

Support for Ethernet/IP, EtherCAT, and Other Popular Networks Based on Ethernet

- Combines tough RJ45 Connectors for use outside of panels and Environment-resistance Connectors with IP67 protection (M12).
- M12 Smartclick mates with any threaded M12 socket and provides 'twist and click' connection with XS5P-T panel socket.
- M12 Smartclick connectors are shielded to protect against EMI.
- Separate RJ45 assembly connectors are available for easy wiring on site
- Uses AWG22 Cat5E cables that are suitable for wiring outside of panels.



■ Specifications

Туре	Cable with Connector on One End (M12)	Cable with Connectors on Both Ends (M12/M12)	Cable with Connectors on Both Ends (M12/RJ45)	Cable with Connectors on Both Ends (RJ45/RJ45)	RJ45 Assembly Connector	M12 Connector for Panel Mounting
Item / Model	XS5H-T421-□M0-K	XS5W-T421-□M2-K	XS5W-T421-□MC-K	XS5W-T421-□MD-K	XS6G-T421-1	XS5P-T42□-5
Rated current	3 A			2.5 A		3 A
Rated voltage	30 V					
Contact resistance	20 mΩ max.					
Insulation resistance	500 M Ω min.					
Withstand voltage	1,000 VAC for 60 s (leak current: 1 mA max.)					
Ambient operating temperature	-25 to 70°C -25 to 70°C -25 to 70°C			–25 to 70°C		
Ambient storage temperature	-25 to 70°C -25 to 70°C -25 to 70°C			–25 to 70°C		
Degree of protection	M12: IEC IP67, RJ45:	IEC IP20				

■ Materials and Finish

Connector

Item Model		M12	RJ45	
Contact Block		PBT plastic (UL94V-0), light gray	PA plastic (UL94V-0), black	
Contacts Materials		Phosphor bronze		
	Finish	Nickel base, 0.4-μm gold-plating	Nickel base, 1.4-μm gold-plating	
Fixtures		Nickel-plated zinc alloy —		
Cover		PBT —		
O-ring		Rubber —		

Cable

Specifications	UL CM PVC (double shielding) Cat. 5E	
Cores and colors	AWG22 (0.26/7): Yellow, orange, white, and blue	
Outer Diameter	6.5 mm	
Sheath color	Light blue	

4-Pin Connectors with Cable Attached

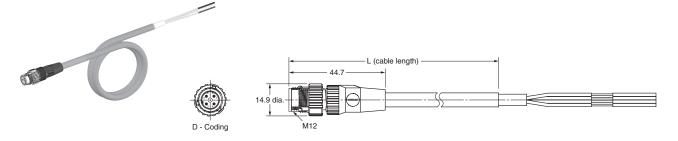
■ XS5H - Plug on One Cable End

XS5H-T421-□M0-K (1 x M12)





Dimensions (Unit: mm)



Ordering Information

Type	Cable length L (m)	Model	
Туре	Cable length L (III)	Straight	
	0.5	XS5H-T421-BM0-K	
	1	XS5H-T421-CM0-K	
Oakla with Oassa atom on Oak Fad	2	XS5H-T421-DM0-K	
Cable with Connector on One End (M12)	3	XS5H-T421-EM0-K	
(10112)	5	XS5H-T421-GM0-K	
	10	XS5H-T421-JM0-K	
	15	XS5H-T421-KM0-K	

Note: Ask your OMRON representative about other specifications.

Model Number Legend

Use this model number legend to identify products from their model number. When ordering, use a model number from the table in *Ordering Information*.

1. Type

Connector connected to cable, M12 plug on one cable end H:

2. Signal type

Ethernet

3. Connector Poles

4 poles

4. Contact Plating

0.4-μm gold plating - M12 connectors

5. Cable Connection Direction

Straight

6. Cable Length

A: 0.3 m G: 5 m B: 0.5 m J: 10 m C: 1 m 15 m D: 2 m

F: 3 m

7. Connections

1) Yellow, 2) White, 3) Orange, 4) Blue (Numbers inside circles are terminal numbers)

8. Connectors on One End/Both Ends

One M12 Plug

9. Cable Specifications

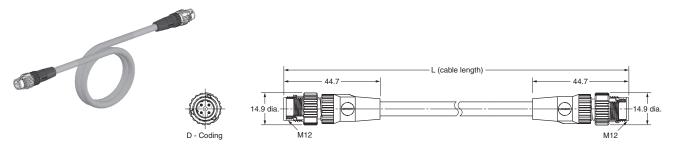
UL CM PVC (double shielded) / Cat.5E

■ XS5W - Plugs on Both Cable Ends

XS5W-T421-□M2-K (2 x M12)



<u>Dimensions</u> (Unit: mm)



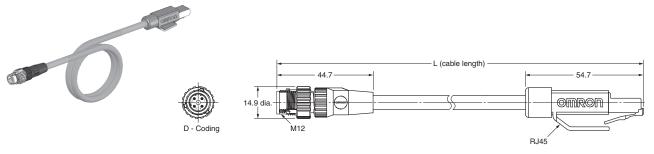
Ordering Information

Type	Cable length L (m)	Model	
Туре	Cable leligili L (III)	Straight	
	0.5	XS5W-T421-BM2-K	
	1	XS5W-T421-CM2-K	
Cable with Connector on Both Ends (M12 / M12)	2	XS5W-T421-DM2-K	
	3	XS5W-T421-EM2-K	
(10112 / 10112)	5	XS5W-T421-GM2-K	
	10	XS5W-T421-JM2-K	
	15	XS5W-T421-KM2-K	

XS5W-T421- \square **MC-K** (1x M12 and 1x RJ45)



<u>Dimensions</u> (Unit: mm)



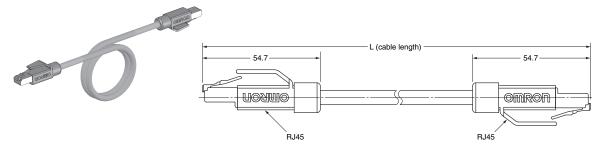
Ordering Information

Time	Coble loweth L (m)	Model	
Туре	Cable length L (m)	Straight	
	0.3	XS5W-T421-AMC-K	
	0.5	XS5W-T421-BMC-K	
	1	XS5W-T421-CMC-K	
Cable with Connector on Both Ends	2	XS5W-T421-DMC-K	
(M12 / RJ45)	3	XS5W-T421-EMC-K	
	5	XS5W-T421-GMC-K	
	10	XS5W-T421-JMC-K	
	15	XS5W-T421-KMC-K	

Note: Ask your OMRON representative about other specifications.

XS5W-T421-□MD-K (2 x RJ45)

Dimensions (Unit: mm)



Ordering Information

Type	Coble length L (m)	Model	
Туре	Cable length L (m)	Straight	
	0.3	XS5W-T421-AMD-K	
	0.5	XS5W-T421-BMD-K	
	1	XS5W-T421-CMD-K	
Cable with Connector on Both Ends	2	XS5W-T421-DMD-K	
(RJ45 / RJ45)	3	XS5W-T421-EMD-K	
	5	XS5W-T421-GMD-K	
	10	XS5W-T421-JMD-K	
	15	XS5W-T421-KMD-K	

Note: Ask your OMRON representative about other specifications.

Model Number Legend

Use this model number legend to identify products from their model number. When ordering, use a model number from the table in Ordering Information.

$$XS5W - T421 - MM - K$$

1. Type

W: Connector connected to cable, plugs on both cable ends

2. Signal type

T: Ethernet

3. Connector Poles

4 poles

4. Contact Plating

0.4- μm gold plating - M12 connectors 1.4 μm gold plating - RJ45 connectors

5. Cable Connection Direction

Straight

6. Cable Length

0.3 m 5 m A: G: B: 0.5 m J: 10 m C: 1 m K: 15 m

D:

E: 3 m

7. Connections

1 Yellow, 2 White, 3 Orange, 4 Blue (Numbers inside circles are terminal numbers)

8. Connectors on One End/Both Ends

2: Two M12 Plugs

C: One M12 Plug + One RJ45 Plug

Two RJ45 Plugs D:

9. Cable Specifications

UL CM PVC (double shielded) / Cat.5E

Assembly Connector - RJ45

■ XS6G - Plugs

XS6G-T421-1

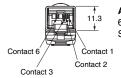


(Unit: mm)

Dimensions







Applicable wires

6.1 to 6.9 dia. Stranded wires: AWG22 to AWG24 Solid wires: AWG22 to AWG23



Ordering Information

Type	Cable length L (m)	Model	
Туре	Cable length E (III)	Straight	
RJ45 Assembly Connector		XS6G-T421-1	

4-Pin Panel-mount Connectors

■ XS5P - Sockets

XS5P-T42□-5 (Rear or Front locking M12 socket)

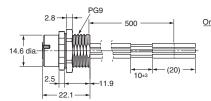


Dimensions

XS5P-T426-5 (Rear Locking)







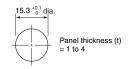
Orange White

(Unit: mm)

Wiring

Terminal No.	Color
1	Yellow
2	White
3	Orange
4	Blue

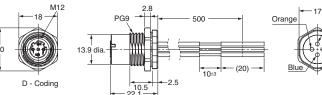
Panel Cutout Dimension



Note 1: The panel cutout dimension is the same for Front-locking and Rearlocking Connectors.

Note 2: Rotational positioning is not possible for connector rotation.

XS5P-T427-5 (Front Locking)



Ordering Information

Туре		Cable length L (m)	Model
		Cable length L (III)	Straight
M12 Connector for Panel Mounting	Rear Locking	0.5 m	XS5P-T426-5
	Front Locking	0.5 m	XS5P-T427-5

Precautions

■ Correct Use

Do not use the Connectors in an atmosphere or environment that exceeds the specifications.

Connector Connection and Disconnection

- When connecting or disconnecting Connectors, be sure to hold the Connectors by hand.
- Do not hold the cable when disconnecting Connectors.
- When mating Connectors, be sure to insert the plug all the way to the back of the socket before attempting to lock the Connectors.
- Do not use tools of any sort to mate the Connectors. Always use your hands. Pliers or other tools may damage the Connectors.

 Lay the cables so that external force is not applied to the Connectors. Otherwise, the degree of protection (IP67) may not be achieved.

Degree of Protection

- The degree of protection of Connectors (IP67) is not for a fully watertight structure. Do not the Connectors underwater.
- Do not step on or place any objects on the Connectors. Doing so may damage the Connectors.

■ General Precautions

- Do not pull excessively on the Connectors or cables. Do not install the Connectors or cables in any way that would place a load directly on the mating section or cable connections. Doing so can damage the Connectors or break the wires inside the cables.
- Install the Connectors and cables where they will not be stepped on to prevent the wires inside the cables from being broken and to prevent the Connectors from being damaged. If the Connectors or cables must be installed where they might be stepped on, protect them with covers.
- Refer to the specifications for your cables before bending the cables and do not bend them past their minimum bending radius.

Omron Electronic Components, LLC

Terms and Conditions of Sales

I. GENERAL

Definitions: The words used herein are defined as follows.

Terms: These terms and conditions

Seller: Omron Electronic Components LLC and its subsidiaries (b)

The buyer of Products, including any end user in section III through VI Buyer: (c)

Products: Products and/or services of Seller Including: Including without limitation

Offer: Acceptance: These Terms are deemed part of all quotations, acknowledgments, invoices, purchase orders and other documents, whether electronic or in writing, relating to the sale of Products by Seller. Seller hereby objects to any Terms proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these

<u>Distributor</u>: Any distributor shall inform its customer of the contents after and including section III of these Terms.

- Prices: Payment: All prices stated are current, subject to change without notice by Seller. Buyer agrees to pay the price in effect at the time the purchase order is accepted by Seller. Payments for Products received are due net 30 days unless otherwise stated in the invoice. Buyer shall have no right to set off any amounts against the amount owing in respect of this invoice.
- Discounts: Cash discounts, if any, will apply only on the net amount of invoices sent to Buyer after deducting transportation charges, taxes and duties, and will be allowed only if (a) the invoice is paid according to Seller's payment terms and (b) Buyer has no past due amounts owing to Seller.
- Interest: Seller, at its option, may charge Buyer 1.5% interest per month or the maximum legal rate, whichever is less, on any balance not paid within the stated terms. Orders: Seller will accept no order less than 200 U.S. dollars net billing.

- Currencies: If the prices quoted herein are in a currency other than U.S. dollars, Buyer shall make remittance to Seller at the then current exchange rate most favorable to Seller; provided that if remittance is not made when due, Buyer will convert the amount to U.S. dollars at the then current exchange rate most favorable to Seller available during the period between the due date and the date remittance is actually made.
- Governmental Approvals: Buyer shall be responsible for all costs involved in obtaining any government approvals regarding the importation or sale of the Products.
- Taxes: All taxes, duties and other governmental charges (other than general real property and income taxes), including any interest or penalties thereon, imposed directly or indirectly on Seller or required to be collected directly or indirectly by Seller for the manufacture, production, sale, delivery, importation, consumption or use of the Products sold hereunder (including customs duties and sales, excise, use, turnover and license taxes) shall be charged to and remitted by Buyer to Seller.
- Financial: If the financial position of Buyer at any time becomes unsatisfactory to Seller, Seller reserves the right to stop shipments or require satisfactory security or payment in advance. If Buyer fails to make payment or otherwise comply with these Terms or any related agreement, Seller may (without liability and in addition to other remedies) cancel any unshipped portion of Products sold hereunder and stop any Products in transit until Buyer pays all amounts, including amounts payable hereunder, whether or not then due, which are owing to it by Buyer. Buyer shall in any event remain liable for all unpaid
- Cancellation; Etc: Orders are not subject to rescheduling or cancellation unless Buyer indemnifies Seller fully against all costs or expenses arising in connection therewith.
- Force Majeure: Seller shall not be liable for any delay or failure in delivery resulting from causes beyond its control, including earthquakes, fires, floods, strikes or other labor disputes, shortage of labor or materials, accidents to machinery, acts of sabotage, riots, delay in or lack of transportation or the requirements of any government authority.

Shipping: Delivery: Unless otherwise expressly agreed in writing by Seller:
(a) All sales and shipments of Products shall be FOB shipping point (unless otherwise stated in writing by Seller), at which point title to and all risk of loss of the Products shall pass from Seller to Buyer, provided that Seller shall retain a security interest in the Products until the full purchase price is paid by Buyer;

Delivery and shipping dates are estimates only; and

- Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
- 12. Claims: Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier or any claim related to pricing or other charges must be presented in detail in writing to Seller within 30 days of receipt of shipment.

III. PRECAUTIONS

- Suitability: IT IS THE BUYER'S SOLE RESPOINSIBILITY TO ENSURE THAT ANY OMRON PRODUCT IS FIT AND SUFFICIENT FOR USE IN A MOTORIZED VEHICLE APPLICATION. BUYER SHALL BE SOLELY RESPONSIBLE FOR DETERMINING APPROPRIATENESS OF THE PARTICULAR PRODUCT WITH RESPECT TO THE BUYER'S APPLICATION INCLUDING (A) ELECTRICAL OR ELECTRONIC COMPONENTS. (B) CIRCUITS, (C) SYSTEM ASSEMBLIES, (D) END PRODUCT, (E) SYSTEM (E) MATERIALS OR SUBSTANCES OR (C) OPERATING ENVIRONMENT SYSTEM, (F) MATÉRIALS OR SUBSTANCES OR (G) OPERATING ENVIRONMENT. Buyer acknowledges that it alone has determined that the Products will meet their requirements of the intended use in <u>all</u> cases. Buyer must know and observe all prohibitions of use applicable to the Product/s.
- Use with Attention: The followings are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible use of any Product, nor to imply that any use listed may be suitable for any Product:
 - Outdoor use, use involving potential chemical contamination or electrical interference.

(b) Use in consumer Products or any use in significant quantities.

Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and

installations subject to separate industry or government regulations.

(d) Systems, machines, and equipment that could present a risk to life or property.

Prohibited Use: NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM

Motorized Vehicle Application: USE OF ANY PRODUCT/S FOR A MOTORIZED VEHICLE APPLICATION MUST BE EXPRESSLY STATED IN THE SPECIFICATION BY

SELLER.

<u>Programmable Products:</u> Seller shall not be responsible for the Buyer's programming of a programmable Product.

IV. WARRANTY AND LIMITATION

- Warranty: Seller's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Seller (or such other period expressed in writing by Seller). SELLER MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT ALL OTHER WARRANTIES, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS.
- Buyer Remedy: Seller's sole obligation hereunder shall be to replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product or, at Seller's election, to repay or credit Buyer an amount equal to the purchase price of the Product; provided that there shall be no liability for Seller or its affiliates unless Seller's analysis confirms that the Products were correctly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be
- approved in writing by Seller before shipment.

 <u>Limitation on Liability</u>: SELLER AND ITS AFFILIATES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY. FURTHER, IN NO EVENT SHALL LIABILITY OF SELLER OR ITS AFFILITATES EXCEED THE INDIVIDUAL PRICE OF THE PRODUCT ON WHICH LIABILITY IS ASSERTED.
- Indemnities: Buyer shall indemnify and hold harmless Seller, its affiliates and its employees from and against all liabilities, losses, claims, costs and expenses (including attorney's fees and expenses) related to any claim, investigation, litigation or proceeding (whether or not Seller is a party) which arises or is alleged to arise from Buyer's acts or omissions under these Terms or in any way with respect to the Products.

V. INFORMATION; ETC.

- Intellectual Property: The intellectual property embodied in the Products is the exclusive property of Seller and its affiliates and Buyer shall not attempt to duplicate it in any way without the written permission of Seller. Buyer (at its own expense) shall indemnify and hold harmless Seller and defend or settle any action brought against Seller to the extent that it is based on a claim that any Product made to Buyer specifications infringed intellectual property rights of another party.
- Property: Confidentiality: Notwithstanding any charges to Buyer for engineering or tooling, all engineering and tooling shall remain the exclusive property of Seller. All information and materials supplied by Seller to Buyer relating to the Products are confidential and proprietary, and Buyer shall limit distribution thereof to its trusted employees and strictly prevent disclosure to any third party.

Performance Data: Performance data is provided as a guide in determining suitability and does not constitute a warranty. It may represent the result of Seller's test conditions, and the users must correlate it to actual application requirements.

- Change In Specifications: Product specifications and descriptions may be changed at any time based on improvements or other reasons. It is Seller's practice to change part numbers when published ratings or features are changed, or when significant engineering changes are made. However, some specifications of the Product may be changed without any notice.
- Errors And Omissions: The information on Seller's website or in other documentation has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.
- Export Controls: Buyer shall comply with all applicable laws, regulations and licenses regarding (a) export of the Products or information provided by Seller; (b) sale of Products to forbidden or other proscribed persons or organizations; (c) disclosure to noncitizens of regulated technology or information.

VI. MISCELLANEOUS

- <u>Waiver</u>: No failure or delay by Seller in exercising any right and no course of dealing between Buyer and Seller shall operate as a waiver of rights by Seller.
- Assignment: Buyer may not assign its rights hereunder without Seller's written consent.
- Law: These Terms are governed by Illinois law (without regard to conflict of laws). Federal and state courts in Cook County, Illinois have exclusive jurisdiction for any dispute hereunder.
- Amendment: These Terms constitute the entire agreement between Buyer and Seller relating to the Products, and no provision may be changed or waived unless in writing signed by the parties.
- Severability: If any provision hereof is rendered ineffective or invalid, such provision shall not invalidate any other provision.

Certain Precautions on Specifications and Use

- <u>Suitability for Use</u>. Seller shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in Buyer's application or use of the Product. At Buyer's request, Seller will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases but the following is a non-exhaustive list of applications for which particular attention must be given:
 - Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this document.
 - (ii) Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government

 - Use in consumer products or any use in significant quantities. Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

- <u>Programmable Products.</u> Seller shall not be responsible for the user's programming of a programmable product, or any consequence thereof. <u>Performance Data.</u> Performance data given in this publication is provided as
- a guide for the user in determining suitability and does not constitute a war-ranty. It may represent the result of Seller's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to
- correlate it to actual application requirements. Actual performance is subject to Seller's Warranty and Limitations of Liability.

 Change in Specifications. Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Seller representative at any time to confirm actual specifications of purchased Product.

 Errors and Omissions. The information in this publication has been carefully checked and is believed to be accurate; however, no responsibility is assumed.
- checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors, or omissions.

 RoHS Compliance. Where indicated, our products currently comply, to the best of our knowledge as of the date of this publication, with the requirements of the European Union's Directive on the Restriction of certain Hazardous Substances ("RoHS"), although the requirements of RoHS do not take effect until July 2006. These requirements may be subject to change. Please consult until July 2006. These requirements may be subject to change. Please consult our website for current information.

Complete "Terms and Conditions of Sale" for product purchase and use are on Omron's website at http://www.components.omron.com - under the "About Us" tab, in the Legal Matters section.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

OMRON OMRON ELECTRONIC

COMPONENTS LLC 55 E. Commerce Drive, Suite B

Schaumburg, IL 60173 847-882-2288

Cat. No. G019-E-01

09/10

Global - http://www.omron.com USA - http://www.components.omron.com

OMRON ON-LINE

Printed in USA

Specifications subject to change without notice

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Ethernet Cables / Networking Cables category:

Click to view products by Omron manufacturer:

Other Similar products are found below:

0152660053 73-7797-25 73-8890-10 73-8890-14 73-8891-14 73-8891-25 73-8892-50 73-8894-10 73-8894-3 73-8895-14 73-8896-7

MCJB2-10P6Q7-120 84909-0204 1200650742 1200700174 1200860368 1200650013 1201080008 1-21919-1 1300500373 1300101844

1300101845 130050-0004 1300500014 1410147 E16A06002M030 E200102-009-S1 MT14-187L 17-103530 NK5EPC18RDY

NK5EPC18VLY NK5EPC18YLY NK5EPC1GRY NK5EPC30BLY NK5EPC30VLY NK5EPC30YLY NK5EPC4Y NK5EPC6YLY

NK5EPC8BLY NK5EPC9YLY NK6PC30BUY NK6PC30GRY NK6PC30RDY NK6PC30YLY 1969343-6 C501100010

C501106002 C501106007 C501106015