A

Marrette® - Wire connectors

A

Marrette - Wire connectors

Table of contents
Section A

History since 1914

At the turn of the twentieth century, a young Scotsman named Bill P. Marr immigrated to Ontario, Canada. After settling in the Toronto area, Marr was soon employed by the T. Eaton Company as a contractor for Ontario Hydro, where he worked as an electrician converting gas-lit homes to electrical incandescent lighting.

As part of this conversion, the accepted practice back then was a process called “solder and tape.” Typically, a mechanic would first run the wires required, then an electrician would polish the exposed conductors and twist them together. Next, the ends of the wires would be firmly joined by dipping them in a pot of molten solder, and after they cooled, the wires would then be wrapped with an insulating tape.

Over time, this process proved to be both time consuming and dangerous, as Bill Marr discovered first-hand when he inadvertently spilled a scorching solder pot while working in a customer’s home. Convinced that there had to be a safer and more efficient way of joining two electrical conductors, Marr worked tirelessly in his basement shop until he finally invented the first pressure-type wire connector (a set-screw version that was the forerunner to the modern-day wire connector).

Since that day in 1914, the Marr® company became a leading manufacturer of twist-on wire connectors throughout North America. The Marrette brand so revolutionized the way branch circuits were connected that the term “marrette” has become synonymous with “wire connector” in the electrician’s vocabulary.

Since being acquired in 1997 by Thomas & Betts, which was in turn acquired in 2012 by ABB, the highly respected Marrette brand name has become an integral part of the vast ABB product offering to the construction market.

Packaging options

Small formats

Model	Format	Description
P	Propak	Box of 50 or 100

Bulk pack format

Model	Format	Description
Q	Flip-pak	Container of 200 or 250
JAR	Plastic jar	Container of 200, 400 and 1,000
D	Flip-pak	Container of 500
M	Flip-pak	Container of 1,000
BP	Box	Bulk box of 1,000
BK	Flip-pak	Bulk keg of 5,000 to 10,000 (depending on model)
BAR	Barrel	Barrel of 20,000 to 45,000 (depending on model) – included: 3 unmarked Flip-paks (500 wire connectors format) with lids

Bag format

Model	Format	Description
KP	Keg pak	Resealable bag of 250 or 500

PRO-BLU 933

Designed and manufactured in Canada, the new PRO-BLU 933 wire connector was developed with the installer's needs in mind.

With an ergonomic design and a wide range of approved wire combinations, this wire connector is a perfect fit for the majority of residential and commercial applications.

External cap:

- Ergonomic wing design makes installation easy and painless, even when installing multiple wire connectors.
- Posi-Grip™ surface provides superior twisting power, even when hands are greasy or damp.
- Finger-friendly plastic for an even more comfortable grip.
- Rounded edge for safe and comfortable installation.
- Made of durable polypropylene resistant to temperatures up to 105°C (221°F).

Exclusive Live Action® variable volume spring expands to accommodate even more wires with less twisting effort compared to other wide range wire connectors.

Inner spring:

- Live Action variable volume spring expands to accommodate even more wires with less twisting effort.
- Wide range of wire combinations: #22 to #8 AWG, solid or stranded, no pre-twisting required.
- The square wire spring construction and funnel design gives a positive pressure conductor grip for solid or stranded wires.
- Approved for circuits up to 600 V and lighting fixtures and signs up to 1000 V.
- For copper conductor only.

PRO-BLU 933

Ordering information

		AWG wire range							
Model	**Colour**	**22**	**20**	**18**	**16**	**14**	**12**	**10**	**8**
933	**Blue**						**Min. 1 #22 + 1 #20, Max. 3 #10 sol**		

Note: Refer to pages A35-A37 for related wire combination reference guide.

Packaging options

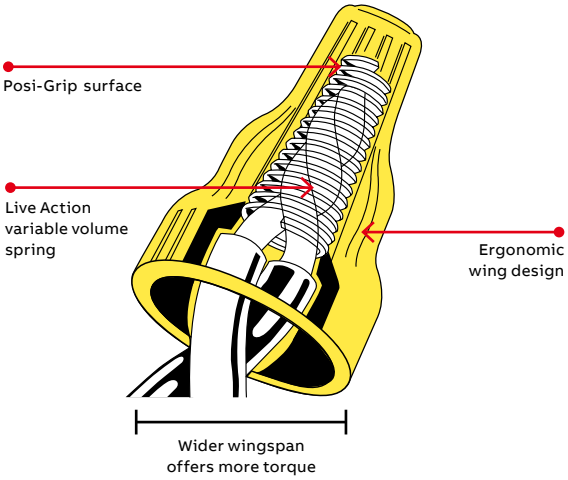
Cat. no.	Packaging format	Quantity per package	Std. pkg. (min./mult.)
933			
933P	Propak	100	1,000 units
933BK	Flip-Pak	10,000	10,000 units
933BAR	Baril	25,000	25,000 units

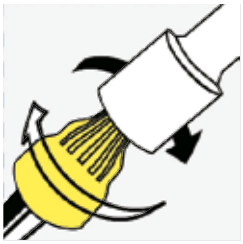
Packaging options

Cat. no.	Packaging format	Quantity per package	Std. pkg. (min./mult.)
933			
933-JAR200	Plastic jar	200	200 units
933-JAR400	Plastic jar	400	400 units
933-JAR1000	Plastic jar	1,000	1,000 units

833

The Marrette 833 is an outstanding wire connector with an ergonomic wing design that can take a wide range of wire combinations from #22 to #8 AWG.





Can also be used with ½ in. or 13 mm nut driver.

External cap

- Ergonomic wing design gives you a comfortable grip and more torque than the competition.
- The ergonomic shape reduces finger fatigue from repetitive installations.
- The ergonomic wing shape allows excellent torque grip for your fingers as well as the option to use a standard 1⁄2 in. or 13 mm hex driver to help twist the wire connector.
- Made of tough durable polypropylene and 105 °C (221 °F) rated to withstand high installation pressures.
- Deep, wide throat ensures full insulation coverage.

Exclusive Live Action variable volume spring expands to accommodate even more wires with less twisting effort compared to other wide range wire connectors.

Inner spring

- Range: #22 to #8 AWG with no pre-twisting.
- The square wire spring construction and funnel design give a positive pressure conductor grip for solid or stranded wires.
- Approved for circuits up to 600 V and lighting fixtures and signs up to 1,000 V.
- For copper conductor only.
- Convenient packaging – sized right and job-site ready.

833
Ordering information

Model	Colour	AWG wire range 22	20	18	16	14	12	10	8
833	**Yellow**								**Min. 2 #22 + 1 #20, Max. 3 #10**
Drivers									
TOOL-WING									Driver for winged Marrette connectors

Note: Refer to pages 33-35 for related wire combination reference guide.

Packaging options

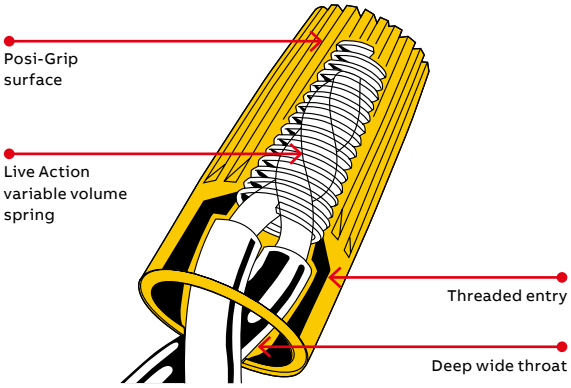
Cat. no.	Packaging format	Quantity per package	Std. pkg. (min./mult.)
833			
833P	Propak	100	1,000 units
833KP	Resealable bag	500	5,000 units
833D	Flip-pak	500	500 units
833M	Flip-pak	1,000	1,000 units
833BK	Flip-pak	10,000	10,000 units
833BAR	Barrel	25,000	25,000 units

Packaging options

Cat. no.	Packaging format	Quantity per package	Std. pkg. (min./mult.)
833			
833-JAR200	Plastic jar	200	200 units
833-JAR400	Plastic jar	400	400 units
833-JAR1000	Plastic jar	1,000	1,000 units

XTP

The Marrette XTP is a high quality, twist-on wire connector with a unique spring and cap grip design that sets it apart from the competition.



External cap

- Made of tough, durable polypropylene and 105 °C (221 °F) rated to withstand high installation pressures.
- Posi-Grip surface combines a matte finish with closely-spaced, deep grooves for superior twisting power, even when hands are greasy or damp.
- Deep, wide throat ensures full insulation coverage.
- Threaded entry helps guide large wire bundles into the spring chamber.
- Colour-coded for quick and easy size selection.

Inner spring

- Exclusive Live Action variable volume spring expands to accommodate more wires with less twisting effort compared to other connectors with a “fixed spring” design.
- Model nos. 329 and 330 have a round spring, while 331, 333 and 335 have a square wire spring construction that gives a positive conductor bite to solid or stranded wires.
- Unique copper-coated spring helps resist corrosion.
- Model nos. 329 and 330 are approved for circuits up to 300 V only. Model nos. 331, 333, 335 and 822 are approved for circuits up to 600 V, and lighting fixtures and signs up to 1000 V.
- For copper conductor only.
- Convenient packaging – sized right and job-site ready.

XTP
Ordering information

Model	Colour	AWG wire range: 22	20	18	16	14	12	10	8
329	Grey	Min. 1 #22 + 1 #20, Max. 2 #16							
330	Blue	Min.1 #22 + 1 #20, Max. 3 #16							
331	Orange			Min. 2 #18, Max. 3 #14					
333	Yellow					Min. 2 #18, Max 2#14 + 1#10			
335	Red					Min. 2 #14, Max. 3 #10			
822*	Blue								Min. 2 #22 + 1 #20, Max. 2 #8

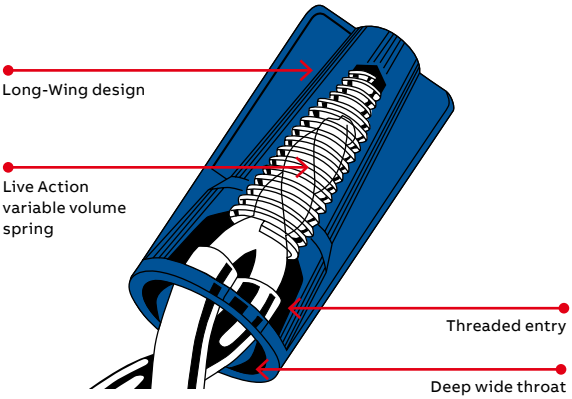
Note: Refer to pages A27-A30 and A32-A33 for related wire combination reference guides.
*UL not applicable.

Packaging options

Cat. no.	Packaging format	Quantity per package	Std. pkg. (min./mult.)
329			
329P	Propak	100	1,000 units
329BP	Bulk box	1,000	1,000 units
329BK	Flip-pak	10,000	10,000 units
330			
330P	Propak	100	1,000 units
330BP	Bulk box	1,000	1,000 units
330BK	Flip-pak	10,000	10,000 units
331			
331P	Propak	100	1,000 units
331D	Flip-pak	500	2,000 units
331KP*	Resealable bag	500	5,000 units
331M*	Flip-pak	1,000	1,000 units
331BK*	Flip-pak	10,000	10,000 units
331BAR*	Barrel	45,000	45,000 units
333			
333P	Propak	100	1,000 units
333KP**	Resealable bag	500	5,000 units
333D**	Flip-pak	500	500 units
333M**	Flip-pak	1,000	1,000 units
333BK**	Flip-pak	10,000	10,000 units
333BAR**	Barrel	25,000	25,000 units
335			
335P	Propak	100	1,000 units
335Q †	Flip-pak	200	800 units
335D †	Flip-pak	500	500 units
335BK	Flip-pak	7,000	7,000 units
822			
822Q	Flip-pak	200	800 units
822D*	Flip-pak	500	500 units
822BK**	Flip-pak	8,000	8,000 units
822BAR**	Barrel	20,000	20,000 units
Drivers			
TOOL 331			Plastic driver to install Model 331 (included in all)*
TOOL 333			Plastic driver to install Model 333 and 822 (included in all packs)**
TOOL 335			Plastic driver to install Model 335 (included in all packs) †

Type II winged

The Marrette Type II winged wire connector is design engineered for additional twisting power to meet the high quality expectations of the electrical professional.



External cap

- Made of tough, durable polypropylene
- and 105 °C (221 °F) rated to withstand high installation pressures.
- Long-Wing™ design for smooth hand application. The long, offset wings with raised edges offer a full-length, “finger-friendly” gripping surface. Torque can be selectively applied exactly where you want it:
  - Top – for tight finger locations
  - Bottom – for large wire bundles
- Ribbed body surface gives additional grip, even when hands are greasy or damp.
- Deep, wide throat ensures full insulation coverage.
- Threaded entry helps guide large wire bundles into the spring chamber.
- Colour-coded for quick and easy size selection.

Inner spring

- Live Action variable volume spring expands to accommodate a wide range of wire combinations.
- Square wire construction gives a positive conductor bite to solid or stranded wires.
- Unique copper-coated spring helps resist corrosion.
- Approved for circuits up to 600 V, and lighting fixtures and signs up to 1000 V.
- For copper conductor only.
- Convenient packaging – sized right and job-site ready.

Type II winged
Ordering information

		AWG wire range							
Model	**Colour**	**22**	**18**	**16**	**14**	**12**	**10**	**8**	**6**
739	**Blue**								**Min. 3 #12, Max. 2 #6**
Drivers									
TOOL-WING									Plastic driver to install model 739 (included in 739KP package)

Note: Refer to page 32 for related wire combination reference guide.

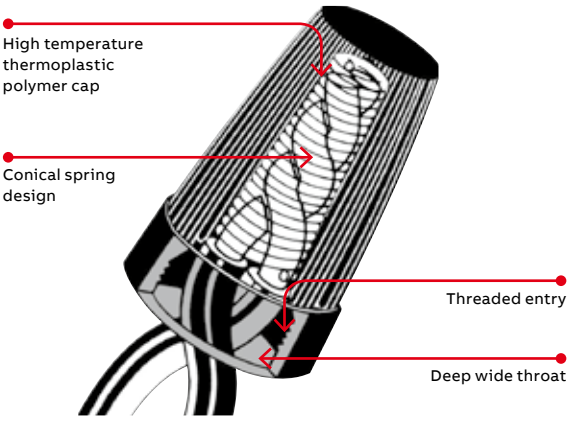
Packaging options

Cat. no.	Packaging format	Quantity per package	Std. pkg. (min./mult.)
739			
739B	Window box (retail market only*)	15/Box	10 boxes
739C	Card (retail market only*)	3/Card	20 cards
739P	Propak	50	500 units
739KP	Resealable bag	100	2,500 units
739Q	Flip-pak	250	250 units

* Retail: Order 1 each for one (1) card/box/flip-pak.

Black high temperature

The Marrette Black high temperature rating makes it the best solution for high wattage lighting fixtures and signs.



External cap

- Made of rugged, thermoplastic polymer material 150 °C (302 °F) rated.
- Large, finely ribbed, “barrel-shaped” cap – makes it easier to grip even when hands are greasy or damp.
- Deep, wide throat ensures full insulation coverage.
- Threaded entry helps guide large wire bundles right into the spring.

Inner spring

- Internal conical spring design multiplies the “twist-on” torque applied by the leverage and wedge action, to firmly crush wires into a solid joint.
- Unique copper-coated spring helps resist corrosion.
- Model no. 30 Black is approved for circuit and fixture type connections up to 300 V only.
- Model nos. 31, 33 and 35 Black are approved for circuits up to 600 V, and lighting fixtures and signs up to 1,000 V.
- For copper conductor only.
- Convenient packaging – sized right and job-site ready.

Black high temperature

Ordering information

Model	Colour	AWG wire range 22	20	18	16	14	12	10	8
30	Black	Min. 1 #22 + 1 #20				Max. 3 #16			
31					Min. 2 #18		Max. 4 #16		
33						Min. 1 #18 + 1 #14		Max. 4 #14	
35								Min. 2 #14	Max. 4 #10

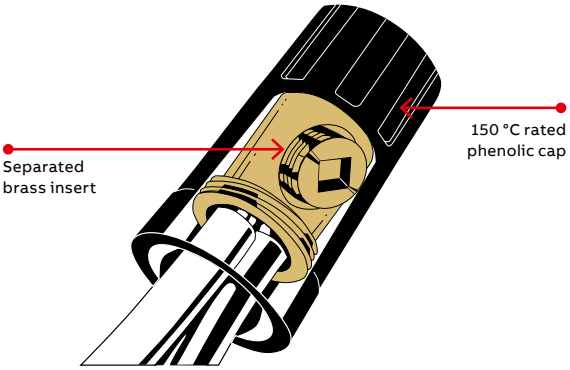
Note: Refer to pages 24-27 for related wire combination reference guides.

Packaging options

Cat. no.	Packaging format	Quantity per package	Std. pkg. (min./mult.)
30			
30P	Propak	100	1,000 units
30BP	Bulk box	1,000	1,000 units
30BK	Flip-pak	15,000	15,000 units
31			
31P	Propak	100	1,000 units
31D	Flip-pak	500	500 units
31M	Flip-pak	1,000	1,000 units
31BK	Flip-pak	10,000	10,000 units
33			
33P	Propak	100	1,000 units
33D	Flip-pak	500	500 units
33BK	Flip-pak	5,000	5,000 units
35			
35P	Propak	100	800 units
35Q	Flip-pak	200	800 units
35D	Flip-pak	500	500 units
35BK	Flip-pak	5,000	5,000 units

Set-screw vibration proof/visible connection

The Marrette set-screw is a two-piece, pressure-type connector featuring a solid brass insert with a screw-on insulating cap. It's the perfect choice when changing a motor, adding a circuit, conducting instrument testing or simply lashing up temporary wiring.



External cap

- Made of rugged, thermoplastic polymer material 150 °C (302 °F) rated.
- Insulator cap locks securely in place to safeguard against accidental loosening in high vibration applications..

Inner sleeve and screw

- Choice of slotted or Robertson screw-driver installation. When tightened into the insert, provides a solid pressure-type connection on all approved wire combinations.
- No need to "re-strip" wires when rewiring. Simply loosen set-screw to remove non-twisted wires.
- Brass sleeve and set-screw help resist corrosion.
- Approved for circuits up to 600 V, and lighting fixtures and signs up to 1,000 V.
- For copper conductor only.
- Convenient packaging – sized right and job-site ready.

Set-screw vibration proof/visible connection

Ordering information

		AWG wire range					
Model	**Description**	**18**	**16**	**14**	**12**	**10**	**8**
1SHD, 1SHP	Cap and insert combination screw and brass barrel		**Min. 2 #18**	**Max. 1 #18 + 3 #14**			
1SHI	Insert screw and brass barrel only		**Min. 2 #18**	**Max. 1 #18 + 3 #14**			
2SHD, 2SHP	Cap and insert combination screw and brass barrel			**Min. 2 #14**	**Max. 1 #12 + 2 #10**		
2SHI	Insert screw and brass barrel only			**Min. 2 #14**	**Max. 1 #12 + 2 #10**		

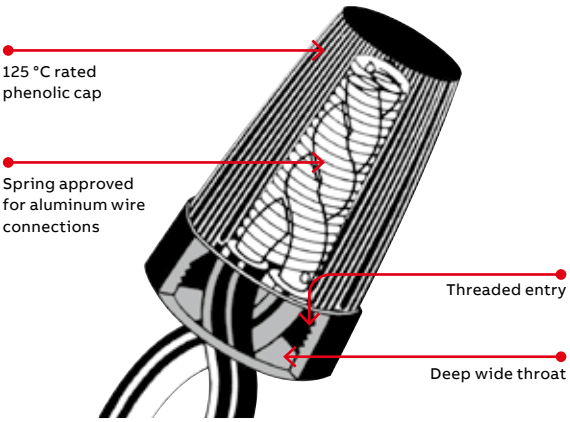
Note: Refer to page 24 for related wire combination reference guides.

Packaging options

Cat. no.	Packaging format	Quantity per package	Std. pkg.
1SH			
1SHP	Propak	100	1,000 units
1SHD	Flip-pak	500	500 units
1SHI	Carton	100	1,000 units
2SH			
2SHP	Propak	50	500 units
2SHD	Flip-pak	500	500 units
2SHI	Carton	50	1,000 units

ACS aluminum wiring (brown)

The Marrette ACS aluminum wiring wire connector is a fixed spring, twist-on connector made of special spring wire materials and coatings to meet the rigorous standards for aluminum wire connections.



External cap

- Made of sturdy, thermoplastic valox resin 125 °C (257 °F) rated.
- Deep, wide throat ensures full insulation coverage.
- Threaded entry helps guide large wire bundles right into the spring.

Inner spring

- Made of a special bronze alloy and then plated with a thick coating of tin to satisfy the rigorous standards established for aluminum wire connections.
- Round spring design ensures that aluminum conductors and highly stranded copper wires are not scored or severed when joined.
- Approved for circuits up to 600 V, and lighting fixtures and signs up to 1,000 V.
- Approved for aluminum-to-aluminum, copper-to-copper, aluminum-to-copper (or highly stranded copper) connections.
- Convenient packaging – sized right and job-site ready.
- Not UL listed.

ACS aluminum wiring (brown)

Ordering information

Model	Colour	AWG wire range 22	20	18	16	14	12	10	8
63	Brown				Min. 1 #18 + 1 #14	Max. 4 #14			
65	Brown					Min. 2 #14	Max. 1 #12 + 2 #10		

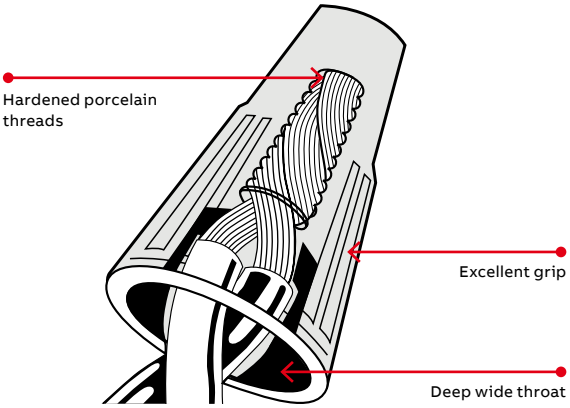
Note: Refer to pages 30-31 for related wire combination reference guides.

Packaging options

Cat. No.	Packaging format	Quantity per package	Std. pkg. (min./mult.)
63			
63P	Propak	100	1,000 units
63D	Flip-pak	500	500 units
65			
65P	Propak	100	1,000 units
65D	Flip-pak	500	500 units

Porcelain extreme high temperature

The porcelain extreme high temperature wire connector is the solution for high temperature furnace/oven or other intense heat applications up to 645 °C (1200 °F).



Cap

- Made of porcelain – rated up to 645 °C (1200 °F).
- Closely spaced groves for excellent twisting power.
- Deep, wide throat ensures full insulation coverage.
- Funneled entry helps wires into threaded compression compartment.
- Springless – inner surface of cap threaded to secure conductors with the same efficiency as a spring.
- Approved for circuits up to 300 V only.
- For stranded copper conductor only.

Porcelain extreme high temperature

Ordering information

		AWG wire range							
Model	**Colour**	**22**	**20**	**18**	**16**	**14**	**12**	**10**	**8**
10-401, 10-411, 10-421	**White**			**Min. 2 #18, Max. 1 #18 + 2 #16**					
10-405, 10-415, 10-425				**Min. 2 #18, Max. 2 #18 + 2 #16**					
10-407, 10-417, 10-427				**Min. 2 #18, Max. 4 #16**					

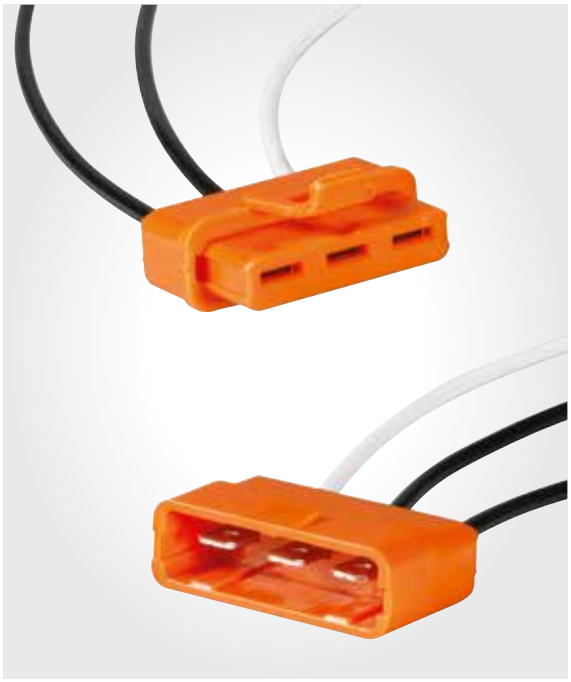
Note: Refer to page 24 for related wire combination reference guides.

Packaging options

Cat. no.	Packaging format	Quantity per package	Std. pkg. (min./mult.)
10-401	Box	100	100 units
10-411	Box	1,000	1,000 units
10-421	Box	5,000	5,000 units
10-405	Box	100	100 units
10-415	Box	1,000	1,000 units
10-425	Box	5,000	5,000 units
10-407	Box	100	100 units
10-417	Box	1,000	1,000 units
10-427	Box	5,000	5,000 units

Luminaire disconnect

The Marrette luminaire disconnect protects electricians servicing fluorescent lights over 150 V from electrical shock.



Suited for

- Fluorescent lighting fixtures and ballasts (OEMs)
- Electricians servicing fluorescent light fixtures
- Maintenance personnel requiring an electrical disconnect

Specifications

Housing: Polycarbonate
Contacts: Tin-plated brass
Integral leads: Insulated #18 AWG solid copper
Max. temp. rating: 105 °C (221 °F)
Flammability: UL94-V2 (V0 available on request)
Electrical rating: 4 A, 600 V
Standards: CSA certified, UL listed, NEC 410.73(G) 2005 edition compliant

Luminaire disconnect

Ordering information

Model	Description
LD2C-D	2-Pole luminaire disconnect (wire connectors not included)
LD3C-D	3-Pole luminaire disconnect (wire connectors not included)
LD2-C	2-Pole luminaire disconnect (2 x 4 wire connectors 333 /inner bag)
LD3-C	3-Pole luminaire disconnect (6 of each wire connectors 331 + 333) /inner bag)

Packaging options

Cat. no.	Packaging format		Std. pkg. (min./mult.)
Bulk			
LD2C-D LD3C-D	Box	Sold without wire connectors Sold in multiple of 500	Inner: 50 per inner bag Outer: 250 per outer box Master: 500 in master box
Kits			
LD2-C LD3-C	Bag	Sold with wire connectors Sold in multiple of 20	Inner: 2 per inner bag Outer: 20 per outer bag Master: 200 in master box

Wire combination reference guide

Unless otherwise specified, all combinations listed are for copper to copper connections only.

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
1SH	1	18	1	14	-	-
1SH	1	18	2	14	-	-
1SH	1	18	3	14	-	-
1SH	2	18	-	-	-	-
1SH	2	18	1	14	-	-
1SH	2	18	2	14	-	-
1SH	3	18	-	-	-	-
1SH	3	18	1	14	-	-
1SH	4	18	-	-	-	-
1SH	5	18	-	-	-	-
1SH	6	18	-	-	-	-
1SH	7	18	-	-	-	-
1SH	8	18	-	-	-	-
1SH	1	16	1	14	-	-
1SH	2	16	-	-	-	-
1SH	2	16	1	14	-	-
1SH	3	16	-	-	-	-
1SH	4	16	-	-	-	-
1SH	5	16	-	-	-	-
1SH	2	14	-	-	-	-
1SH	3	14	-	-	-	-
1SH	2	12	-	-	-	-
10401	1	18	2	16	-	-
10401	1	18	1	14	-	-
10401	2	18	-	-	-	-
10401	2	18	1	16	-	-
10401	3	18	-	-	-	-
10401	4	18	-	-	-	-
10401	2	16	-	-	-	-
10405	1	18	1	16	-	-
10405	1	18	2	16	-	-
10405	1	18	1	14	-	-
10405	2	18	-	-	-	-
10405	2	18	1	16	-	-
10405	2	18	2	16	-	-
10405	2	18	1	14	-	-
10405	3	18	-	-	-	-
10405	3	18	1	16	-	-
10405	4	18	-	-	-	-
10405	1	16	1	14	-	-
10405	2	16	-	-	-	-
10405	3	16	-	-	-	-
10407	1	18	1	16	-	-
10407	1	18	2	16	-	-

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
10407	1	18	3	16	-	-
10407	1	18	1	14	-	-
10407	1	18	2	14	-	-
10407	1	18	1	12	-	-
10407	2	18	-	-	-	-
10407	2	18	1	16	-	-
10407	2	18	1	14	-	-
10407	3	18	-	-	-	-
10407	3	18	1	16	-	-
10407	3	18	1	14	-	-
10407	4	18	-	-	-	-
10407	5	18	-	-	-	-
10407	1	16	1	14	-	-
10407	1	16	1	12	-	-
10407	2	16	1	14	-	-
10407	2	16	-	-	-	-
10407	3	16	-	-	-	-
10407	4	16	-	-	-	-
10407	2	14	-	-	-	-
2SH	1	16	2	14	-	-
2SH	2	16	1	14	-	-
2SH	2	16	2	14	-	-
2SH	3	16	1	14	-	-
2SH	2	10	-	-	-	-
30	1	22	1	20	-	-
30	1	22	1	20	1	18
30	1	22	1	20	1	16
30	1	22	3	20	-	-
30	1	22	4	20	-	-
30	1	22	1	18	-	-
30	1	22	2	18	-	-
30	1	22	3	18	-	-
30	1	22	4	18	-	-
30	1	22	1	16	-	-
30	1	22	2	16	-	-
30	1	22	1	14	-	-
30	2	22	1	20	-	-
30	2	22	2	20	-	-
30	2	22	3	20	-	-
30	2	22	4	20	-	-
30	2	22	1	18	-	-
30	2	22	2	18	-	-
30	2	22	3	18	-	-
30	2	22	1	16	-	-
30	2	22	2	16	-	-
30	2	22	1	14	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
30	3	22	-	-	-	-
30	3	22	1	20	-	-
30	3	22	2	20	-	-
30	3	22	1	18	-	-
30	3	22	1	16	-	-
30	3	22	2	16	-	-
30	3	22	1	14	-	-
30	4	22	-	-	-	-
30	4	22	1	20	-	-
30	4	22	1	18	-	-
30	4	22	1	16	-	-
30	4	22	1	14	-	-
30	5	22	-	-	-	-
30	5	22	1	18	-	-
30	1	20	1	18	-	-
30	1	20	2	18	-	-
30	1	20	3	18	-	-
30	1	20	1	16	-	-
30	1	20	2	16	-	-
30	1	20	1	14	-	-
30	2	20	-	-	-	-
30	2	20	1	18	-	-
30	2	20	3	18	-	-
30	2	20	1	16	-	-
30	2	20	2	16	-	-
30	2	20	1	14	-	-
30	3	20	-	-	-	-
30	3	20	1	18	-	-
30	3	20	1	16	-	-
30	3	20	1	14	-	-
30	4	20	-	-	-	-
30	4	20	1	18	-	-
30	4	20	1	16	-	-
30	5	20	-	-	-	-
30	1	18	1	16	-	-
30	1	18	2	16	-	-
30	1	18	1	14	-	-
30	2	18	-	-	-	-
30	3	18	-	-	-	-
30	4	18	-	-	-	-
30	1	16	1	14	-	-
30	2	16	-	-	-	-
30	3	16	-	-	-	-
31	1	18	1	16	-	-
31	1	18	2	16	-	-
31	1	18	3	16	-	-
31	1	18	1	14	-	-

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
31	1	18	2	14	-	-
31	2	18	-	-	-	-
31	2	18	1	16	-	-
31	2	18	2	16	-	-
31	2	18	1	14	-	-
31	3	18	-	-	-	-
31	3	18	1	16	-	-
31	3	18	2	16	-	-
31	3	18	1	14	-	-
31	4	18	-	-	-	-
31	4	18	1	16	-	-
31	5	18	-	-	-	-
31	1	16	1	14	-	-
31	2	16	-	-	-	-
31	2	16	1	14	-	-
31	3	16	-	-	-	-
31	4	16	-	-	-	-
31	2	14	-	-	-	-
33	1	18	1	14	-	-
33	1	18	2	14	-	-
33	1	18	3	14	-	-
33	1	18	1	12	-	-
33	2	18	1	16	-	-
33	2	18	2	16	-	-
33	2	18	3	16	-	-
33	2	18	4	16	-	-
33	2	18	1	14	-	-
33	2	18	2	14	-	-
33	2	18	1	12	-	-
33	3	18	1	16	-	-
33	3	18	2	16	-	-
33	3	18	1	14	-	-
33	3	18	2	14	-	-
33	3	18	1	12	-	-
33	4	18	1	16	-	-
33	4	18	2	16	-	-
33	4	18	1	14	-	-
33	4	18	1	12	-	-
33	5	18	-	-	-	-
33	1	16	1	14	-	-
33	1	16	2	14	-	-
33	1	16	3	14	-	-
33	1	16	1	12	-	-
33	2	16	1	14	-	-
33	2	16	2	14	-	-
33	2	16	1	12	-	-
33	3	16	-	-	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
33	3	16	1	14	-	-
33	3	16	2	14	-	-
33	3	16	1	12	-	-
33	4	16	-	-	-	-
33	4	16	1	14	-	-
33	5	16	-	-	-	-
33	1	14	1	12	-	-
33	2	14	-	-	-	-
33	2	14	1	12	-	-
33	3	14	-	-	-	-
33	4	14	-	-	-	-
33	2	12	-	-	-	-
35	1	18	4	14	-	-
35	1	18	5	14	-	-
35	1	18	6	14	-	-
35	1	18	2	12	-	-
35	1	18	3	12	-	-
35	1	18	1	10	-	-
35	1	18	2	10	-	-
35	1	18	3	10	-	-
35	2	18	4	16	-	-
35	2	18	4	14	-	-
35	2	18	6	14	-	-
35	2	18	2	12	-	-
35	2	18	3	12	-	-
35	2	18	1	10	-	-
35	2	18	2	10	-	-
35	3	18	4	14	-	-
35	3	18	2	12	-	-
35	3	18	3	12	-	-
35	3	18	1	10	-	-
35	3	18	2	10	-	-
35	4	18	2	12	-	-
35	4	18	1	10	-	-
35	4	18	2	10	-	-
35	5	18	2	12	-	-
35	5	18	1	10	-	-
35	6	18	1	10	-	-
35	6	18	1	18	1	12
35	1	16	4	14	-	-
35	1	16	5	14	-	-
35	1	16	6	14	-	-
35	1	16	2	12	-	-
35	1	16	3	12	-	-
35	1	16	1	10	-	-
35	1	16	2	10	-	-
35	2	16	4	14	-	-

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
35	2	16	6	14	-	-
35	2	16	2	12	-	-
35	2	16	3	12	-	-
35	2	16	1	10	-	-
35	2	16	2	10	-	-
35	3	16	4	14	-	-
35	3	16	2	12	-	-
35	3	16	3	12	-	-
35	3	16	1	10	-	-
35	3	16	2	10	-	-
35	4	16	2	12	-	-
35	4	16	1	10	-	-
35	5	16	-	-	-	-
35	5	16	2	12	-	-
35	5	16	1	10	-	-
35	6	16	-	-	-	-
35	6	16	1	10	-	-
35	6	16	1	16	-	-
35	6	16	2	16	-	-
35	1	14	1	12	-	-
35	1	14	2	12	-	-
35	1	14	3	12	-	-
35	1	14	4	12	-	-
35	1	14	1	10	-	-
35	1	14	2	10	-	-
35	1	14	3	10	-	-
35	1	14	1	8	-	-
35	2	14	-	-	-	-
35	2	14	1	12	-	-
35	2	14	2	12	-	-
35	2	14	3	12	-	-
35	2	14	1	10	-	-
35	2	14	2	10	-	-
35	2	14	1	8	-	-
35	3	14	-	-	-	-
35	3	14	1	12	-	-
35	3	14	2	12	-	-
35	3	14	1	10	-	-
35	3	14	2	10	-	-
35	3	14	1	8	-	-
35	4	14	-	-	-	-
35	4	14	1	12	-	-
35	4	14	1	10	-	-
35	5	14	-	-	-	-
35	5	14	1	12	-	-
35	6	14	-	-	-	-
35	1	12	1	10	-	-
35	1	12	2	10	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
35	1	12	3	10	-	-
35	1	12	1	8	-	-
35	2	12	-	-	-	-
35	2	12	1	10	-	-
35	2	12	2	10	-	-
35	2	12	1	8	-	-
35	3	12	-	-	-	-
35	3	12	1	10	-	-
35	3	12	1	8	-	-
35	4	12	-	-	-	-
35	4	12	1	10	-	-
35	5	12	-	-	-	-
35	1	10	1	8	-	-
35	2	10	-	-	-	-
35	2	10	1	8	-	-
35	3	10	-	-	-	-
35	4	10	-	-	-	-
35	2	8	-	-	-	-
329	1	22	1	20	-	-
329	1	22	2	20	-	-
329	1	22	3	20	-	-
329	1	22	1	20	1	18
329	1	22	1	20	1	16
329	1	22	1	18	-	-
329	1	22	2	18	-	-
329	1	22	1	16	-	-
329	2	22	1	20	-	-
329	2	22	2	20	-	-
329	2	22	3	20	-	-
329	2	22	1	18	-	-
329	2	22	1	16	-	-
329	3	22	-	-	-	-
329	3	22	1	20	-	-
329	3	22	2	20	-	-
329	3	22	1	18	-	-
329	4	22	-	-	-	-
329	4	22	1	20	-	-
329	4	22	1	18	-	-
329	5	22	-	-	-	-
329	1	20	1	18	-	-
329	1	20	2	18	-	-
329	1	20	1	16	-	-
329	2	20	-	-	-	-
329	2	20	1	18	-	-
329	3	20	-	-	-	-
329	4	20	-	-	-	-
329	1	18	1	16	-	-

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
330	1	22	1	20	-	-
330	1	22	1	20	1	18
330	1	22	1	20	1	16
330	1	22	3	20	-	-
330	1	22	4	20	-	-
330	1	22	1	18	-	-
330	1	22	2	18	-	-
330	1	22	3	18	-	-
330	1	22	4	18	-	-
330	1	22	1	16	-	-
330	1	22	2	16	-	-
330	1	22	1	14	-	-
330	2	22	1	20	-	-
330	2	22	2	20	-	-
330	2	22	3	20	-	-
330	2	22	4	20	-	-
330	2	22	1	18	-	-
330	2	22	2	18	-	-
330	2	22	3	18	-	-
330	2	22	1	16	-	-
330	2	22	2	16	-	-
330	2	22	1	14	-	-
330	3	22	-	-	-	-
330	3	22	1	20	-	-
330	3	22	2	20	-	-
330	3	22	1	18	-	-
330	3	22	1	16	-	-
330	3	22	2	16	-	-
330	3	22	1	14	-	-
330	4	22	-	-	-	-
330	4	22	1	20	-	-
330	4	22	1	18	-	-
330	4	22	1	16	-	-
330	4	22	1	14	-	-
330	5	22	-	-	-	-
330	5	22	1	18	-	-
330	1	20	1	18	-	-
330	1	20	2	18	-	-
330	1	20	3	18	-	-
330	1	20	1	16	-	-
330	1	20	2	16	-	-
330	1	20	1	14	-	-
330	2	20	-	-	-	-
330	2	20	1	18	-	-
330	2	20	3	18	-	-
330	2	20	1	16	-	-
330	2	20	2	16	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
330	2	20	1	14	-	-
330	3	20	-	-	-	-
330	3	20	1	18	-	-
330	3	20	1	16	-	-
330	3	20	1	14	-	-
330	4	20	-	-	-	-
330	4	20	1	18	-	-
330	4	20	1	16	-	-
330	5	20	-	-	-	-
330	1	18	1	16	-	-
330	1	18	2	16	-	-
330	1	18	1	14	-	-
330	2	18	-	-	-	-
330	3	18	-	-	-	-
330	4	18	-	-	-	-
330	1	16	1	14	-	-
330	2	16	-	-	-	-
330	3	16	-	-	-	-
331	1	18	1	16	-	-
331	1	18	2	16	-	-
331	1	18	3	16	-	-
331	1	18	1	14	-	-
331	1	18	2	14	-	-
331	2	18	-	-	-	-
331	2	18	1	16	-	-
331	2	18	2	16	-	-
331	2	18	2	14	-	-
331	3	18	-	-	-	-
331	3	18	1	14	-	-
331	3	18	1	16	-	-
331	3	18	2	16	-	-
331	4	18	-	-	-	-
331	5	18	-	-	-	-
331	1	16	1	14	-	-
331	1	16	2	14	-	-
331	2	16	-	-	-	-
331	2	16	1	14	-	-
331	3	16	-	-	-	-
331	3	16	1	14	-	-
331	4	16	-	-	-	-
331	2	14	-	-	-	-
331	3	14	-	-	-	-
333	1	18	2	14	-	-
333	1	18	3	14	-	-
333	1	18	4	14	-	-
333	1	18	1	12	-	-

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
333	1	18	2	12	-	-
333	2	18	-	-	-	-
333	2	18	2	16	-	-
333	2	18	3	16	-	-
333	2	18	4	16	-	-
333	2	18	1	14	-	-
333	2	18	2	14	-	-
333	2	18	1	12	-	-
333	3	18	2	16	-	-
333	3	18	1	14	-	-
333	3	18	2	14	-	-
333	3	18	1	12	-	-
333	4	18	2	16	-	-
333	4	18	1	14	-	-
333	5	18	-	-	-	-
333	6	18	-	-	-	-
333	1	16	2	14	-	-
333	1	16	3	14	-	-
333	1	16	1	12	-	-
333	1	16	2	12	-	-
333	2	16	1	14	-	-
333	2	16	2	14	-	-
333	2	16	1	12	-	-
333	2	16	2	12	-	-
333	3	16	-	-	-	-
333	3	16	1	14	-	-
333	3	16	2	14	-	-
333	3	16	1	12	-	-
333	4	16	-	-	-	-
333	4	16	1	14	-	-
333	5	16	-	-	-	-
333	1	14	1	12	-	-
333	1	14	2	12	-	-
333	1	14	1	10	-	-
333	2	14	-	-	-	-
333	2	14	1	12	-	-
333	2	14	1	10	-	-
333	3	14	-	-	-	-
333	4	14	-	-	-	-
333	1	12	1	10	-	-
333	2	12	-	-	-	-
335	1	22	2	18	-	-
335	2	22	2	16	-	-
335	2	22	3	16	-	-
335	3	22	1	16	-	-
335	4	22	1	16	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
335	1	20	2	18	-	-
335	1	20	3	18	-	-
335	1	20	4	18	-	-
335	2	20	2	18	-	-
335	2	20	3	18	-	-
335	2	20	1	16	-	-
335	2	20	2	16	-	-
335	2	20	3	16	-	-
335	3	20	1	18	-	-
335	3	20	2	18	-	-
335	3	20	1	16	-	-
335	4	20	-	-	-	-
335	4	20	1	18	-	-
335	4	20	1	16	-	-
335	5	20	-	-	-	-
335	1	18	2	16	-	-
335	1	18	3	16	-	-
335	1	18	4	16	-	-
335	1	18	5	16	-	-
335	1	18	2	14	-	-
335	1	18	3	14	-	-
335	1	18	4	14	-	-
335	1	18	5	14	-	-
335	1	18	1	12	-	-
335	1	18	2	12	-	-
335	1	18	3	12	-	-
335	2	18	1	16	-	-
335	2	18	2	16	-	-
335	2	18	3	16	-	-
335	2	18	4	16	-	-
335	2	18	1	14	-	-
335	2	18	2	14	-	-
335	2	18	3	14	-	-
335	2	18	4	14	-	-
335	2	18	1	12	-	-
335	2	18	2	12	-	-
335	2	18	3	12	-	-
335	3	18	-	-	-	-
335	3	18	1	16	-	-
335	3	18	2	16	-	-
335	3	18	3	16	-	-
335	3	18	1	14	-	-
335	3	18	2	14	-	-
335	3	18	3	14	-	-
335	3	18	1	12	-	-
335	3	18	2	12	-	-
335	3	18	3	12	-	-
335	4	18	-	-	-	-
335	4	18	1	16	-	-
335	4	18	2	16	-	-
335	4	18	1	14	-	-
335	4	18	2	14	-	-
335	4	18	1	12	-	-
335	4	18	2	12	-	-
335	5	18	-	-	-	-
335	5	18	1	12	-	-
335	5	18	2	12	-	-
335	6	18	-	-	-	-
335	1	16	2	14	-	-
335	1	16	3	14	-	-
335	1	16	4	14	-	-
335	1	16	2	12	-	-
335	1	16	3	12	-	-
335	1	16	4	12	-	-
335	1	16	2	10	-	-
335	2	16	-	-	-	-
335	2	16	1	14	-	-
335	2	16	2	14	-	-
335	2	16	3	14	-	-
335	2	16	1	12	-	-
335	2	16	2	12	-	-
335	2	16	3	12	-	-
335	2	16	1	10	-	-
335	2	16	2	10	-	-
335	3	16	-	-	-	-
335	3	16	1	14	-	-
335	3	16	2	14	-	-
335	3	16	3	14	-	-
335	3	16	1	12	-	-
335	3	16	2	12	-	-
335	3	16	3	12	-	-
335	4	16	-	-	-	-
335	4	16	1	14	-	-
335	4	16	1	12	-	-
335	4	16	2	12	-	-
335	5	16	-	-	-	-
335	5	16	2	12	-	-
335	6	16	-	-	-	-
335	1	14	1	12	-	-
335	1	14	2	12	-	-
335	1	14	3	12	-	-
335	1	14	4	12	-	-
335	1	14	1	10	-	-
335	1	14	2	10	-	-
335	2	14	-	-	-	-
335	2	14	1	12	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
335	2	14	2	12	-	-
335	2	14	3	12	-	-
335	2	14	1	10	-	-
335	2	14	2	10	-	-
335	3	14	-	-	-	-
335	3	14	1	12	-	-
335	3	14	2	12	-	-
335	3	14	1	10	-	-
335	4	14	-	-	-	-
335	4	14	1	12	-	-
335	4	14	2	12	-	-
335	5	14	-	-	-	-
335	5	14	1	12	-	-
335	5	14	1	10	-	-
335	1	12	1	10	-	-
335	1	12	2	10	-	-
335	2	12	-	-	-	-
335	2	12	1	10	-	-
335	3	12	-	-	-	-
335	3	12	1	10	-	-
335	4	12	-	-	-	-
335	3	10	-	-	-	-
Copper-copper						
63	1	18	1	14	-	-
63	1	18	2	14	-	-
63	1	18	3	14	-	-
63	1	18	1	12	-	-
63	1	18	2	12	-	-
63	2	18	1	16	-	-
63	2	18	2	16	-	-
63	2	18	3	16	-	-
63	2	18	1	14	-	-
63	2	18	2	14	-	-
63	2	18	1	12	-	-
63	3	18	1	16	-	-
63	3	18	2	16	-	-
63	3	18	1	14	-	-
63	3	18	2	14	-	-
63	3	18	1	12	-	-
63	4	18	1	16	-	-
63	4	18	2	16	-	-
63	4	18	1	14	-	-
63	5	18	-	-	-	-
63	6	18	-	-	-	-
63	1	16	1	14	-	-
63	1	16	2	14	-	-
63	1	16	3	14	-	-
63	1	16	1	12	-	-
63	1	16	2	12	-	-
63	2	16	1	14	-	-
63	2	16	2	14	-	-
63	2	16	1	12	-	-
63	3	16	-	-	-	-
63	3	16	1	14	-	-
63	3	16	1	12	-	-
63	4	16	-	-	-	-
63	5	16	-	-	-	-
63	1	14	1	12	-	-
63	1	14	1	10	-	-
63	2	14	-	-	-	-
63	2	14	1	12	-	-
63	3	14	-	-	-	-
63	4	14	-	-	-	-
63	2	12	-	-	-	-
Copper-aluminum						
63	1	18	1	12	-	-
63	2	18	1	12	-	-
63	3	18	1	12	-	-
63	1	16	1	12	-	-
63	2	16	1	12	-	-
63	3	16	1	12	-	-
63	1	14	1	12	-	-
63	2	14*	1	12	-	-
63	1	12*	1	12	-	-
Aluminum-aluminum						
63	2	12	-	-	-	-
Copper-copper						
65	1	18	4	14	-	-
65	1	18	5	14	-	-
65	1	18	6	14	-	-
65	1	18	2	12	-	-
65	1	18	3	12	-	-
65	1	18	1	10	-	-
65	1	18	2	10	-	-
65	2	18	4	16	-	-
65	2	18	4	14	-	-
65	2	18	2	12	-	-
65	2	18	3	12	-	-
65	2	18	1	10	-	-
65	2	18	2	10	-	-
65	3	18	4	14	-	-
65	3	18	2	12	-	-

* Solid only

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
65	3	18	3	12	-	-
65	3	18	1	10	-	-
65	3	18	2	10	-	-
65	4	18	2	12	-	-
65	4	18	1	10	-	-
65	4	18	2	10	-	-
65	5	18	2	12	-	-
65	5	18	1	10	-	-
65	6	18	1	10	-	-
65	1	16	4	14	-	-
65	1	16	5	14	-	-
65	1	16	6	14	-	-
65	1	16	2	12	-	-
65	1	16	3	12	-	-
65	1	16	1	10	-	-
65	1	16	2	10	-	-
65	2	16	4	14	-	-
65	2	16	2	12	-	-
65	2	16	3	12	-	-
65	2	16	1	10	-	-
65	2	16	2	10	-	-
65	3	16	4	14	-	-
65	3	16	2	12	-	-
65	3	16	3	12	-	-
65	3	16	1	10	-	-
65	4	16	2	12	-	-
65	4	16	1	10	-	-
65	5	16	-	-	-	-
65	5	16	2	12	-	-
65	5	16	1	10	-	-
65	6	16	-	-	-	-
65	6	16	1	10	-	-
65	7	16	-	-	-	-
65	1	14	1	12	-	-
65	1	14	2	12	-	-
65	1	14	3	12	-	-
65	1	14	1	10	-	-
65	1	14	2	10	-	-
65	2	14	-	-	-	-
65	2	14	1	12	-	-
65	2	14	2	12	-	-
65	2	14	1	10	-	-
65	3	14	-	-	-	-
65	3	14	1	12	-	-
65	3	14	2	12	-	-
65	3	14	1	10	-	-
65	4	14	-	-	-	-
65	4	14	1	12	-	-
65	5	14	-	-	-	-
65	5	14	1	12	-	-
65	6	14	-	-	-	-
65	1	12	1	10	-	-
65	1	12	2	10	-	-
65	2	12	-	-	-	-
65	2	12	1	10	-	-
65	3	12	-	-	-	-
65	4	12	-	-	-	-
Copper-aluminum						
65	1	18	3	12	-	-
65	1	18	2	10	-	-
65	2	18	3	12	-	-
65	2	18	2	10	-	-
65	3	18	3	12	-	-
65	3	18	2	10	-	-
65	4	18	2	10	-	-
65	1	16	3	12	-	-
65	1	16	2	10	-	-
65	2	16	3	12	-	-
65	2	16	2	10	-	-
65	3	16	3	12	-	-
65	6	16	1	10	-	-
65	1	14	1	12	-	-
65	1	14	2	12	-	-
65	1	14*	3	12	-	-
65	1	14*	1	10	-	-
65	1	14	2	10	-	-
65	2	14*	1	12	-	-
65	2	14*	2	12	-	-
65	2	14*	1	10	-	-
65	3	14*	1	12	-	-
65	3	14*	2	12	-	-
65	3	14*	1	10	-	-
65	4	14*	1	12	-	-
65	5	14*	1	12	-	-
65	1	12	1	12	-	-
65	1	12	2	12	-	-
65	1	12	1	10	-	-
65	1	12	2	10	-	-
65	2	12	1	10	-	-
Aluminum-aluminum						
65	1	12*	1	10	-	-
65	1	12	2	10	-	-
65	2	12	-	-	-	-
65	2	12	1	10	-	-

* Solid only

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
65	3	12	-	-	-	-
65	4	12	-	-	-	-
65	2	10	-	-	-	-
739	1	14	3	12	-	-
739	1	14	2	10	-	-
739	1	14	3	10	-	-
739	1	14	2	8	-	-
739	2	14	2	12	-	-
739	2	14	3	12	-	-
739	2	14	2	10	-	-
739	2	14	3	10	-	-
739	2	14	2	8	-	-
739	3	14	2	12	-	-
739	3	14	3	12	-	-
739	3	14	1	10	-	-
739	3	14	2	10	-	-
739	3	14	3	10	-	-
739	3	14	2	8	-	-
739	4	14	2	12	-	-
739	4	14	1	10	-	-
739	4	14	2	10	-	-
739	4	14	2	8	-	-
739	5	14	-	-	-	-
739	5	14	1	10	-	-
739	6	14	-	-	-	-
739	1	12	2	10	-	-
739	1	12	4	10	-	-
739	1	12	2	8	-	-
739	1	12	1	6	-	-
739	2	12	1	10	-	-
739	2	12	2	10	-	-
739	2	12	2	8	-	-
739	2	12	1	6	-	-
739	3	12	-	-	-	-
739	3	12	1	10	-	-
739	3	12	2	10	-	-
739	4	12	-	-	-	-
739	4	12	1	10	-	-
739	5	12	-	-	-	-
739	6	12	-	-	-	-
739	1	10	1	8	-	-
739	1	10	2	8	-	-
739	1	10	1	6	-	-
739	2	10	-	-	-	-
739	2	10	1	8	-	-
739	2	10	1	6	-	-
739	3	10	-	-	-	-

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
739	3	10	1	8	-	-
739	4	10	-	-	-	-
739	5	10	-	-	-	-
739	1	8	1	6	-	-
739	2	8	-	-	-	-
739	3	8	-	-	-	-
739	2	6	-	-	-	-
822	1	22	2	20	-	-
822	1	22	3	20	-	-
822	1	22	4	20	-	-
822	1	22	2	18	-	-
822	1	22	3	18	-	-
822	1	22	4	18	-	-
822	2	22	1	20	-	-
822	2	22	2	20	-	-
822	2	22	3	20	-	-
822	2	22	1	18	-	-
822	2	22	2	18	-	-
822	2	22	3	18	-	-
822	2	22	1	16	-	-
822	2	22	3	16	-	-
822	3	22	1	20	-	-
822	3	22	2	20	-	-
822	3	22	1	18	-	-
822	3	22	2	18	-	-
822	3	22	1	16	-	-
822	4	22	-	-	-	-
822	4	22	1	20	-	-
822	4	22	1	18	-	-
822	4	22	1	16	-	-
822	5	22	-	-	-	-
822	1	20	2	18	-	-
822	1	20	3	18	-	-
822	1	20	4	18	-	-
822	2	20	1	18	-	-
822	2	20	2	18	-	-
822	2	20	3	18	-	-
822	2	20	1	16	-	-
822	2	20	3	16	-	-
822	3	20	-	-	-	-
822	3	20	1	18	-	-
822	3	20	2	18	-	-
822	3	20	1	16	-	-
822	4	20	-	-	-	-
822	4	20	1	18	-	-
822	4	20	1	16	-	-
822	5	20	-	-	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
822	1	18	2	16	-	-
822	1	18	3	16	-	-
822	1	18	4	16	-	-
822	1	18	5	16	-	-
822	1	18	2	14	-	-
822	1	18	1	12	-	-
822	1	18	2	12	-	-
822	1	18	3	12	-	-
822	2	18	-	-	-	-
822	2	18	1	16	-	-
822	2	18	2	16	-	-
822	2	18	3	16	-	-
822	2	18	4	16	-	-
822	2	18	1	14	-	-
822	2	18	2	14	-	-
822	2	18	1	12	-	-
822	2	18	2	12	-	-
822	2	18	3	12	-	-
822	3	18	-	-	-	-
822	3	18	1	16	-	-
822	3	18	2	16	-	-
822	3	18	3	16	-	-
822	3	18	1	14	-	-
822	3	18	1	12	-	-
822	4	18	-	-	-	-
822	4	18	1	16	-	-
822	4	18	2	16	-	-
822	4	18	1	12	-	-
822	5	18	-	-	-	-
822	5	18	1	12	-	-
822	6	18	-	-	-	-
822	1	16	2	14	-	-
822	1	16	3	14	-	-
822	1	16	4	14	-	-
822	1	16	2	12	-	-
822	1	16	3	12	-	-
822	1	16	4	12	-	-
822	1	16	2	10	-	-
822	2	16	-	-	-	-
822	2	16	1	14	-	-
822	2	16	2	14	-	-
822	2	16	3	14	-	-
822	2	16	1	12	-	-
822	2	16	2	12	-	-
822	2	16	3	12	-	-
822	2	16	1	10	-	-
822	2	16	2	10	-	-
822	2	16	1	8	-	-
822	3	16	-	-	-	-
822	3	16	1	14	-	-
822	3	16	1	12	-	-
822	3	16	2	12	-	-
822	3	16	1	8	-	-
822	4	16	-	-	-	-
822	4	16	1	14	-	-
822	4	16	1	12	-	-
822	4	16	1	8	-	-
822	5	16	-	-	-	-
822	1	14	2	12	-	-
822	1	14	3	12	-	-
822	1	14	4	12	-	-
822	1	14	2	10	-	-
822	2	14	-	-	-	-
822	2	14	1	12	-	-
822	2	14	2	12	-	-
822	2	14	3	12	-	-
822	2	14	1	10	-	-
822	2	14	2	10	-	-
822	2	14	1	8	-	-
822	3	14	-	-	-	-
822	3	14	1	12	-	-
822	3	14	2	12	-	-
822	3	14	1	10	-	-
822	3	14	1	8	-	-
822	4	14	-	-	-	-
822	4	14	1	12	-	-
822	4	14	1	10	-	-
822	5	14	1	10	-	-
822	1	12	2	10	-	-
822	2	12	-	-	-	-
822	2	12	1	10	-	-
822	2	12	1	8	-	-
822	3	12	-	-	-	-
822	3	12	1	10	-	-
822	4	12	-	-	-	-
822	5	12	-	-	-	-
822	2	10	-	-	-	-
822	3	10	-	-	-	-
822	2	8	-	-	-	-
833	1	22	2	20	-	-
833	1	22	3	20	-	-
833	1	22	4	20	-	-
833	1	22	2	18	-	-
833	1	22	3	18	-	-
833	1	22	4	18	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
833	2	22	1	20	-	-
833	2	22	2	20	-	-
833	2	22	3	20	-	-
833	2	22	1	18	-	-
833	2	22	2	18	-	-
833	2	22	3	18	-	-
833	2	22	1	16	-	-
833	2	22	2	16	-	-
833	2	22	3	16	-	-
833	3	22	1	20	-	-
833	3	22	2	20	-	-
833	3	22	1	18	-	-
833	3	22	2	18	-	-
833	3	22	1	16	-	-
833	4	22	-	-	-	-
833	4	22	1	20	-	-
833	4	22	1	18	-	-
833	4	22	1	16	-	-
833	5	22	-	-	-	-
833	1	20	2	18	-	-
833	1	20	3	18	-	-
833	1	20	4	18	-	-
833	2	20	1	18	-	-
833	2	20	2	18	-	-
833	2	20	3	18	-	-
833	2	20	1	16	-	-
833	2	20	2	16	-	-
833	2	20	3	16	-	-
833	3	20	-	-	-	-
833	3	20	1	18	-	-
833	3	20	2	18	-	-
833	3	20	1	16	-	-
833	4	20	-	-	-	-
833	4	20	1	18	-	-
833	4	20	1	16	-	-
833	5	20	-	-	-	-
833	1	18	1	16	-	-
833	1	18	2	16	-	-
833	1	18	3	16	-	-
833	1	18	4	16	-	-
833	1	18	5	16	-	-
833	1	18	2	14	-	-
833	1	18	1	12	-	-
833	1	18	2	12	-	-
833	1	18	3	12	-	-
833	2	18	-	-	-	-
833	2	18	1	16	-	-
833	2	18	2	16	-	-

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
833	2	18	3	16	-	-
833	2	18	4	16	-	-
833	2	18	1	14	-	-
833	2	18	2	14	-	-
833	2	18	1	12	-	-
833	2	18	2	12	-	-
833	2	18	3	12	-	-
833	3	18	-	-	-	-
833	3	18	1	16	-	-
833	3	18	2	16	-	-
833	3	18	3	16	-	-
833	3	18	1	14	-	-
833	3	18	1	12	-	-
833	4	18	-	-	-	-
833	4	18	1	16	-	-
833	4	18	2	16	-	-
833	4	18	1	12	-	-
833	5	18	-	-	-	-
833	5	18	1	12	-	-
833	6	18	-	-	-	-
833	1	16	2	14	-	-
833	1	16	3	14	-	-
833	1	16	4	14	-	-
833	1	16	2	12	-	-
833	1	16	3	12	-	-
833	1	16	4	12	-	-
833	1	16	2	10	-	-
833	2	16	-	-	-	-
833	2	16	1	14	-	-
833	2	16	2	14	-	-
833	2	16	3	14	-	-
833	2	16	1	12	-	-
833	2	16	2	12	-	-
833	2	16	3	12	-	-
833	2	16	1	10	-	-
833	2	16	2	10	-	-
833	2	16	1	8	-	-
833	3	16	-	-	-	-
833	3	16	1	14	-	-
833	3	16	2	14	-	-
833	3	16	1	12	-	-
833	3	16	2	12	-	-
833	3	16	1	8	-	-
833	4	16	-	-	-	-
833	4	16	1	14	-	-
833	4	16	1	12	-	-
833	4	16	1	8	-	-
833	5	16	-	-	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
833	1	14	2	12	-	-
833	1	14	3	12	-	-
833	1	14	4	12	-	-
833	1	14	2	10	-	-
833	2	14	-	-	-	-
833	2	14	1	12	-	-
833	2	14	2	12	-	-
833	2	14	3	12	-	-
833	2	14	1	10	-	-
833	2	14	2	10	-	-
833	2	14	1	8	-	-
833	3	14	-	-	-	-
833	3	14	1	12	-	-
833	3	14	2	12	-	-
833	3	14	1	10	-	-
833	3	14	1	8	-	-
833	4	14	-	-	-	-
833	4	14	1	12	-	-
833	4	14	1	10	-	-
833	5	14	-	-	-	-
833	1	12	2	10	-	-
833	2	12	-	-	-	-
833	2	12	1	10	-	-
833	2	12	1	8	-	-
833	3	12	-	-	-	-
833	3	12	1	10	-	-
833	4	12	-	-	-	-
833	2	10	-	-	-	-
833	3	10	-	-	-	-
933	1	22	1	20		
933	1	22	2	20	-	-
933	1	22	3	20	-	-
933	1	22	4	20	-	-
933	1	22	5	20	-	-
933	1	22	1	18	-	-
933	1	22	2	18	-	-
933	1	22	3	18	-	-
933	1	22	4	18	-	-
933	1	22	5	18	-	-
933	1	22	1	16	-	-
933	1	22	2	16	-	-
933	1	22	3	16	-	-
933	1	22	4	16	-	-
933	1	22	5	16	-	-
933	2	22	1	20	-	-
933	2	22	2	20	-	-
933	2	22	3	20	-	-
933	2	22	4	20	-	-

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
933	2	22	1	18	-	-
933	2	22	2	18	-	-
933	2	22	3	18	-	-
933	2	22	4	18	-	-
933	2	22	1	16	-	-
933	2	22	2	16	-	-
933	2	22	3	16	-	-
933	2	22	4	16	-	-
933	3	22	1	20	-	-
933	3	22	2	20	-	-
933	3	22	3	20	-	-
933	3	22	1	18	-	-
933	3	22	2	18	-	-
933	3	22	3	18	-	-
933	3	22	4	18	-	-
933	3	22	1	16	-	-
933	3	22	2	16	-	-
933	3	22	3	16	-	-
933	3	22	-	-	-	-
933	4	22	1	20	-	-
933	4	22	2	20	-	-
933	4	22	1	18	-	-
933	4	22	2	18	-	-
933	4	22	1	16	-	-
933	4	22	2	16	-	-
933	4	22	-	-	-	-
933	5	22 Sol.	-	-	-	-
933	6	22 Sol.	-	-	-	-
933	1	20	1	18	-	-
933	1	20	2	18	-	-
933	1	20	3	18	-	-
933	1	20	4	18	-	-
933	1	20	1	16	-	-
933	1	20	2	16	-	-
933	1	20	3	16	-	-
933	1	20	4	16	-	-
933	1	20	1	14	-	-
933	1	20	2	14	-	-
933	1	20	3	14	-	-
933	1	20	4	14	-	-
933	2	20	1	18	-	-
933	2	20	2	18	-	-
933	2	20	3	18	-	-
933	2	20	1	16	-	-
933	2	20	2	16	-	-
933	2	20	3	16	-	-
933	2	20	1	14	-	-
933	2	20	2	14	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
933	2	20	2	14	-	-
933	2	20	3	14	-	-
933	2	20	-	-	-	-
933	3	20	1	18	-	-
933	3	20	2	18	-	-
933	3	20	1	16	-	-
933	3	20	2	16	-	-
933	3	20	1	14	-	-
933	3	20	2	14	-	-
933	3	20	-	-	-	-
933	4	20	1	18	-	-
933	4	20	2	18	-	-
933	4	20	1	16	-	-
933	4	20	2	16	-	-
933	4	20	1	14	-	-
933	4	20	2	14	-	-
933	4	20	-	-	-	-
933	5	20 Sol.	-	-	-	-
933	6	20 Sol.	-	-	-	-
933	1	18	1	16	-	-
933	1	18	2	16	-	-
933	1	18	3	16	-	-
933	1	18	4	16	-	-
933	1	18	5	16	-	-
933	1	18	1	14	-	-
933	1	18	2	14	-	-
933	1	18	3	14	-	-
933	1	18	4	14	-	-
933	1	18	1	12	-	-
933	1	18	2	12	-	-
933	1	18	3	12	-	-
933	1	18	4	12	-	-
933	1	18	1	10	-	-
933	1	18	2	10	-	-
933	2	18	1	16	-	-
933	2	18	2	16	-	-
933	2	18	3	16	-	-
933	2	18	4	16	-	-
933	2	18	1	14	-	-
933	2	18	2	14	-	-
933	2	18	3	14	-	-
933	2	18	4	14	-	-
933	2	18	1	12	-	-
933	2	18	2	12	-	-
933	2	18	3	12	-	-
933	2	18	1	10	-	-
933	2	18	2	10	-	-

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
933	2	18	-	-	-	-
933	3	18	1	16	-	-
933	3	18	2	16	-	-
933	3	18	3	16	-	-
933	3	18	1	14	-	-
933	3	18	2	14	-	-
933	3	18	3	14	-	-
933	3	18	1	12	-	-
933	3	18	2	12	-	-
933	3	18	3	12	-	-
933	3	18	1	10	-	-
933	3	18	2	10	-	-
933	3	18	-	-	-	-
933	4	18	1	16	-	-
933	4	18	2	16	-	-
933	4	18	1	14	-	-
933	4	18	2	14	-	-
933	4	18	1	12	-	-
933	4	18	2	12	-	-
933	4	18	1	10	-	-
933	4	18	-	-	-	-
933	5	18	1	16	-	-
933	5	18	1	14	-	-
933	5	18	1	12	-	-
933	5	18	-	-	-	-
933	6	18	-	-	-	-
933	1	16	1	14	-	-
933	1	16	1	14	-	-
933	1	16	1	14	-	-
933	1	16	2	14	-	-
933	1	16	2	14	-	-
933	1	16	2	14	-	-
933	1	16	3	14	-	-
933	1	16	4	14	-	-
933	1	16	1	12	-	-
933	1	16	1	12	-	-
933	1	16	2	12	-	-
933	1	16	3	12	-	-
933	1	16	4	12	-	-
933	1	16	1	10	-	-
933	1	16	2	10	-	-
933	2	16	1	14	-	-
933	2	16	1	14	-	-
933	2	16	1	14	-	-
933	2	16	2	14	-	-
933	2	16	2	14	-	-
933	2	16	3	14	-	-

Wire combination reference guide

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
933	2	16	4	14	-	-
933	2	16	1	12	-	-
933	2	16	1	12	-	-
933	2	16	2	12	-	-
933	2	16	3	12	-	-
933	2	16	1	10	-	-
933	2	16	2	10	-	-
933	2	16	1	8 Strd.	-	-
933	2	16	-	-	-	-
933	3	16	1	14	-	-
933	3	16	1	14	-	-
933	3	16	1	14	-	-
933	3	16	2	14	-	-
933	3	16	3	14	-	-
933	3	16	1	12	-	-
933	3	16	2	12	-	-
933	3	16	1	10	-	-
933	3	16	2	10	-	-
933	3	16	1	8 Strd.	-	-
933	3	16	-	-	-	-
933	4	16	1	14	-	-
933	4	16	2	14	-	-
933	4	16	1	12	-	-
933	4	16	1	12	-	-
933	4	16	2	12	-	-
933	4	16	1	10	-	-
933	4	16	1	8 Strd.	-	-
933	4	16	-	-	-	-
933	5	16	1	14	-	-
933	5	16	1	10	-	-
933	5	16	-	-	-	-
933	6	16	-	-	-	-
933	1	14	1	12	-	-
933	1	14	1	12	-	-
933	1	14	2	12	-	-
933	1	14	2	12	-	-
933	1	14	3	12	-	-
933	1	14	4	12	-	-
933	1	14	1	10	-	-
933	1	14	2	10	-	-
933	1	14	1	8 Strd.	-	-
933	1	14	-	-	-	-
933	2	14	1	12	-	-
933	2	14	1	12	-	-
933	2	14	2	12	-	-
933	2	14	3	12	-	-
933	2	14	1	10	-	-

Model number	Number of cond.	AWG	+ Number of cond.	AWG	+ Number of cond.	AWG
933	2	14	1	8 Strd.	-	-
933	2	14	-	-	-	-
933	3	14	1	12	-	-
933	3	14	2	12	-	-
933	3	14	1	10	-	-
933	3	14	1	8 Strd.	-	-
933	3	14	-	-	-	-
933	4	14	1	12	-	-
933	4	14	1	10	-	-
933	4	14	-	-	-	-
933	5	14	-	-	-	-
933	1	12	1	10	-	-
933	1	12	2	10	-	-
933	1	12	1	8 Strd.	-	-
933	1	12	-	-	-	-
933	2	12	1	10	-	-
933	2	12	1	8 Strd.	-	-
933	2	12	-	-	-	-
933	3	12	1	10	-	-
933	3	12	-	-	-	-
933	4	12	-	-	-	-
933	1	10	1	8 Strd.	-	-
933	1	10	-	-	-	-
933	2	10	-	-	-	-
933	3	10	-	-	-	-