



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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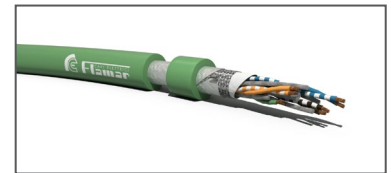
# Flamar Standard Cables for Industrial Automation



Available in multiple packaging sizes with small minimum order quantities, Flamar provides a complete selection of cables for all industrial automation applications while utilizing in-house design and manufacturing to meet and exceed the most stringent quality requirements at a competitive cost

## Features and Benefits

All cables are UL AWM/CSA recognized or UL listed	Delivers a complete selection of cables that adhere to the de-facto reliability standard for industrial automation cables
Several jacket materials available (PVC, WSOR*, PUR and TPE)	Enhances design and application flexibility. Ensures the correct cable for the required application features is available
Cables designed for Flexible or Drag-Chain installation	Solves almost all installation issues
Temperature ranges for multiple applications down to -40°C (-40°F) and up to 105°C (221°F)	Withstands wide temperature range. Delivers operational flexibility
Cross sections range from 0.25mm <sup>2</sup> (AWG 24) to 2.5mm <sup>2</sup> (AWG 14) for Signal & Control, 1.5mm <sup>2</sup> (AWG 16) to 6.0mm <sup>2</sup> (AWG 10) for Servo Motor, and from 0.14mm <sup>2</sup> (AWG 26) to 0.5mm <sup>2</sup> (AWG 20) for Network Cables	Ensures the most common cross sections for industrial automation applications are available in the cable offering
Flame-retardant compliance with UL Vertical Flame Test, UL VW-1, and CSA FT-1 up to CSA FT-4	Ensures safety for out-of-the-cabinet use



Flamar Standard Cables (from top to bottom): Signal & Control, Servo Motor, Network



Flamar standard cables for industrial automation brochure  
[English 987651-3992](#)  
[Chinese 987651-4141](#)

## Applications

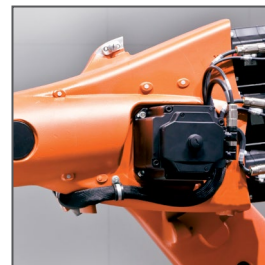
### Industrial Automation —

#### Line and Machine Builders

- Sensors: Brad® M8 and M12 Connectors
- Valves: mPm® DIN Valve Connectors
- Ethernet: Brad® M12 Connectors
- Servo Motors: Brad® M23 Connectors
- Control Cabinets:
  - GWconnect® Heavy Duty Connectors
- Auxiliary Power: Brad® Mini-Change



Sensors, valves and control cabinets



Servo Motors



Smart I/O modules

#### Industrial Factory Automation

- Material Handling

#### Non Automotive/Commercial Vehicles

\*Weld-Slag and Oil-Resistant

# Flamar Standard Cables for Industrial Automation

## Specifications

### SIGNAL AND CONTROL

Series	Environment	Installation	Halogen Free	Temperature Rating (Min   Max)		Voltage	Bending Radius	Jacket Material	Shielded	Approval
<a href="#">155210</a>	Standard	Flexible	No	+5°C	+80°C	300V	> 15xOD	PVC	No	UL AWM 2464/CSA
<a href="#">155211</a>				Yes						
<a href="#">155220</a>	Severe	Drag Chain		-25°C		600V	> 7.5xOD	WSOR*	No	UL AWM 21215/CSA
<a href="#">155221</a>				Yes						
<a href="#">155230</a>	Harsh		Yes	-40°C	1000V	PUR		No	UL AWM 21223/CSA	
<a href="#">155231</a>								Yes		
<a href="#">155240</a>	Severe	No	+105°C	300V	> 10xOD	TPE	No	UL Listed PLTC		
<a href="#">155241</a>							Yes			

### SERVO MOTOR

Series	Environment	Installation	Halogen Free	Temperature Rating (Min   Max)		Voltage	Bending Radius	Jacket Material	Shielded	Approval
<a href="#">155311</a>	Standard	Flexible	No	+5°C	+80°C	1000V Power 600V Feedback	> 15xOD	PVC	Yes	UL AWM 2570/CSA
<a href="#">155321</a>	Severe	Drag Chain		-25°C				WSOR*		UL AWM 21939/CSA (Power) UL AWM 21215/CSA (Feedback)
<a href="#">155331</a>	Harsh		Yes	-40°C			PUR	UL AWM 21223/CSA		

### NETWORK

Series	Environment	Installation	Halogen Free	Temperature Rating (Min   Max)		Voltage	Bending Radius	Jacket Material	Shielded	Approval
<a href="#">155411</a>	Standard	Flexible	No	+5°C	+60°C (CC-Link)	300V	> 15xOD	PVC	Yes	UL AWM 2464/CSA
<a href="#">155421</a>	Severe	Drag Chain		-10°C	+60°C (PROFIBUS) +70°C (PROFINET)	600V		WSOR*		UL AWM 21215/CSA
<a href="#">155431</a>	Harsh			Yes	-20°C	+60°C (EtherNet/IP)		300V		PUR

\*Weld-Slag and Oil-Resistant

## Packaging Options

