

RoHS
Ready 

Special Cable Systems for the Automotive Market

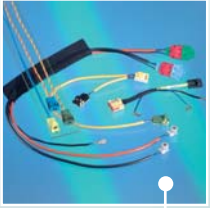


Tyco Electronics Ltd. is a leading global provider of engineered electronic components, network solutions and wireless systems, with customers in more than 150 countries. We design, manufacture and market products for customers in industries from automotive, appliances and aerospace and defense to telecommunications, computers and consumer electronics. With over 8,000 engineers and worldwide manufacturing, sales and customer service capabilities, Tyco Electronics' commitment is our customers' advantage.

Global Automotive Division

CABLE ASSEMBLY SYSTEMS

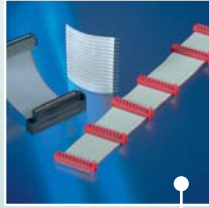
Tyco Electronics is your partner for special cable assemblies. We offer research and development capabilities, prototyping, samples as well as manufacturing facilities for special cable assemblies. This includes overmold technology, semi- and fully-automatic manufacturing, testing equipment and appliances for handling of high volume production.



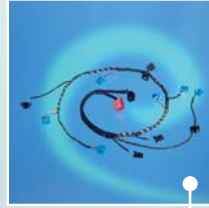
Squib



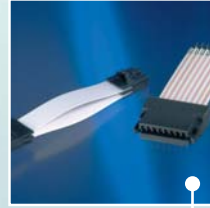
*Low Voltage
Data Signaling*



*Planar and
Discrete
Wiring*



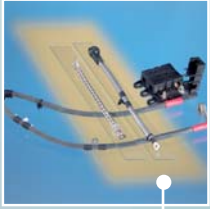
*Heating and
Ventilation
Cable*



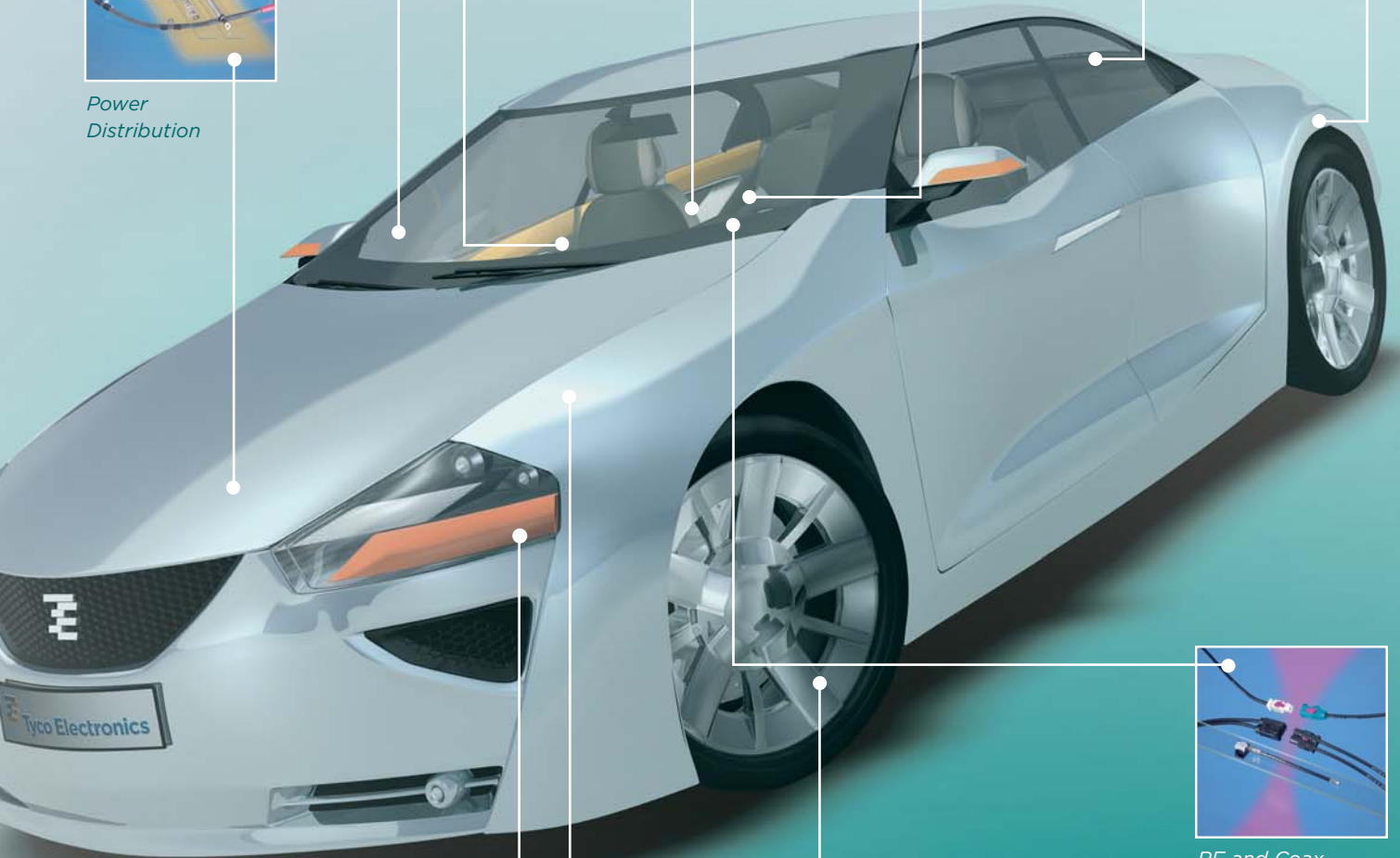
FFC Cable



*Wiring
Products*



*Power
Distribution*



RF and Coax



Pump Nozzle



*High Voltage
Cable*



*Overmolded
Wiring*

INNOVATIVE TECHNOLOGIES

Tyco Electronics Ltd. is a leading global provider of engineered electronic components, network solutions and undersea telecommunication systems. We design, manufacture and market products for customers in industries from automotive, appliance and aerospace and defense to telecommunications, computers and consumer electronics. The global automotive division follows the globalization goals of our customers, speeds up the integration of new technologies and enables our customers access to our vast product portfolio and services.

TERMINALS & CONNECTORS



Tyco Electronics offers a broad range of high quality terminals and connectors. Our electrical/electronic interconnection products and solutions are used to electrically and mechanically join wires and cables, printed circuit boards, integrated circuit packages and batteries. Tyco Electronics expanding capabilities include new copper and fiber-optic connectors, wires, cables/cable management systems that are designed to meet automotive industry demands. The AMP brand encompasses the broadest range of connectors in the world, including high-density, high-speed designs for leading-edge communications equipment.

LITERATURE NO. 1308092-2

CABLE ASSEMBLY SYSTEMS



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LITERATURE NO. 1654288-2

MECHATRONICS



A variety of technical products are designed today by integrating mechanical components and electronic hardware into one packaging unit thus creating true mechatronic solutions. Mechatronic applications offer amazing and versatile potentials related to functionality, cost, space requirements and quality. Tyco Electronics contributes to those applications with its wide range of innovative and cost-effective product and process technologies.

Advanced stamping, injection molding and assembly techniques are applied along with highly selective surface plating methods.

LITERATURE NO. 1308091-2

SENSORS



Contact-less measuring eliminates interference effects, wear and tear, and provides increased reliability. Tyco Electronics, one of the largest technology providers for the automobile industry, offers contact-less sensors for a variety of applications. As sensor manufacturer and processing partner, Tyco Electronics also provides project planning support for new sensor applications, assistance in the selection of the appropriate sensor technology for the respective application, and assistance with defining the corresponding mechanical, electrical

and magnetic interface. Tyco Electronics has a broad electromechanical portfolio that includes robust housing technologies, connector systems, and temperature stable designs based on foil and cable networks. This combination of technologies and experience ensures that reliable and cost effective sensor solutions are available for all application types.

LITERATURE NO. 1308086-2

RELAYS AND SWITCHING MODULES



Automotive technology and integrated systems continue to develop rapidly with electric and electronic systems in today's vehicles playing an increasingly important role for traffic safety and travelling comfort. Automotive Relays and Switching Modules (AR & SM) of Tyco Electronics' Global Automotive Division offer a wide range of the most important components for such systems and is the world's number one participant in this industry sector. Tyco Electronics has competencies in development, production and related technologies

as well as application support, which ensures a competitive edge and mutual business growth on a worldwide scale.

LITERATURE NO. 1308085-2

HIGH SPEED DATA NETWORKING



High speed data networking within the automobile is becoming more predominant. What was till now restricted to the high end of the market utilizing system such as the MOST[®] network, high speed data transmission based on optical fibers, now with the introduction of iPod's, display screens and cameras results in the need for high speed networking throughout all platforms.

MOST[®] IS A TRADEMARK



LITERATURE NO. 1308084-2

POWER DISTRIBUTION SYSTEMS



In automotive environments, the extensive net of electrical/electronic loads requires complex powernet structures. The next evolution of these structures include intelligent control and distribution systems.

Tyco Electronics is working on modules with intelligent technology combinations. Our capabilities include, power distribution units that incorporate integrated switching and protection functions along with flexibility and maximizing modularity to best suit our customer needs.



LITERATURE NO. 1308087-2

ALTERNATIVE POWER SYSTEMS COMPONENTS FOR HYBRID AND FUELCELL TECHNOLOGY



Tyco Electronics is a leader in next-generation transportation technologies and products for hybrid and electric vehicles. The Global Automotive Division is your source for high voltage power distribution, high current contacts, high voltage connectors and cables, high voltage relays, sensors and temperature protection devices for hybrid and other alternative powered vehicles.



LITERATURE NO. 1308093-2

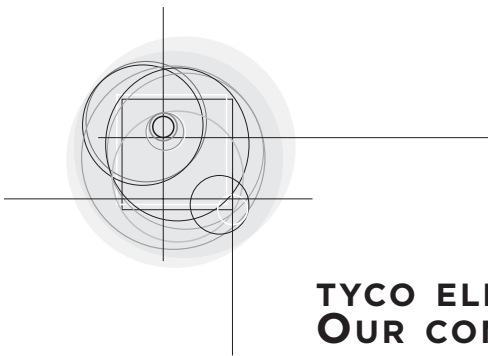
INDUCTIVE SYSTEMS



The Global Automotive Division is your source for interconnection technologies for automotive, truck and off-highway OEMs and Tier 1 suppliers. With the design competency center in Oostkamp (Belgium), and strategic production centers in Evora (Portugal), Bangalore (India), Shenzhen (China), and Oostkamp (Belgium), Tyco Electronics Inductive Systems is ready to offer you any LF-application component required in the automotive industry.

The Inductive System group focuses on the customer requirement in order to design to the exact demand. This is achieved by highly technical, intelligent and cost-efficient engineering. In order to be a leader in design, Tyco Electronics Inductive Systems has a vast product portfolio, which consists out of antennas, actuators and integrated modules. Next to that, several specific applications are designed.

LITERATURE NO. 1308089-2



TYCO ELECTRONICS. OUR COMMITMENT. YOUR ADVANTAGE.

Tyco Electronics' businesses operate in thousands of different areas of industry. The products and services we deliver all have one thing in common. They are vital to everyday living. Individuals and companies worldwide have critical needs. And every minute of every day, we satisfy them.

TYCO ELECTRONICS “TECHNOLOGY PORTFOLIO”



● Connector Systems / Electromechanical Components

● Relays

● Sensors

● Fiber Optic Products

● Wire & Cable

● Application Tooling

● Tubing & Harnessing Products

● Circuit Protection Devices

● Touch Screen Displays

● Resistors & Inductors

● Heat Sinks & Thermal Solutions

● Switches and Knobs

● Battery Connectors & Assemblies

● Racks & Panels

● Smart Cards / Leadframes

● Identification Labeling Products



Tyco Electronics Online

The Tyco Electronics website is an innovative and interactive source for application information, product updates and technical solutions.

Our step-by-step software makes our website intuitive and user-friendly to better serve you!

Please contact us at:

www.tycoelectronics.com/automotive

Internet Homepage

www.tycoelectronics.com

www.tycoelectronics.com/automotive

Electronic Internet Catalog

www.catalog.tycoelectronics.com

Product Information Center (PIC)

You can rely on Tyco Electronics PIC Team to provide you support for answers to your general information or technical questions in an efficient and effective manner.

To reach our PIC staff, please contact your local Tyco Electronics organization.

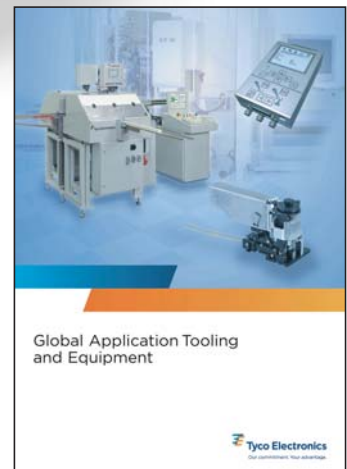


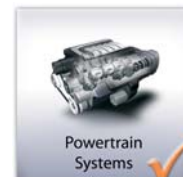
Product and Machine Literature

Tyco Electronics offers a variety of product specific catalogs, brochures and high impact flyers to help better serve you!

For more information on literature for Tyco Electronics'

Global Automotive Division, please contact your local Tyco Electronics Organization or go to www.tycoelectronics.com/automotive





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Wiring Products with Standard Contact Systems

Wiring Products with Standard Contact Systems

Tyco Electronics provides many discrete cable assemblies utilizing proven components. These cable assemblies are designed to suit the customer and application, all terminated with in-house application tooling available in high and low volume production.



Application

- Head Light Leveling
- Rear Window Heating
- Seat
- Mirror
- Door
- Gear Box

Product Features

- Tyco Electronics contact systems like MQS, Junior Power Timer, MULTILOCK, MTA, AMP DUOPLUG
- Terminated with in-house application tooling
- Assemblies available in high- and low volumes
- Customer specific design



Overmolded Wiring Products

Overmolded Wiring Products

Tyco Electronics overmolding competency provides a gas tight product ensuring high durability against the effects of vibration, temperature and moisture.

Application

- Throttle Value Body
- Fuel Tank

Product Features

- Macromelt for gas tightness keeping durability of high vibration and temperature overmolded sealing (contact)
- -40 °C up to +140 °C



High Voltage Cable Assemblies

High Voltage Cable Assemblies

Tyco Electronics high voltage cable assemblies for lighting platforms provide products suitable for up to 25 KV integrating passive components and fully shielded design, coupled with easy to mate and un-mate design.

Application

- Gas Discharge Lamps
- Xenon Lights

Product Features

- Integrated passive components
- Silicon free
- EMC shielded design
- Isolation voltage up to 25 kV
- Easy mate and un-mate
- Robust design
- -40 °C up to +135 °C (peak temperature 155 °C)



Squib Cable Assemblies

Squib Cable Assemblies

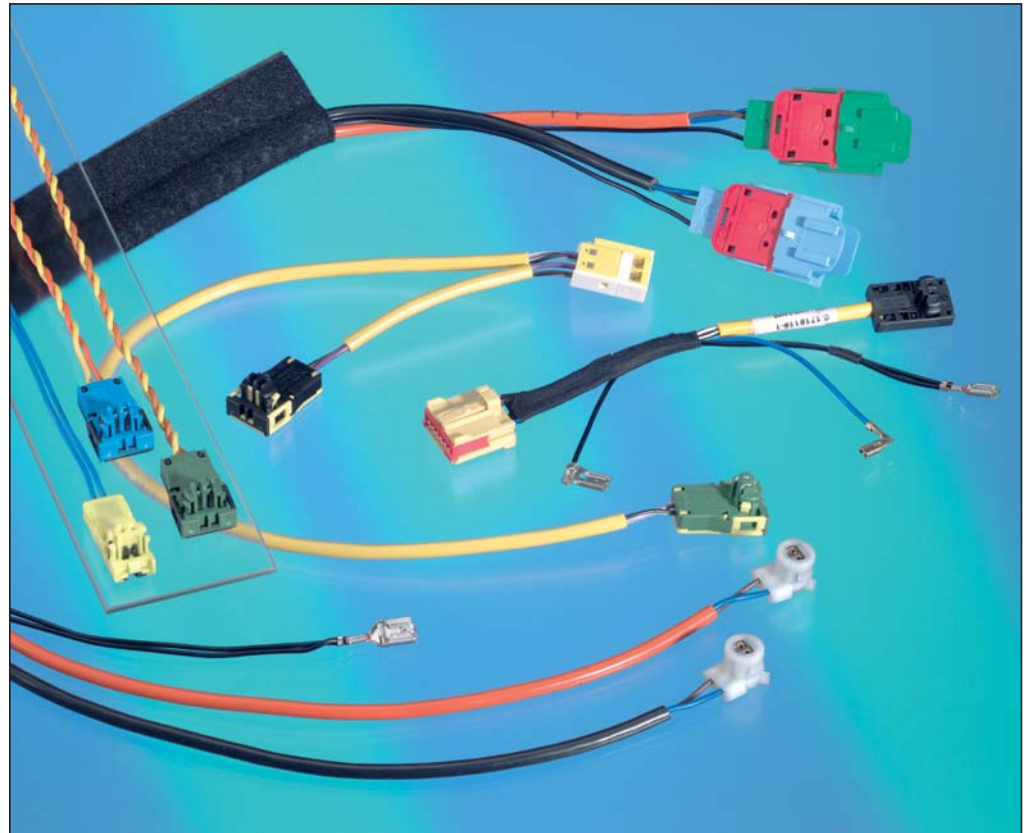
Tyco Electronics provides a varied array of Squib cable assemblies to cater for 10 mm, 11 mm and Universal interfaces. A choice of product for AC or DC wiring systems along with fully or semi automated manufacturing process to ensure high reliability for this safety critical application.

Application

- Safety Restraint Systems

Product Features

- 11.0 mm 90° and 180° Universal Squib
- 11.0 mm 90° lockable Squib
- 10.0 mm jacketed cable Squib
- IDC or crimp contacts
- -40 °C up to +90 °C (+120 °C)



Pump Nozzle

Pump Nozzle

These cable assemblies are located inside the cylinder head of the vehicle, operating in a hostile environment of temperature and hot oil whilst providing a sealed interface to the outside of the engine.

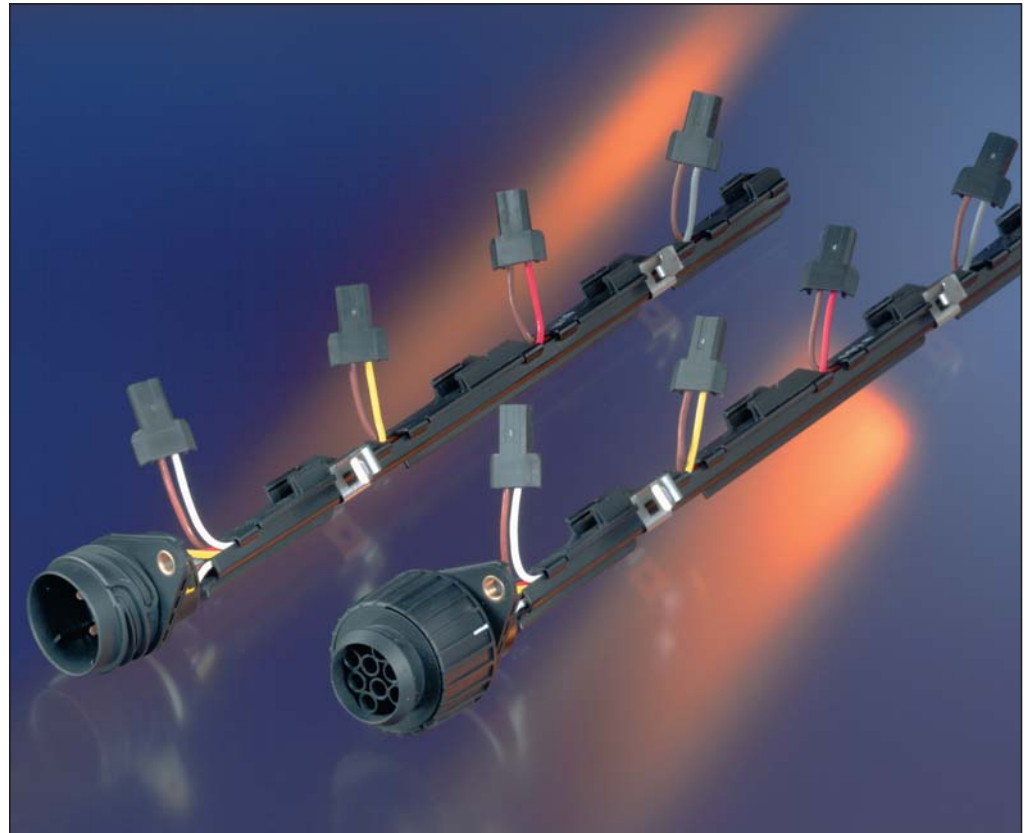


Application

- Direct Injection Diesel Engine

Product Features

- The cable assembly is used for pump nozzle pre-wiring for direct injection diesel engine
- Sealing contacts FASTIN-FASTON
- 2.8 mm and Junior Power Timer
- Mating aid by bayonette mechanism
- -40 °C up to +135 °C



Power Distribution

Power Distribution

High Current applications exist on all vehicles including Hybrids. Tyco Electronics manufactures power cable assemblies from 25 mm to 75 mm with our own cable and terminals to provide a cable that can be fitted directly at the OEM.

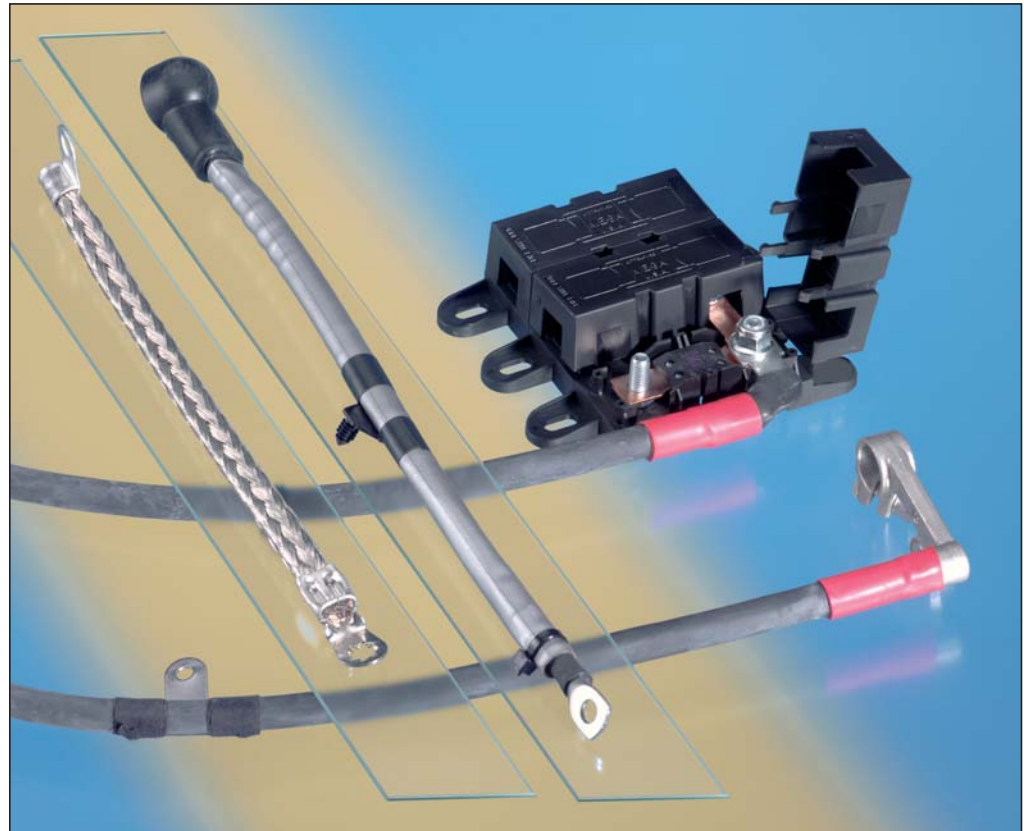


Application

- Prefuse Box
- Power Distribution

Product Features

- High current application
- Compact and variable design (6–12 pos.)
- Designed for Maxi Fuses up to 80 A
- Low resistance crimped bus bar
- 200 A primary side
- 80 A secondary side
- -40 °C up to +85 °C



Heating and Ventilation Cable Assemblies

Heating and Ventilation Cable Assemblies

These cable assemblies are design in conjunction with the HVAC manufacturer to optimise the available Tyco Electronics product portfolio of cable, terminals, connectors and other wire related products, thus ensuring a reliable product with a cost effective solution.



Application

- Driver / Passenger Comfort

Product Features

- Fully assembled cable assembly
- Specific Fixings added for easy assembly
- Designed to eliminate the effects of vibration



FFC Cable Assemblies

FFC Cable Assemblies

Tyco Electronics laminated 2.54 mm pitch cable with terminals and connectors applied with Tyco Electronics application tooling.

Application

- Infotainment System
- Air Conditioning Module
- Rear Window Heating

Product Features

- Tyco Electronics laminated FFC (2.54 mm pitch)
- FFC contact portfolio and application tooling



Low Voltage Differential Signaling

**Low Voltage
Differential Signaling**

These cable assemblies are fully shielded and used within the driver information system providing a high speed data link to the screen in the cockpit.

Application

- Driver Information

Product Features

- Fully shielded assembly
- MQS Terminal technology
- Tyco Electronics developed process technology



Planar and Discrete Wiring Products

Planar and Discrete Wiring Products

Our own ribbon cable is utilized in conjunctions with Tyco Electronics standard contact technology to enable the production of a low cost flexible cable assembly.

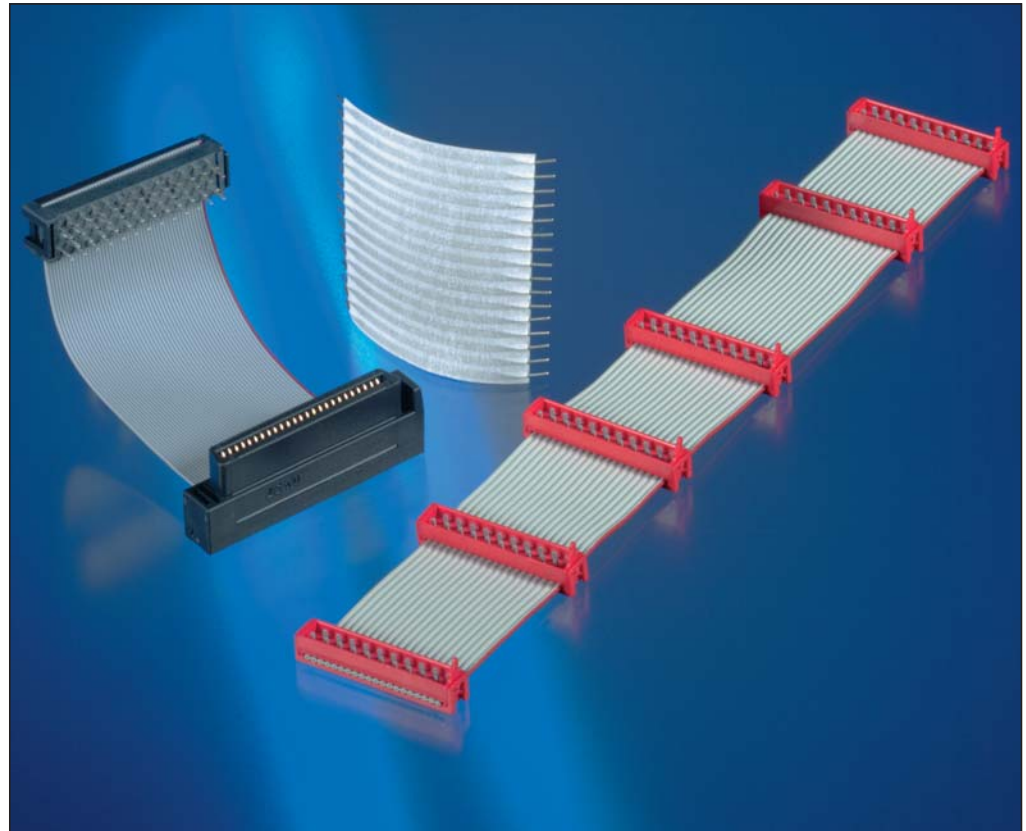


Application

- Radio
- Head Light Control Module
- Internal Control Unit Connections

Product Features

- Own manufactured cable
- Tyco Electronics low cost flex strip
- Tyco Electronics contact technology



RF and Coax Cable Assemblies

RF and Coax Cable Assemblies

Suitable for various coax applications.



Application

- Tyre Pressure Sensor
- Door Locking
- Radio
- GSM
- GPS

Product Features

- 50 Ohm/125 Ohm cable
- Small and compact design
- High quality signal transmission
- -40 °C up to +85 °C



Americas

Argentina – Buenos Aires
Phone: +54-11-4733-2200
Fax: +54-11-4733-2211

Brasil – São Paulo
Phone: +55-11-2103-6105
Fax: +55-11-2103-6204

Chile – Santiago
Phone: +56-2-345-0361
Fax: +56-2-223-1477

Canada – Toronto
Phone: +1-905-475-6222
Fax: +1-905-474-5520
Product Information Center:
Phone: +1-905-470-4425
Fax: +1-905-474-5525

Colombia – Bogota
Phone: +57-1-319-8959
Fax: +57-1-319-8960

Mexico – Mexico City
Phone: +52-55-1106-0800
+01-800-733-8926
Fax: +52-55-1106-0901

For Latin/South American Countries not shown
Phone: +54-11-4733-2015
Fax: +54-11-4733-2083

United States
Harrisburg, PA
Phone: +1-717-564-0100
Fax: +1-717-986-7575
Product Information Center:
Phone: +1-800-522-6752
Fax: +1-717-986-7575
Troy, MI
Phone: +1-248-273-3359
Fax: +1-248-273-3322

Asia/Pacific

Australia – Sydney
Phone: +61-2-9554-2600
Fax: +61-2-9502-2556
Product Information Center:
Phone: +61-2-9840-8200
Fax: +61-2-9634-6188

India – Bangalore
Phone: +91-80-285-40800
Fax: +91-80-285-40820

Indonesia – Jakarta
Phone: +65-6482-0311
Fax: +65-6482-1012

Japan – Kawasaki, Kanagawa
Phone: +81-44-844-8111
Fax: +81-44-812-3207
Product Information Center:
Phone: +81-44-844-8013
Fax: +81-44-812-3200

Korea – Seoul
Phone: +82-2-3415-4500
Fax: +82-2-3486-3810

Malaysia – Selangor
Phone: +60-3-7805-3055
Fax: +60-3-7805-3066

New Zealand – Auckland
Phone: +64-9-634-4580
Fax: +64-9-634-4586

Philippines – Makati City
Phone: +632-848-0171
Fax: +632-867-8661

People's Republic of China
Hong Kong
Phone: +852-2735-1628
Fax: +852-2735-0243

Shanghai
Phone: +86-21-2407-1588
Fax: +86-21-2407-1599

Singapore – Singapore
Phone: +65-6482-0311
Fax: +65-6482-1012

Taiwan – Taipei
Phone: +886-2-8768-2788
Fax: +886-2-8768-2268

Thailand – Bangkok
Phone: +66-2-955-0500
Fax: +66-2-955-0505

Vietnam – Ho Chi Minh City
Phone: +84-8-930-5546
Fax: +84-8-930-3443

Europe/Middle East/Africa

Austria – Vienna
Phone: +43-1-905-60-0
Fax: +43-1-905-60-1333
Product Information Center:
Phone: +43-1-905-60-1249
Fax: +43-1-905-60-1251

Belarus – Minsk
Phone: +375-17-237-47-94
Fax: +375-17-237-47-94

Belgium – Kessel-Lo
Phone: +32-16-352-300
Fax: +32-16-352-352

Bulgaria – Sofia
Phone: +359-2-971-2152
Fax: +359-2-971-2153

Czech Republic and Slovakia
Czech Republic – Kurim
Phone: +420-541-162-111
Fax: +420-541-162-223
Product Information Center:
Phone: +420-541-162-113
Fax: +420-541-162-132

Denmark – Glostrup
Phone: +45-43-48-04-00
Fax: +45-43-44-14-14

Egypt – Cairo
Phone: +202-419-2334
Fax: +202-417-7647

Estonia – Tartu
Phone: +372-5138-274
Fax: +372-7400-779

Finland – Helsinki
Phone: +358-95-12-34-20
Fax: +358-95-12-34-250

France – Cergy-Pontoise Cedex
Phone: +33-1-3420-8888
Fax: +33-1-3420-8600
Product Information Center:
Phone: +33-1-3420-8686
Fax: +33-1-3420-8623

France Export Divisions –
Cergy-Pontoise Cedex
Phone: +33-1-3420-8866
Fax: +33-1-3420-8300

Germany – Bensheim
Phone: +49-6251-133-0
Fax: +49-6251-133-1600
Product Information Center:
Phone: +49-6251-133-1999
Fax: +49-6251-133-1988

Greece – Athens
Phone: +30-210-9370-396/397
Fax: +30-210-9370-655

Hungary – Budapest
Phone: +36-1-289-1000
Fax: +36-1-289-1010
Product Information Center:
Phone: +36-1-289-1016
Fax: +36-1-289-1017

Ireland – Dublin
Phone: +353-1-866-5612
Fax: +353-1-866-5714

Israel – Petach-Tikva
Phone: +972-3-929-0999
Fax: +972-3-919-1088

Italy – Collegno (Torino)
Phone: +39-011-4012-111
Fax: +39-011-4031-116
Product Information Center:
Phone: +39-011-4012-428
Fax: +39-011-40-287-428

Lithuania and Latvia
Lithuania – Vilnius
Phone: +370-5-213-1402
Fax: +370-5-213-1403
Product Information Center:
Phone: +370-5-211-3016
Fax: +370-5-213-1403

Netherlands – 's-Hertogenbosch
Phone: +31-73-6246-246
Fax: +31-73-6212-365
Product Information Center:
Phone: +31-73-6246-999
Fax: +31-73-6246-998

Norway – Nesbru
Phone: +47-66-77-88-50
Fax: +47-66-77-88-55

Poland – Warsaw
Phone: +48-22-4576-700
Fax: +48-22-4576-720
Product Information Center:
Phone: +48-22-4576-704
Fax: +48-22-4576-720

Romania – Bucharest
Phone: +40-21-311-3479/3596
Fax: +40-21-312-0574

Russia – Moscow
Phone: +7-495-790-7902
Fax: +7-495-721-1893
Product Information Center:
Phone: +7-495-790-7902-503
Fax: +7-495-721-1893

Russia – Nizhniy Novgorod
Phone: +7-831-220-33-05/-06
Fax: +7-831-220-33-39/-40

Slovenia – Ljubljana
Phone: +386-1561-3270
Fax: +386-1561-3240

South Africa – Port Elizabeth
Phone: +27-41-503-4500
Fax: +27-41-581-0440

Spain – Barcelona
Phone: +34-93-291-0330
Fax: +34-93-201-7879

Sweden – Upplands Väsby
Phone: +46-8-50-72-50-00
Fax: +46-8-50-72-50-01

Switzerland – Steinach
Phone: +41-71-447-0447
Fax: +41-71-447-0444

Turkey – Istanbul
Phone: +90-212-281-8181-83
+90-212-282-5130/5430
Fax: +90-212-281-8184

Ukraine – Kiev
Phone: +380-44-206-2265
Fax: +380-44-206-2264
Product Information Center:
Phone: +380-44-206-2265
Fax: +380-44-206-2264

United Kingdom –
Stanmore, Middlesex
Phone: +44-8706-080208
Fax: +44-208-954-6234
Product Information Center:
Freephone (UK only):
0800-267-666
Phone: +44-8706-080208
Fax: +44-208-420-8095



Tyco Electronics AMP GmbH

AMPèrestr. 12-14
64625 Bensheim / Germany
Phone: +49-(0)6251-133-0
Fax: +49-(0)6251-133-1600

www.tycoelectronics.com
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