded Cu	2.79	25.40	422.4	960.0	380
☐ A-2Y(L)2Y2YB2Y 10×4×1.4	10×4×1.4	Solid / Stranded Cu	3.30	30.00	607.2	1,380.0	450

- Outer diameters and weights are nominal engineering values for A-2Y(L)2Y2YB2Y subject to standard manufacturing tolerances per DIN VDE 0816 / DB 416.0115 Railway Star-Quad Signalling & Telecom Specification.

Electrical & rating data

12 sizes

Configuration	Max. DC R @ 20 °C Ω/km	Primary rating (A or nF/km)	Secondary rating	Dielectric test V AC rms
1×4×0.9	56.60	52.0	44.2	2,500
2×4×0.9	56.60	52.0	44.2	2,500
4×4×0.9	56.60	52.0	44.2	2,500
6×4×0.9	56.60	52.0	44.2	2,500
10×4×0.9	56.60	52.0	44.2	2,500
14×4×0.9	56.60	52.0	44.2	2,500
20×4×0.9	56.60	52.0	44.2	2,500
1×4×1.4	23.40	52.0	44.2	2,500
2×4×1.4	23.40	52.0	44.2	2,500
4×4×1.4	23.40	52.0	44.2	2,500
6×4×1.4	23.40	52.0	44.2	2,500
10×4×1.4	23.40	52.0	44.2	2,500

- Electrical resistance at +20 °C and dielectric withstand voltages verified per DIN VDE 0816 / DB 416.0115 Railway Star-Quad Signalling & Telecom Specification.

Standards and approvals

✓ DIN VDE 0816 / DB 416.0115 Railway Star-Quad Signalling & Telecom Specification

✓ CE (2014/35/EU) & RoHS 3 (2015/863/EU) Compliant

✓ REACH SVHC Compliance Verified

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

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Email

info@tebaoflex.com

Web

tebaoflex.com/cables/a-2y-l-2y2yb2y-railway-armoured-signalling-and-telecom-cable



Typical values for this cable type, based on DIN VDE 0816 / DB 416.0115 Railway Star-Quad Signalling & Telecom Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.