The cables you trust. The service you deserve.

Every application is critical and wire failure is not an option when the safety of your equipment and personnel is paramount. Specify Alpha communication, control, and industrial cable from stock in most sizes and constructions, in both small and large pull-ups, so you can order it when you need it. Our products are available for same-day shipment, eliminating long lead times.

Superior availability

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Service and support, second-to-none

Selecting the correct cable for your critical application is essential to overall system reliability, performance, and safety. So we make it easy for you to select the right Alpha cable for your specific application. Our online resources include a wire and cable selection guide, technical information, full product catalog, and a distributor locator to make it easy to select and get the cable you need. Can’t find what you’re looking for? Design the cable to your specification. It’s easy, just visit www.alphawire.com!

Cables you trust. Service you deserve.

Get control of demanding applications

The broad range of communication and control cables from Alpha Wire means you can find the right cable for your application. Our cables meet special needs, such as low-capacitance cables for extended transmission of digital signals, such as the extra flexibility of rubber insulation and jackets, or excellent shielding for electrically noisy environments. We combine a wide range of insulation materials, shielding variations, conductor counts and gauges, as well as other options to create cables suited to any application. From traditional RS-232 connections to high-speed telemetry and data recording to high-fidelity microphone systems, our experience in materials and expertise in manufacturing means cable built to perform electrically, mechanically, and environmentally. We know that a cable is not simply a cable: it is the conduit over which your critical signals pass.

Our communication and control line includes three main categories:

• Industrial series cable: factory-tough cable configured for standard factory needs, such as drive interconnections, conveyors, or automation networks
• Communication and control round multiconductor and multipair cable in configurations suited to nearly any application
• Flat cable: plane multiconductor cable used primarily inside cabinets or equipment

Communication, Control, and Industrial Cable
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Get control of your communication and control applications

Our line-up of standard communication and control cables gives you maximum choice and fewer leadtimes. By offering you a comprehensive collection of insulation/jacketing materials, shielding options, and conductor counts, you can easily select the cable that meets your most demanding needs. We have cables that go beyond the ordinary to satisfy rigorous requirements of EH&I performance, transmission distances, flexibility, and temperature extremes.

Typical applications for communication and control include:
- Audio systems: speakers, microphones, intercoms
- Broadcast and studios
- Data transmission: RS-232, D-85, 485
- CAD/CAM
- Computer peripherals
- Security systems: alarms, cameras, sensors
- Control systems
- Instrumentation systems
- Plenum-of-air systems
- Rack-mounting systems

Industrial series cable from the factory floor to process control

Alpha Wire’s industrial series cables are well suited to the widest range of industrial applications. We offer a range of cables for general needs such as control wiring in both stationary and moving components. We also offer application-specific configurations for user-driven, servo systems, and factory protocols.

Typical applications for Industrial cable include:
- High-flexibility applications
- Factory equipment: interconnects
- Robotics
- Machine tools
- Automotive assembly equipment
- Conveyor systems
- Control panels
- Transfer shuttles
- Automated pick-and-place systems
- PLC controlled equipment
- Automated handling systems
- Cutting/mouting of speed and position in servo systems

Industrial series cable from the factory floor to process control

Alpha Wire’s Industrial series cables are suitable for general cable needs such as control wiring in both stationary and moving components. We also offer application-specific configurations for user-driven, servo systems, and factory protocols.

Table of Cable Features

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series FD</td>
<td>High-flexible cable</td>
<td>Low-skew for improved signal transmission</td>
</tr>
<tr>
<td>Series VFD</td>
<td>Flat cable for fast, easy mass termination</td>
<td>Requires additional protection for improved crosstalk performance of twisted pairs</td>
</tr>
</tbody>
</table>

Flat cable

The planar geometry of flat cables can save significant space in board-to-board and other interconnects within equipment or cabinets. We offer extruded flat cable with both 0.003 and 0.005 pitch for fast, easy mass termination with IDC connectors.

Series V FVD cable Drives performance

Series V FVD cable is designed specifically for the needs of variable-frequency drives, combining the continuous dynamic stresses that cause other cables to fail. Specially formulated XLPE insulated conductors improve performance and signal integrity. Series V cables will not degrade under heavy electrical load and activity with harmonics, corona discharges, and power distortion. The cable’s round geometry ensures a symmetrical profile and a corresponding roundness to the foil/braid shield to deliver the low-capacity shielding that allows longer cable runs. The cable is available with or without a break pair.

FIT™: heat-shrink products

A perfect complement to our communication, control, and industrial cables, FIT® heat-shrink products are made from premium compounds under the tightest manufacturing controls. This means FIT™ will consistently deliver excellent physical characteristics, such as a smooth, non-shrink, non-skid elongation, and high temperature ranges, while providing a clean and neat appearance when used alone or on EH&I equipment.

The FIT line consists of 23 different tubing types, each designed with unique attributes that offer tubing solutions for the broadest possible range of applications and environments. FIT products are always in stock and come in an unprecedented variety of package sizes.
Get control of your communication and control applications

Our line-up of standard, communication and control cables gives you maximum choice and fewer tradeoffs. By offering you a comprehensive collection of insulation/jacketing materials, shielding options, and conductor counts, you can easily select the cable that meets your most demanding needs. We have cables that go beyond the ordinary to satisfy your needs, and conductor counts, you can easily select the cable that meets your most demanding needs. We have cables that go beyond the ordinary to satisfy your needs.

Industrial series cable

Industrial Alpha Wire's industrial series cables are well suited for general industrial applications. We offer a range of cables for general industrial needs such as control wiring in both stationary and moving components. We also offer application-specific configurations for use in drives, servo systems, and factory protocols.

Typical applications for Industrial cable include:

- High-frequency applications
- Factory equipment interconnects
- Robotics
- Machine tools
- Automotive assembly equipment
- Control panels
- Transfer switches
- Automated pick-and-place systems
- PLC controlled equipment
- Automated handling systems
- Cabling monitor of speed and position in servo systems

Industrial Alpha Wire Series 1 – 50 pairs

Flat cable

The planar geometry of flat cables can save significant space in board-to-board and other interconnects with no equipment or cabinets. We offer extruded flat cable with both 0.025 and 0.050 pitch for fast, easy mass termination with IDC connectors.

<table>
<thead>
<tr>
<th>Pitch</th>
<th>Conductors</th>
<th>Conductor Range</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.025</td>
<td>28 AWG</td>
<td>0.050 28 AWG tinned, stranded copper 9 – 64</td>
<td>Unshielded extruded Bridged heat-shrink cable</td>
</tr>
<tr>
<td>0.050</td>
<td>0.025 pitch</td>
<td>28 – 8 AWG</td>
<td>Unshielded extruded 30 AWG sub-cable</td>
</tr>
</tbody>
</table>

Series V FVD cable drives performance

Series V FVD cable is designed specifically for the needs of variable-frequency drives, combining the continuous dielectric stress that cause other cables to fail. Specializedally suspended KUPE insulated conductors improve performance and signal integrity. Series V cable will not degrade under heavy electrical load and activity with harmonics, coronas, discharges, and power distortion. The cable's round geometry ensures a symmetrical profile and a corresponding roundness to the foil/brass shield to deliver the low capacity that allows longer cable runs. The cable is available with or without a brake pair.

Series V FVD cable is designed specifically for the needs of variable-frequency drives, combining the continuous dielectric stress that cause other cables to fail. Specializedally suspended KUPE insulated conductors improve performance and signal integrity. Series V cable will not degrade under heavy electrical load and activity with harmonics, coronas, discharges, and power distortion. The cable's round geometry ensures a symmetrical profile and a corresponding roundness to the foil/brass shield to deliver the low capacity that allows longer cable runs. The cable is available with or without a brake pair.

Study: KUPE® foil shield

Alpha Wire's industrial series cables are well suited for general industrial applications. We offer a range of cables for general industrial needs such as control wiring in both stationary and moving components. We also offer application-specific configurations for use in drives, servo systems, and factory protocols.

Typical applications for Industrial cable include:

- High-frequency applications
- Factory equipment interconnects
- Robotics
- Machine tools
- Automotive assembly equipment
- Control panels
- Transfer switches
- Automated pick-and-place systems
- PLC controlled equipment
- Automated handling systems
- Cabling monitor of speed and position in servo systems

Communication & Control Cable

Conductor Count & Material

<table>
<thead>
<tr>
<th>Conductor Range</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 50 pairs</td>
<td>Tinned, Stranded Copper</td>
</tr>
<tr>
<td>51 – 100 pairs</td>
<td>Tinned, Strand Copper</td>
</tr>
</tbody>
</table>

Tinned, stranded copper offers excellent signal transmission characteristics, low loss, high flexibility, and long life.

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FIT® heat-shrink products

A perfect complement to our communication, control, and industrial cables, FIT™ EMI/RFI-shielded products are made from premium compounds under the tightest manufacturing controls. This results in EMI/RFI-shielded products that are designed specifically for the needs of variable-frequency drives, combining the continuous dielectric stress that cause other cables to fail. Specializedally suspended KUPE insulated conductors improve performance and signal integrity. Series V cable will not degrade under heavy electrical load and activity with harmonics, coronas, discharges, and power distortion. The cable's round geometry ensures a symmetrical profile and a corresponding roundness to the foil/brass shield to deliver the low capacity that allows longer cable runs. The cable is available with or without a brake pair.

The FIT™ line consists of 23 different tubing types, each individually designed with unique attributes that offer tubing solutions for the broadest possible range of applications and environments.

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- Broadcast and studio
- Data transmission: RS-232, 422, 485
- CAD/CAM
- Computer peripherals
- Business machines
- Security systems: alarms, cameras, sensors
- Control systems: instrumentation systems
- Actuator-of-alive systems
- Banking systems

Industrial series cable from the factory floor to process control
Alpha Wire’s industrial series cables are well suited to the widest range of industrial applications. We offer a range of cables for general applications such as control wiring in both stationary and moving components. We also offer application-specific configurations for use in drives, servo systems, and factory protocols.

Typical applications for Industrial cable include:
- High-flexibility applications
- Factory equipment interconnects
- Robotics
- Machine tools
- Automotive assembly
- Machine tools
- Robotics
- Factory equipment
- Interconnects

Series V VFD cable drives performance
Series V VFD cable is designed specifically for the needs of variable-frequency drives, combining the continuous dynamic stresses that cause other cables to fail. Specially formulated XLPPE insulated conductors improve performance and signal integrity. Series V cable will not degrade under heavy electrical load and altitude, keeping industrial cables working better in high-flex cable conditions.

Flattened cable drivers:
Flattened cable drivers offer the improved crosstalk and skew performance of twisted-pair cabling but in a footprint that is significantly smaller, allowing for greater space in the signal pathway. They are ideal for applications where space is at a premium, such as in automotive or aerospace environments. These cables offer excellent signal integrity and reducedcrosstalk, making them ideal for high-speed data transmission applications. They are available in a variety of configurations to meet the specific needs of different industries and applications.
Communication and control are critical to any electronic system. Whether it’s the monitoring and control of a wind turbine, communication between drive and motor on the factory floor, or interconnections of CAD systems in an engineering department, the proper communication and control cable is critical to maintaining high signal integrity.

The broad range of communication and control cables from Alpha Wire means you can find the right cable for your application. Our cables meet special needs, such as low-capacitance cables for extended transmission of digital signals, such as the extra flexibility of rubber insulation and jackets, or excellent shielding for electrically noisy environments.

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Get control of demanding applications 

The cables you trust. The service you deserve. Every application is critical and wire failure is not an option when the safety of your equipment and personnel is paramount. Specify Alpha communication, control, and industrial cable for harsh environments and crucial applications; since the integrity of your system is only as robust as the products you use.

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