



TE Connectivity EN 50306 WIRE & CABLE PRODUCTS

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Wire and Cable/// Technical Data Sheet

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TECHNICAL DATA SHEET

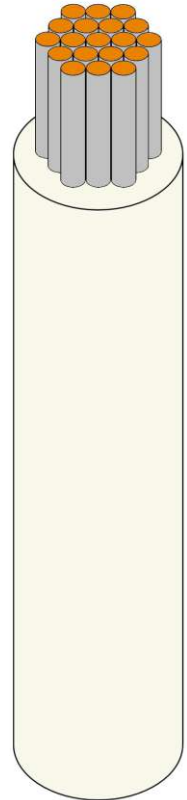
EN 50306 WIRE & CABLE PRODUCTS

Application/Use:

Zero Halogen, light weight cable for signal, and Low voltage applications (300V). The construction is a single wall construction made with a TE Connectivity polymer blend.

Developed to meet Rail specification requirements, whilst maintaining the desirable features of small size, lightweight, flexible and non-wrinkling.

Typical applications include terminal boxes, ground connection and carriage wiring.



Features:

- Electron beam crosslinked insulation – EL 109
- EM104 / S2 Jacket material for multicore cables
- Thin Wall, Light Weight
- Meets common railway requirements
- Highly flexible and low bending radii

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TECHNICAL DATA SHEET

EN 50306 WIRE & CABLE PRODUCTS

EN50306-2-RAIL

SINGLE CORE WIRE

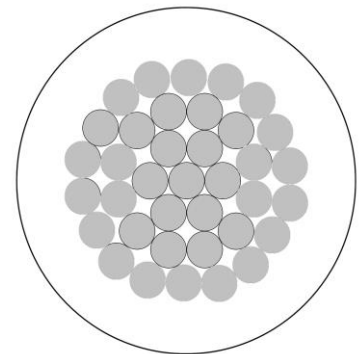
Conductor	Stranded Tinned Copper	Voltage Rating	300 V AC
Number of Conductors	1		
Cross Section	0.50mm ² – 2.50mm ²	Temperature Range	-40°C to +120°C

Construction

Insulation	EBXL – EL 109 Colour: White
Conductor	Finely Stranded Annealed Electro Tinned Copper

Characteristics

- Excellent resistance to high and low temperature
- Outstanding Flame retardant
- Halogen free
- Thin walled with excellent flexibility
- Resistance to Oil, fuel, ozone and weathering.
- Easy to strip
- Low smoke density
- Soldering iron resistant
- Electron Beam Cross Linked.
- Resistance to corona effect



Standards

Specification / Standard	Category / Hazard Level
EN 45545-2	R15/R16 – Hazard Level 3
EN 50306-2*	Meets requirements of EN 50306-2 Hazard Level 4, Identifier M
DIN 5510-2	

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TECHNICAL DATA SHEET

EN 50306 WIRE & CABLE PRODUCTS

EN50306-2-RAIL

SINGLE CORE WIRE

Part Description	Conductor			Finished Wire				
	Nominal Cross Sectional Area	Conductor Stranding No./Diam.	Diameter Max.	Insulation Thickness Min.	Maximum Resistance @ 20°C	Diameter (mm)		Approx. Weight
	(mm ²)	(mm)	(mm)	(mm)	(Ohms/km)	Min.	Max.	(kg/km)
EN50306-2-RAIL-0.50	0.50	19/0.18	0.95	0.18	40.10	1.15	1.45	6.0
EN50306-2-RAIL-0.75	0.75	37/0.16	1.15	0.18	26.70	1.35	1.65	8.0
EN50306-2-RAIL-1.00	1.00	37/0.18	1.30	0.18	20.00	1.40	1.80	10.0
EN50306-2-RAIL-1.50	1.50	37/0.23	1.65	0.22	13.70	1.90	2.30	15.0
EN50306-2-RAIL-2.50	2.50	37/0.30	2.15	0.28	8.21	2.45	2.85	25.0

EN50306-2-RAIL

PART NUMBERS

Part Description	Product Detail	TE Part Number
EN50306-2-RAIL-0.50	Single Wire, 0.50 mm ² , White Insulation, 300V, EN 50306-3	2333642-1
EN50306-2-RAIL-0.75	Single Wire, 0.75 mm ² , White Insulation, 300V, EN 50306-3	2333643-1
EN50306-2-RAIL-1.00	Single Wire, 1.00 mm ² , White Insulation, 300V, EN 50306-3	2333644-1
EN50306-2-RAIL-1.50	Single Wire, 1.50 mm ² , White Insulation, 300V, EN 50306-3	2333645-1
EN50306-2-RAIL-2.50	Single Wire, 2.50 mm ² , White Insulation, 300V, EN 50306-3	2333646-1

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EN 50306 WIRE & CABLE PRODUCTS

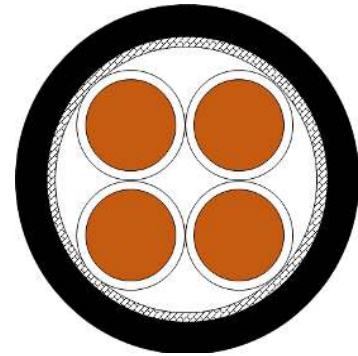
EN50306-3-RAIL

MULTI-CORE SHIELDED CABLES

Conductor	IEC 60228 Class 5	Voltage Rating	300 V AC
Number of Conductors	1 to 4		
Cross Section	0.50mm ² – 2.50mm ²	Temperature Range	-40°C to +120°C

Construction

Cores	EN 50306-2-RAIL Primary Wire - White
EMC Screen	Tinned copper braid
Jacket	EXBL – EM104 Colour: Black



Characteristics

- Excellent resistance to high and low temperature
- Outstanding Flame retardant
- Halogen free
- Thin walled with excellent flexibility
- Resistance to Oil, fuel, ozone and weathering.
- Easy to strip
- Low smoke density
- Soldering iron resistant
- Electron Beam Cross Linked.
- Resistance to corona effect.

Standards

Specification / Standard	Category / Hazard Level
EN 45545-2	R15/R16 – Hazard Level 3
EN 50306-3	*Meets requirements of EN 50306-3 Hazard Level 4, Identifier MM
DIN 5510-2	

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TECHNICAL DATA SHEET

EN 50306 WIRE & CABLE PRODUCTS

EN50306-3-RAIL

MULTI-CORE SHIELDED CABLES

Part Number	Nominal		Maximum Resistance @ 20°C (Ohms/km)	Core Diameter Max. (mm)	Sheath Thickness Min. (mm)	Outer Diameter (mm)		Approx. Cable Weight (kg/km)
	No. of Cores (No.)	CSA (mm ²)				Min.	Max.	
EN50306-3-RAIL-1X0.50	1	0.50	40.1	1.45	0.20	2.3	2.9	15
EN50306-3-RAIL-2X0.50	2	0.50	40.1	1.45	0.20	3.5	4.4	32
EN50306-3-RAIL-3X0.50	3	0.50	40.1	1.45	0.20	3.7	4.7	38
EN50306-3-RAIL-4X0.50	4	0.50	40.1	1.45	0.20	4.0	5.2	46
EN50306-3-RAIL-6X0.50	6	0.50	40.1	1.45	0.20	5.5	6.5	67
EN50306-3-RAIL-8X0.50	8	0.50	40.1	1.45	0.20	6.1	7.1	86
EN50306-3-RAIL-1X0.75	1	0.75	26.7	1.65	0.20	2.5	3.1	19
EN50306-3-RAIL-2X0.75	2	0.75	26.7	1.65	0.20	3.9	4.8	41
EN50306-3-RAIL-3X0.75	3	0.75	26.7	1.65	0.20	4.0	5.2	49
EN50306-3-RAIL-4X0.75	4	0.75	26.7	1.65	0.20	4.5	5.7	59
EN50306-3-RAIL-6X0.75	6	0.75	26.7	1.65	0.20	6.1	7.1	87
EN50306-3-RAIL-8X0.75	8	0.75	26.7	1.65	0.20	7.3	8.3	112
EN50306-3-RAIL-1X1.00	1	1.00	20.0	1.80	0.20	2.7	3.3	21
EN50306-3-RAIL-2X1.00	2	1.00	20.0	1.80	0.20	4.2	5.3	46
EN50306-3-RAIL-3X1.00	3	1.00	20.0	1.80	0.20	4.5	5.7	56
EN50306-3-RAIL-4X1.00	4	1.00	20.0	1.80	0.20	5.0	6.2	70
EN50306-3-RAIL-6X1.00	6	1.00	20.0	1.80	0.20	6.3	7.3	103
EN50306-3-RAIL-8X1.00	8	1.00	20.0	1.80	0.20	7.5	8.5	135
EN50306-3-RAIL-1X1.50	1	1.50	13.7	2.30	0.20	3.1	3.7	28
EN50306-3-RAIL-2X1.50	2	1.50	13.7	2.30	0.20	5.1	6.2	65
EN50306-3-RAIL-3X1.50	3	1.50	13.7	2.30	0.20	5.4	6.6	80
EN50306-3-RAIL-4X1.50	4	1.50	13.7	2.30	0.20	6.0	7.2	100
EN50306-3-RAIL-6X1.50	6	1.50	13.7	2.30	0.20	7.3	8.3	149
EN50306-3-RAIL-8X1.50	8	1.50	13.7	2.30	0.20	8.5	9.5	195

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TECHNICAL DATA SHEET

EN 50306 WIRE & CABLE PRODUCTS

EN50306-3-RAIL

MULTI-CORE SHIELDED CABLES

Part Number	Nominal		Maximum Resistance @ 20°C (Ohms/km)	Core Diameter Max. (mm)	Sheath Thickness Min. (mm)	Outer Diameter (mm)		Approx. Cable Weight (kg/km)
	No. of Cores (No.)	CSA (mm ²)				Min.	Max.	
EN50306-3-RAIL-1X2.50	1	2.50	8.21	2.85	0.20	3.6	4.5	43
EN50306-3-RAIL-2X2.50	2	2.50	8.21	2.85	0.20	6.4	7.5	95
EN50306-3-RAIL-3X2.50	3	2.50	8.21	2.85	0.20	6.8	8.0	120
EN50306-3-RAIL-4X2.50	4	2.50	8.21	2.85	0.20	7.5	8.7	150

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EN 50306 WIRE & CABLE PRODUCTS

EN50306-3-RAIL

PART NUMBERS

Part Description	Product Detail	TE Part Number
EN50306-3-RAIL-1X0.50	1-Core Cable, 0.50 mm ² , White Core, Black Sheath, EN 50306-3	2336342-1
EN50306-3-RAIL-1X0.75	1-Core Cable, 0.75 mm ² , White Core, Black Sheath, EN 50306-3	2336347-1
EN50306-3-RAIL-1X1.00	1-Core Cable, 1.00 mm ² , White Core, Black Sheath, EN 50306-3	2336365-1
EN50306-3-RAIL-1X1.50	1-Core Cable, 1.50 mm ² , White Core, Black Sheath, EN 50306-3	2336371-1
EN50306-3-RAIL-1X2.50	1-Core Cable, 2.50 mm ² , White Core, Black Sheath, EN 50306-3	2336375-1
EN50306-3-RAIL-2X0.50	2-Core Cable, 0.50 mm ² , White Core, Black Sheath, EN 50306-3	2336343-1
EN50306-3-RAIL-2X0.75	2-Core Cable, 0.75 mm ² , White Core, Black Sheath, EN 50306-3	2336358-1
EN50306-3-RAIL-2X1.00	2-Core Cable, 1.00 mm ² , White Core, Black Sheath, EN 50306-3	2336366-1
EN50306-3-RAIL-2X1.50	2-Core Cable, 1.50 mm ² , White Core, Black Sheath, EN 50306-3	2336372-1
EN50306-3-RAIL-2X2.50	2-Core Cable, 2.50 mm ² , White Core, Black Sheath, EN 50306-3	2336376-1
EN50306-3-RAIL-3X0.50	3-Core Cable, 0.50 mm ² , White Core, Black Sheath, EN 50306-3	2336345-1
EN50306-3-RAIL-3X0.75	3-Core Cable, 0.75 mm ² , White Core, Black Sheath, EN 50306-3	2336362-1
EN50306-3-RAIL-3X1.00	3-Core Cable, 1.00 mm ² , White Core, Black Sheath, EN 50306-3	2336369-1
EN50306-3-RAIL-3X1.50	3-Core Cable, 1.50 mm ² , White Core, Black Sheath, EN 50306-3	2336373-1
EN50306-3-RAIL-3X2.50	3-Core Cable, 2.50 mm ² , White Core, Black Sheath, EN 50306-3	2336377-1
EN50306-3-RAIL-4X0.50	4-Core Cable, 0.50 mm ² , White Core, Black Sheath, EN 50306-3	2336346-1
EN50306-3-RAIL-4X0.75	4-Core Cable, 0.75 mm ² , White Core, Black Sheath, EN 50306-3	2336364-1
EN50306-3-RAIL-4X1.00	4-Core Cable, 1.00 mm ² , White Core, Black Sheath, EN 50306-3	2336370-1
EN50306-3-RAIL-4X1.50	4-Core Cable, 1.50 mm ² , White Core, Black Sheath, EN 50306-3	2336374-1
EN50306-3-RAIL-4X2.50	4-Core Cable, 2.50 mm ² , White Core, Black Sheath, EN 50306-3	2336378-1

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