



Control & signal cable

A-2Y(L)2YB2Y H45

Low-Capacitance Armoured Railway Telecom Cable

DIN VDE 0816 / DB H45 (≤ 45 nF/km) low-capacitance armoured railway star-quad cable

H45 ≤ 45 nF/km Low-Cap

DIN VDE 0816 / DB 416.0115

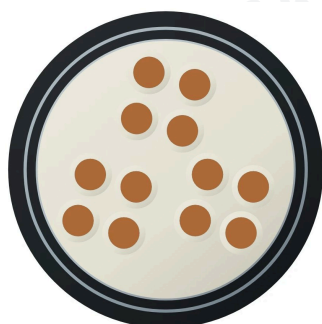
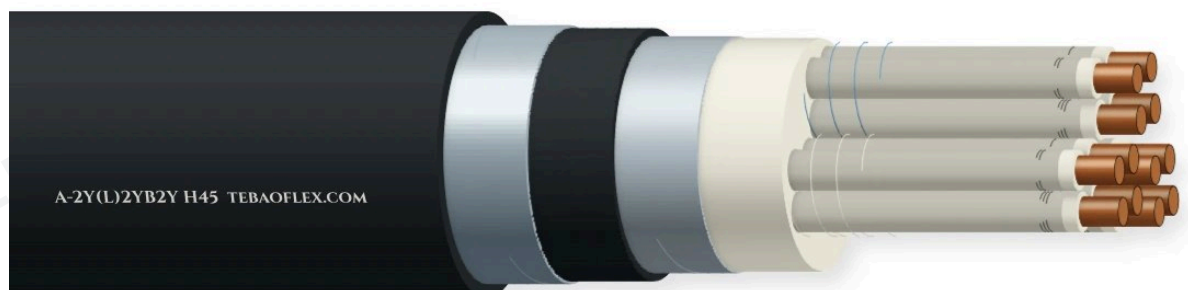
Axle-Counter & ETCS Quads

Application

A-2Y(L)2YB2Y H45 low-capacitance armoured railway telecom cable (DIN VDE 0816 / DB 416.0115) with ≤ 45 nF/km ('H45') 0.9–1.4 mm copper star-quads for long axle-counter and ETCS links, '(L)2Y' Al/PE barrier, double steel tape armour ('B'), and HDPE jacket.

Typical uses: Railway Axle-Counter Evaluator Links, ETCS Level 1/2 Wayside Signalling, SHDSL / Voice-Frequency Block Circuits, Trackside Cable Troughs & Direct Burial, Regional & Industrial Rail Networks

Construction



Cross-section, not to scale

- 1 Solid bare copper star-quads
- 2 H45 low-capacitance 2Y PE
- 3 (L)2Y Al/PE laminated inner sheath
- 4 Double steel tape armour (B)
- 5 2Y black HDPE outer sheath

Technical data

Typical values

Mutual capacitance (H45) ≤ 45 nF/km at 800 Hz

Insulation resistance $\geq 5,000$ M Ω ·km at +20 °C

Operating temperature (fixed) -40 °C to +70 °C

Quad construction Low-capacitance star-quads (H45)

Min. bending radius 15 × overall cable diameter

Moisture barrier Al/PE laminated inner sheath (L)2Y

UV & weather resistance Carbon-black HDPE jacket (EN 50290-2-23)

Loop resistance (+20 °C) ≤ 56.6 Ω /km (0.9) · ≤ 31.8 Ω /km (1.2) · ≤ 23.4 Ω /km (1.4)

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/mm² of total copper area

Rodent & impact protection Double steel tape armour ('B')

Standards DIN VDE 0816 & DB TL 416.0115 (H45)

Sizes

11 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 $\approx$ mm	Outer $\varnothing \approx$ mm	Metal kg/km	Weight $\approx$ kg/km	Min. bend R fixed mm
Standard A-2Y(L)2YB2Y H45 configurations 11 sizes							
☐ A-2Y(L)2YB2Y 1×4×0.9 H45	1×4×0.9	Solid / Stranded Cu	1.43	13.00	99.0	225.0	195
☐ A-2Y(L)2YB2Y 2×4×0.9 H45	2×4×0.9	Solid / Stranded Cu	1.74	15.80	138.6	315.0	240
☐ A-2Y(L)2YB2Y 4×4×0.9 H45	4×4×0.9	Solid / Stranded Cu	1.98	18.00	187.0	425.0	270
☐ A-2Y(L)2YB2Y 6×4×0.9 H45	6×4×0.9	Solid / Stranded Cu	2.24	20.40	237.6	540.0	305
☐ A-2Y(L)2YB2Y 10×4×0.9 H45	10×4×0.9	Solid / Stranded Cu	2.60	23.60	323.4	735.0	355
☐ A-2Y(L)2YB2Y 20×4×0.9 H45	20×4×0.9	Solid / Stranded Cu	3.28	29.80	523.6	1,190.0	450
☐ A-2Y(L)2YB2Y 1×4×1.2 H45	1×4×1.2	Solid / Stranded Cu	1.58	14.40	127.6	290.0	215
☐ A-2Y(L)2YB2Y 4×4×1.2 H45	4×4×1.2	Solid / Stranded Cu	2.22	20.20	255.2	580.0	305
☐ A-2Y(L)2YB2Y 1×4×1.4 H45	1×4×1.4	Solid / Stranded Cu	1.71	15.50	147.4	335.0	235
☐ A-2Y(L)2YB2Y 4×4×1.4 H45	4×4×1.4	Solid / Stranded Cu	2.40	21.80	305.8	695.0	330
☐ A-2Y(L)2YB2Y 10×4×1.4 H45	10×4×1.4	Solid / Stranded Cu	3.26	29.60	589.6	1,340.0	445

– Outer diameters and weights are nominal engineering values for A-2Y(L)2YB2Y H45 subject to standard manufacturing tolerances per DIN VDE 0816 / DB 416.0115 H45 Low-Capacitance Axle-Counter & Telecom Specification.

Electrical & rating data

11 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	45.0	38.2	2,500
2×4×0.9	56.60	45.0	38.2	2,500
4×4×0.9	56.60	45.0	38.2	2,500
6×4×0.9	56.60	45.0	38.2	2,500
10×4×0.9	56.60	45.0	38.2	2,500
20×4×0.9	56.60	45.0	38.2	2,500
1×4×1.2	31.80	45.0	38.2	2,500
4×4×1.2	31.80	45.0	38.2	2,500
1×4×1.4	23.40	45.0	38.2	2,500
4×4×1.4	23.40	45.0	38.2	2,500
10×4×1.4	23.40	45.0	38.2	2,500

– Electrical resistance at +20 °C and dielectric withstand voltages verified per DIN VDE 0816 / DB 416.0115 H45 Low-Capacitance Axle-Counter & Telecom Specification.

Standards and approvals

- ✓ DIN VDE 0816 / DB 416.0115 H45 Low-Capacitance Axle-Counter & 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

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/a-2y-l-2yb2y-h45-low-capacitance-armoured-railway-telecom-cable



Typical values for this cable type, based on DIN VDE 0816 / DB 416.0115 H45 Low-Capacitance Axle-Counter & 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.