



XG Category 6A F/UTP Cabling System Products

Performance for Next Generation Applications





25 Year System Performance Coverage*

We are confident that your AMP NETCONNECT cabling system will keep performing to current TIA/EIA industry standards. If the registered system ever fails to meet those standards within 25 years of the date of installation, we'll provide the reasonable parts and labor to replace or repair the AMP NETCONNECT product.



25 Year Component Coverage*

Tyco Electronics also offers a 25 Year Component Warranty to protect individual AMP NETCONNECT cabling system components. If a component fails within 25 years of the date of installation, we'll provide the reasonable parts to replace or repair the registered AMP NETCONNECT product.

It's Standard Equipment

This coverage is automatically part of the package when*:

- AMP NETCONNECT products are specified end-to-end
- A Tyco Electronics authorized NETCONNECT Design & Installation (ND&I) contractor registers the network project with Tyco Electronics
- That ND&I performs the actual installation in accordance with Tyco Electronics requirements

Who's Covered

Unlike most systems suppliers, Tyco Electronics provides warranty coverage directly to the end user. Many suppliers provide coverage to the installers, who then provide coverage to the customer. But with Tyco Electronics warranties, there are no middlemen. The warranties are between you and Tyco Electronics.

For more information, please visit: <http://www.tycoelectronics.com/aboutus/pdf/tc.pdf>

Or call: 1-800-553-0938

Outside the U.S., please contact your local AMP NETCONNECT product sales office.

People & Products to Answer the Cabling Challenge.

Cabling a retail store, casino or office building can be complex. Yet the solution for productive connectivity and cable management can be as simple as talking to the right people - The AMP NETCONNECT business unit of Tyco Electronics.

The reason is what we bring to the building infrastructure challenges you face. In-depth technical knowledge and expertise from decades of experience. Innovative technologies from ongoing R&D. And quality products for every power, data, voice and video networking need. One of the broadest lines in the industry, in fact.

Additionally, it's what we do to answer the challenge: develop and deliver integrated, made-to-order solutions that optimize network performance, increase productivity and produce more immediate return-on-investment.

And it's not just providing technology. It's making sure solutions are efficiently and effectively installed: working with distributors and customers so products are delivered when and where you need them. And maintaining a global network of certified installation contractors.

It all means, simply, that AMP NETCONNECT cabling systems provide the answers you're looking for: the whole solution for any cabling challenge. From the ground up.

*Some conditions may apply. AMP NETCONNECT Home Net-Works Systems qualify for a 25 year component warranty only. For more information, please visit www.ampnetconnect.com or call 1-800-553-0938. Outside the U.S., please contact your local AMP NETCONNECT product sales office.



- XG Category 6A General Information.....02
- XG20 Series Category 6A F/UTP (ScTP) Cable03
- XG Category 6A AMP-TWIST Shielded Modular Jacks03
- Colored Dust Covers for AMP-TWIST Modular Jacks.....03
- XG Category 6A F/UTP Slim Line Patch Cable Assemblies.....04
- XG Category 6A AMP-TWIST Shielded Patch Panels04

Chapter Summary

At Tyco Electronics, we've known for years that shielded cabling offers superior noise immunity at higher frequencies where applications like 10 gigabit Ethernet reside, without hampering performance. That's why shielded technology is the only copper technology with proposals for supporting next-generation applications beyond 10 gig.

Through advancements in connector technology and system design, the AMP NETCONNECT XG Category 6A shielded solution now offers easier 10-gig installation without the restrictions of unshielded cabling. For starters, our XG Category 6A solution allows you to mix cabling with other types of copper media and neatly arrange cabling bundles without worrying about performance. Plus, there's no need for time-consuming Alien Crosstalk testing. And you get the easiest terminating shielded jack on the market, which means your 10-gig networks can be up and running faster than ever.

Backed by our 25-year performance warranty*, the AMP NETCONNECT XG shielded cabling solution features modular jacks, patch panels and shielded cable and assemblies that offer superior performance and cost advantages over unshielded solutions. Our fully-compliant XG solution offers fast, easy deployment with bonding and grounding that occurs naturally through normal installation practices.

With superior noise immunity to eliminate Alien Crosstalk and RFI/EMI, the AMP NETCONNECT XG Category 6A shielded system offers performance above 500 MHz, with plenty of margin needed for advanced 10 gigabit transmission and future applications.

Section Facts

- Exceeds ANSI/TIA 568-C.2 Category 6A
- Meets IEEE 802.3an 10GBASE-T and ISO/IEC 11801 Class EA on 100m channels
- Superior noise immunity for superior performance and headroom
- Better heat dissipation for power over Ethernet
- Faster, more familiar installation
- Consistent, precise terminations
- Fastest termination time in the industry
- Enhanced cable management and density
- Automatic bonding and grounding design
- Please call customer service at 1-800-553-0938 for quotes on custom assemblies
- Tyco Electronics offers one of the broadest assortments of connectors in the world and is continually introducing new products. If you don't see what you need in this catalog, please contact Tyco Electronics Product Information Center at 1-800-522-6752

*Some conditions may apply. AMP NETCONNECT Home Net-Works Systems qualify for a 25 year component warranty only. For more information, please visit www.ampnetconnect.com or call 1-800-553-0938. Outside the U.S., please contact your local AMP NETCONNECT product sales office.

Twisted Pair Cable Information

01

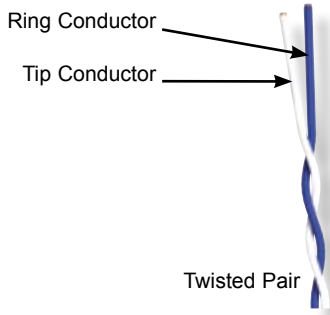
Cable Packaging Reference



WR = Wooden Reels

Note: Unless otherwise specified, all lengths are 1000 feet (305 meters). Other lengths and colors available. Call for details. Package types are listed in each chart.

4-Pair Conductor Color Code

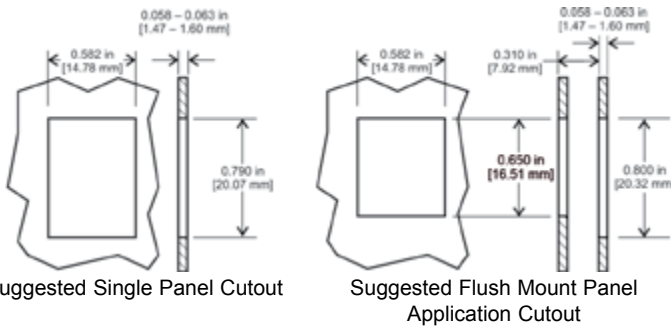


Pair		Jacket Color
1	Tip	White
	Ring	Blue
2	Tip	White
	Ring	Orange
3	Tip	White
	Ring	Green
4	Tip	White
	Ring	Brown

Twisted Pair Cable Temperatures

Category	Condition	Riser/Plenum
Cat 6A	Storage	-4 – 140°F (-20 – 60°C)
	Operating	-4 – 140°F (-20 – 60°C)
	Installation	40 – 140°F (4 – 60°C)

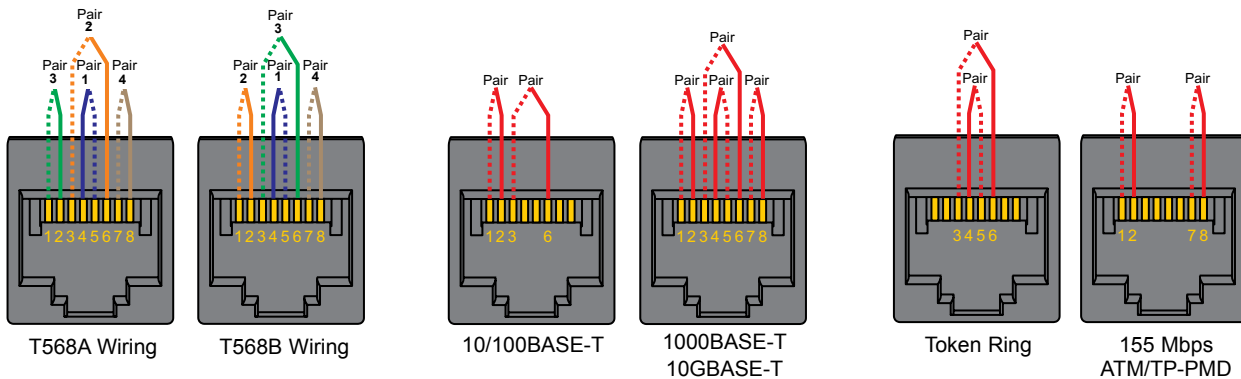
Suggested Modular Jack Cutouts



AMP NETCONNECT Modular Jack Technical Reference

Modular Jack Mating Cycles	110 Contacts Terminations	Modular Jack Pull Force	Voltage	Operating Temperature	Approvals
750	200	20 lbs (89 N)	150 VAC max.	-40° — 70°C (-40° — 158°F)	UL Listed File Number: E81956

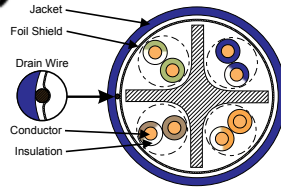
Application Wiring Diagrams for Modular Jacks



XG Category 6A F/UTP Cabling System



XG20 Series Category 6A F/UTP (ScTP) Cable

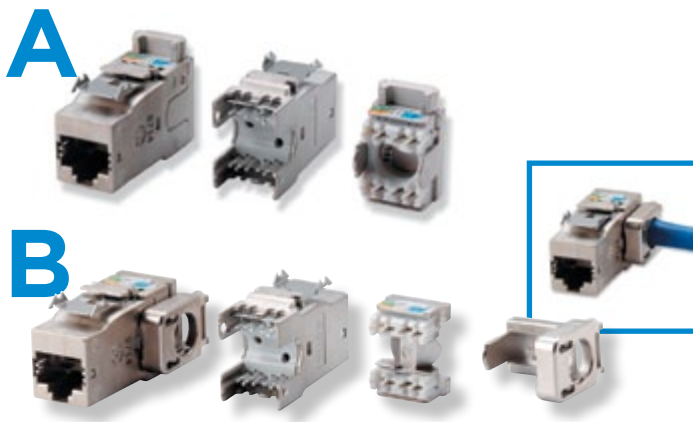


- Meets or exceeds the channel specifications of ANSI/TIA-568-C.2 Category 6A and Amendment 1 to ISO/IEC 11801:2002 Class E_A up to 500 MHz when used as a component in a properly installed AMP NETCONNECT XG F/UTP channel
- Independently tested by Intertek ETL SEMKO third party testing services
- Meets or exceeds all requirements for IEEE 802.3an 10 Gigabit Ethernet
- 23 AWG solid conductors
- Lead-free (no heavy metals)

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UL/NEC Ratings	Pair Count	Package	Part Number				Weight lbs/mft	Vp (%nom)	Dimensions (in)	
			White	Gray	Blue	Yellow			Dielectric	Outside
CMR	4	WR	4-1499389-1	4-1499389-3	4-1499389-5	4-1499389-7	41.0	72	0.044	0.300
CMP	4	WR	4-1499416-1	4-1499416-3	4-1499416-5	4-1499416-7	41.7	72	0.044	0.300

XG Category 6A AMP-TWIST Shielded Modular Jacks



- Meets or exceeds the channel specifications of ANSI/TIA-568-C.2 Category 6A and Amendment 1 to ISO/IEC 11801:2002 Class E_A up to 500 MHz when used as a component in a properly installed AMP NETCONNECT XG F/UTP channel
- Integrated strain relief and shield clamp
- Integrated dust cover option
- Re-usable
- Universal wiring label permits wiring to T568A or T568B
- 8-Position RJ45 Modular Jacks for 1, 2, 3, and 4-Pair applications
- RoHS compliant
- For unloaded patch panels see Chapter 15
- Meets or exceeds all requirements for IEEE 802.3an 10 Gigabit Ethernet
- Easy installation
- Termination time: about 90 seconds (using AMP NETCONNECT SL Series Termination Tool, without Lacing Fixture – 1725150-3, see Chapter 22)

Description	Wiring Pattern		Figure	Part Number
Rear Entry	T568A/T568B	without Dust Cover	A	1711342-2
		with Clear Dust Cover		1711160-2
Side Entry	T568A/T568B	without Dust Cover	B	1711343-2
		with Clear Dust Cover		1711295-2

Colored Dust Covers for XG Cat 6A AMP-TWIST Modular Jacks With Dust Covers



- For use with AMP-TWIST modular jacks 1711160-2 and 1711295-2 only
- Replaces existing clear dust cover on 1711160-2 and 1711295-2 (jack is not included with colored dust cover)
- 8 color choices
- Provides easier port identification
- Interchangeable
- No special tooling required
- Packaged 50/bag
- Application Spec: 114-93008
- RoHS compliant

Black	White	Violet	Orange	Blue	Red	Green	Yellow
1-1711511-2	1-1711511-3	1-1711511-4	1-1711511-5	1-1711511-6	1-1711511-7	1-1711511-8	1-1711511-9

XG Category 6A F/UTP Slim Line Patch Cable Assemblies

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- Meets or exceeds the channel specifications of ANSI/TIA-568-C.2 Category 6A and Amendment 1 to ISO/IEC 11801:2002 Class E_A up to 500 MHz when used as a component in a properly installed AMP NETCONNECT XG F/UTP channel
- Meets or exceeds all requirements for IEEE 802.3an 10 Gigabit Ethernet
- Non-plenum (CM rated)
- 4-Pair stranded F/UTP conductors
- Universal wiring (T568A/T568B)
- Lead-Free (no heavy metals)
- Jacket colors shown in the table are approximate

Length	Black	Gray	Blue	Green	Red	White	Yellow	Orange	Violet
2 ft [0.61 m]	1933880-2	1933881-2	1933882-2	1933883-2	1933884-2	1933885-2	1933886-2	1933887-2	1933888-2
3 ft [0.91 m]	1933880-3	1933881-3	1933882-3	1933883-3	1933884-3	1933885-3	1933886-3	1933887-3	1933888-3
4 ft [1.22 m]	1933880-4	1933881-4	1933882-4	1933883-4	1933884-4	1933885-4	1933886-4	1933887-4	1933888-4
5 ft [1.52 m]	1933880-5	1933881-5	1933882-5	1933883-5	1933884-5	1933885-5	1933886-5	1933887-5	1933888-5
6 ft [1.83 m]	1933880-6	1933881-6	1933882-6	1933883-6	1933884-6	1933885-6	1933886-6	1933887-6	1933888-6
7 ft [2.13 m]	1933880-7	1933881-7	1933882-7	1933883-7	1933884-7	1933885-7	1933886-7	1933887-7	1933888-7
8 ft [2.44 m]	1933880-8	1933881-8	1933882-8	1933883-8	1933884-8	1933885-8	1933886-8	1933887-8	1933888-8
9 ft [2.74 m]	1933880-9	1933881-9	1933882-9	1933883-9	1933884-9	1933885-9	1933886-9	1933887-9	1933888-9
10 ft [3.05 m]	1-1933880-0	1-1933881-0	1-1933882-0	1-1933883-0	1-1933884-0	1-1933885-0	1-1933886-0	1-1933887-0	1-1933888-0
12 ft [3.66 m]	1-1933880-2	1-1933881-2	1-1933882-2	1-1933883-2	1-1933884-2	1-1933885-2	1-1933886-2	1-1933887-2	1-1933888-2
14 ft [4.27 m]	1-1933880-4	1-1933881-4	1-1933882-4	1-1933883-4	1-1933884-4	1-1933885-4	1-1933886-4	1-1933887-4	1-1933888-4
15 ft [4.57 m]	1-1933880-5	1-1933881-5	1-1933882-5	1-1933883-5	1-1933884-5	1-1933885-5	1-1933886-5	1-1933887-5	1-1933888-5
16 ft [4.88 m]	1-1933880-6	1-1933881-6	1-1933882-6	1-1933883-6	1-1933884-6	1-1933885-6	1-1933886-6	1-1933887-6	1-1933888-6
20 ft [6.10 m]	2-1933880-0	2-1933881-0	2-1933882-0	2-1933883-0	2-1933884-0	2-1933885-0	2-1933886-0	2-1933887-0	2-1933888-0
25 ft [7.62 m]	2-1933880-5	2-1933881-5	2-1933882-5	2-1933883-5	2-1933884-5	2-1933885-5	2-1933886-5	2-1933887-5	2-1933888-5
30 ft [9.14 m]	3-1933880-0	3-1933881-0	3-1933882-0	3-1933883-0	3-1933884-0	3-1933885-0	3-1933886-0	3-1933887-0	3-1933888-0
40 ft [12.19 m]	4-1933880-0	4-1933881-0	4-1933882-0	4-1933883-0	4-1933884-0	4-1933885-0	4-1933886-0	4-1933887-0	4-1933888-0
50 ft [15.24 m]	5-1933880-0	5-1933881-0	5-1933882-0	5-1933883-0	5-1933884-0	5-1933885-0	5-1933886-0	5-1933887-0	5-1933888-0

XG Category 6A AMP-TWIST Shielded Patch Panels



- Meets or exceeds the channel specifications of ANSI/TIA-568-C.2 Category 6A and Amendment 1 to ISO/IEC 11801:2002 Class E_A up to 500 MHz when used as a component in a properly installed AMP NETCONNECT XG F/UTP channel
- Meets or exceeds all requirements for IEEE 802.3an 10 Gigabit Ethernet
- Shielded installation made simple with jacks
- Ports may be individually replaced
- Packaged unloaded with jacks bagged separately for termination with SL Series jack termination tool, see Chapter 22
- Available in straight and angled versions
- Labels and label covers included
- Accommodates icons (sold separately)
- Integrated bonding bar makes bonding simple and requires no extra steps
- For multimedia (no included connectivity) patch panels, see Chapter 15

Footprint	Port Count	Height	Width	Figure	Part Number
Standard	24	1U (1.75")	19.0"	A	1933319-2
	48	2U (3.50")	19.0"	B	1933320-2
Angled	24	1U (1.75")	19.0"	C	1933321-2
	48	2U (3.50")	19.0"	D	1933322-2

Need more information?

Visit our web site at <http://www.ampnetconnect.com>

- Instruction Sheets
- Data Sheets
- Cut Sheets
- White Papers
- Authorized NETCONNECT Design and Installation (ND&I) contractor listings
- Authorized AMP NETCONNECT product distributor listings
- AMP NETCONNECT product sales engineer contact listings

Send us an e-mail at networking.help@tycoelectronics.com

Give our customer service center (USA) a call: 1-800-553-0938

- Technical Support
- Place an Order
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- Product Information
- Product Samples Obtain a Quote
- Tyco Electronics Fax Service

Get Training - AMP NETCONNECT Product Training Services: 1-800-331-9857 ext 63809

- Designing LAN Cabling
- Certifying and Troubleshooting LAN Cabling
- Installing and Connectorizing LAN Cabling

Globally Connected for all your cabling needs

Americas

Argentina	54-11-4733-2200
Brazil	55 11 2103-6120
Canada	905-475-6222
Chile	56-2-3450347
Colombia	57-1-3198999
Mexico	52-55-1106-0800
Peru	51-1-3197900
United States	1-800-553-0938
Venezuela	57-1-3198999

Asia/Pacific

Australia	Sydney	61-2-9554-2600
	Melbourne	61-3-9389-5677
	Brisbane	61-7-3623-0340
China	Beijing	86-10-65816181
	Chongqing	86-23-89808860
	Guangzhou	86-20-86672071
	Hong Kong	852-2735-1628
	Shanghai	86-21-24071588
	Shenzhen	86-755-25154700
	Wuhan	86-27-68850166
Indonesia		6221-526-7852
Japan	Kawasaki	81-44-844-8071
	Osaka	81-6-6533-8240
Korea		82-2-3274-0535
Malaysia		603-705-3055
New Zealand	Auckland	64-9-634-4580
	Wellington	64-4-384-1495
Philippines		632-848-0171
Singapore		65-482-0311
Taiwan		886-2-87682788
Thailand		66-2-955-0500
Vietnam		848-9305-546

Europe/Middle East/Africa

Armenia	374-10-381083	Lithuania	370-5-213-1402
Austria	43-1-90560-1204	Luxemburg	31-73-6246-246
Azerbaijan	49-6103-709-3301	Netherlands	31-73-6246-246
Belarus	375-172374794	Norway	47-66-77-88-99
Belgium	32-16-35-2190	Poland	48-22-4576-700
Bulgaria	359-2-971-2152	Portugal	351-961-377-331
Cyprus	30-210-9370-396	Romania	40-21-311-3479
Czech Republic	420-5-41-162-112	Russia	7-495-790-7902
Denmark	45-70-15-52-00	Slovakia	420-5-41-162-112
Egypt	20-2-2419-2334	Slovenia	385-1-3666-733
Estonia	358-95-12-34-20	Spain	34-93-291-0330
Finland	358-95-1234-20	Netherlands	31-73-6246-211
France	33-1-3420-212	Norway	47-66-77-88-99
Georgia	49-6103-709-3301	Poland	48-22-4576-700
Germany	49-6103-709-1547	Russia	7-095-926-55-06
Greece	30-210-9370-396	Spain	34-93-291-0330
Hungary	36-1-289-1007	Sweden	46-8-5072-5000
India	91-80-4011-5000	Switzerland	41-71-447-0447
Ireland	44-208-420-8140	Turkey	90-212-281-8181
Italy	39-011-4012-111	U.A.E. (United Arab Emirates)	971-4-3210201
Kazakhstan	7-327-244-5875	Ukraine	380-44-206-226
Latvia	370-5-213-14-02	United Kingdom	44-208-420-8140
For Eastern European Countries not shown			49-6103-709-1166
For Middle East/African Countries not shown			33-1-3420-2122
For BeNeLux			31-73-6246-246

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Our commitment. Your advantage.