

PROconnect Patch Cable Cat5 | Technical Details

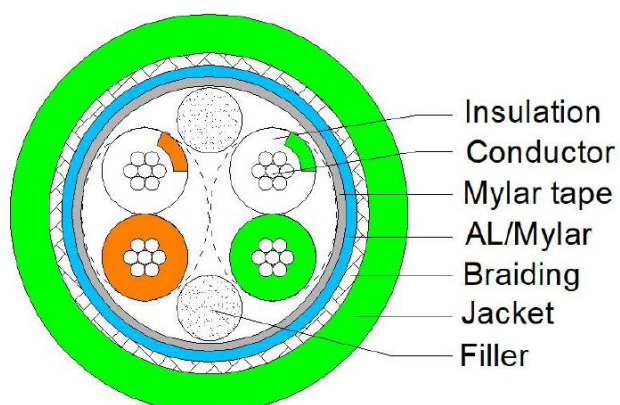
Articel	RJ45 – RJ45	RJ45 – M12-D	M12-D – M12-D
Article number	140000000-xxxxx	140001000-xxxxx	140101000-xxxxx
Length	xxxxx in cm (Example: 00050 corresponds to 50 cm)		
Application areas			
Signal type / Category	Cat.5, Class D		
Max. Transmission rates	100 Mbit/s		
Application	fixed and flexible installation		
Connectors			
Connector A			
connection type	RJ45	RJ45	M12 D coded
pin count	4		
Coating contact	gold plated		
Degree of protection	IP20	IP20	IP67
Connector B			
connection type	RJ45	M12 D coded	M12 D coded
pin count	4		
Coating contact	gold plated		
Degree of protection	IP20	IP67	IP67
Cable specifications			
Cable construction	2x2xAWG24/7 SF/UTP		
Conductor	7*0,20 mm - bare copper		
Insulation	High-Density Polyethylen (HDPE)		
Wire diameter	1,13 ± 0,05 mm		
Filler	Cotton rope		
Overall shielding	aluminium composite foil Tinned copper braid (coverage ≥ 85%)		
Material jacket	PVC		
Jacket Color	green, RAL 6018		
Outer-diameter (jacket)	6,5 ± 0,3 mm		
Thickness (jacket)	approx 0,8 mm		
Environmental conditions / Product characteristics			
Operating temperature	-40° - 80°C		
Installation temperature	-20° - 60°C		
Bending radius	Fixed: 4 x Outer diameter Occasional movement: 8 x Outer diameter		
Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free		
Flame resistance	EN 60332-1-2, FT2		
UV resistance	300h (UL 1581)		
Oil resistance	IRM 902, 70°C x 4h (EN 50290-2-22)		
LABS-free	VDMA 24364-B2-L		
Electrical properties			
Conductor resistance	≤ 145 Ohm / km		
Insulation resistance	≥ 5 GOhm x km		
Electrical capacity line constant	nom. 56 nF / km		
Nominal impedance	100 Ohm ± 15 Ohm		
Nominal voltage max.	300 V / DC		
Signal propagation speed (NVP)	67 %		
Delay skew	≤ 25 ns/100m		
conformities/approvals			
RoHS	Yes		
UL	Recognized AWM Style 20276		

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Transmission characteristics

Frequency [MHz]	Attenuation (dB)	NEXT (dB)	RL (dB)	ACR-F (dB)
1	3,0	60,0	19,0	58,6
4	3,9	54,8	19,0	46,6
8	5,5	50,0	19,0	40,6
10	6,2	48,5	19,0	38,6
16	7,9	45,2	19,0	34,5
20	8,9	43,7	19,0	32,6
25	10,0	42,1	18,0	30,7
31,25	11,2	40,5	17,1	28,7
62,5	16,2	35,7	14,1	22,7
100	21,0	32,3	12,0	18,6

Design



technical drawing

PROconnect Patch Cable Cat6A | Technical Details

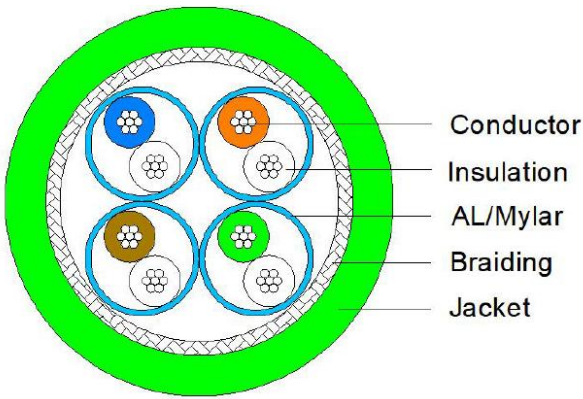
Articel	RJ45 – RJ45		RJ45 – M12-X		M12-X – M12-X	
Article number	140000010-xxxxx		140002010-xxxxx		140202010-xxxxx	
Length	xxxxx in cm (Example: 00050 corresponds to 50 cm)					
Application areas						
Signal type / Category	Cat.6A, Class EA					
Max. Transmission rates	10 Gbit/s					
Application	fixed and flexible installation					
Connectors						
Connector A						
connection type	RJ45		RJ45		M12 X coded	
pin count	8					
Coating contact	gold plated					
Degree of protection	IP20		IP20		IP67	
Connector B						
connection type	RJ45		M12 X coded		M12 X coded	
pin count	8					
Coating contact	gold plated					
Degree of protection	IP20		IP67		IP67	
Cable specifications						
Cable construction	4x2xAWG26/7 S/FTP					
Conductor	7*0,16 mm - bare copper					
Insulation	Polyethylen (PE)					
Wire diameter	1,0 ± 0,05 mm					
Pair shielding	aluminium composite foil					
Overall shielding	Tinned copper braid (coverage ≥ 85%)					
Material jacket	PVC					
Jacket Color	green, RAL 6018					
Outer-diameter (jacket)	6,1 ± 0,3 mm					
Thickness (jacket)	approx 0,55 mm					
Environmental conditions / Product characteristics						
Operating temperature	-40° - 80°C					
Installation temperature	-20° - 60°C					
Bending radius	Fixed: 6 x Outer diameter Occasional movement: 10 x Outer diameter					
Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free					
Flame resistance	VW-1, CMX					
UV resistance	720h (UL 1581)					
Oil resistance	IRM 902, 70°C x 4h (EN 50290-2-22)					
LABS-free	VDMA 24364-B2-L					
Electrical properties						
Conductor resistance	≤ 148 Ohm / km					
Insulation resistance	≥ 5 GOhm x km					
Electrical capacity line constant	nom. 56 nF / km					
Nominal impedance	100 Ohm ± 15 Ohm					
Nominal voltage max.	300 V / DC					
Signal propagation speed (NVP)	77 %					
Delay skew	≤ 45 ns/100m					
conformities/approvals						
RoHS	Yes					
UL	Recognized AWM Style 20276					

PROconnect Patch Cable Cat6A | Technical Details

Transmission characteristics

Frequency [MHz]	Attenuation (dB)	NEXT (dB)	RL (dB)	ACR-F (dB)	PSNEXT (dB)	PSACR-F (dB)
1	1,9	65,0	19,1	64,2	62,0	61,1
4	3,5	34,1	21,0	52,1	61,8	49,1
8	5,0	59,4	21,0	46,1	57,0	43,1
10	5,5	57,8	21,0	44,2	55,5	41,2
16	7,0	54,7	20,0	40,1	52,2	37,1
20	7,8	53,1	19,5	38,2	50,7	35,2
25	8,8	51,5	19,0	36,2	49,1	33,2
31,25	9,8	50,0	18,5	34,3	47,5	31,3
62,5	14,0	45,1	16,0	28,3	42,7	25,3
100	18,0	41,8	14,0	24,2	39,3	21,2
200	26,1	36,9	11,0	18,2	34,3	15,2
250	29,5	35,3	10,0	16,2	32,7	13,2
300	32,7	34,0	9,2	14,6	31,4	11,6
400	38,4	29,9	8,0	12,1	27,1	9,1
500	43,8	26,7	8,0	10,2	23,8	7,2

Design



technical drawing