

# Alpha Wire **INDUSTRIAL** SERIES

## TECHNOLOGICALLY ADVANCED CABLE SYSTEMS FOR AUTOMOTIVE AND INDUSTRIAL FACTORY AUTOMATION

Alpha Wire continues to offer “Powerful Solutions For Critical Applications” with the introduction of our new **Alpha Wire INDUSTRIAL** SERIES product line.

The **Alpha Wire INDUSTRIAL** SERIES offers technologically advanced cable systems for automotive and industrial factory automation. There is an **Alpha Wire INDUSTRIAL** SERIES cable product available to solve most existing critical and severe-duty application requirements.

When it has to be right, when dependability and quality are paramount, when safety and security are the primary issue, the **UL Exposed Run (-ER) Compliant Alpha Wire INDUSTRIAL** SERIES provides the total solution and sets the industry standard for performance, quality and reliability.

Specify **Alpha Wire INDUSTRIAL** SERIES: **SERIES F, SERIES M, SERIES L, SERIES P, SERIES S** and **SERIES V** for compliance with the 2005 National Electrical Code for cables installed in industrial establishments.

All **Alpha Wire INDUSTRIAL** SERIES products are designed and manufactured in the United States by Alpha's exacting team of engineers. If you don't find the cable you require in this catalog, we'll work with you to design what you need.



**Manufactured In The U.S.A.**

### APPLICATIONS

- High Flexibility/High Bend Applications
- Factory Equipment Interconnects
- Robotics
- Machine Tools
- Automotive Assembly Equipment
- Conveyor Systems
- Control Panels
- Flex and Static Track
- Transfer Shuttles
- Automated Pick-and-Place Systems
- PLC Controlled Equipment
- C-Track or Stationary Applications
- Automated Handling Systems
- Regulation and Measurement of Motor Speeds and Positions For Use in Servo Motor Systems

# Alpha Wire INDUSTRIAL SERIES

## FLEXIBLE AUTOMOTIVE CONTROL CABLE

MAXIMUM FLEXIBILITY, OIL/CHEMICAL RESISTANT, MULTICONDUCTOR, UNSHIELDED

UL TYPE TC-ER 600 VOLT  
UL TYPE PLTC OPEN WIRING 300 VOLT  
SUNLIGHT RESISTANT, RoHS COMPLIANT  
UL STANDARD 66 TYPE TFFN: OIL RES I/II  
CSA AWM I/II A/B: 600 VOLT FT-4  
CE - LVD 73/68/EEC,  
AMEND. 93/68/EEC

### SERIES F HIGH PERFORMANCE, FLEXIBLE AUTOMOTIVE CONTROL CABLE

THE ULTIMATE CABLE SOLUTION FOR SEVERE FLEXING APPLICATIONS AND SUPERIOR RESISTANCE TO OILS AND CHEMICALS

#### CHOOSE SERIES F FOR:

- Cables Extending From Cable Tray For An Unlimited Distance UL Type PLTC or UL Type TC
- Maximum Flex Life
- Improved Performance
- Reduced Cable Cost
- Oil Resistance
- Abrasion Resistance
- Jacket Durability

#### SERIES F APPLICATIONS:

- UL Compliant to NEC Section 725.61 (D) (4) and NEC Section 336.10 (7) For Extended Runs Exiting The Cable Tray
- High Flexibility/High Bend Applications
- Factory Equipment Interconnects
- Automotive Assembly Equipment
- Conveyor Systems
- Control Panels
- Machine Tools
- Robotics
- Flex and Static Track
- Transfer Shuttles

#### SERIES F PRODUCT PERFORMANCE FEATURES:

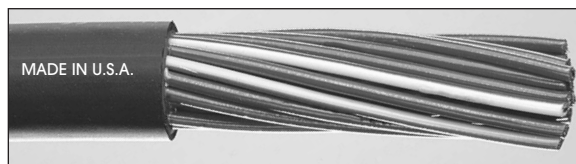
Alpha Wire **INDUSTRIAL SERIES - SERIES F** Cables are Designed and Manufactured to Perform at:

- Over 20 Million Continuous Rolling Flex Cycles at a Minimum Bend Radius of 10X OD
- Tic-Toc/Twist Test Per MIL-C-13777G

#### AVAILABILITY

- ▲ In Stock: Bulk, Cut to Length
  - 16 (Black Conductors Only) Cables Are Made To Order, 1,000 Ft. Minimum, Non-Cancelable, Non-Returnable
  - 18, 14, 12, 10 and 8 AWG Cables Are Made To Order, 1,000 Ft. Minimum, Non-Cancelable, Non-Returnable
- Call Alpha for details.

**RED INSULATION – AC Circuits Operating at Less Than Line Voltage**  
**BLUE INSULATION – DC Circuits Operating at Less Than Line Voltage**  
**BLACK INSULATION – AC Circuits Operating at Less Than Line Voltage**



#### CHARACTERISTICS

##### OPERATING TEMPERATURE:

- -25°C to 90°C (Stationary)
- -5°C to 90°C (Flexing)

##### VOLTAGE RATING:

- 600 Volt

##### COLOR DESCRIPTION:

- Color Code: Red (RW), Blue (LW) or Black (KW) Alpha-Numeric Conductors
- White Striped Neutral (>12 Conductors)
- Green/Yellow Ground Conductor
- Jacket Color: Black

##### PRODUCT DESCRIPTION:

- Conductor: Class M Stranded Bare Copper
- Insulation: Red PVC/Nylon or Blue PVC/Nylon
- Jacket: Specially-Formulated Thermoplastic Elastomer

#### SPECIFICATIONS

- UL Standard 66, Type TFFN PVC/Nylon Conductors – Oil Resistance I & II
- UL MTW
- UL Standard 1277, Type TC-ER, 90°C, 600 Volt
- UL Standard 13, Type PLTC, 90°C, 300 Volt – UL Sunlight Resistant – UL Open Wiring
- CSA C22.2 No. 210.2 AWM I/II A/B 90°C, 600 Volt, FT-4
- CE Low Voltage Directive: 73/68/EEC – Amendment 93/68/EEC
- RoHS Compliant



#### FIT® TUBING RECOMMENDATION

**FIT® 600** – Highly Flexible, Irradiated Elastomer (See Page 131 for Product Specifications)

**FIT® -650** – Chemical and Temperature Resistant Irradiated Viton® (See Page 132 for Product Specifications)  
Viton® is a registered trademark of Dupont Dow Elastomers

**16 AWG (1,31mm<sup>2</sup>), 65/34 BC, Insulation Thickness 0.016" PVC (0,4mm)/0.005" Nylon (0,1mm)**

Red Conductors Alpha Part No.	Blue Conductors Alpha Part No.	Black Conductors Alpha Part No.	No. of Cond.	Primary O.D.		Jacket Thickness		Nominal Inches	Diameter mm
				Inches	mm	Inches	mm		
▲F16003RW	▲F16003LW	F16003KW	3	0.102	2,6	0.050	1,3	0.335	8,5
▲F16004RW	▲F16004LW	F16004KW	4	0.102	2,6	0.050	1,3	0.365	9,3
▲F16005RW	▲F16005LW	F16005KW	5	0.102	2,6	0.050	1,3	0.395	10,0
▲F16007RW	▲F16007LW	F16007KW	7	0.102	2,6	0.065	1,7	0.490	12,4
▲F16012RW	▲F16012LW	F16012KW	12	0.102	2,6	0.065	1,7	0.570	14,5
▲F16017RW	▲F16017LW	F16017KW	17	0.102	2,6	0.065	1,7	0.660	16,8
▲F16019RW	▲F16019LW	F16019KW	19	0.102	2,6	0.065	1,7	0.689	17,5
▲F16022RW	▲F16022LW	F16022KW	22	0.102	2,6	0.065	1,7	0.730	18,5
▲F16025RW	▲F16025LW	F16025KW	25	0.102	2,6	0.065	1,7	0.800	20,3
▲F16033RW	▲F16033LW	F16033KW	33	0.102	2,6	0.085	2,2	0.905	23,0
▲F16042RW	▲F16042LW	F16042KW	42	0.102	2,6	0.085	2,2	0.975	24,8
▲F16049RW	▲F16049LW	F16049KW	49	0.102	2,6	0.085	2,2	1.080	27,4
▲F16065RW	▲F16065LW	F16065KW	65	0.102	2,6	0.085	2,2	1.180	30,0

FOR COMPLETE SERIES F PRODUCT PERFORMANCE DATA, SEE PAGE 366.

