

FMB911 Bus cables



- PUR outer jacket
- Shielded
- Coolant-resistant
- Notch-resistant
- Flame resistance
- Oil-resistant
- Hydrolysis and microbe-resistant
- UV-resistance

Dynamic Information

	Min. bending radius	Moving in cable carriers	12.5 x d
		Flexible moving	10 x d
		Fixed installation	7 x d
	Temperature	Moving in cable carriers	-20°C to +70°C
		Flexible moving	-40°C to +70°C
		Fixed installation	-50°C to +70°C
	v max.	Unsupported	3 m/s
		Gliding	2 m/s
	a max.	30 m/s ²	
	Travel distance	Unsupported travels and up to 20 m for gliding applications	

Cable structure

	Conductor	Conductor consisting of bare copper wires (according to EN 60228).
	Conductor insulation	According to bus specification.
	Conductor construction	According to bus specification.
	Color code	According to bus specification.
	Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage linear approx. 70 %, optical approx. 90 %
	Outer jacket	Low-adhesion mixture on the basis of PUR, especially abrasion-resistant and highly flexible, adapted to suit the requirements in cable carriers. Color: Red lilac RAL 4001

Electrical Information

	Nominal voltage	50 V (following VDE0298-3)
	Test voltage	500 V (following EN50395)

Properties and approvals

	UV-resistance	Medium
	Hydrolysis-resistance	High
	Cold-resistant	-50°C
	Oil resistance	Oil-resistant (following IEC60811-404, tested by SGS), bio-oil-resistant (following VDMA24568, tested by SGS)
	Flame resistance	According to IEC 60332-1-2、VW-1、FT1
	Halogen-free	Following IEC60754
	REACH	Accordding to the regulation (EC) No. 1907/2006 (REACH)
	EAC	Certificate No. KG 417/043.CN.02.00249
	Lead-free	Following 2015/863/EU (RoHS-II Tested by SGS)
	Cleanroom	Following ISO 14644-1
	CE	Following 2014/35/EU
	UL	Following UL20233, 300V, 80°C

Guaranteed service life

Double strokes	5 million times	7.5 million times	10 million times
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	15	16	17
-10/+60	12.5	13.5	14.5
+60/+70	15	16	17

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Part No.	Number of cores and conductor nominal cross-section [mm]	Outer diameter [mm]	Copper index [kg/km]	Weight [kg/km]
Profibus				
FMB911.001	(2x0.25)C	8.5	25	75
CAN-Bus				
FMB911.020 ^④	(4x0.25)C	7.5	23	64
FMB911.021	(2x0.5)C	8.5	32	82
FMB911.022 ^④	(4x0.5)C	8.5	43	91
CC-Link				
FMB911.035	(3x0.5)C	8	40	76
Ethernet/CAT5				
FMB911.040 ^④	(4x0.25)C	6.5	29	69
Single Pair Ethernet				
FMB911.042	(2x0.15)C	5.5	12	33
Ethernet/CAT5e				
FMB911.045	(4x(2x0.15))C	7.5	33	66
Ethernet/CAT6				
FMB911.049	(4x(2x0.15))C	7.5	33	66
Ethernet/CAT6A				
FMB911.050	4x(2x0.2)C	10	65	120
Ethernet/CAT7				
FMB911.052	(4x(2x0.15)C)C	9.5	89	129
FireWireIEEE 1394b				
FMB911.056	(2x(2x0.15)C+2x0.38)C	9	59	91
Profinet				
FMB911.060 ^{④ ⑥}	(4x0.38)C	7	33	64
USB3.0				
FMB911.068	(2x(2xAWG28)+2x(2xAWG28)C)C	7	39	64

- ④) Cables marked with ④ are four-star twisted design.
 ⑥) Outer jacket color is yellow-green (similar to RAL 6018)

Note: The outer diameters are reference values.
 G: With green-yellow earth core
 x: Without earth core
 AWG: American Wire Gauge

Part No.	Characteristic wave impedance approx. [Ω]	Core group	Colour code
Profibus			
FMB911.001	150	(2x0.25)C	red, green
CAN-Bus			
FMB911.020	120	(4x0.25)C	white, green, brown, yellow (Star-quad)
FMB911.021	120	(2x0.5)C	white,brown
FMB911.022	120	(4x0.5)C	white, green, brown, yellow (Star-quad)
CC-Link			
FMB911.035	110	(3x0.5)C	white, blue, yellow
Ethernet/CAT5			
FMB911.040	100	(4x0.25)C	white, green, brown, yellow (Star-quad)
Single Pair Ethernet			
FMB911.042	100	(2x0.15)C	white/blue
Ethernet/CAT5e			
FMB911.045	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Ethernet/CAT6			
FMB911.049	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Ethernet/CAT6A			
FMB911.050	100	(4x(2x0.2))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Ethernet/CAT7			
FMB911.052	100	(4x(2x0.15)C)C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
FireWireIEEE 1394b			
FMB911.056	110	2x(2x0.15)C	orange/blue, blue/red
		2x0.38	black,white
Profinet			
FMB911.060	100	(4x0.38)C	white, orange, blue, yellow (Star-quad)
USB3.0			
FMB911.068	90	2x(2xAWG28)	red/black, green/white-green
		2x(2xAWG28)C	red/black, green/white-green