



Hook-up & equipment wires

EN 50264-3-2

Reduced-Wall Multicore Rolling Stock Cable

EN 50264-3-2 300/500 V & 0.6/1 kV reduced-wall multicore rolling stock cable



EN 50264-3-2

Reduced-Wall EI 109 + EM 104

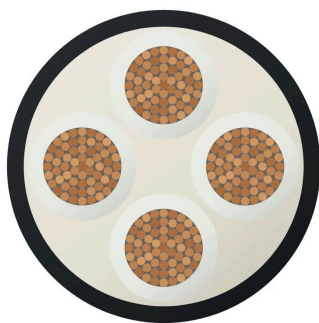
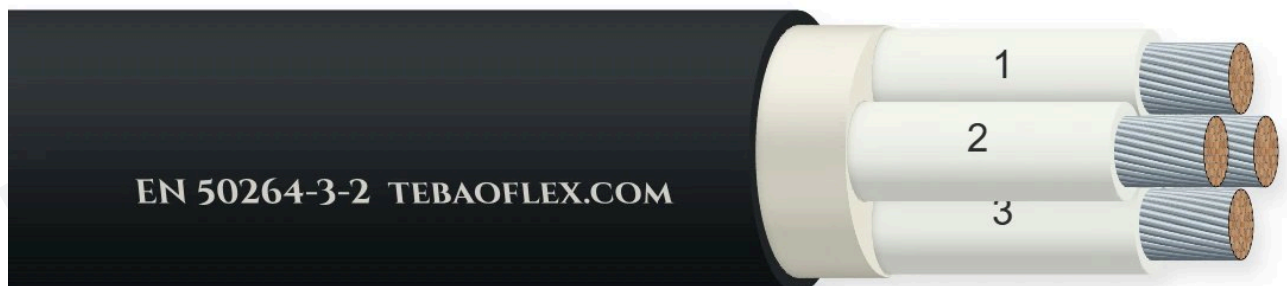
EN 45545-2 HL1-HL3

Application

Compact reduced-wall railway rolling-stock multicore ('MM') and tinned-Cu braid screened ('MMS') cable to EN 50264-3-2 and EN 45545-2 HL3 with Class 5 tinned copper conductors, e-beam cross-linked EI 109 core insulation and oil/fuel-resistant EM 104 sheath.

Typical uses: High-speed EMUs & passenger coaches, Metro, tramway & light-rail car bodies, Door, HVAC, PIS & lighting subsystems, Inter-vehicle Harting connector harnesses, Locomotive control & auxiliary power

Construction



Cross-section, not to scale

1	Class 5 tinned copper conductor	EN 60228 Class 5 · EN 50264-3-2
2	Reduced-wall EI 109 core insulation	EN 50264-1 EI 109 · EN 50264-3-2
3	Halogen-free wrapping tape	EN 50264-3-2
4	Optional tinned-copper braid (MMS)	EN 50264-3-2 · EN 50121-3-2
5	Cross-linked EM 104 outer sheath	EN 50264-1 EM 104 · EN 45545-2 HL3

Technical data

Typical values

Rated voltage U0/U	300/500 V ('300 V' class) & 0.6/1 kV ('600 V' class) AC	AC test voltage (50 Hz)	2.0 kV AC (300/500 V class) · 3.5 kV AC (0.6/1 kV class) for 5 min
Surface transfer impedance	≤ 200 mΩ/m at 30 MHz (MMS screened versions)	Operating temperature range	−40 °C to +90 °C (fixed) · −25 °C to +90 °C (flexing)
Thermal overload rating	+120 °C (20,000 h cumulative life)	Short-circuit temperature	+200 °C max. (5 s)
Min. bending radius, fixed	4 × OD (D ≤ 12 mm) · 5 × OD (D > 12 mm) for MM · 6 × OD for MMS	Min. bending radius, flexing	8 × OD (MM) · 10 × OD (MMS)
Weight & space reduction	Up to 25 % smaller diameter and lower cable weight vs EN 50264-2-2	Railway fire safety	EN 45545-2 Hazard Level HL1, HL2 & HL3 (Requirement Sets R15 & R16)
Smoke & halogen-free	EN 61034-2 low smoke · EN 60754-1/2 zero halogen · EN 50305 low toxicity	Oil, fuel & UV	Resistant to mineral oil (IRM 902), diesel fuel (IRM 903), ozone and UV weathering (EM 104)
Standards	EN 50264-3-2 (Reduced wall multicore rolling stock cables)	Standard packing	Heat-treated ISPM-15 timber drums or spools with sealed ends

Sizes

24 standard constructions

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

Order designation	Cores × mm ² / AWG	AWG ≈	Outer Ø min mm	Outer Ø max mm	Copper kg/km	Weight ≈ kg/km	Min. bend R mm
300/500 V Reduced-Wall Unscreened (EN 50264-3-2 MM) 12 sizes							
☐ EN 50264-3-2 300V 2×0.5 MM	2×0.5	20	5.0	5.4	9	38	22
☐ EN 50264-3-2 300V 4×0.5 MM	4×0.5	20	5.6	6.1	19	54	24
☐ EN 50264-3-2 300V 7×0.5 MM	7×0.5	20	6.6	7.2	33	82	29
☐ EN 50264-3-2 300V 12×0.5 MM	12×0.5	20	8.6	9.4	57	138	38
☐ EN 50264-3-2 300V 2×1.0 MM	2×1.0	18	5.7	6.2	19	55	25
☐ EN 50264-3-2 300V 4×1.0 MM	4×1.0	18	6.5	7.1	38	82	28
☐ EN 50264-3-2 300V 7×1.0 MM	7×1.0	18	7.7	8.4	67	128	34
☐ EN 50264-3-2 300V 12×1.0 MM	12×1.0	18	10.2	11.1	115	218	44
☐ EN 50264-3-2 300V 2×1.5 MM	2×1.5	16	6.3	6.8	28	69	27
☐ EN 50264-3-2 300V 4×1.5 MM	4×1.5	16	7.2	7.8	57	106	31
☐ EN 50264-3-2 300V 7×1.5 MM	7×1.5	16	8.6	9.3	100	168	37
☐ EN 50264-3-2 300V 12×1.5 MM	12×1.5	16	11.3	12.3	172	285	49
300/500 V Reduced-Wall Screened (EN 50264-3-2 MMS) 5 sizes							
☐ EN 50264-3-2 300V 4×1.0 MMS	4×1.0	18	7.3	7.9	58	112	32
☐ EN 50264-3-2 300V 7×1.0 MMS	7×1.0	18	8.6	9.3	95	168	37
☐ EN 50264-3-2 300V 4×1.5 MMS	4×1.5	16	7.9	8.6	82	142	34
☐ EN 50264-3-2 300V 7×1.5 MMS	7×1.5	16	9.4	10.2	134	215	41
☐ EN 50264-3-2 300V 12×1.5 MMS	12×1.5	16	12.3	13.4	224	355	54
0.6/1 kV Reduced-Wall Power & Screened (EN 50264-3-2 MM / MMS) 7 sizes							
☐ EN 50264-3-2 600V 3G2.5 MM	3×2.5	14	8.5	9.2	72	138	37
☐ EN 50264-3-2 600V 4G2.5 MM	4×2.5	14	9.3	10.1	96	175	40
☐ EN 50264-3-2 600V 4G2.5 MMS	4×2.5	14	10.2	11.1	132	228	44
☐ EN 50264-3-2 600V 4G4 MM	4×4	12	10.9	11.8	153	258	47
☐ EN 50264-3-2 600V 4G6 MM	4×6	10	12.3	13.4	230	355	54
☐ EN 50264-3-2 600V 4G10 MM	4×10	8	15.5	16.8	384	575	67
☐ EN 50264-3-2 600V 4G16 MM	4×16	6	18.2	19.8	614	860	79

– Dimensions and weights are typical values per EN 50264-3-2 / EN 45545-2 HL1–HL3. Minimum fixed bending radius shown is 4 × OD.

Electrical & current ratings

8 sizes

Cross-section mm ²	AWG ≈	Max. DC resistance 20 °C, Ω/km	Single wire in air 30 °C, A	Multi-core bundle 30 °C, A
0.5	20	40.1	10	7
1	18	20	16	12
1.5	16	13.7	21	16
2.5	14	8.21	30	22
4	12	5.09	41	30
6	10	3.39	53	38
10	8	1.95	75	53
16	6	1.24	100	71

– Current ratings at 30 °C ambient in free air. Apply temperature and bundle grouping factors per applicable equipment standard.

Standards and approvals

✓ EN 50264-3-2 / EN 45545-2 HL1–HL3

✓ CE · RoHS 2 (2011/65/EU) · REACH

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

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Web

tebaoflex.com/cables/reduced-wall-multicore-rolling-stock-cable



Typical values for this cable type, based on EN 50264-3-2 / EN 45545-2 HL1–HL3. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.