Product Overview

QZ Cable Service Drop Cable is an overhead aluminum cable designed for low-voltage electrical service connections between utility distribution lines or pole-mounted transformers and consumers' service entrance equipment.

Available in Duplex, Triplex and Quadruplex configurations, the cable is suitable for residential and commercial service connections, temporary power supplies, and outdoor or street lighting installations. It features concentrically stranded, compressed 1350-H19 aluminum phase conductors with polyethylene (PE) or cross-linked polyethylene (XLPE/XLP) insulation.

The neutral messenger can be manufactured using AAC, AAAC (6201-T81 aluminum alloy), or ACSR, depending on the required configuration and mechanical strength.

Applications

Duplex Service Drop Cable

- Supplies 120 V aerial service to residential and other low-voltage installations.
- Used for temporary electrical service at construction sites.
- Suitable for outdoor and street lighting installations.
- Designed for service at 600 V or lower.

Triplex Service Drop Cable

- Supplies power from utility distribution lines to the consumer's weatherhead.
- Used for overhead service connections at 600 V or less, phase-to-phase.

Quadruplex Service Drop Cable

- Used to supply three-phase power, typically from a pole-mounted transformer to the consumer's service head.
- Suitable for overhead service connections at 600 V or less, phase-to-phase.

Applicable Standards

The service drop cable meets or exceeds the following ASTM and industry specifications:

- **ASTM B-230** – Aluminum 1350-H19 Wire for Electrical Purposes
- **ASTM B-231** – Aluminum Conductors, Concentric-Lay-Stranded
- **ASTM B-232** – Aluminum Conductors, Concentric-Lay-Stranded, Coated Steel Reinforced (ACSR)
- **ASTM B-399** – Concentric-Lay-Stranded, 6201-T81 Aluminum Alloy Conductors
- **ASTM B-901** – Compressed Round Stranded Aluminum Conductors Using Single Input Wire
- **ANSI/ICEA S-76-474**

Cable Construction

Phase Conductor

- Material: 1350-H19 aluminum

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- Construction: Concentric-lay-stranded, compressed aluminum
- Available conductor sizes and strand configurations vary by cable type.

Insulation

- Material: Polyethylene (PE) or cross-linked polyethylene (XLPE/XLP)
- Insulation thickness: Available in different nominal thicknesses according to conductor size and cable configuration.

Neutral Messenger

The neutral messenger is concentrically stranded and can be supplied in the following constructions:

- AAC – All Aluminium Conductor
- AAAC – All Aluminium Alloy Conductor, 6201-T81
- ACSR – Aluminium Conductor Steel Reinforced

The messenger construction and rated strength depend on the selected cable configuration.

Product Configurations

Cable Type	Typical Configuration	Application
Duplex	Two conductors, including one insulated phase conductor and one neutral messenger	Single-phase overhead service
Triplex	Three-conductor service cable assembly	Single-phase overhead service
Quadruplex	Four-conductor service cable assembly	Three-phase overhead service

Electrical and Temperature Ratings

Parameter	PE Insulation	XLPE/XLP Insulation
Service voltage	600 V or lower	600 V or lower
Maximum conductor temperature	75°C	90°C

The voltage and temperature ratings above follow the supplied source information. Confirm the applicable cable configuration and project requirements when ordering.

Available Technical Data

The source specification tables cover the following configurations:

- Duplex – AAC phase conductor with AAC neutral messenger
- Duplex – AAC phase conductor with ACSR neutral messenger
- Duplex – AAC phase conductor with AAAC neutral messenger
- Triplex – AAC phase conductor with AAC neutral messenger
- Triplex – AAC phase conductor with ACSR neutral messenger

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- Triplex – AAC phase conductor with AAAC neutral messenger
- Quadruplex – AAC phase conductor with AAC neutral messenger
- Quadruplex – AAC phase conductor with ACSR neutral messenger
- Quadruplex – AAC phase conductor with AAAC neutral messenger

Technical data note: The individual Code Word tables should be displayed with their original configuration headings and column labels. The values are approximate and subject to normal manufacturing tolerances. Compatibility with glands, connectors and accessories should be checked against the actual product dimensions. Other sizes are available upon request.

Manufacturing & Customization

QZ Cable can manufacture service drop cables according to project specifications, applicable standards and required conductor configurations.

Customers can submit their required cable type, conductor size, insulation material, neutral messenger construction and applicable technical requirements for evaluation and quotation.

Construction Parameters

Duplex Service Drop Cable (600V)

CodeName	Phaseconductor				BareNeutralMessage		NominalWeight(kg/km)		AllowableAmpacity
	Size&No.of wires	InsulationThick (mm)	NominalDiameter (mm)		Size&No.of wires	RatedStrength (kg)	XLPE	Aluminum	(A)
			Bare	OD					
AAC Bare Neutral Wire Supported									
Pekingese	6-Solid	1.14	4.1	6.4	6-7	255	20.8	72.9	78
Collie	6-7	1.14	4.6	6.9	6-7	255	23.8	72.9	78
Cocker	6-7	1.52	4.6	7.7	6-7	255	32.7	72.9	78
Dachshund	4-Solid	1.14	5.2	7.5	6-7	400	26.8	114.6	103
Spaniel	4-7	1.14	5.9	8.2	6-7	400	29.8	116.1	103
Cairn	4-7	1.52	5.9	8.9	6-7	400	40.2	116.1	103
Doberman	2-7	1.14	7.4	9.7	2-7	612	38.7	184.5	136
Airedale	1-19	1.52	8.4	11.5	1-7	—	56.5	233.6	158
Basset	1/0-7	1.52	9.3	12.4	1/0-7	903	64	294.7	182
Malemure	1/0-19	1.52	9.4	12.5	1/0-7	903	64	294.7	182

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CodeName	Phaseconductor				BareNeutralMessage		NominalWeight(kg/km)		AllowableAmpacity
	Size&No.of wires	InsulationThick (mm)	NominalDiameter (mm)		Size&No.of wires	RatedStrength (kg)	XLPE	Aluminum	(A)
AAAC Bare Neutral Wire Supported									
Chihuahua	6-Solid	1.14	4.1	6.4	6-7	499	20.8	72.9	78
Vizsla	6-7	1.14	4.6	6.9	6-7	499	23.8	72.9	78
Harrier	4-Solid	1.14	5.2	7.5	4-7	798	26.8	116.1	103
Whippet	4-7	1.14	5.9	8.2	4-7	798	29.8	116.1	103
Schnauzer	2-7	1.14	7.4	9.7	2-7	1270	38.7	184.5	136
Afghan	1/0-7	1.52	9.3	12.4	1/0-7	2023	64	296.1	182
Heeler	1/0-19	1.52	9.4	12.5	1/0-7	2023	64	296.1	182
ACSR Bare Neutral Wire Supported									
Setter	6-Solid	1.14	4.1	6.4	6/6/01	540	20.8	72.9	78
Shepherd	6-7	1.14	4.6	6.9	6/6/01	540	23.8	72.9	78
Retriever	6-7	1.52	4.6	7.7	6/6/01	540	32.7	72.9	78
Eskimo	4-Solid	1.14	5.2	7.5	4/6/01	844	26.8	114.6	103
Terrier	4-7	1.14	5.9	8.2	4/6/01	844	29.8	116.1	103
Yorkshirc	4-7	1.52	5.9	8.9	4/6/01	844	40.2	116.1	103
Chow	2-7	1.14	7.4	9.7	2/6/01	1293	38.7	184.5	136
Labrador	1-19	1.52	8.4	11.5	2/6/01	1610	56.5	233.6	158
Bloodhound	1/0-7	1.52	9.3	12.4	1/0-6/1	1987	64	294.7	182
Bull	1/0-19	1.52	9.4	12.5	1/0-6/1	1987	64	294.7	182

Triplex Service Drop Cable (600V)

Triplex – AAC Conductor and AAC Neutral Messenger

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Code Word	Phase Conductor Size (AWG or kcmil)	Phase Conductor Strands	Insulation Thickness (mil)	Cable OD (in)	Neutral Messenger Size (AWG or kcmil)	Neutral Messenger Strands	Rated Strength (lb)	Weight – PE (lb/kft)	Weight – XLPE (lb/kft)
Haliotis	6	1	45	0.26	6	7	563	101	100
Patella	6	7	45	0.28	6	7	563	108	107
Fusus	4	1	45	0.30	4	7	881	149	149
Oyster	4	7	45	0.33	4	7	881	159	158
Clam	2	7	45	0.39	2	7	1,350	240	238
Snail	1/0	7	60	0.50	2	7	1,350	387	385
Murex	1/0	7	60	0.50	1/0	7	1,990	387	385
Purpura	1/0	19	60	0.50	1/0	7	1,990	382	380
Nassa	2/0	7	60	0.55	2/0	7	2,510	477	474
Trophon	2/0	19	60	0.55	2/0	7	2,510	471	469
Melita	3/0	19	60	0.60	3/0	19	3,040	581	579
Portunus	4/0	19	60	0.65	4/0	19	3,830	721	718
Nannynose	336.4	19	80	0.83	336.4	19	6,150	1,162	1,157

Notes: The above data are approximate and subject to normal manufacturing tolerances. Where required, compatibility with glands, connectors and accessories should be verified using the actual product dimensions. Other sizes are available upon request.

Triplex (Continued) – AAC Conductor and ACSR Neutral Messenger

Code Word	Phase Conductor Size (AWG or kcmil)	Phase Conductor Strands	Insulation Thickness (mil)	Cable OD (in)	Neutral Messenger Size (AWG or kcmil)	Neutral Messenger Strands	Rated Strength (lb)	Weight – PE (lb/kft)	Weight – XLPE (lb/kft)
Paludina	6	1	45	0.26	6	6/1	1,190	112	112
Voluta	6	7	45	0.28	6	6/1	1,190	119	119
Bolma	6	7	60	0.31	6	6/1	1,190	132	131
Scallop	4	1	45	0.30	6	6/1	1,190	147	146
Strombus	4	7	45	0.33	6	6/1	1,190	156	155
Whelk	4	1	45	0.30	4	6/1	1,860	168	168
Periwinkle	4	7	45	0.33	4	6/1	1,860	178	177
Calma	4	7	60	0.36	4	6/1	1,860	192	191
Cockle	2	7	45	0.39	4	6/1	1,860	235	234
Conch	2	7	45	0.39	2	6/1	2,850	270	269
Gebia	2	7	60	0.42	4	6/1	1,860	252	250
Janthina	1/0	7	60	0.50	2	6/1	2,850	380	378
Ranella	1/0	19	60	0.50	2	6/1	2,850	375	373

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Neritina	1/0	7	60	0.50	1/0	6/1	4,380	435	433
Cenia	1/0	19	60	0.50	1/0	6/1	4,380	430	428
Cavolinia	2/0	7	60	0.55	1	6/1	3,550	468	465
Clio	2/0	19	60	0.55	1	6/1	3,550	462	460
Runcina	2/0	7	60	0.55	2/0	6/1	5,300	537	535
Triton	2/0	19	60	0.55	2/0	6/1	5,300	531	529
Aega	3/0	19	60	0.60	1/0	6/1	4,380	570	568
Mursia	3/0	19	60	0.60	3/0	6/1	6,620	658	655
Cerapus	4/0	19	60	0.65	2/0	6/1	5,300	705	702
Zuzara	4/0	19	60	0.65	4/0	6/1	8,350	815	813
Dosinia	266.8	19	80	0.76	266.8	18/1	6,880	982	977
Cowry	336.4	19	80	0.83	4/0	6/1	8,350	1,137	1,132
Limpet	336.4	19	80	0.83	336.4	18/1	8,680	1,213	1,208

Triplex – AAC Conductor and AAAC Neutral Messenger

Code Word	Phase Conductor Size (AWG or kcmil)	Phase Conductor Strands	Insulation Thickness (mil)	Cable OD (in)	Neutral Messenger Size (AWG or kcmil)	Neutral Messenger Strands	Rated Strength (lb)	Weight – PE (lb/kft)	Weight – XLPE (lb/kft)
Minex	6	1	45	0.26	6	7	1,110	105	104
Hippa	6	7	45	0.28	6	7	1,110	112	111
Artemia	4	1	45	0.30	6	7	1,110	139	138
Crab	4	1	45	0.33	6	7	1,110	143	142
Prawn	4	1	45	0.30	4	7	1,760	156	156
Barnacles	4	7	45	0.33	4	7	1,760	166	165
Solaster	2	7	45	0.39	4	7	1,760	223	222
Shrimp	2	7	45	0.39	2	7	2,800	251	250
Lobster	2	7	60	0.42	2	7	2,800	268	266
Sandcrab	1/0	7	60	0.50	2	7	2,800	361	359
Echinus	1/0	19	60	0.50	2	7	2,800	356	354
Gammarus	1/0	7	60	0.50	1/0	7	4,270	405	403
Leda	1/0	19	60	0.50	1/0	7	4,270	400	398
Dungeness	2/0	7	60	0.55	2/0	7	5,390	499	497
Cyclops	2/0	19	60	0.55	2/0	7	5,390	493	497
Fulgur	3/0	19	60	0.60	1/0	7	4,270	540	537
Flustra	3/0	19	60	0.60	3/0	7	6,790	609	607
Arca	4/0	19	60	0.65	2/0	7	5,390	667	665
Lepas	4/0	19	60	0.65	4/0	7	8,560	755	752

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Notes: The above data are approximate and subject to normal manufacturing tolerances. Where required, compatibility with glands, connectors and accessories should be verified using the actual product dimensions. Other sizes are available upon request.

Quadruplex Service Drop Cable (600V)

Quadruplexservicedrop										
Code Name	Phase conductor				Bare Neutral Message		Nominal Weight （kg/km）			Ampacity
	Size & No.of wires	Insulation Thick (mm)	Nominal Dia. (mm)		Size & No.of wires	Rated Strength (kg)	XLPE	Al	Total	Amps
			Bare	OD						
AAAC										
Bay	6-Solid	1.143	4.115	6.401	6-7	503.485	63	155	217	78
French-conch	6-7	1.143	4.674	6.960	6-7	503.485	71	155	226	78
Cerman-conch	4-Solid	1.143	5.182	7.468	4-7	798.318	79	247	324	103
Arabian	4-7	1.143	5.893	8.179	4-7	784.711	89	247	336	103
Belgain	2-7	1.143	7.417	9.703	2-7	1270.052	115	391	506	136
Saddle	1-19	1.524	8.433	11.481	2-7	1270.052	171	466	637	158
Plow	1/0-7	1.524	9.347	12.395	1/0-7	2023.011	192	624	814	182
Sherland	1/0-19	1.524	9.474	12.522	1/0-7	2023.011	193	624	817	182
Dapple-grey	2/0-7	1.524	10.516	13.564	2/0-7	2444.850	217	786	1005	210
Thoroughbred	2/0-19	1.524	10.643	13.691	2/0-7	2444.850	220	786	1007	210
Dobbin	3/0-7	1.524	11.786	14.834	3/0-7	3079.876	249	991	1238	242
Trotter	3/0-19	1.524	11.938	14.986	3/0-7	3079.876	251	991	1243	242
Pony	4/0-7	1.524	13.259	16.307	4/0-7	3882.730	286	1250	1534	279
Walking	4/0-19	1.524	13.411	16.459	4/0-7	3882.730	289	1250	1539	279
ACSR										
Morochuca	6-Solid	1.143	4.115	6.401	6-6/1	539.722	63	149	229	78
Chola	6-7	1.143	4.674	6.96	6-6/1	539.722	71	149	237	78
Morgan	4-Solid	1.143	5.182	7.468	4-6/1	843.677	79	238	344	103
Hackney	4-7	1.143	5.893	8.179	4-6/1	843.677	90	238	356	103
Palomino	2-7	1.143	7.417	9.703	2-6/1	1292.732	115	377	557	136
Albino	1-19	1.524	8.433	11.481	1-6/1	1610.245	171	473	699	158
Standardbred	1/0-7	1.524	9.347	12.395	1/0-6/1	1986.724	192	598	859	182
Costena	1/0-19	1.524	9.474	12.522	1/0-6/1	1986.724	193	598	862	182
Chicoteagues	2/0-7	1.524	10.516	13.564	2/0-6/1	2404.027	217	753	1060	210
Grullo	2/0-19	1.524	10.643	13.691	2/0-6/1	2404.027	220	753	1063	210
mare	3/0-7	1.524	11.786	14.834	3/0-6/1	3002.766	249	951	1308	242
Suffolk	3/0-19	1.524	11.938	14.986	3/0-6/1	3002.766	251	951	1313	242

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Quadruplexservicedrop										
Stallion	4/0-7	1.524	13.259	16.307	4/0-6/1	3787.477	286	1198	1622	279
Appaloosa	4/0-19	1.524	13.411	16.459	4/0-6/1	3787.477	289	1198	1627	279
AAC										
Quarter	6-Solid	1.143	4.115	6.401	6-7	255.371	63	149	211	78
Clydesdale	4-Solid	1.143	5.182	7.468	4-7	399.613	79	237	315	103
Pinto	4-7	1.143	5.893	8.179	4-7	399.613	89	237	326	136
Mustang	2-7	1.143	7.417	9.703	2-7	612.347	115	377	491	158
Shire	1-19	1.524	8.433	11.481	1-19	743.888	171	475	646	158
Libyan	1/0-7	1.524	9.347	12.395	1/0-7	902.644	192	598	790	182
Criollo	1/0-19	1.524	9.474	12.522	1/0-19	902.644	193	598	793	182
Orloff	2/0-7	1.524	10.516	13.564	2/0-7	1138.511	217	754	973	210
Peroheron	2/0-19	1.524	10.643	13.691	2/0-19	1138.511	220	754	976	210
Mongolian	3/0-7	1.524	11.786	14.834	3/0-7	1378.914	249	951	1199	242
Hanoverian	3/0-19	1.524	11.938	14.986	3/0-19	1378.914	251	951	1204	242
Singlefoot	4/0-7	1.524	13.259	16.307	4/0-7	1737.25	286	1199	1485	279
Oldenburg	4/0-19	1.524	13.411	16.459	4/0-19	1737.25	289	1199	1490	279

Frequently Asked Questions

1. What is a service drop cable?

A service drop cable is an overhead cable assembly used to supply electrical power from a utility distribution line or pole-mounted transformer to a consumer's service entrance.

2. What is the difference between Duplex, Triplex and Quadruplex service drop cables?

Duplex, Triplex and Quadruplex refer to different service cable configurations. Duplex is commonly used for 120 V aerial service, Triplex for overhead connections from utility lines to a consumer's weatherhead, and Quadruplex for three-phase service connections.

3. What voltage is the service drop cable designed for?

The supplied specifications cover service applications at 600 V or lower. The specific application and configuration should be confirmed against the project requirements.

4. What insulation materials are available?

The cable is available with polyethylene (PE) or cross-linked polyethylene (XLPE/XLP) insulation.

5. What is the maximum conductor operating temperature?

According to the supplied specifications, the maximum conductor temperature is 75°C for PE-insulated conductors and 90°C for XLPE/XLP-insulated conductors.

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6. What materials are available for the neutral messenger?

The neutral messenger can be supplied in AAC, AAAC 6201-T81 aluminum alloy, or ACSR construction, depending on the selected design.

7. Which standards apply to service drop cables?

The supplied standards include ASTM B-230, ASTM B-231, ASTM B-232, ASTM B-399, ASTM B-901 and ANSI/ICEA S-76-474.

8. Can service drop cables be customized?

Yes. Cable configurations, conductor sizes, insulation materials and neutral messenger constructions can be specified according to project requirements and the available manufacturing range.

9. Are other conductor sizes available?

The supplied technical data indicates that other sizes are available upon request. Contact QZ Cable with your required specifications for confirmation.

10. What information is needed for a quotation?

Please provide the cable type (Duplex, Triplex or Quadruplex), conductor size, insulation material, neutral messenger construction, required quantity, applicable standard and destination port.

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