

www.amerace.com



Your underground solutions

Company Profile

<http://www.amerace.com>

Amerace, the world's leading **specialist** in the design and manufacture of isolating transformers, connector kits and cable assemblies for airfield lighting.



Everything manufactured under one roof for:

- Quick availability
- Efficiency
- Complete control of quality

QUALITY POLICY

Certified to ISO 9001

For latest certificate see:



FAA CERTIFICATION

Copies of all Amerace Certificates are available at:



ENVIRONMENTAL POLICY

Certified to ISO 14000

For latest certificate see



COMMUNICATION



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to enter the
Amerace customer
dialogue zone

Clicking this symbol on the home page of the Amerace web site takes you to the Amerace Dialogue Zone powered by RealityClick.com™.

This is your exclusive forum to ask questions, share ideas, offer compliments and even make complaints about our company and our products, or make comments or ask questions about airfield lighting in general. This service is free. You may participate in public areas along with other visitors, or in the private areas where comments will be seen and responded to only by Amerace. Try it today!

AMERACE AIRPORT LIGHTING

Series Isolating Transformers

<http://www.amerace.com>

Specifications

CONSTRUCTION

Core	Flat laminations (E&I) of high grade grain oriented silicon steel for a long, stable life.
Encapsulant	TPR rubber (also known as TPV, TPE) <ul style="list-style-type: none">• Much higher dielectric strength and lower water absorption than older materials such as epoxy, neoprene, or polychloroprene.• Minimal swelling in the presence of hydrocarbons, unlike neoprene, polychloroprene, etc.
Encapsulation process	Injection molding for maximum consistency of encapsulation, yielding exceptionally low leakage currents. Vacuum drawing prior to injection prevents air pockets inside. A far superior process to compression or transfer molding, or pouring.
Winding	Magnet wire on a plastic bobbin, specifically designed to electrically isolate the primary and secondary windings for maximum safety.
Connector pins and sockets	Tin plated for corrosion resistance
Primary cables	Cable is AWG #8 (8,3 mm ²) Type C TPR for maximum reliability, 0,6 meter (24") with FAA Style 2 and FAA Style 9 connectors
Secondary cable	Cable is AWG 2/12 (3,3 mm ²), 1,2 meters (48") with FAA Style 8 (standard) or FAA Style 7 connector
Material compatibility	Transformer body, cables, and connectors are all molded of TPR for perfect bonding.
Waterproofness	Amerace® transformers are designed and manufactured to operate submerged in water indefinitely.

ELECTRICAL

Insulation Level	Primary 5000 V RMS; Secondary 600 V RMS
Insulation Resistance	<ul style="list-style-type: none">• Minimum 7500 Megohms (tested hot with 15 kV DC)• Typical 150,000 Megohms• Much higher than that required by FAA
Open Circuit Voltages	<ul style="list-style-type: none">• Less than 3 times the full load RMS value in all cases, generally much lower, when tested with sine waves.
Efficiencies	85% to 95% depending on the power rating
Power Factor	> 0,97 for all
Ratio	Flat response load curves for constant lamp brilliancy and long life
Testing	<ul style="list-style-type: none">• All units (100%) are hipotted and their ratio confirmed• All ratio testing done with the appropriate frequency, 50Hz or 60 Hz, for precision. No "conversion factors" used.

ENVIRONMENTAL

Operating Temperature Range	-55°C to +65°C
Contaminant resistance	Suitable for areas contaminated with most oils, aircraft fuels, soil acids and alkalis, and de-icing fluids. Resistant to UV exposure and ozone.

APPROVALS/CONFORMANCES

Accepted in most countries of the world. Formal approvals with FAA, CSA, US Military, STNA (France), etc. Also complies with ICAO, in future with IEC (a specification being prepared by TC 97).

INSTALLATION OPTIONS

All types, including above ground, in concrete or other non-metallic pits, in metal cans, or direct buried.

AMERACE AIRPORT LIGHTING Series Isolating Transformers

<http://www.amerace.com>



FAA STYLE (NON-EARTHED)



ICAO STYLE (WITH EARTH)







Amerace manufactures the world's broadest range of series isolating transformers. Some of the options available are:

Nominal Power (watts) 30/45, 65, 100, 150, 200, 300, 400, 500

Primary/sec current (A) 4, 4.4, 6.6, 8.3, 12, 20 in many combinations

The table below shows several available constructions. Don't see what you want here? Contact us with your requirements or go to our web site to *Create Your Own Transformer*.

 <http://www.amerace.com/NewFiles/techno.html>

Construction	Earthed?	Secondary Connector?	Primary Connectors?
FAA  http://www.amerace.com/NewFiles/product3.html	No	Style 8	Yes
US Military  http://www.amerace.com/NewFiles/product5.html	No	Style 8	Yes
CSA  http://www.amerace.com/NewFiles/product4.html	Yes	Style 8	Yes
ICAO Style  http://www.amerace.com/NewFiles/product8.html	Yes	Style 7 or 8	Yes
UK Style  http://www.amerace.com/NewFiles/product7.html	Yes	Style 7 or 8	No
UK TISE  http://www.amerace.com/NewFiles/product7.html	Yes	Style 7	No

AMERACE AIRPORT LIGHTING Series Isolating Transformers

<http://www.amerace.com>

GENERAL INFORMATION

1. Secondary Connector configurations

Standard is catalog suffix 01 "Tennis Ball" FAA Style 8  4,45 cm (1 3/4")

Alternatively catalog suffix 10 "Straight" FAA Style 7  2,54 cm (1")



2. Unlike the FAA, ICAO recommends that each transformer have an earth (ground) connection for one side of the secondary (large socket, white wire). Any Amerace® transformer can be supplied with an earth stud to meet this recommendation. To specify, add the letter G to the catalog number as follows - a TA045666-01 would become a TAG045666-01.

 <http://www.amerace.com/NewFiles/product3.html>

FAA SPECIFICATION L 830 60 Hz *

FAA Designation	Amerace Catalog No.	Rated Watts	Prim/Sec. Amps	Fig. (pg.6)	T Dim. cm/in.	Lead Lengths		Appr. Shp. Wt.	
						Primary	Secondary	Kg.	Lbs.
L830-1	TA045666-01	30/45	6.6/6.6	1	8,6/3.4	60 cm (24")	1,2m (48")	2,4	5.2
L830-2	TA045266-01	30/45	20/6.6	1	8,6/3.4	60 cm (24")	1,2m (48")	2,3	5.0
L830-3	TA065666-01	60	6.6/6.6	1	8,6/3.4	60 cm (24")	1,2m (48")	2,3	5.0
L830-4	TA10066D-01	100	6.6/6.6	2	8,9/3.5	60 cm (24")	1,2m (48")	3,3	7.7
L830-5	TA100266-01	100	20/6.6	2	8,9/3.5	60 cm (24")	1,2m (48")	3,6	8.0
L830-6	TA200666-01	200	6.6/6.6	3	9,1/3.6	60 cm (24")	1,2m (48")	4,9	10.8
L830-7	TA200266-01	200	20/6.6	3	9,1/3.6	60 cm (24")	1,2m (48")	4,9	10.8
L830-8	TA300626-01	300	6.6/20	3	11,4/4.5	60 cm (24")	1,2m (48")	6,9	15.1
L830-9	TA300226-01	300	20/20	3	11,4/4.5	60 cm (24")	1,2m (48")	7,7	17.0
L830-10	TA300666-01	300	6.6/6.6	3	11,4/4.5	60 cm (24")	1,2m (48")	7,1	15.8
L830-11	TA300266-01	300	20/6.6	3	11,4/4.5	60 cm (24")	1,2m (48")	7,9	17.5
L830-12	TA500626-01	500	6.6/20	3	12,5/4.9	60 cm (24")	1,2m (48")	8,0	17.6
L830-13	TA500226-01	500	20/20	3	12,5/4.9	60 cm (24")	1,2m (48")	8,4	18.5

FAA SPECIFICATION L 831 50 Hz *

FAA Designation	Amerace Catalog No.	Rated Watts	Prim/Sec. Amps	Fig. (pg.6)	T Dim. cm/in.	Lead Lengths		Appr. Shp. Wt.	
						Primary	Secondary	Kg.	Lbs.
L831-1	TA045665-01	30/45	6.6/6.6	1	8,6/3.4	60 cm (24")	1,2m (48")	2,4	5.2
L831-2	TA045265-01	30/45	20/6.6	1	8,6/3.4	60 cm (24")	1,2m (48")	2,3	5.0
L831-3	TA065665-01	65	6.6/6.6	1	8,6/3.4	60 cm (24")	1,2m (48")	2,3	5.0
L831-4	TA10066D-01	100	6.6/6.6	2	8,9/3.5	60 cm (24")	1,2m (48")	3,3	7.7
L831-5	TA100265-01	100	20/6.6	2	8,9/3.5	60 cm (24")	1,2m (48")	3,1	6.9
L831-6	TA200665-01	200	6.6/6.6	3	9,9/3.9	60 cm (24")	1,2m (48")	5,6	12.4
L831-7	TA200265-01	200	20/6.6	3	9,9/3.9	60 cm (24")	1,2m (48")	5,9	13.0
L831-8	TA300625-01	300	6.6/20	3	12,5/4.9	60 cm (24")	1,2m (48")	7,7	17.0
L831-9	TA300225-01	300	20/20	3	11,4/4.5	60 cm (24")	1,2m (48")	7,9	17.5
L831-10	TA300665-01	300	6.6/6.6	3	12,5/4.9	60 cm (24")	1,2m (48")	7,9	17.5
L831-11	TA300265-01	300	20/6.6	3	12,5/4.9	60 cm (24")	1,2m (48")	7,9	17.5
L831-12	TA500625-01	500	6.6/20	3	12,5/4.9	60 cm (24")	1,2m (48")	8,4	18.5
L831-13	TA500225-01	500	20/20	3	12,5/4.9	60 cm (24")	1,2m (48")	8,4	18.5

* Not FAA Certified if provided with Style 7 Secondary Connector

AMERACE AIRPORT LIGHTING Series Isolating Transformers

<http://www.amerace.com>

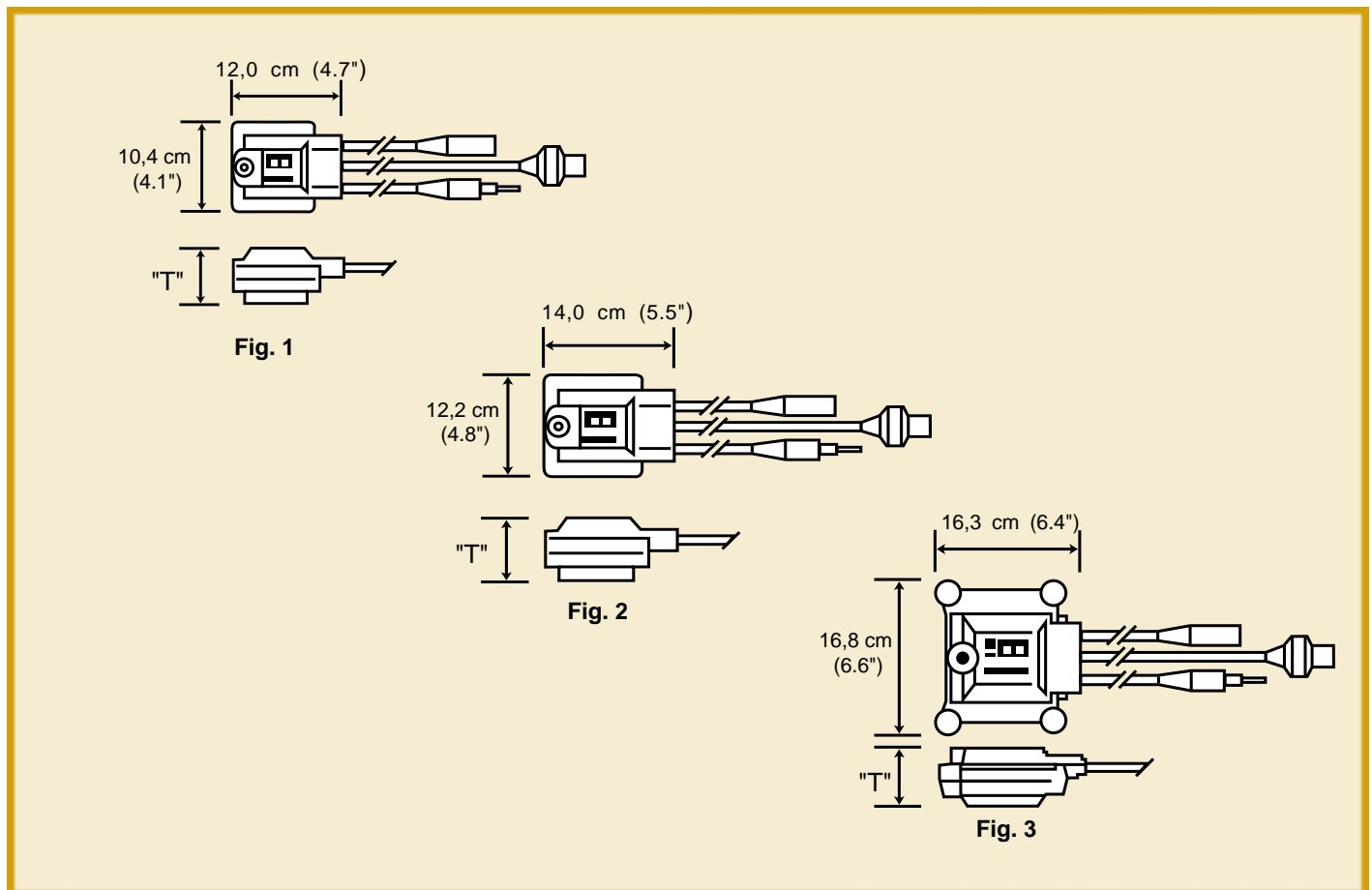
CSA CERTIFIED TRANSFORMERS



<http://www.amerace.com/NewFiles/product4.html>

Replaces Catalog No.	Description	Epoxy Style	Fig.	T Dim. cm/in.	Approx. Ship.Wt. Kg./Lbs.	Certi- fication
CTAG04566D-01	30/45 watt 6.6/6.6 amp 50/60 Hz	8001-2	2	8,9/3.5	3,1/6.9	CSA
CTAG10066D-01	100 watt 6.6/6.6 amp 50/60 Hz	8201-2	2	8,9/3.5	3,3/7.2	CSA
CTAG200666-01	200 watt 6.6/6.6 amp 60 Hz	8301-2	3	9,1/3.6	4,9/10.9	CSA
CTAG250626-01	250 watt 6.6/20 amp 60 Hz	8401-2	3	9,9/3.9	5,6/12.4	CSA
TAG300666-01CS050*	300 watt 6.6/6.6 60 Hz		3	11,4/4.5	7,1/15.8	
TAG500666-01CS058*	500 watt 6.6/6.6 60 Hz		3	12,5/4.9	9,0/19.1	

*CS means split bolt CSA ground post



AMERACE AIRPORT LIGHTING Primary Connector Kits

<http://www.amerace.com>



For Unscreened Cable

ELECTRICAL RATING

25 amps
5000 volts

SHIPPING

0,23 kg (.5#) each
50/box
11,5 kg (25#)

CONSTRUCTION

EPDM rubber
Every kit filled with silicone

SUGGESTED CRIMPING TOOLS

See page 14

54 Super Kit



54 Classic Kit



Slide show "How does the 54 Super kit work?"

<http://www.amerace.com/NewFiles/54sinst1.html>

Slide show "Super Kits? Classic Kits? What's the Difference?"

<http://www.amerace.com/NewFiles/compar1.html>

CATALOG NUMBER CODE

54Super E4 E4

Model Number

54 Primary Connector Kit, Classic Kit

54Super Primary Connector Kit with

- AmerSeal
- SuperSeal
- PositiveGrip

Cable Size -Receptacle side

Outside diameter of cable:
Select size code from Table 1.

Wire size:
Select size code from Table 2.

Cable Size -Plug side

Outside diameter of cable:
Select size code from Table 1.

Wire size:
Select size code from Table 2.

Cable Diameter				Size Code
Metric		Imperial		
Min.	Max.	Min.	Max.	
5,0	6,6	.195"	.260"	B*
6,4	8,4	.250"	.330"	C
8,1	10,9	.320"	.430"	D
9,4	12,9	.370"	.507"	Z
10,7	14,9	.420"	.585"	E
14,6	19,9	.575"	.785"	F

* 54 Classic Kit only includes adapter

Wire Size and Type				Size Code
Concentric Stranded		Solid		
mm ²	AWG	mm ²	AWG	
4 - 6	10-12	4-6	8-10	6
10	8	10	6	4
16	6	16	4	3
-	4	-	-	2
-	2	-	-	1

Primary Connector Kits

<http://www.amerace.com>

For Screened Cable

ELECTRICAL RATING

25 amps
5000 volts

SHIPPING

0,23 kg (.5#) each
50/box
12 kg (26.5#)

CONSTRUCTION

EPDM rubber
Every kit filled with silicone

SUGGESTED CRIMPING TOOLS

See page 14

CATALOG NUMBER CODE

52Super B EC4 EC4

Model Number

52Super Connecting screened primary cable to Amerace® encapsulated transformers or creating a separable splice in screened primary cable.

Earth Wire

B bare copper

I insulated

Cable Size - Receptacle side

Outside diameter of jacket:
Select size code from Table 1.

Outside diameter of insulation:
Select size code from Table 1.

Wire size:

Select size code from Table 2.

Cable Size - Plug side

Outside diameter of jacket:
Select size code from Table 1.

Outside diameter of insulation:
Select size code from Table 1.

Wire size:

Select size code from Table 2.

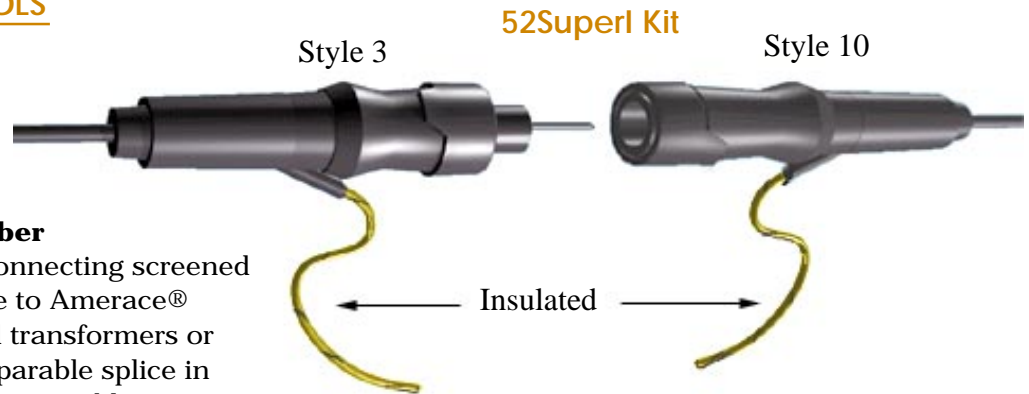
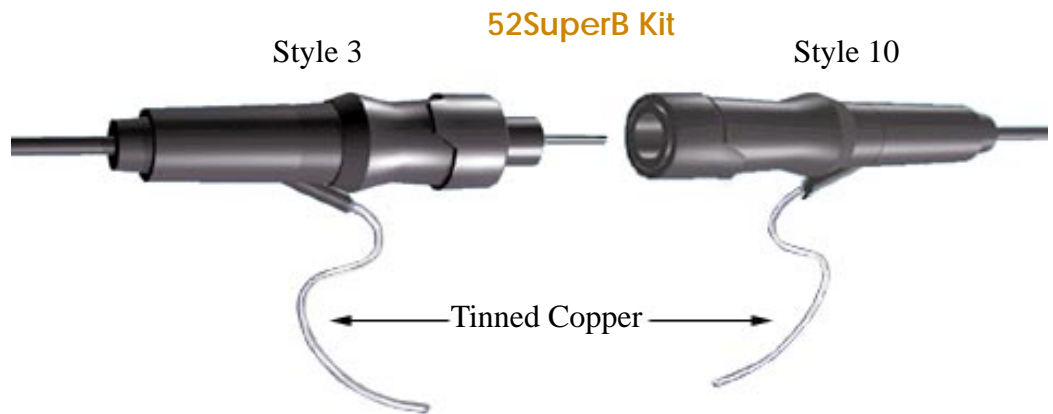


Table 1				
Cable or Insulation Diameter				
Metric		Imperial		Size Code
Min.	Max.	Min.	Max.	
6,4	8,4	.250"	.330"	C
8,1	10,9	.320"	.430"	D
10,7	14,9	.420"	.585"	E
14,6	19,9	.575"	.785"	F

Table 2				
Wire Size and Type				
Concentric Stranded		Solid		Size Code
mm ²	AWG	mm ²	AWG	
4 - 6	10-12	4-6	8-10	6
10	8	10	6	4
16	6	16	4	3
	4	-	-	2

Slide Show "How Does The 52 Super Kit Work"

 <http://www.amerace.com/NewFiles/52sinst1.html>

AMERACE AIRPORT LIGHTING Secondary Connector Kits

<http://www.amerace.com>

USED FOR FIELD ASSEMBLY OF EXTENSION CORDS OR REPAIR OF DAMAGED CONNECTORS.



ORDERING INSTRUCTIONS

Amerace® connector kit model numbers make it easy to select the right product for your specific application.

Follow the chart to the right.

EXAMPLE

Order catalog number 90P-B6 for a secondary connector kit for a plug (male) termination on 2 single conductors with an outside diameter over insulation between 5 mm² (.195") and 6,6 mm² (.260") and wire size of 4 mm² (10-12 AWG) stranded or 6 mm² (8-10 AWG) solid.

SHIPPING

0,06 kg (.14#) each
6,5 kg (14#)100/box

SUGGESTED CRIMPING TOOLS

See page 14.

ELECTRICAL

20A
600V between contacts
1500V to earth

CATALOG NUMBER CODE

90 P - B 6

Model Number

90 For terminating 2 single conductors
91 For terminating 2 core cable

Configuration

P - Plug (male) connector
R - Receptacle (female) connector

Outside diameter over

Insulation (90 Series) or
Jacket (91 Series)

Select size code from Table 1.

Wire size

Select size code from Table 2.



Insulation or Jacket Diameter				Size Code	Applicable to Kit Models
Metric		Imperial			
Min.	Max.	Min.	Max.		
3	4	.120"	.160"	S	90P,90R
3,9	5,5	.155"	.205"	A	90P,90R
5,0	6,6	.195"	.260"	B	90P,90R
6,4	8,4	.250"	.330"	C	90P,90R
8,1	10,9	.320"	.430"	D	91P,91R
10,7	14,9	.420"	.585"	E	91P,91R
14,6	19,9	.575"	.785"	F	91P,91R

Wire Size					
Concentric Stranded				Solid	Size Code
	14-16 AWG		12-14 AWG	8	
2,5mm ²				6	
4mm ²	10-12 AWG	6mm ²	8-10 AWG	6	
6mm ²	8 - AWG	10mm ²	6 AWG	4	



<http://www.amerace.com/NewFiles/sconkit.html>

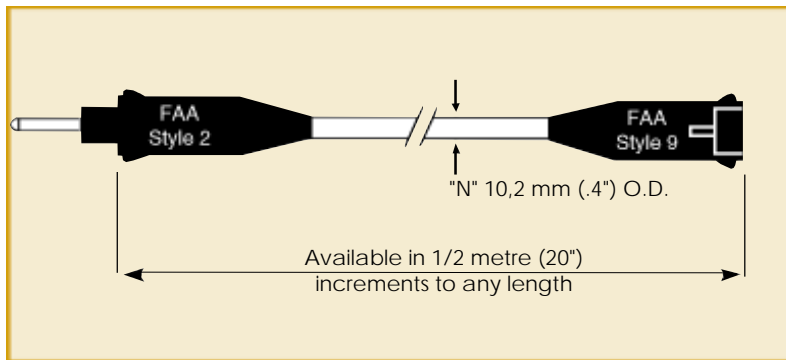
AMERACE AIRPORT LIGHTING Primary Cable Assemblies

<http://www.amerace.com>

<http://www.amerace.com/NewFiles/pcableass.html>



- All connectors are molded on the cable for strong waterproof joints.
- 25 amps
- 5000 volts to earth
- Every cable assembly is continuity checked prior to shipment
- Cable assemblies are conveniently coiled and shipped in boxes or fibre drums (contact factory for reels or other arrangements.)



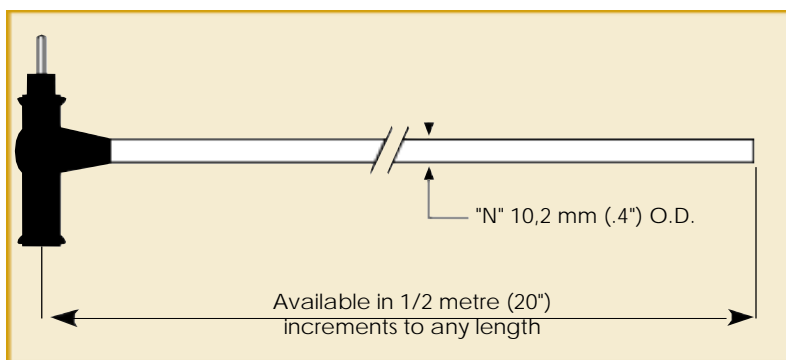
CATALOG NUMBER CODE

54M_ - _/_/_
(Length in meters)

Connector Configuration
P - Plug (male) connector Style 2
R - Receptacle (female) connector Style 9. If both ends of the cable are to be terminated use two letters here - If only one end is to be terminated, select the correct configuration and use only one letter

Type of Cable
N - Single #8 AWG (8.4mm²) Type C thermoplastic insulated cable rated 5000V, 25 amp, 90°C (19 strands)

"T" CABLE



54MT_ - _/_/_
(Length in meters)

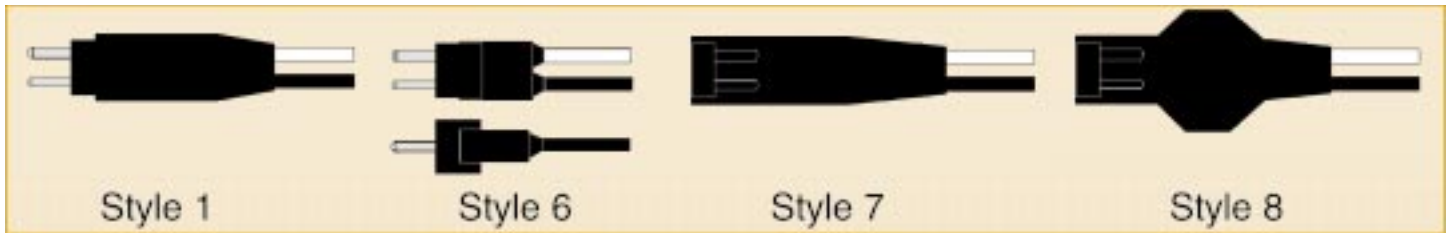
Type of Cable
N - Single #8 AWG (8.4mm²) Type C thermoplastic insulated cable rated 5000V, 25 amp, 90°C (19 strands)

Note: Also available with Style 2 plug or Style 9 receptacle on free end

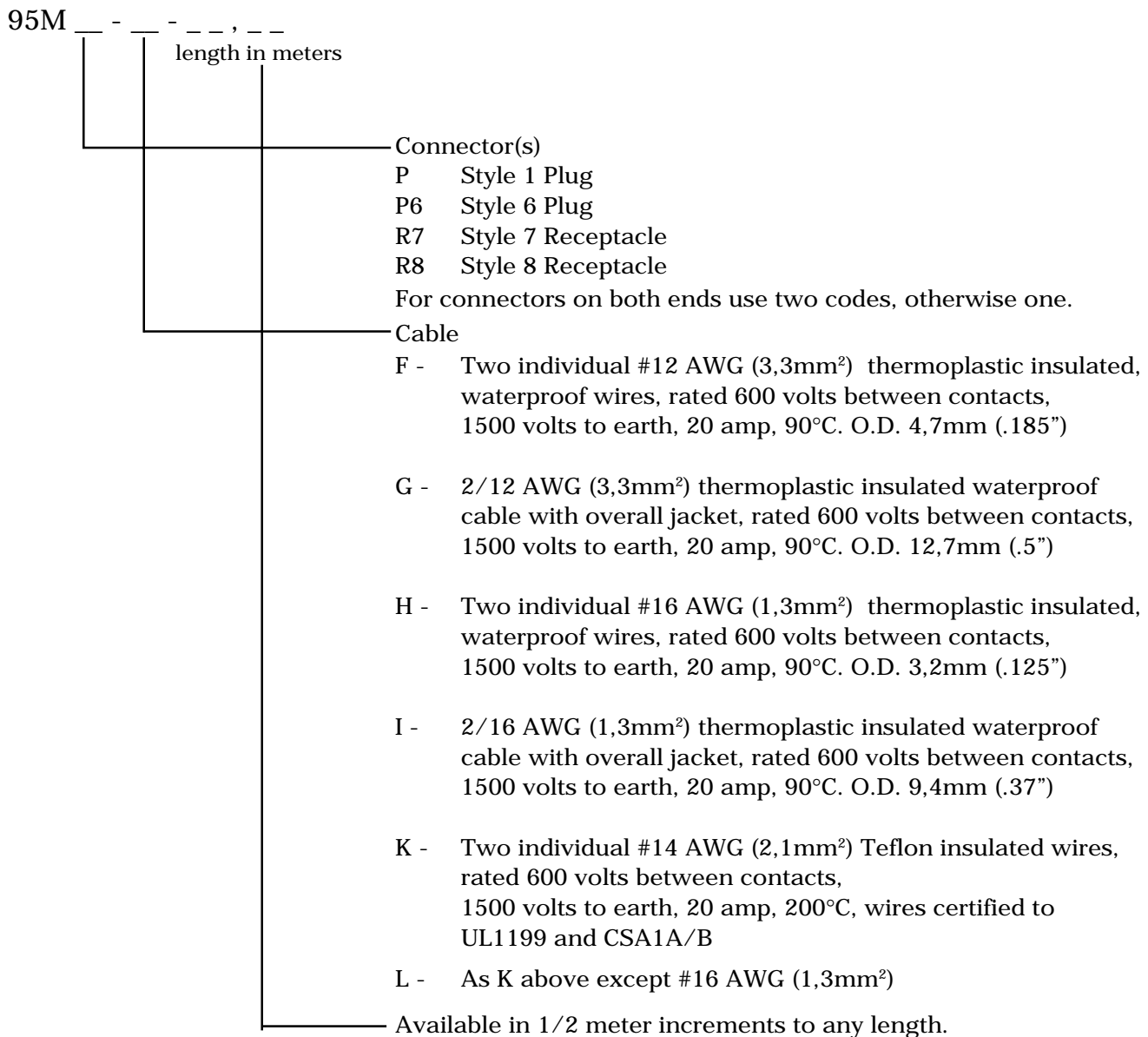
AMERACE AIRPORT LIGHTING Secondary Cable Assemblies

<http://www.amerace.com>

<http://www.amerace.com/NewFiles/ffscable.html>



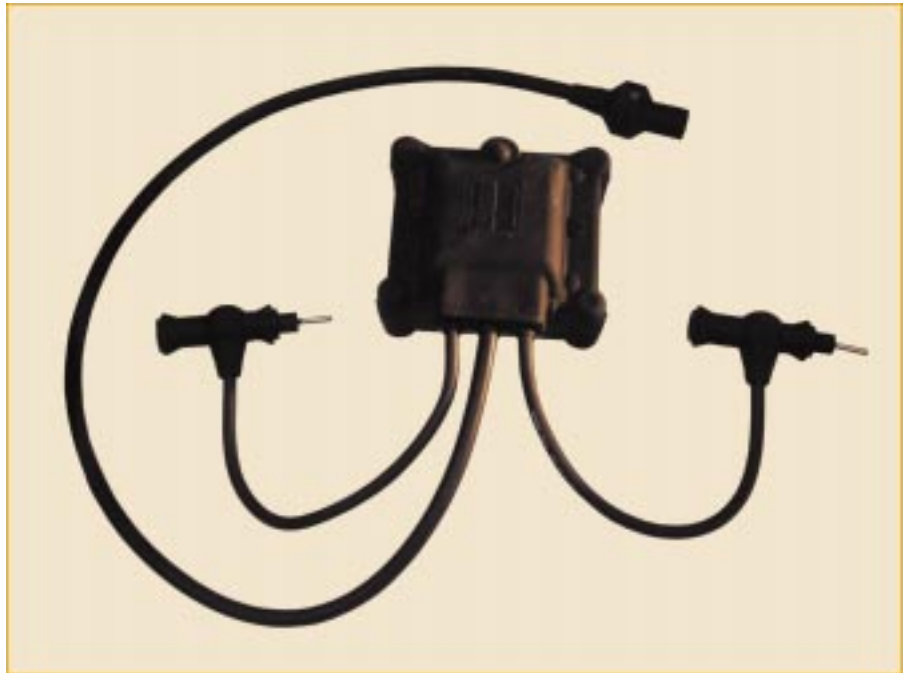
CATALOG NUMBER CODE



Voltage Transformers

<http://www.amerace.com>

- Used in parallel circuits - see diagram on facing page
- Submersible
- Plug in using standard FAA connectors (page 7/8)
- Allow step down of line voltage for standard airfield bulbs (6.6 amp), or for other standard bulbs such as automotive (12V), or 120/240 volt.

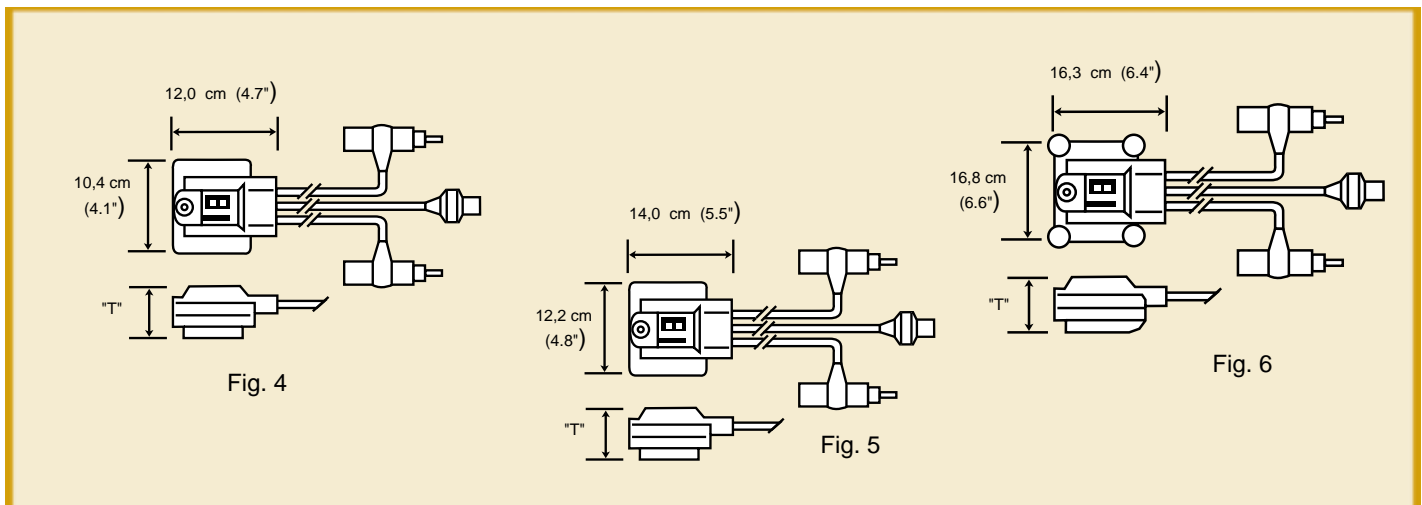


VOLTAGE TRANSFORMERS 50/60 Hz

Catalog Number	Replaces Neoprene	Rated Watts	Prim/Sec. Rating	Fig.	T Dim. cm/in.	Lead Lengths		Appr. Ship. Wt.	
						Primary	Secondary	Kg.	Lbs.
VTA045P120S6.9-01	5045A0	45	120/6.9 V	5	8,9/3.5	38 cm (15")	38 cm (15")	3,1	6.9
VTA045P240S6.9-01	---	45	240/6.9 V	5	8,9/3.5	38 cm (15")	38 cm (15")	3,1	6.9
VTA200P240S30.3-01	5150D1	200	240/30 V	6	9,9/3.9	38 cm (15")	38 cm (15")	5,5	12.0
VTA300P240S45.4-01	3100D1	300	240/45 V	6	11,4/4.5	38 cm (15")	1,2 m (48")	6,6	14.5

Don't see what you want here? Contact us with your requirements or go to our web site to *Create Your Own Transformer.*

 <http://www.amerace.com/NewFiles/technov.html>



Tools

<http://www.amerace.com>

 <http://www.amerace.com/NewFiles/technical1.html> 

Suggested Crimping Tools for use with AMERACE® Connector Kits						
AMERACE Contact Size	FOR USE WITH WIRE GAGE		Available Tools	C R I M P S		Application
	mm ²	AWG		#	Location	
8	2 Stranded 3 Solid	16 Stranded 14 Stranded 14 Solid 12 Solid	T&B WT 111M "AB" Groove Channel Lock #909 * Burndy Y 14MF	2 2 2	Rotate the second crimp or indent at least 90° from the first	Primary Only Primary & Secondary** Primary & Secondary**
6	4 Stranded 6 Solid	12 Stranded 10 Stranded 10 Solid 8 Solid	T&B WT 111M "C" Groove Channel Lock #909 * Burndy Y 14MF	2 2 2	Rotate the second crimp or indent at least 90° from the first	Primary Only Primary & Secondary** Primary & Secondary**
4	6 Stranded 10 Solid	8 Stranded 6 Solid	Channel Lock #909 * Burndy Y 14MF Nico Press 31 "E" Groove T&B TBM 20S "RED" Groove Burndy MR4C "8" Groove	2 2 2 2	Rotate the successive crimp or indent at least 90° from the first	Primary & Secondary** Primary & Secondary** Primary Only Primary Only
3	10 Stranded 16 Solid	6 Stranded 4 Solid	Nico Press 41 "G" Groove T&B TBM 20S "BLUE" Groove Burndy MR4C "6" Groove	2 2 2	Rotate the successive crimp or indent at least 90° from the first	Primary Only Primary Only Primary Only
2	16 Stranded	4 Stranded	Nico Press 41 "J" Groove	2	Rotate the successive crimp or indent at least 90° from the first	Primary Only

* Modified

** Secondary 1 crimp only

OTHER LINKS TO OUR WEBSITE

Secondary shorting plug

 <http://www.amerace.com/NewFiles/ffscable.html> 

Secondary waterproof cap

 <http://www.amerace.com/NewFiles/ffscable.html> 

Bulletin - Multiple Transformers to Feed One Load

 <http://www.amerace.com/NewFiles/bullet3.html> 

Secondary Y cables - for series or parallel connections

 <http://www.amerace.com/NewFiles/ffscable.html> 

4-Pole Connectors

 <http://www.amerace.com/NewFiles/swedish.html> 

Streetlight Connections

 <http://www.amerace.com/NewFiles/street1.html> 

Bulletin - Preparation of Screened Cable for Installation of Primary Connectors

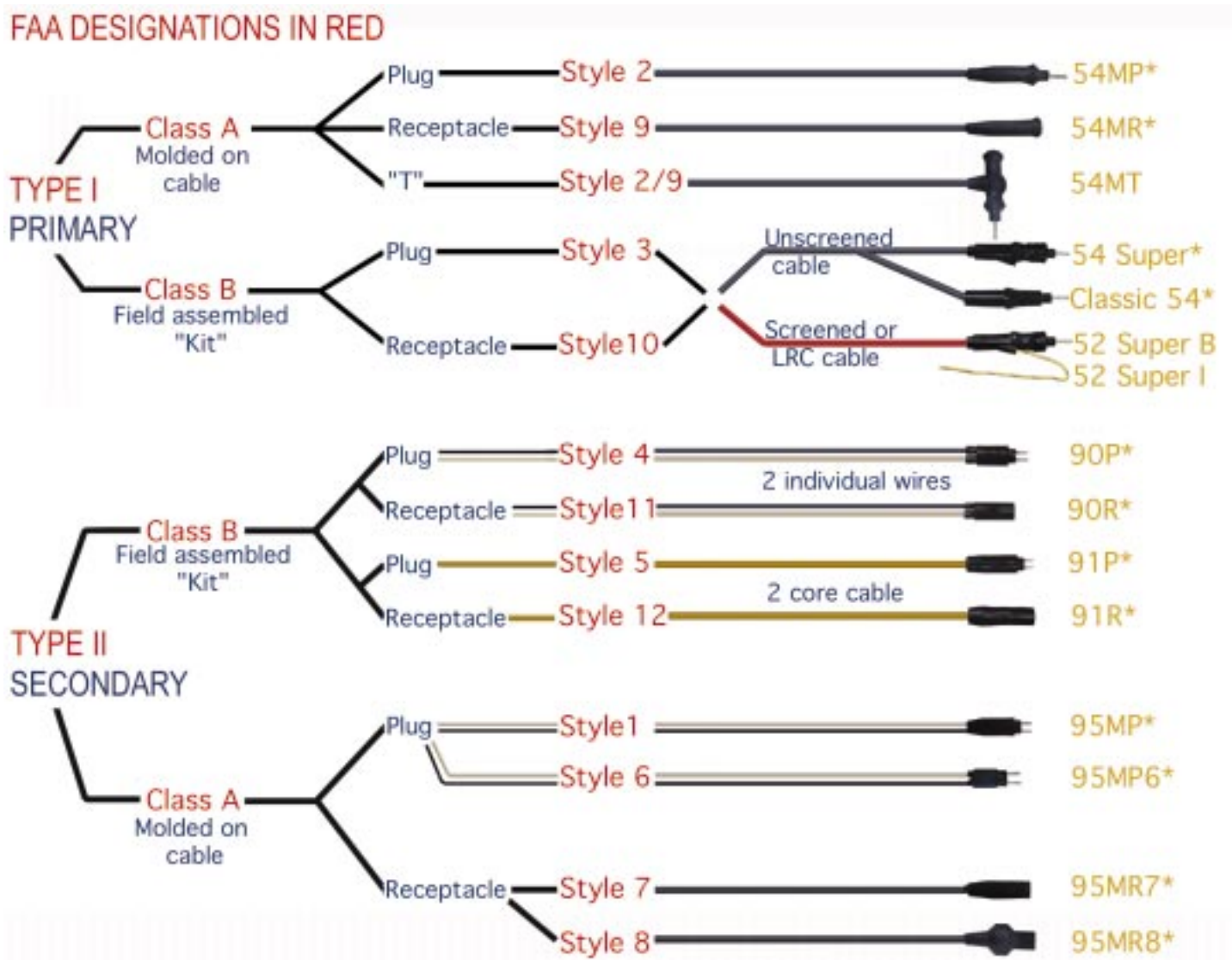
 <http://www.amerace.com/NewFiles/bullet2.html> 

End of Line Caps for Voltage Transformers

 <http://www.amerace.com/NewFiles/voltxfmr.html> 

AMERACE AIRPORT LIGHTING Guide to FAA L823 Connectors

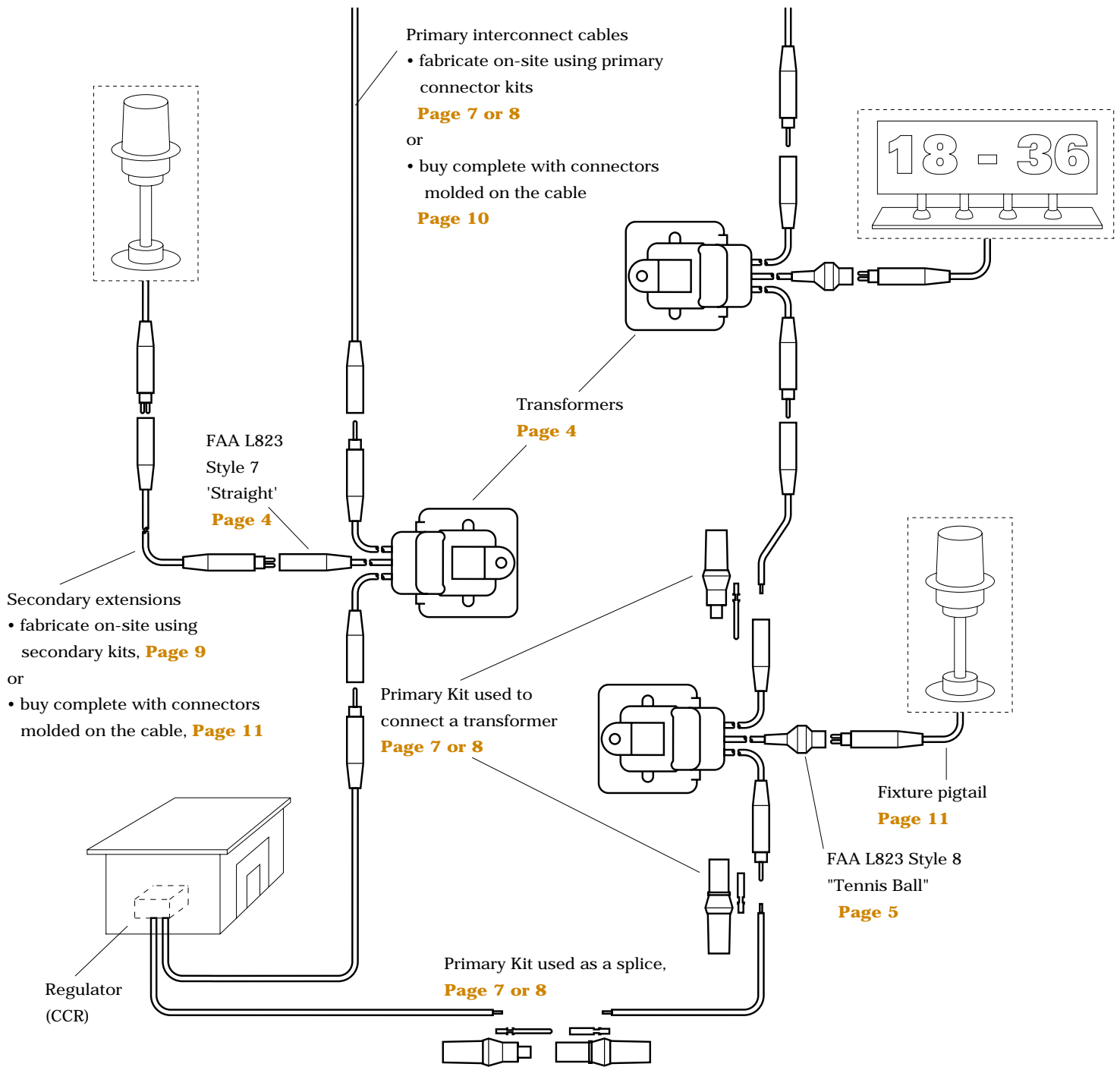
<http://www.amerace.com>



The * symbol indicates the connector is certified by ETL, and listed in the FAA AC 150/5345-IV "Approved Airport Equipment". This list is updated monthly and may be downloaded from:

 <http://www.faa.gov/arp/pdf/534553ad.pdf>

TYPICAL SERIES LIGHTING CIRCUIT



We supply products for airports around the world, directly and through selected original equipment manufacturers and distributors. We welcome your enquiries.

Email: sales@amerace.com or for a list of current email addresses go to:

 <http://www.amerace.com/NewFiles/contacts.html>



AMERACE

A Division of Thomas & Betts

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