

# Low-Smoke, Zero-Halogen Communication and Control Cable



**AlphaWire**

*Cables you trust. Service you deserve.*

# Get control with uncompromising safety



**Choosing the right cable may be one of the most important safety decisions you can make. Common wire and cable insulating materials can emit toxic gases, toxic smoke, and toxic acids when they burn.**

**Alpha Wire offers a complete range of high-performance cable that lowers the amount of smoke and eliminates halogens emitted, without compromising on electrical and mechanical performance.**

While halogens used in common cabling materials, such as chlorine in PVC or fluorine in PTFE, are stable under most conditions, they present serious health hazards when burned.

A halogen-containing plastic can release hydrogen chloride, hydrogen fluoride, and other dangerous gases when burned.

When hydrogen chloride comes in contact with water, it forms dangerous hydrochloric acid. These gases are also highly corrosive to metal.

Cables that produce heavy amounts of smoke are also dangerous. More people in fires die from smoke inhalation than any other cause. Reducing smoke in general and toxic smoke in particular saves lives.

## Low smoke, zero halogens saves lives

Alpha Wire's low-smoke, zero-halogen (LSZH) communication and control cable combines LSZH-rated insulation and jackets with the rugged performance you expect from Alpha. The specially formulated LSZH material minimizes the effects from smoke and harmful corrosive gases in the event of combustion. Low smoke means easier visibility in exiting the area and reduced danger of smoke inhalation, while low toxicity means no harm to people from halogenated gases.

Our LSZH cables are suited to such applications as rapid transit, industrial, commercial, and similar confined-space applications where the low-smoke cables

can save lives and potentially reduce damage to electronic components.

- *LSZH materials for low-smoke properties and reduced toxicity*
- *Tinned copper conductors resist corrosion*
- *Stranded conductors for installation flexibility*
- *Multiconductor and multipair configurations*
- *Unshielded versions for smallest diameter*
- *Foil shielded, overall or individual pairs, for EMI protection and improved signal integrity*
- *Color-coded conductor insulation for easy identification*



Unshielded Cable (LSZH jacket/LSZH insulation)							
Conductor Size		No. of Conductors	Cable Diameter		Jacket Wall Thickness		Part No.
AWG	mm <sup>2</sup>		Inch	mm	Inch	mm	
22	0.35	2	0.16	4.1	0.028	0.71	1172L
		3	0.17	4.3	0.028	0.71	1173L
		4	0.19	4.8	0.028	0.71	1174L
		5	0.20	5.1	0.028	0.71	1175L
		6	0.21	5.3	0.030	0.76	1176L
		7	0.21	5.3	0.030	0.76	1177L
		8	0.22	5.6	0.030	0.76	1178L
		9	0.25	6.3	0.032	0.81	1179L
		10	0.26	6.6	0.035	0.88	1180L
		20	0.56	2	0.18	4.6	0.018
3	0.19			4.8	0.018	0.45	1896L
4	0.21			5.3	0.020	0.50	1896/4L
5	0.23			5.9	0.020	0.50	1896/5L
6	0.28			7.0	0.020	0.50	1896/6L

Shielded Cable: Foil Shielding Overall (LSZH Jacket/LSZH Insulation)							
Conductor Size		No. of Pairs	Cable Diameter		Jacket Wall Thickness		Part No.
AWG	mm <sup>2</sup>		Inch	mm	Inch	mm	
24	0.22	1	0.16	4.1	0.028	0.71	5471L
		2	0.21	5.3	0.028	0.71	5472L
		3	0.23	5.8	0.028	0.71	5473L
		4	0.24	6.1	0.028	0.71	5474L
		5	0.27	6.9	0.030	0.76	5475L
		6	0.30	7.6	0.030	0.76	5476L
		7	0.30	7.6	0.030	0.76	5477L
		8	0.32	8.1	0.032	0.81	5478L
		9	0.34	8.6	0.032	0.81	5479L
		10	0.38	9.6	0.032	0.81	5480L

Shielded Cable: Individually Foil-Shielded Pairs (LSZH Jacket/Polypropylene Insulation)							
Conductor Size		No. of Pairs	Cable Diameter		Jacket Wall Thickness		Part No.
AWG	mm <sup>2</sup>		Inch	mm	Inch	mm	
22	0.35	2	0.16	4.1	0.014	0.35	2466L
		3	0.30	7.6	0.047	1.19	6010L
		4	0.24	6.2	0.020	0.50	2463L
		6	0.39	9.9	0.040	1.01	6012L
		9	0.44	11.2	0.040	1.01	6014L
		12	0.49	12.5	0.040	1.01	6017L

## Specifications



Conductors	Stranded tinned copper
Materials	LSZH (low smoke/zero halogen)
Standard Jacket Color	Slate
Shielding	Aluminum/polyester
Temperature	-20°C to +75°C
Voltage	300 V
Approvals	UL Type CM UL VW-1 flame test CSA Type CMG FT4
LSZH Flammability	Passes IEC 60332-1
LSZH Acid Gas Generation	Passes IEC 60754-1 and 60754-2
LSZH Smoke Emission	Passes IEC 61034-2

### 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 people is paramount. Specify Alpha LSZH cable for a higher standard of safety in enclosed public places. The integrity of your system is only as robust as the products you use.

### Superior availability

Alpha offers LSZH cables from stock in most sizes and constructions, in both small and large put-ups, so you can order it when you need it. Our products are available for same-day shipment, eliminating long lead times.

### 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 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](http://www.alphawire.com)!

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