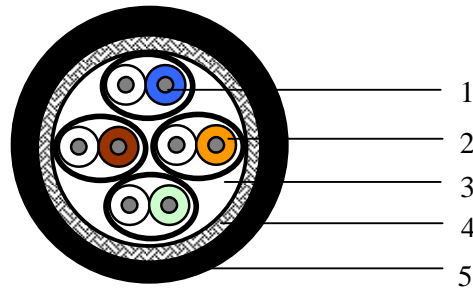


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Datacable 50106FTCB
4PR AWG24/19 S/FTP PVC
28-11-2017 v1



Applications

- Support Category 6 / 6A and 7 applications for fixed installation in railway vehicles, supports protocols such as: 10GBase-T (10 Gigabit Ethernet), 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM

General standards

- International standard: ISO/IEC 11801 2nd edition (2002) and ISO/IEC 11801 Amendment 2 (2010)
- European standard: EN 50173-1 (2002) and EN 50173-1 Amendment 1 (2009)
- UL AWM 20276 80C 30V

Construction & Dimensions

1.	Conductor Material Diameter	Stranded tinned copper ETP AWG 24/19
2.	Insulation Material Nominal diameter over insulation	Foam-skin polyethylene max 1.60 mm
3.	Cable core Pair Foil Number of shielded pairs Colour code pair 1 Colour code pair 2 Colour code pair 3 Colour code pair 4	2 twisted insulated conductors with overall foil Laminated aluminium-polyester Aluminium facing outside 4, all twisted together White / Blue White / Orange White / Green White / Brown
4.	Braid Material Coverage	Solid tinned copper ≥ 80%
5.	Jacket Material Nominal Diameter Diameter tolerance Colour UL Printlegend	PVC 8.1 mm +/- 0.3 mm Black AWM 20276 80C 30V t.b.d. on customer request

Electrical characteristics

Reference standard : ISO/IEC 61156-6 edition 2.0

Low frequency and D.C. (at 20°C)	Specification	Unit
D.C. resistance conductor	< 9,5	Ω/100m
Voltage rating AWM 20276	30	V
Resistance unbalance: within a pair / between pairs	< 2 / < 4	%
Insulation resistance	≥ 5000	MΩ.km
Dielectric strength conductor-conductor and conductor-screen (2 sec.)	2.5	kV DC
Mutual capacitance	< 56	nF/km
Capacitance unbalance pair to ground	< 1600	pF/km
Nominal velocity of propagation (for information only)	0.78	c
Delay skew (differential delay)	≤ 25	ns/100m
Transfer impedance according IEC 61156-5	Grade 1	
Coupling attenuation according IEC 61156-5	Type I	

High frequency (at 20°)											
TYPE	1*	4	10	16	31.2	62.5	100	300	600	1000*	MHz
Attenuation	2.9	5.6	8.8	11.1	15.6	22.3	28.5	51.3	75.1	100.4	dB/100m
NEXT	80.0	80.0	80.0	80.0	80	75.5	72.4	65.2	60.7	57.4	dB/100m
PS NEXT	77.0	77.0	77.0	77.0	77.0	72.5	69.4	62.2	57.7	54.4	dB/100m
ACR	76.0	74.3	72.1	70.6	67.6	60.6	53.4	31.1	10.6	-	dB/100m
PS ACR	73.0	71.3	69.1	67.6	64.6	57.6	50.4	28.1	7.6	-	dB/100m
ACR-F	78.0	78.0	75.3	71.2	65.4	59.4	55.3	45.8	39.7	35.3	dB/100m
PS ACR-F	75.0	75.0	72.3	68.2	62.4	56.4	52.3	42.8	36.7	32.3	dB/100m
Return Loss	20.0	23.0	25.0	25.0	23.6	21.5	20.1	17.3	17.3	-	dB/100m
TCL level 1	40.0	34.0	30.0	28.0	25.1	22.0	20.0				dB/100m
EL TCTL	35.0	23.0	15.0	10.9	5.1						dB/100m
Impedance upper limit	122.2	115.2	111.9	111.9	114.1	118.3	121.9	131.6	131.6	142.8	Ω
Impedance lower limit	81.8	86.8	89.4	89.4	87.7	84.5	82.0	76.0	76.0	70.0	Ω
Propagation delay	570	552	545	543	540	539	538	536	535	535	ns/100m

NOTE: Limits below 4MHz are for information only. Values at 1000 MHz are for information only.

Mechanical characteristics

	Specification	Unit
Setting (fixed) radius	4*D	mm
Bending radius (during installation)	8*D	mm
Bulk cable weight	78	g/m

Environmental and overall characteristics

	Specification	Unit
Maximum operating voltage	72	V D.C.
Maximum continuous current per conductor (@25°C)	1.5	A
Temperature rating installation	-5 / 50	°C
Temperature rating storage and operation	-40 / 80	°C

Rolling stock characteristics

	Specification
Flame resistance IEC	IEC 60332-1-2
Flame resistance UL	AWM cable flame test
Oil resistance	IEC 60811-2-1

