EcoGen™
Wire and Cable

AlphaWire

Cables you trust. Service you deserve.

EcoFlex® PUR Cable

Rugged 600 V Continuous Flex Cable

EcoFlex PUR cable provides abrasion, UV, and oil resistance with a tough, zero-halogen polyurethane jacket. It's up to 40% smaller and 44% lighter than other 600 V continuous flex cables.

- Up to 40% smaller and 44% lighter
- Rated for over 8 million flex cycles
- Flexible at low temperatures
- Unshielded or braid shielding
- 28 to 10 AWG
- Zero halogen
- Contains no heavy metals or phthalates
- 2 to 36 conductors

Conductors: Finely stranded tinned copper (IEC 60228 Conductors, Class 6)

Insulation: mPPE

Jacket: PUR, zero halogen, slate

Shielding:
Unshielded
Tinned copper braid, 85% coverage

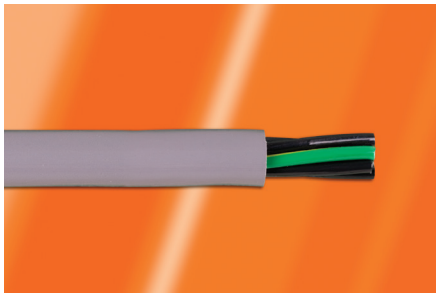
Voltage: 600 V (UL)

Temperature Range:
-40°C to + 80°C (dynamic)
-50°C to + 90°C (static)

Availability:
100' put-up in stock
Bulk (Min. 1000')

Configurations

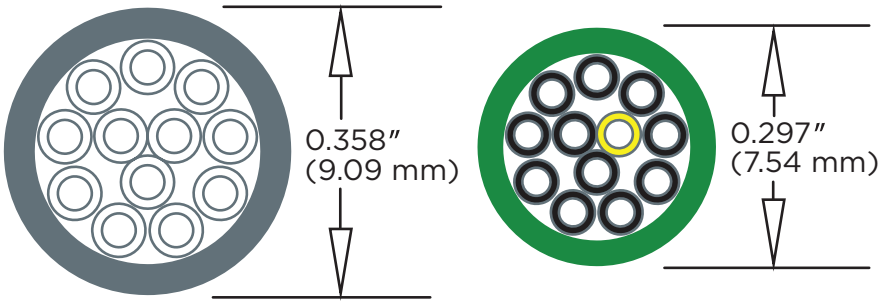
- Unshielded multiconductor
- Braid shielded multiconductor
- Custom configuration available



Approvals

- UL AWM 21959 (90°C / 600 VRMS)
- UL Oil Res I
- UL Sunlight Resistant
- CSA AWM I/II A/B FT2
- IEC 60332-1 Flame Behavior
- IEC 60332-2 Flame Behavior
- IEC 60754-2 Acid Gas Generation
- IEC 60228 Class 6
- EU Low Voltage Directive 2006/95/EC
- RoHS
- REACH

20 AWG (0.523 mm²) 12-Conductor Unshielded Cable



Traditional PUR Cable

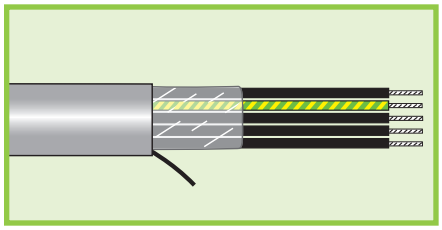
EcoFlex PUR

Order free samples at **www.alphawire.com/ecogen** or call 1-800-52-ALPHA

Specifications subject to change. For complete specifications and availability, visit www.alphawire.com.

EcoFlex® PUR Cable

600 V Unshielded, Multiconductor



UL AWM 21959 (90°C / 600 VRMS)
CSA AWM I/II A/B FT2

Temperature Range

-40°C to + 80°C (dynamic)
-50°C to + 90°C (static)

Conductor Color Coding

- Black and numbered, with one green/yellow, except where noted

Materials

- Finely stranded tinned copper
- mPPE insulation
- PUR, zero halogen jacket, slate

Properties

- Up to 40% smaller and 44% lighter
- Rated for over 8 million flex cycles
- Flexible at low temperatures
- Zero halogen
- Contains no heavy metals or phthalates

Flammability

- IEC 60332-1 Flame Behavior
- IEC 60332-2 Flame Behavior
- IEC 60754-2 Acid Gas Generation

Additional Approvals

- UL Oil Res I
- UL Sunlight Resistant
- IEC 60228 Class 6
- EU Low Voltage Directive 2006/95/EC

Availability

100 ft (30.5 m) put-up in stock
Bulk (Min. 1000 ft (305 m))

FIT® Tubing Recommendations

- FIT-221L: Low smoke zero halogen

28 AWG (0.0925 mm²)

Stranding: 19/40 (19 x 0.079 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80001	2	0.140	3.56
80002	3	0.146	3.71

(Color code D)

26 AWG (0.154 mm²)

Stranding: 19/38 (19 x 0.102 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80003	2	0.150	3.81
80004	3	0.156	3.96
80005	5	0.179	4.55
80006	7	0.192	4.88
80007	9	0.231	5.87

(Color code D)

24 AWG (0.241 mm²)

Stranding: 19/36 (19 x 0.127 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80008	2	0.158	4.01
80009	3	0.165	4.19
80010	5	0.190	4.83
80011	7	0.204	5.18
80012	9	0.247	6.27
80013	10	0.248	6.30

22 AWG (0.382 mm²)

Stranding: 19/34 (19 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

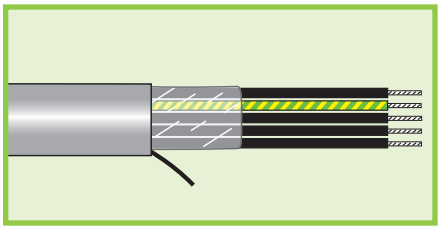
Part Number	Conductors	Nominal Diameter	
		Inch	mm
80014	2	0.172	4.37
80015	3	0.180	4.57
80016	4	0.195	4.95
80017	6	0.225	5.72
80018	9	0.275	6.98
80019	10	0.276	7.01

- FIT Spiral Wrap: Zero-halogen wrap simplifies wire harnessing, cabling, and bundling

RoHS Compliant CA PROP 65

EcoFlex® PUR Cable

600 V Unshielded, Multiconductor



UL AWM 21959 (90°C / 600 VRMS)
CSA AWM I/II A/B FT2

Temperature Range

-40°C to + 80°C (dynamic)
-50°C to + 90°C (static)

Conductor Color Coding

- Black and numbered, with one green/yellow

Materials

- Finely stranded tinned copper
- mPPE insulation
- PUR, zero halogen jacket, slate

Properties

- Up to 40% smaller and 44% lighter
- 8 million flex cycles (and still counting)
- Flexible at low temperatures
- Zero halogen
- Contains no heavy metals or phthalates

Flammability

- IEC 60332-1 Flame Behavior
- IEC 60332-2 Flame Behavior
- IEC 60754-2 Acid Gas Generation

Additional Approvals

- UL Oil Res I
- UL Sunlight Resistant
- IEC 60228 Class 6
- EU Low Voltage Directive 2006/95/EC

Availability

100 ft (30.5 m) put-up in stock
Bulk (Min. 1000 ft (305 m))

FIT® Tubing Recommendations

- FIT-221L: Low smoke zero halogen

20 AWG (0.523 mm²)

Stranding: 26/34 (26 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80020	2	0.178	4.52
80021	3	0.187	4.75
80022	5	0.217	5.51
80023	6	0.234	5.94
80024	7	0.234	5.94
80025	9	0.287	7.29
80026	12	0.297	7.54
80027	18	0.344	8.74
80028	20	0.361	9.17
80029	25	0.398	10.11
80030	30	0.421	10.69
80031	36	0.454	11.53

18 AWG (0.825 mm²)

Stranding: 41/34 (41 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80032	2	0.202	5.13
80033	3	0.213	5.41
80034	4	0.231	5.87
80035	5	0.250	6.35
80036	7	0.271	6.88
80037	9	0.334	8.48
80038	12	0.347	8.81
80039	18	0.405	10.29
80040	25	0.470	11.94

16 AWG (1.31 mm²)

Stranding: 65/34 (65 x 0.16 mm)
Insulation thickness: 0.012 (0.30 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80041	2	0.228	5.79
80042	3	0.241	6.12
80043	4	0.263	6.68
80044	5	0.285	7.24
80045	7	0.310	7.87
80046	9	0.386	9.80
80047	12	0.401	10.19
80048	18	0.470	11.94
80049	25	0.548	13.92
80050*	36	0.672	17.07

*0.053 (1.35 mm) jacket thickness

- FIT Spiral Wrap: Zero-halogen wrap simplifies wire harnessing, cabling, and bundling

RoHS Compliant CA PROP 65

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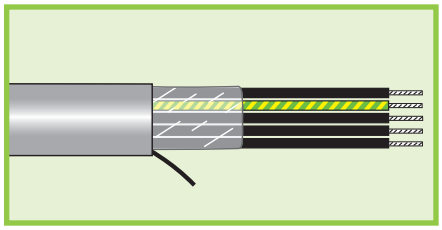
EcoFlex® PUR Cable

600 V Unshielded, Multiconductor



UL AWM 21959 (90°C / 600 VRMS)
CSA AWM I/II A/B FT2

Temperature Range

-40°C to + 80°C (dynamic)
-50°C to + 90°C (static)

Conductor Color Coding

- Black and numbered, with one green/yellow

Materials

- Finely stranded tinned copper
- mPPE insulation
- PUR, zero halogen jacket, slate

Properties

- Up to 40% smaller and 44% lighter
- 8 million flex cycles (and still counting)
- Flexible at low temperatures
- Zero halogen
- Contains no heavy metals or phthalates

Flammability

- IEC 60332-1 Flame Behavior
- IEC 60332-2 Flame Behavior
- IEC 60754-2 Acid Gas Generation

Additional Approvals

- UL Oil Res I
- UL Sunlight Resistant
- IEC 60228 Class 6
- EU Low Voltage Directive 2006/95/EC

Availability

100 ft (30.5 m) put-up in stock
Bulk (Min. 1000 ft (305 m))

FIT® Tubing Recommendations

- FIT-221L: Low smoke zero halogen
- FIT Spiral Wrap: Zero-halogen wrap simplifies wire harnessing, cabling, and bundling

14 AWG (2.11 mm²)

Stranding: 105/34 (105 x 0.16 mm)
Insulation thickness: 0.013 (0.33 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80052	3	0.275	6.98
80053	4	0.301	7.65
80054	5	0.329	8.36
80055	7	0.358	9.09
80056	9	0.449	11.40
80057	12	0.467	11.86
80058	18	0.550	13.97
80059*	25	0.686	17.42

*0.053 (1.35 mm) jacket thickness

12 AWG (3.38 mm²)

Stranding: 168/34 (168 x 0.16 mm)
Insulation thickness: 0.015 (0.38 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80060	3	0.357	9.07
80061	4	0.393	9.98
80062	5	0.432	10.97
80063	7	0.473	12.01
80064*	9	0.642	16.31

*0.053 (1.35 mm) jacket thickness

10 AWG (5.21 mm²)

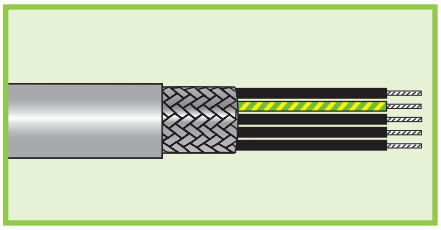
Stranding: 259/34 (259 x 0.16 mm)
Insulation thickness: 0.020 (0.51 mm)
Jacket thickness: 0.053 (1.35 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80065	3	0.481	12.23
80066	4	0.528	13.41
80067	5	0.577	14.66
80068	7	0.630	16.00

RoHS Compliant CA PROP 65

EcoFlex® PUR Cable

600 V Braid Shielded, Multiconductor



UL AWM 21959 (90°C / 600 VRMS)
CSA AWM I/II A/B FT2

Temperature Range

-40°C to + 80°C (dynamic)
-50°C to + 90°C (static)

Conductor Color Coding

- Black and numbered, with one green/yellow, except where noted

Materials

- Finely stranded tinned copper
- mPPE insulation
- Tinned copper braid, 85% coverage
- PUR, zero halogen jacket, slate

Properties

- Up to 40% smaller and 44% lighter
- 8 million flex cycles (and still counting)
- Flexible at low temperatures
- Zero halogen
- Contains no heavy metals or phthalates

Flammability

- IEC 60332-1 Flame Behavior
- IEC 60332-2 Flame Behavior
- IEC 60754-2 Acid Gas Generation

Additional Approvals

- UL Oil Res I
- UL Sunlight Resistant
- IEC 60228 Class 6
- EU Low Voltage Directive 2006/95/EC

Availability

100 ft (30.5 m) put-up in stock
Bulk (Min. 1000 ft (305 m))

FIT® Tubing Recommendations

- FIT-221L: Low smoke zero halogen
- FIT Spiral Wrap: Zero-halogen wrap simplifies wire harnessing, cabling, and bundling

28 AWG (0.0925 mm²)

Stranding: 19/40 (19 x 0.079 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80101	2	0.168	4.27
80102	3	0.174	4.42

(Color code D)

26 AWG (0.154 mm²)

Stranding: 19/38 (19 x 0.102 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80103	2	0.178	4.52
80104	3	0.184	4.67
80105	4	0.196	4.98
80106	6	0.220	5.59
80107	8	0.246	6.25

(Color code D)

24 AWG (0.241 mm²)

Stranding: 19/36 (19 x 0.127 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80108	2	0.186	4.72
80109	3	0.193	4.90
80110	5	0.218	5.54
80111	7	0.232	5.89
80112	9	0.275	6.98
80113	10	0.276	7.01

22 AWG (0.382 mm²)

Stranding: 19/34 (19 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

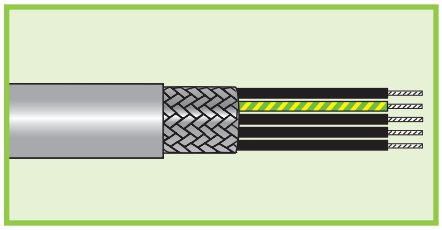
Part Number	Conductors	Nominal Diameter	
		Inch	mm
80114	2	0.200	5.08
80115	3	0.208	5.28
80116	4	0.223	5.66
80117	6	0.253	6.43
80118	9	0.303	7.70
80119	10	0.304	7.72

RoHS Compliant CA PROP 65

Specifications subject to change. For complete specifications and availability, visit www.alphawire.com.

EcoFlex® PUR Cable

600 V Braid Shielded, Multiconductor



UL AWM 21959 (90°C / 600 VRMS)
CSA AWM I/II A/B FT2

Temperature Range

-40°C to + 80°C (dynamic)
-50°C to + 90°C (static)

Conductor Color Coding

- Black and numbered, with one green/yellow

Materials

- Finely stranded tinned copper
- mPPE insulation
- Tinned copper braid, 85% coverage
- PUR, zero halogen jacket, slate

Properties

- Up to 40% smaller and 44% lighter
- 8 million flex cycles (and still counting)
- Flexible at low temperatures
- Zero halogen
- Contains no heavy metals or phthalates

Flammability

- IEC 60332-1 Flame Behavior
- IEC 60332-2 Flame Behavior
- IEC 60754-2 Acid Gas Generation

Additional Approvals

- UL Oil Res I
- UL Sunlight Resistant
- IEC 60228 Class 6
- EU Low Voltage Directive 2006/95/EC

Availability

100 ft (30.5 m) put-up in stock
Bulk (Min. 1000 ft (305 m))

FIT® Tubing Recommendations

- FIT-221L: Low smoke zero halogen

20 AWG (0.523 mm²)

Stranding: 26/34 (26 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80120	2	0.206	5.23
80121	3	0.215	5.46
80122	5	0.245	6.22
80123	6	0.262	6.65
80124	7	0.262	6.65
80125	9	0.315	8.00
80126	12	0.325	8.25
80127	18	0.372	9.45
80128	20	0.389	9.88
80129	25	0.426	10.82
80130	30	0.449	11.40
80131	36	0.488	12.40

18 AWG (0.825 mm²)

Stranding: 41/34 (41 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80132	2	0.223	5.66
80133	3	0.241	6.12
80134	4	0.259	6.58
80135	5	0.278	7.06
80136	7	0.299	7.59
80137	9	0.362	9.19
80138	12	0.375	9.53
80139	18	0.433	11.00
80140	25	0.504	12.80

16 AWG (1.31 mm²)

Stranding: 65/34 (65 x 0.16 mm)
Insulation thickness: 0.012 (0.30 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80141	2	0.256	6.50
80142	3	0.269	6.83
80143	4	0.291	7.39
80144	5	0.313	7.95
80145	7	0.338	8.59
80146	9	0.414	10.52
80147	12	0.429	10.90
80148	18	0.504	12.80
80149*	25	0.624	15.85
80050*	36	0.672	17.07

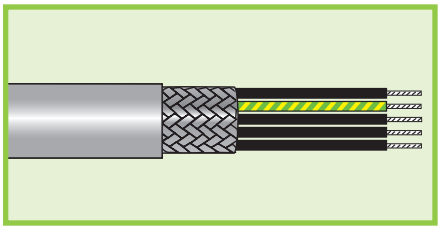
*0.053 (1.35 mm) jacket thickness

- FIT Spiral Wrap: Zero-halogen wrap simplifies wire harnessing, cabling, and bundling

RoHS Compliant CA PROP 65

EcoFlex® PUR Cable

600 V Braid Shielded, Multiconductor



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CSA AWM I/II A/B FT2

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Additional Approvals

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Availability

100 ft (30.5 m) put-up in stock
Bulk (Min. 1000 ft (305 m))

FIT® Tubing Recommendations

- FIT-221L: Low smoke zero halogen
- FIT Spiral Wrap: Zero-halogen wrap simplifies wire harnessing, cabling, and bundling

14 AWG (2.11 mm²)

Stranding: 105/34 (105 x 0.16 mm)
Insulation thickness: 0.013 (0.33 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80150	3	0.303	7.70
80151	4	0.329	8.36
80152	5	0.357	9.07
80153	7	0.386	9.80
80154	9	0.483	12.27
80155	12	0.501	12.73
80156*	18	0.626	15.90
80157*	25	0.727	18.47

*0.053 (1.35 mm) jacket thickness

12 AWG (3.38 mm²)

Stranding: 168/34 (168 x 0.16 mm)
Insulation thickness: 0.015 (0.38 mm)
Jacket thickness: 0.032 (0.81 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80158	3	0.385	9.78
80159	4	0.421	10.69
80160	5	0.460	11.68
80161	7	0.507	12.88
80162	9	0.676	17.17

*0.053 (1.35 mm) jacket thickness

10 AWG (5.21 mm²)

Stranding: 259/34 (259 x 0.16 mm)
Insulation thickness: 0.020 (0.51 mm)
Jacket thickness: 0.053 (1.35 mm)

Part Number	Conductors	Nominal Diameter	
		Inch	mm
80163	3	0.509	12.93
80164	4	0.562	14.27
80165	5	0.611	15.52
80166	7	0.644	16.36

RoHS Compliant CA PROP 65

Specifications subject to change. For complete specifications and availability, visit www.alphawire.com.

Conductor Color Coding

Multipair Cables

Chart A

Pair No.	Color Combination	Pair No.	Color Combination
1	Black + Red	14	Green + Blue
2	Black + White	15	Green + White
3	Black + Green	16	Green + Brown
4	Black + Blue	17	Green + Orange
5	Black + Brown	18	Green + Yellow
6	Black + Yellow	19	White + Blue
7	Black + Orange	20	White + Brown
8	Red + Green	21	White + Orange
9	Red + White	22	White + Yellow
10	Red + Blue	23	Blue + Brown
11	Red + Yellow	24	Blue + Orange
12	Red + Brown	25	Blue + Yellow
13	Red + Orange		

Chart B

Pair No.	Color Combination	Pair No.	Color Combination
1	White + Black	14	Black + Green
2	White + Brown	15	Black + Blue
3	White + Red	16	Black + Violet
4	White + Orange	17	Black + Slate
5	White + Yellow	18	Brown + Red
6	White + Green	19	Brown + Orange
7	White + Blue	20	Brown + Yellow
8	White + Violet	21	Brown + Green
9	White + Slate	22	Brown + Blue
10	Black + Brown	23	Brown + Violet
11	Black + Red	24	Brown + Slate
12	Black + Orange	25	Red + Orange
13	Black + Yellow		

Multiconductor Cables

Chart D

No.	Base Color	1st Stripe	2nd Stripe
1	Black		
2	Red		
3	White		
4	Green		
5	Orange		
6	Blue		
7	Brown		
8	Yellow		
9	Violet		
10	Slate		
11	Pink		
12	Tan		
13	Red	Green	
14	Red	Yellow	
15	Red	Black	
16	White	Black	
17	White	Red	
18	White	Green	
19	White	Yellow	
20	White	Blue	
21	White	Brown	
22	White	Orange	
23	White	Slate	
24	White	Violet	
25	White	Black	Red
26	White	Black	Green
27	White	Black	Yellow
28	White	Black	Blue
29	White	Black	Brown
30	White	Black	Orange
31	White	Black	Slate
32	White	Black	Violet
33	White	Black	Black
34	White	Red	Black
35	White	Red	Red
36	White	Red	Green

Multiconductor Cables

Chart E

No.	Base Color	1st Stripe	2nd Stripe
1	Black		
2	Brown		
3	Red		
4	Orange		
5	Yellow		
6	Green		
7	Blue		
8	Violet		
9	Slate		
10	White		
11	White	Black	
12	White	Brown	
13	White	Red	
14	White	Orange	
15	White	Yellow	
16	White	Green	
17	White	Blue	
18	White	Violet	
19	White	Slate	
20	White	Black	Brown
21	White	Black	Red
22	White	Black	Orange
23	White	Black	Yellow
24	White	Black	Green
25	White	Black	Blue

Cables you trust. Service you deserve.

Every application is critical and cable failure is not an option when the safety of equipment and personnel is paramount. Specify Alpha Wire cable for rugged, reliable performance, since the integrity of your system is only as robust as the products you use.

Custom cable is standard

Alpha Wire goes one step further: manufacturing custom cables to meet unique applications—offering specific conductor counts, shielding options, jacket materials, and versatile product designs. Our custom cable orders are often shipped in less than a week, once again giving you products with more convenience and less delay.

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 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!**

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Lit. No. EcoGen-Cat-1807
Supersedes: EcoGen-Cat-1608