



Cross Section

Longitudinal
Section

Introducing AMPLIVAR for Motor Production

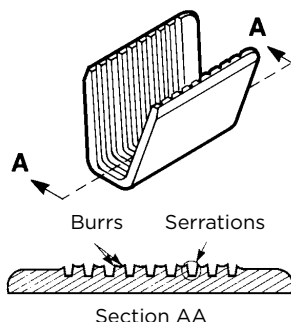
TE Connectivity offers a full selection of AMP AMPLIVAR splices that are specifically designed to terminate magnet wire to itself or in combination with standard solid or stranded lead wire.

AMPLIVAR splices have machined, sharp edged serrations inside the crimp barrels. These serrations, made by a special production process, pierce the insulating layer of magnet wires in a manner that provides a large contact area.

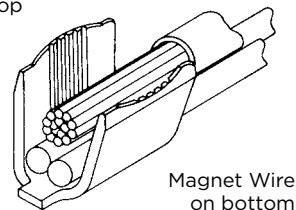
In a one-step operation the magnet wire is automatically multiple ring-stripped of its insulation as it is forced into the serrations during the precisely controlled crimp. The resulting termination produces a high tensile strength, air-sealed connection that is as resistant to corrosion as the insulated conductor.

As many as three magnet wires can be terminated simultaneously in one splice. In addition, copper or aluminum magnet wire, or a combination of both, can be terminated. When required, copper or aluminum magnet wire can be combined with standard, pre-stripped solid or stranded lead wires.

Depending on your specific application, AMPLIVAR splices in this guidance are available in the 400 to 13000 CMA range and for others out of this range, you can always consult TE engineers. The crimping of AMPLIVAR splices is done by semiautomatic crimping machines for high output per hour production rates.



Stranded Wire
on top



Magnet Wire
on bottom

KEY FEATURES

- Compression crimp eliminates cold solder points, weld burns and wire embrittlement usually connected with thermal-type terminations
- Excellent tensile strength—vibration resistant
- Provides a superior electrical connection that is free of many contaminants such as stripper residue and solder flux
- Precision formed, strip-fed splices terminated in AMP automatic machines for high production rates per hour
- High termination rates, low wire consumption and the elimination of rejects caused by solder flux or heat damage results in the lowest applied costs
- Precisely controlled crimp termination helps eliminate human error for maximum reliability
- Splice up to 3 magnet wires together with stranded lead in one barrel

MATERIALS

- Tin-plated brass

APPLICATIONS

- Motor windings and connections
- Coil connections
- Transformer windings and connections
- Solid wire connections
- Lighting ballasts
- Power supplies
- Starters and alternators

SPECIFICATIONS

- 114-2003
- 108-32030

te.com/products/magnetwire



Product Offering

Pigtail-type Splice Base Number	AWG [mm ²]	Wire Range	CMA	Stock Thickness	Crimp Width	APT 5A □ -2161800- □	APT 5E □ -2161900- □
62303-2	24-18.5 0.26-0.80	.020-.039 0.55-1.00	400-1500	0.016 0.41	.080[2.03]	1-[-]3	1-[-]3
62304-2	22-15.5 0.38-1.54	.028-.055 0.70-1.40	600-3000	0.02 0.51	.110[2.79]	1-[-]2	1-[-]2
62305-2	22-15.5 0.38-1.54	.028-.055 0.70-1.40	600-3000	0.016 0.41	.110[2.79]	1-[-]2	1-[-]2
62306-2	18.5-13.5 0.80-2.54	.039-.071 1.00-1.80	1500-5000	0.02 0.51	.140[3.56]	1-[-]0	1-[-]0
62306-2	18.5-13.5 0.80-2.54	.039-.071 1.00-1.80	1500-5000	0.02 0.51	.110[2.79]	1-[-]1	1-[-]1
62307-2	18.5-13.5 0.80-2.54	.039-.071 1.00-1.80	1500-5000	0.016 0.41	.110[2.79]	1-[-]1	1-[-]1
62308-2	15.5-12 1.54-3.46	.055-.083 1.40-2.10	3000-7000	0.02 0.51	.140[3.56]	1-[-]9	1-[-]9
62308-2	15.5-12 1.54-3.46	.055-.083 1.40-2.10	3000-7000	0.02 0.51	.180[4.57]	1-[-]5	1-[-]5
62309-2	13.5-10 2.54-4.90	.071-.098 1.80-2.50	5000-10,000	0.025 0.64	.220[5.59]	1-[-]4	1-[-]4
62309-2	13.5-10 2.54-4.90	.071-.098 1.80-2.50	5000-10,000	0.025 0.64	.180[4.57]	1-[-]5	1-[-]5
62310-2	12-9 3.46-6.38	.083-.112 2.10-2.85	7000-13,000	0.025 0.64	.220[5.59]	1-[-]2	1-[-]2
62310-2	12-9 3.46-6.38	.083-.112 2.10-2.85	7000-13,000	0.025 0.64	.180[4.57]	1-[-]4	1-[-]4

Application tooling

Part Number	Description
2161800	APT 5A Terminator
2161900	APT 5E Terminator
2161850	APT 5A Terminator for Direct Connect
2161950	APT 5A Terminator for Direct Connect

How to choose a p/n

Example (with insulation film): - 0.35mm Cu magnet wire, 1pcs - 0.68mm Al magnet wire, 1pcs -0.8—0.9² lead wire, 19 stranded lead wire, 0.233mm each, 1pcs

Calculate wires' CMA Formula=(Dia[mm]/25.4) ² ×10 ⁶ (Dia[in]) ² ×10 ⁶	(0.35/25.4) ² ×10 ⁶ =190 (0.68/25.4) ² ×10 ⁶ =717 (0.233/25.4) ² ×10 ⁶ ×19=1599
Calculate the sum of all CMA	190+717+1599=2506
Choose a p/n from the list	62305-2
Calculate the sum of magnet wire diameter	0.35+0.68=1.03
Find the stock thickness of the chosen p/n from the list	0.41 (62305-2)
Calculate the sum of magnet wire diameter and double of the stock thickness, then compare the sum with the crimp width from the list Formula=(sum of magnet wire diameter + stock thickness×2≤crimp width)	1.03+0.41×2=1.85≤2.79 (62305-2)

* Please download the drawing from TE website to find the formula for calculating the crimp height

te.com/products/magnetwire

