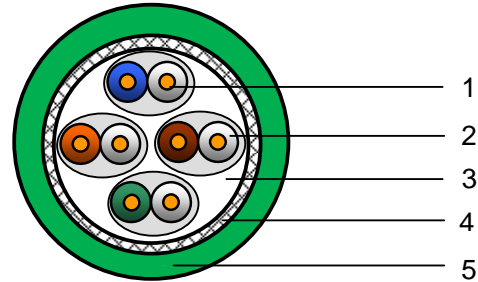


74010E

Networking Cables
Datatwist® cable FOR PROFINET
TYPE A
CAT 6A S/FTP
2017-05-11 v1



Applications

- Horizontal and building backbone cable
- Support current and future Category 6a, 7 applications, such as:
10GBase-T (10 Gigabit Ethernet), 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM
- PROFINET4 Pairs.

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)
- AWM 20276

Construction & Dimensions

1. Conductor	
Material	Solid bare copper ETP
Diameter	AWG 22
2. Insulation	
Material	Foamed polyethylene
Nominal diameter over insulation	1.54 mm
3. Cable core	
Pair	2 twisted insulated conductors with overall foil
Foil	Laminated aluminium-polyester Aluminium facing outside
Number of shielded pairs	4, all twisted together
Colour code pair 1	White / Blue
Colour code pair 2	White / Orange
Colour code pair 3	White / Green
Colour code pair 4	White / Brown
4. Braid	
Material	Solid tinned copper
Coverage	≥ 80%
5. Jacket	
Material	PVC
Diameter	8.7 ± 0.3 mm
Colour	GREEN (similar RAL6018)

Electrical characteristics

Reference standard : ISO/IEC 61156-5 edition 2.0 (2009)

Low frequency and D.C. (at 20°C)	Specification	Unit
D.C. resistance conductor	< 5.91	Ω/100m
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)	0.73	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	125	200	250	300	600	MHz	
Attenuation	2.0	3.7	5.9	7.4	10.4	14.9	19.0	21.4	27.5	31.0	34.2	50.1		dB/100m
NEXT	78.0	78.0	78.0	78.0	78.0	75.5	72.4	70.9	67.9	66.4	65.2	60.7		dB/100m
PS NEXT	75.0	75.0	75.0	75.0	75.0	72.5	69.4	67.9	64.9	63.4	62.2	57.7		dB/100m
ACR	76.0	74.3	72.1	70.6	67.6	60.6	53.4	49.6	40.4	35.5	31.1	10.6		dB/100m
PS ACR	73.0	71.3	69.1	67.6	64.6	57.6	50.4	46.6	37.4	32.5	28.1	7.6		dB/100m
ACR-F	78.0	78.0	75.3	71.2	65.4	59.4	55.3	53.4	49.3	47.3	45.8	39.7		dB/100m
PS ACR-F	75.0	75.0	72.3	68.2	62.4	56.4	52.3	50.4	46.3	44.3	42.8	36.7		dB/100m
Return Loss	20.0	23.0	25.0	25.0	23.6	21.5	20.1	19.4	18.0	17.3	17.3	17.3		dB/100m
TCL level 1	40.0	34.0	30.0	28.0	25.1	22.0	20.0	19.0	17.0	16.0				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	123.9	128.8	131.5	131.6	131.6		Ω
Impedance lower limit	81.8	86.8	89.4	89.4	87.7	84.5	82.0	80.7	77.6	76.0	76.0	76.0		Ω
Propagation delay	570	552	545	543	540	539	538	537	536	536	536	535		ns/100m

NOTE: Limits below 4MHz are for information only

Environmental and overall characteristics

	Specification	Unit
Maximum operating voltage	72	V D.C.
Maximum operating voltage UL AWM 20276	30	V ac
Maximum continuous current per conductor (@25°C)	1.5	A
Temperature rating installation	0 / 60	°C
Temperature rating operation	- 40 / 80	°C
Minimum bending radius (during operation and installation)	45 / 90	mm
Oil resistance to IEC 60811:404	Pass	
Fire performance according IEC 60332-1-2	Pass	
Fire performance according AWM 20276 Cable flame test	Pass	



Belden declares this product to be in compliance with the environmental regulations EU RoHS (Directive 2011/65/EU, 02 Jan. 2013); this is valid for all material produced after the RoHS compliant date for this product.

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