

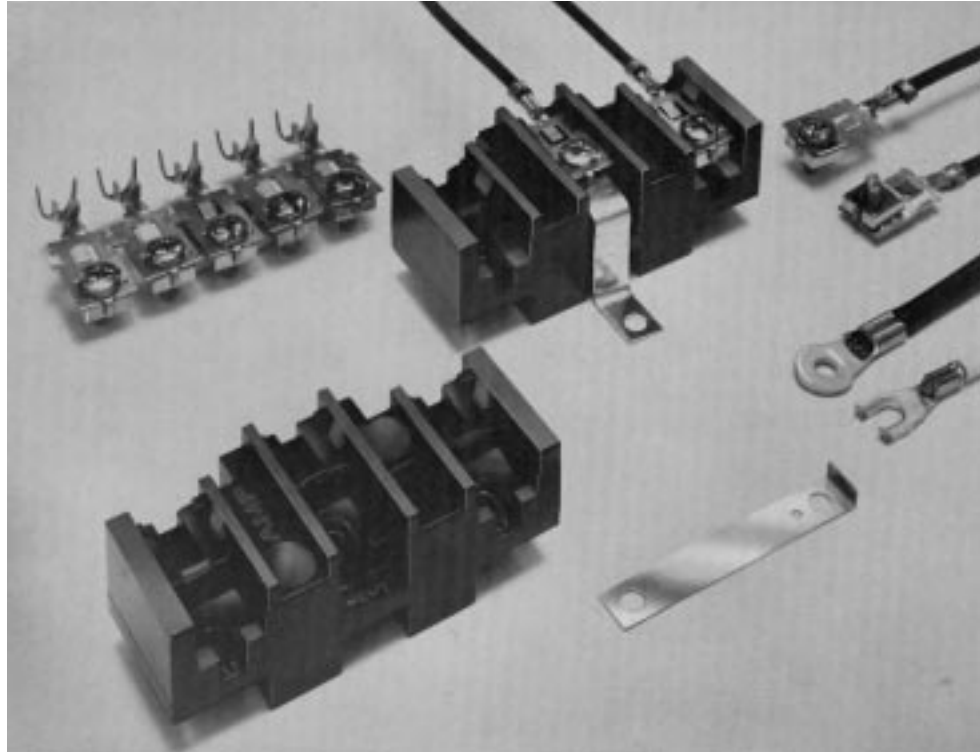


### Product Facts

- Simplifies and facilitates power integration for washers, dryers, air conditioners and other household appliances
- Power Rings snap into 3-position phenolic Power Block, further facilitating installation
- Power Block is easily mounted in appliance using sheet metal screws
- Power Block and Power Rings allow easy attachment of power cords or direct wiring with 10 through 6 AWG [5 through 15 mm<sup>2</sup>] cable in accordance with National Electrical Code requirements
- Recognized under the Component Program of Underwriters Laboratories Inc. File No. E60677 (Power Block) File No. E13288 (Power Ring) 
- Certified by Canadian Standards Association File No. LR84713 (Power Block) File No. LR7189 (Power Ring) 



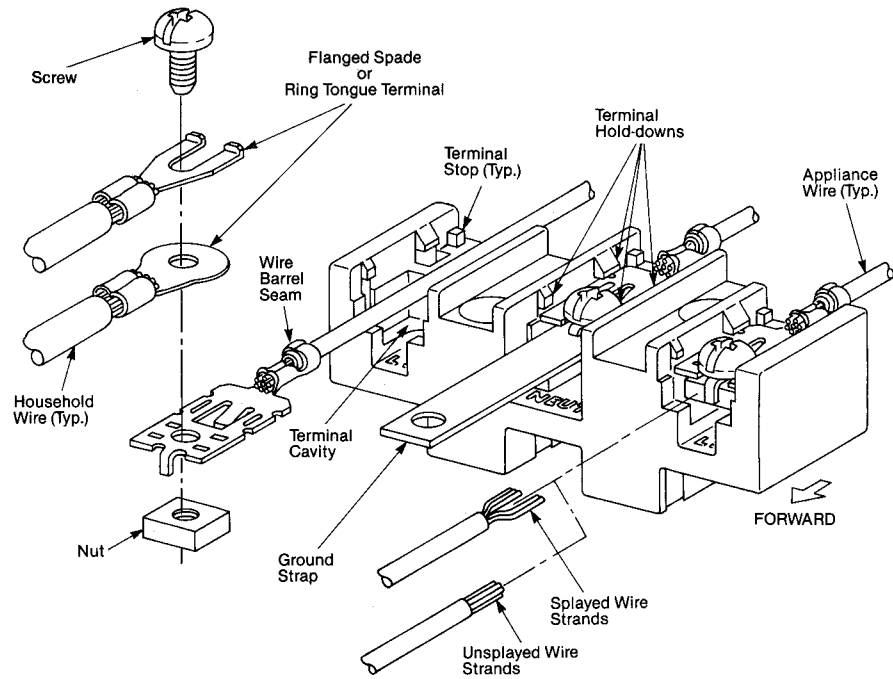
AMP Power Blocks and Power Rings are the main elements in the AMP "power block connector system" that simplifies integrating power connections in washers, dryers, air conditioners and other household appliances. These Power Blocks and Power Rings permit you to easily attach standard power cords or stranded copper wire within a range of 10 through 6 AWG [5 through 15mm<sup>2</sup>] to appliances in accordance with National Electrical Code requirements. The connecting wire can remain unterminated or it can be terminated to any precision, formed or custom-made terminal with a maximum thickness of .125 [3.18]. or you can use AMP optional Ring Tongue or Flanged Spade Terminals to connect the wire to the Power Rings.

Installing the "power block connector system" in the appliance is a "snap". The 3-position phenolic Power Block is mounted in the appliance using sheet metal screws. The brass or pre-tin Power Rings snap into the Power Block. Optional AMP tooling further facilitates connecting power cords or wires.

Outstanding features of the "connector system" include Power Rings with pre-assembled nuts and screws; 16 to 10 AWG [1.25 to 6 mm<sup>2</sup>] capability (including two 14's or two 12's) in the same contact for harnessing simplicity; and a contact retention tyne that locks into the Power Block without need for additional hardware.

For complete product information, order Catalog 89-896

### Power Block and Power Rings Connector System

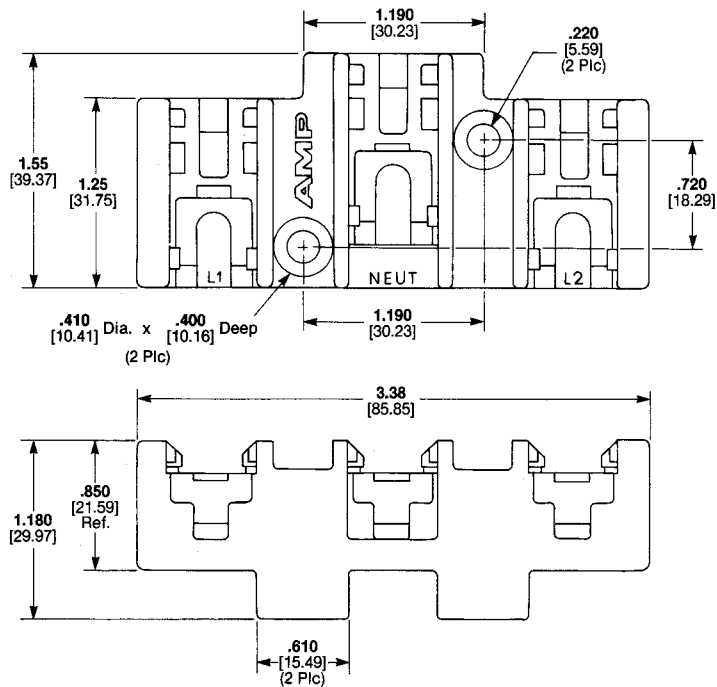


### Power Block

**Part Number** 520942-2

**Material:**

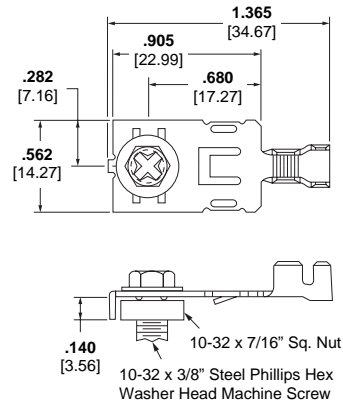
Black phenolic 94V-1 Rated



**Note:** Appliance and household wire supplied by user.

For complete product information, order Catalog 89-896

### Power Rings

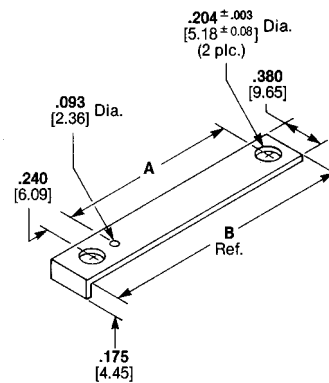


Wire Size		Insulation Diameter Range	Finish	Power Ring Part Number	Applicator Number
AWG	mm <sup>2</sup>				
16-12	1.25-3.00	.110-.160 2.79-4.06	Pre-Tin Plated	520994-1	567253-2

### Grounding Strap

**Material:**

Plain Copper



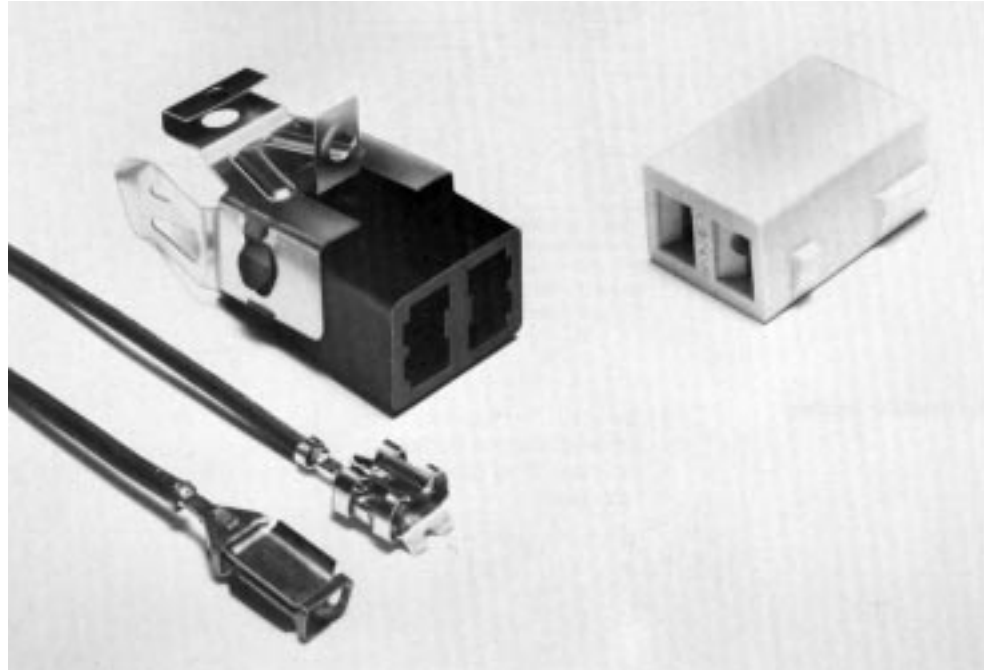
Dimensions		Part Numbers
A	B	
1.650 41.91	2.340 59.44	63450-1*
1.40 35.56	2.09 53.10	1217143-1

\*Pre-tin

For complete product information, order Catalog 89-896

### Product Facts

- Accepted as the industry standard by leading kitchen-range manufacturers
- Designed for easy connection of surface burners in ranges of virtually any manufacturer
- Permits a manufacturer to use high-speed equipment to terminate leads
- Permits easy interchange of cooking or burner elements
- Available with a housing of heat-resistant phenolic for temperatures up to 300°C...or with a porcelain housing for temperatures above 300°C
- Lab tests indicate connectors still good after 3500 mating/unmating cycles
- Housings snap into any of the four AMP Clips
- Recognized under the Component Program of Underwriters Laboratories Inc. File No. E70200
- Certified by the Canadian Standards Association File No. LR7189



Accepted as the industry standard by virtually all kitchen-range manufacturers, AMP Surface Burner Connector system comprises a phenolic or porcelain housing, a plug-in receptacle and a clip. This system is easily assembled. The phenolic or porcelain housing snaps into the clip and the receptacle plugs into the housing. Receptacle design permits a manufacturer to use "high-speed" equipment to terminate leads. The clips are available in four different configurations to satisfy various range and burner designs.

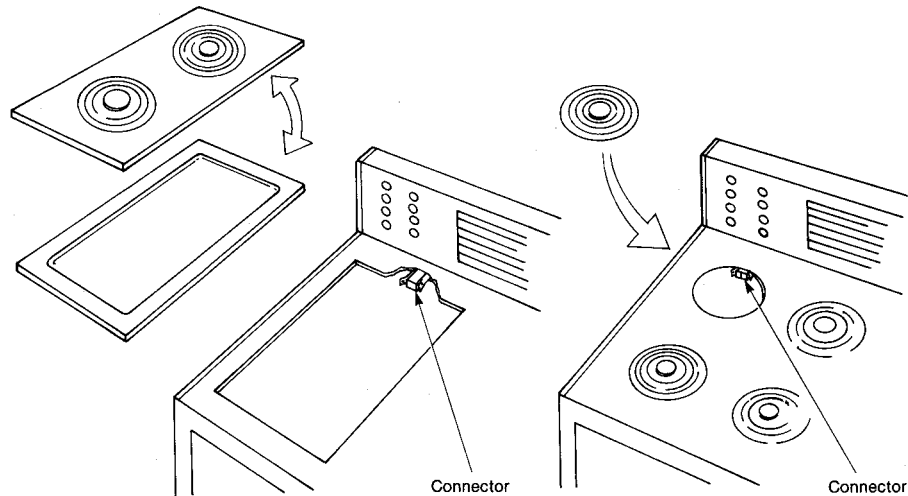
The heat-resistant phenolic housings are used for temperatures up to 300°C...the porcelain housings for temperatures over 300°C. The phenolic

housings are used primarily on ranges with "standard" burners and the porcelain housings on ranges with interchangeable cooking modules such as grills and broilers. The porcelain housings are available in two configurations, one of which snaps into an AMP Clip, and the second into a "purchased" or "user" Clip.

AMP Surface Burner connector systems facilitate changing cooking elements. Tests demonstrate these systems still operating after 3500 cycles of mating and unmating. All connectors carry UL recognition and CSA certification.

If you need special Surface Burner Connectors for special uses or applications, please contact Tyco Electronics.

**Heavy-Duty Burner Connector Housings, Clips and Receptacles**



For Ranges with Interchangeable Cooking Modules

For Ranges with Standard Burner Configurations

**Housings**

**Housing Part Number 770524-1**

**Material:**

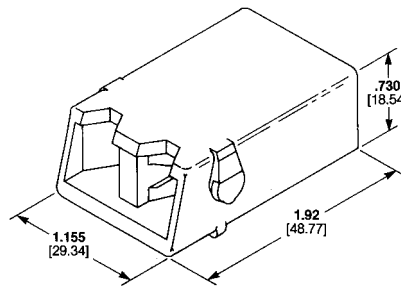
Phenolic, black, heat resistant grade

**Housings Part Number 770324-1**

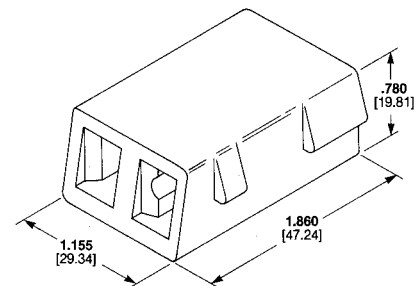
**Material:**

Porcelain, natural

**Note:** 770324-1 Housing is used with an AMP Clip



**Part Number 770524-1**



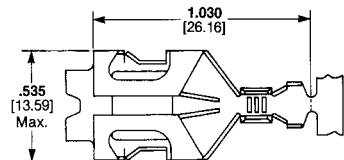
**Part Number 770324-1**

**Receptacle**

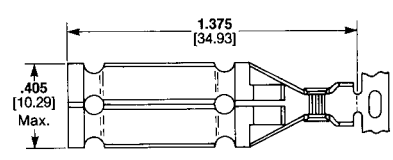
**Material:**

**Part Number 640748-1**—Copper, Nickel-Tin, Alloy 725

**Part Number 770321-1**—Copper Alloy 195



**Part Number 640748-1<sup>1</sup>**



**Part Number 770321-1<sup>2</sup>**

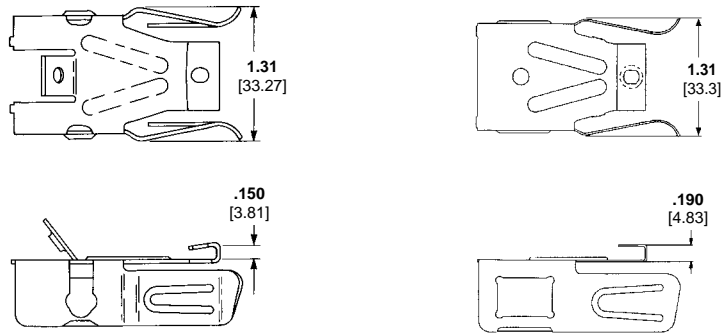
<sup>1</sup> Receptacle Part Number 640748 used with standard surface burner units only.  
<sup>2</sup> Receptacle Part Number 770321 used with interchangeable modules only.

### Connector Clips

**Material:**

Stainless Steel

**Part Number** 640750-1



### Fluorescent Tube Socket, Housings

**Housing Part Number** 1-480344-0

**Material:**

Phenolic, black

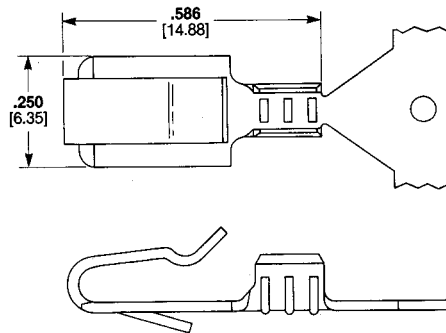
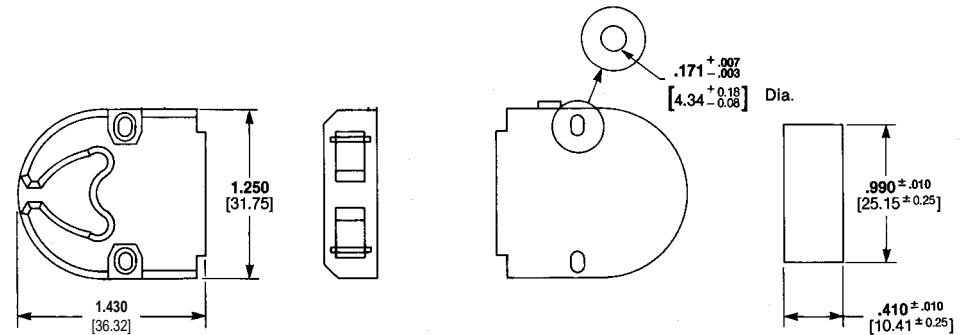
**Lamp Socket Terminals**

**Material and Finish:**

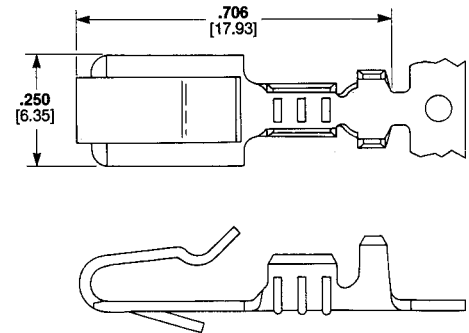
Brass; see table below right for finish.

**Wire Size:**

20-16 AWG [0.5-1.4 mm<sup>2</sup>]



**Type A**  
Part Number 640483



**Type B**  
Part Number 60805

Type	Insulation Diameter Maximum	Finish	Quick-Change Part Numbers	Quick-Change Applicator for AMP-O-ELECTRIC	Integral Die Applicator for AMPOMATOR	Hand Tool
A	—	—	640483-1	466695-2	466695-1	—
B	.130 3.3	Tin	60805-2 60805-3	466390-2 *	466390-1 *	47044-2

\*Contact the Technical Support Center for applicator information.

**Application Tooling**

See chart at right for hand tool and applicator numbers.

### Introduction



As a result of the increasing globalization of the Appliance marketplace, products designed to comply with the European Rast 5 and 2.5 standard have become increasingly more important to U.S. manufacturers. AMP is able to support designs to this standard by offering a complete range of products and corresponding application tooling for harness manufacture. RAST 5 and 2.5 are acronyms for:

<b>R</b> aster	Centerline
<b>A</b> nschluss	Connection
<b>S</b> teck	Plug
<b>T</b> echnik	Technology
<b>5/2.5</b>	Pitch in mm

The RAST standard describes standard mating interface features for various appliance components such as motors, water pumps, etc. Covered in the mating interface features are:

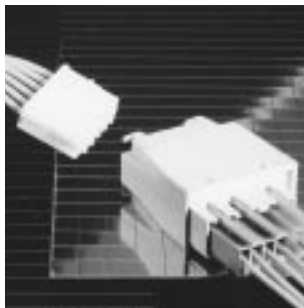
- Position of locking latch
- Position of keying ribs
- Position of polarization ribs
- Number of positions
- Electrical function of each tab

AMP has several product families from crimp-snap to insulation displacement connector systems (IDC) which are designed in accordance with the RAST standard and can assist manufacturers who are just

beginning to use RAST compatible components as well as those ready to implement fully automated production of a wiring harness. Appliances and harnesses built using the RAST designed components and harnesses have the potential to offer the following advantages:

- Lower labor cost
  - Lower rate of plugging errors
  - Less potential for damage to individual contacts during assembly
  - Lower stress for the final assembly worker due to lower mating forces

### AMP Standard Timer in In-Line Mating Technology



AMP Standard Timer connectors according to RAST 5.0 mm standard have been developed to connect RAST 5 components (like motors, leach pumps, water level regulators, relays and push-button switches) in the Household Appliances Industry.

They meet industry requirements, for example multiple position connectors, secure connection even at inclining mating as well as a sturdy contact design.

AMP Standard Power Timer contacts, for use with Standard Timer housings, are suitable for high density and high current capacity up to 16 A.

Housing is designed for end-to-end stacking without contact loss. They are available in different keying and locking versions from 2- positions to 12-positions.

Standard Timer contacts can be used with stranded wires from

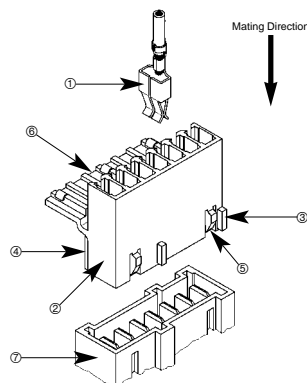
0.5 mm<sup>2</sup> to 2.5 mm<sup>2</sup> and can be double terminated. Of course, the corresponding tooling is available, too.

AMP Standard Timer connectors are tested by VDE and fulfill all requirements acc. to VDE 0700 (air gap, creepage distance, glow wire test, ball pressure test, creepage current strength). UL recognized component.

#### Interior Locking

Connection to the Components according to RAST 5 Standard

- ① Connected Timer Contact
- ② Standard Timer Housing with Interior Locking
- ③ Keying
- ④ Polarization
- ⑤ Locking Latch
- ⑥ Cover (Secondary Locking)
- ⑦ RAST 5 Tab Array

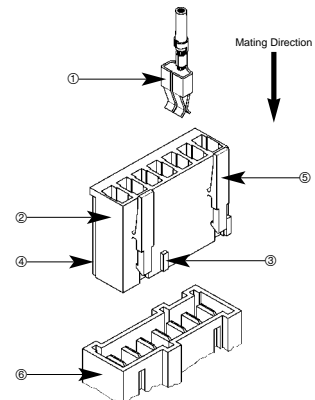


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#### Exterior Locking

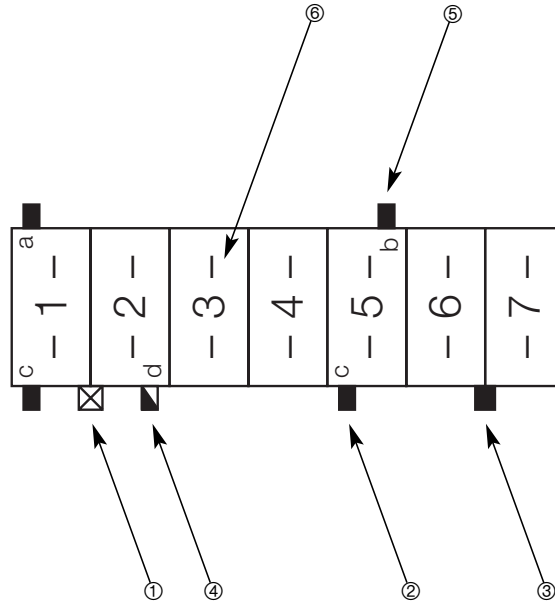
Connection to the Components according to RAST 5 Standard

- ① Connected Timer Contact
- ② Standard Timer Housing with Exterior Locking
- ③ Keying
- ④ Polarization
- ⑤ Locking Latch
- ⑥ RAST 5 Tab Array



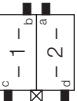
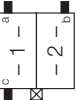
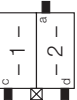

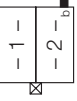
### Keying Plan from Mating Direction

- ① Locking Latch
- ② Keying Rib
- ③ Keying Rib between Cavity
- ④ Slanted Keying Rib
- ⑤ Polarization Rib
- ⑥ Cavity Number



### 2 Position RAST 5 Variations

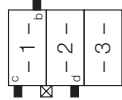
### Standard Timer Housings

RAST 5 Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	Natural	928344-2	6-928247-2	—
	Black	—	928247-2	—
	Gray	3-964951-2	—	—
	Green	6-928344-2	5-928247-2	—
	Yellow	928343-2	—	—

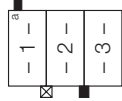
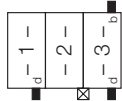
For complete product information, order Catalog 296599

### Standard Timer Housings

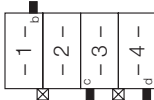
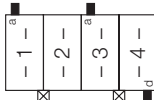
#### 3 Position RAST 5 Variation

RAST 5 Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	03-A	Natural	928344-3	—

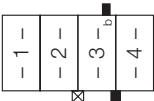
#### 3 Position Special Variations

Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	—	Natural	928343-3	—
	—	Yellow	—	928247-3

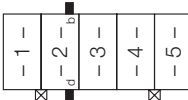
#### 4 Position RAST 5 Variations

RAST 5 Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	04-A	Natural	928344-4	—
	04-F	White	—	2-928247-4

#### 4 Position Special Variation

Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	—	Natural	928343-4	—

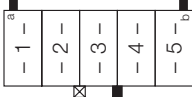
#### 5 Position RAST 5 Variation

RAST 5 Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	05-B	Black	—	2-928247-5

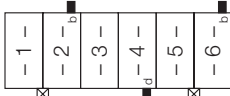
For complete product information, order Catalog 296599

### Standard Timer Housings

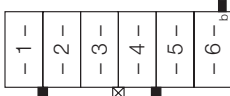
#### 5 Position Special Variation

Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	—	Natural	928343-5	—

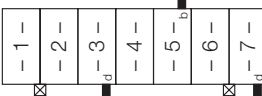
#### 6 Position RAST 5 Variation

RAST 5 Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	06-D	Blue	2-928247-6	—

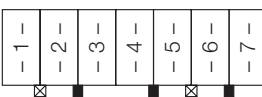

#### 6 Position Special Variation

Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	—	Natural	928343-6	—

#### 7 Position RAST 5 Variation

RAST 5 Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	07-C	Gray	928247-7	—

#### 7 Position Special Variations

Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	—	Natural	928343-7	—
	—	Natural	928344-7	—

For complete product information, order Catalog 296599

### Standard Timer Housings

#### 8 Position Special Variation

Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	—	Black	2-928343-8	—

#### 9 Position RAST 5 Variation

RAST 5 Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	09-D	Blue	—	2-928247-9

#### 9 Position Special Variation

Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	—	Natural	927740-9	—

#### 10 Position Special Variation

Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	—	Brown	—	1-928247-0

#### 11 Position RAST 5 Variation

RAST 5 Version	Keying Version	Color	Part Numbers	
			Interior Locking	Exterior Locking
	11-B	Black	—	1-928247-1

For complete product information, order Catalog 296599

### Standard Timer Housings

#### 11 Position Special Variation

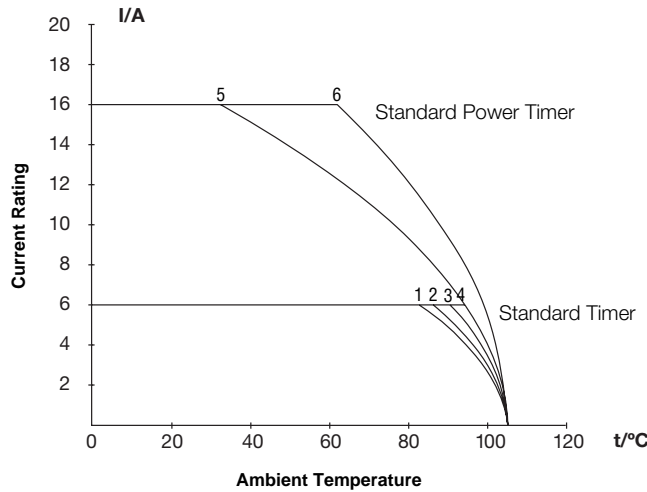
Version	Color	Part Numbers	
		Interior Locking	Exterior Locking
	Natural	1-927740-1	—

#### 12 Position Special Variation

Version	Color	Part Numbers	
		Interior Locking	Exterior Locking
	Natural	1-927740-2	—

#### Standard Timer Connector

Derating Curve



**Material:**

Brass, tin plated

**Mating Part:**

6.3 tab

**Material:**

Brass, tin plated

**Wire:**

FLK 0.5/0.75 and 1.5 mm<sup>2</sup>

Current Carrying Capacity to 6 A:

1 = Wire 0.50 mm<sup>2</sup>, 11pos. housing

2 = Wire 0.75 mm<sup>2</sup>, 11pos. housing

3 = Wire 0.50 mm<sup>2</sup>, 02pos. housing

4 = Wire 0.75 mm<sup>2</sup>, 02pos. housing

Current Carrying Capacity to 16 A:

5 = Wire 1.50 mm<sup>2</sup>, 11pos. housing

6 = Wire 1.50 mm<sup>2</sup>, 02pos. housing

### Standard Timer Contacts

#### Standard Timer Contacts with One Locking Lance

	Wire Size mm <sup>2</sup>	Insulation Dia. Range	Material	Finish	Part Numbers
	0.5-1.0	.055-.091 1.4-2.3	Brass	Tin Plated	928820-1
	1.0-2.5	.118-.169 3.0-4.3			926973-1

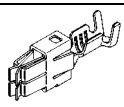
#### Standard Timer Contacts with Two Locking Lances

	Wire Size mm <sup>2</sup>	Insulation Dia. Range	Material	Finish	Part Numbers
	0.5-1.0	.055-.091 1.4-2.3	Brass	Tin Plated	964201-1
	1.0-2.5	.118-.169 3.0-4.3			964202-1

For complete product information, order Catalog 296599

### Standard Power Timer Contacts

### Standard Timer Contacts

	Wire Size mm <sup>2</sup>	Insulation Dia. Range	Material	Finish	Part Numbers
	1.0-2.5	.087-.118 2.2-3.0	Copper Iron	Tin Plated	964203-1
				Silver Plated	964203-5
	1.5-3.0	.078 x .118 max. 2 x 3.0		Tin Plated	964204-1
				Silver Plated	964204-5

### AMP Multifitting Connectors in In-Line Mating Technology



The modular connector system incorporates modern in-line mating technology on a .197 [5.0 mm] centerline, 2- to 12 positions, with no loss of spacing and a variety of keying possibilities.

The AMP Multifitting connector system program was developed by AMP for economic and efficient cable harness production

using newly developed AMP application tooling. This connector program uses insulation displacement contacts: AMP Multifitting connectors.

This system is suitable for termination of 0.5 mm<sup>2</sup> to 0.75 mm<sup>2</sup> leads. The housing cover has two special functions providing reliable strain relief by independent locking in the housing, as well as allowing a 90° or 180° wire exit.

AMP Multifitting connectors are fed into the machine from reels, saving time and money.

The new modular component connecting devices, .248 [6.3 mm] or .189 [4.8 mm] tabs, are terminated quickly and easily.

The AMP Multifitting connector is tested by VDE.

UL recognized component.

### AMP Multifitting Edge One-Piece Connector System



This AMP Multifitting Edge One-Piece Connector System in .197 [5.0 mm] centerline has specially been developed for the household appliance industry.

Suitable are 12- as well as 7-stranded wires with a wire size range of 0.5 mm<sup>2</sup> to 0.75 mm<sup>2</sup>.

The single wires are fixed through a separate cover. Only a few basic part

numbers are needed to enable customers to produce all the required keying in accordance to RAST 5 standard during the termination process on the AMP application tooling.

Misalignment is avoided through a separately mounted frame on the printed circuit board, which has also a latching function.

As termination equipment a complete range from hand

tool up to a modular high-speed harness-maker for manufacturing double ended cable assemblies, using insulation displacement technique, can be offered.

For complete product information, order Catalog 296599

### AMP MONO-SHAPE Connectors in In-Line Mating Technology



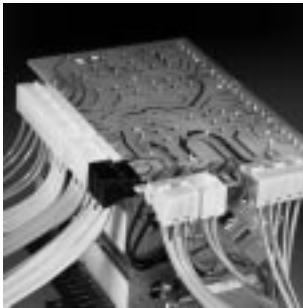
AMP MONO-SHAPE connectors represent a valid solution to the ever-increasing requirements for production and application flexibility. They are high productivity, great flexibility, quality, minimum applied cost.

AMP MONO-SHAPE product-line includes a full range of .197 [5.0 mm] pitch modular connector contents with similar outer shape, several variations in the mating area such as PC Board and .248 x .031 [6.3 x 0.8 mm] tabs (RAST 5), plus a version for harness shunts.

AMP MONO-SHAPE connection system adopts the IDC termination technology, which improves application results and quality level.

The AMP MONO-SHAPE product range, combined with the performances and properties offered by the termination system, allows the manufacture of extremely complicated harness structures while still maintaining high production levels.

### AMP MT-Edge Card Edge Connectors



AMP developed the MT-Edge Card Edge, .197 [5.0 mm] centerline, connector range for the household appliance industry. AMP offers a choice of Edge Connector types, contact centerlines and number of housing positions.

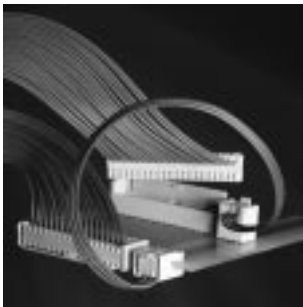
Pre-loaded insulation displacement contacts are terminated using fully or semi-automatic machines.

This connector system meets the requirements of DIN 41611, Part 6 and VDE 0627, 6 A current rating.

#### Features

- Optimum contact design with special forked spring construction
- Application tooling is available for various production volumes

### AMP DUOPLUG 2.5 Connector System for Wire-to-Board Applications



The AMP DUOPLUG 2.5 Connector System offers a complete printed circuit board system which is suitable for edge as well as female to header applications using the same female part.

The top of the female contact is provided with an IDC slot, a technique which permits high speed wire termination. Application tooling specially developed for this system can

produce cable assemblies with connectors at one or both ends.

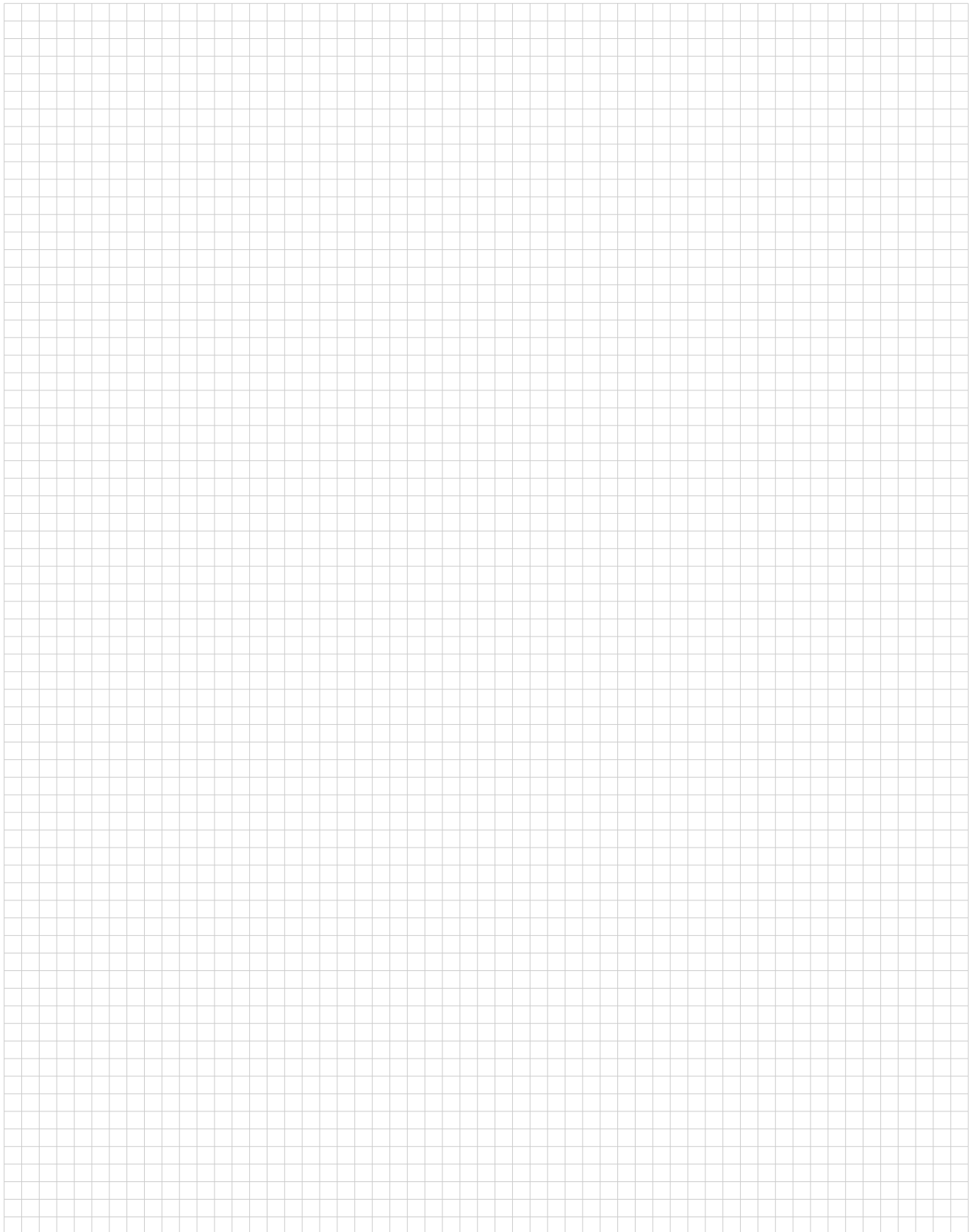
The connector keying is produced with a cutting unit on the application tooling machine.

#### Applications

- Household Appliances
- Consumer Electronics
- Telecommunication Industry
- Automotive Industry
- Vending Machines
- Measuring Devices and others

For complete product information, order Catalog 296599

### Engineering Notes



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