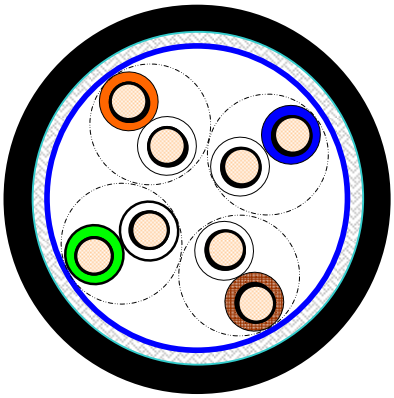
STANDARDS

- ISO/IEC 11801 2nd edition (September 2002) and ISO/IEC 24702
- EN 50173 – 1 (November 2002).
- TIA/EIA-568-B.2 (May 2001).
- UL AWM 20549

CABLE CONSTRUCTION



Conductor		
Material	Solid bare copper ETP	
Diameter	AWG 24	
Insulation		
Material	Polypropylene	
Diameter over insulated conductor	1.1 ± 0.05	mm
Pair		
Pair	2 twisted insulated conductors, non bonded	
Number of pairs	4, all twisted together	
Colour code pair 1	White / Blue & Blue	
Colour code pair 2	White / Orange & Orange	
Colour code pair 3	White / Green & Green	
Colour code pair 4	White / Brown & Brown	
Insulating foil		
Material	Polyester	
Shielding foil		
Material	Laminated Aluminium / Polyester	Position
aluminium	Outside	
Braid		
Material	Solid tinned copper	
Coverage	minimum. 80	%
Sheath:		
Material	PUR Flame-retardant and Halogen-free	
Diameter	6.6 +/- 0.2 mm	
wallthickness	0.6 mm	

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Colour	Black

ELECTRICAL CHARACTERISTICS

Low frequency and D.C.		
D.C. resistance conductor	< 93.8	Ω/km
D.C. loop resistance	< 19.0	Ω/100m
Resistance unbalance	< 2	%
D.C. insulation resistance	> 5000	MΩ.km
Dielectric strength cond. – cond. (2 sec.)	2.5	kV D.C.
Mutual capacitance	< 56	nF/km
Capacitance unbalance	< 1600	pF/km
High frequency		
Velocity of propagation 4 – 100 MHz	≥ 0.6	c
Skew		
@ 1 – 100 MHz	≤ 40	ns/100m
Propagation delay		
@ 1 – 100 MHz	≤ 534 + 36/Vf	ns/100m
Longitudinal attenuation		
@ 4 – 100 MHz	≤ 1.9108*Vf+0.0222*f+0.2/Vf	dB
Transverse conversion loss (TCL)		
@ 1 – 100 MHz	≥ 40-10log(f)	dB
Equal level transverse conversion loss (ELTCL)		
@ 1 – 30 MHz	> 35 – 20 log (f)	dB
Near end cross talk (NEXT)		
@ 1 – 100 MHz	≥ 65.3-15xlog(f)	dB
Power sum near end cross talk (PSNEXT)		
@ 1 – 100 MHz	≥ 62.3-15xlog(f)	dB
Equal level far end cross talk (ELFEXT)		
@ 1 – 100 MHz	≥ 64.0-20xlog(f)	dB
Power sum equal level far end cross talk (PSELFEXT)		
@ 1 – 100 MHz	≥ 61.0-20xlog(f)	dB
Attenuation cross talk ratio (ACR)		
@ 4 – 100 MHz	≥ 65.3-15xlog(f)-(1.9108*Vf+0.0222*f+0.2/Vf)	dB
Power sum attenuation cross talk ratio (PSACR)		
@ 4 – 100 MHz	≥ 62.3-15xlog(f)-(1.9108*Vf+0.0222*f+0.2/Vf)	dB
Input impedance open/short (Zo/s)		
@ 4-100 MHz	100 ± 15	Ω
Mean characteristic impedance (Zcm)		
@ 100 MHz	100 ± 5	Ω
Return Loss (RL)		
@ 4 ≤ f ≤ 10 MHz	≥ 20 + 5 log (f)	dB
@ 10 ≤ f ≤ 20 MHz	≥ 25	dB

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@ 20 ≤ f ≤ 100 MHz	≥ 25 – 7 log (f/20)	dB

MECHANICAL CHARACTERISTICS

Elongation at break conductor	≥ 10 %
Elongation at break insulation	≥ 100 %
Elongation at break sheath	≥ 100 %
Tensile strength sheath	≥15 Mpa

ENVIRONMENTAL AND OVERALL CHARACTERISTICS

Maximum operating voltage	450 V D.C. and 300 V A.C.
Maximum continuous current per conductor (@25°C)	1.4 A rms
Halogenfree acc to	IEC 60754-2
Oil resistant acc	IEC 60811-2-1
Maximum pulling tension	80 N
Minimum setting/bending radius	35/70 mm
Temperature range during installation	-15 / +60 °C
Temperature range during operation	-40 / +80 °C
Temperature range storage	-40 / +80 °C
Flame resistance UL AWM	Horizontal flametest
UL AWM Style	20549

Belden declares this product to be in compliance with the environmental regulations EU RoHS (Directive 2002/95/EC, 27 January 2003); this is valid for all material produced after the RoHS compliant date for this product.

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