

# POTTER & BRUMFIELD SOCKETS & ACCESSORIES, R10 RELAYS

## SIGNAL RELAYS

### INTRODUCTION

TE Connectivity (TE)'s Relay accessories are essential devices that support the design and maintenance of relays in electrical circuits. This series of relay accessories includes hold-down springs, mounting adapters, and sockets. Mounting adapters facilitate compatibility between different standard socket types. Sockets are used for relay mounting in various configurations, such as solder and PC terminal sockets, bracket mount sockets, flange mount sockets, and track mount sockets. Additionally, hold-down springs are employed to secure the relay within the connector.



### FEATURES

- Sockets for 2 - 6 pole relays
- Solder, PCB or screw terminal sockets
- Choice of grounding provision on sockets
- Hold down springs
- Plates and brackets permit various mounting options

### APPROVALS

- UL E59244
- CSA LR15734



Technical data of approved types on request

# POTTER & BRUMFIELD SOCKETS & ACCESSORIES, R10 RELAYS

## SIGNAL RELAYS

### SOLDER AND PC TERMINAL SOCKETS

Rugged, molded socket body retains floating terminals of either solder or printed circuit pin configuration. PC terminal sockets are offered with pins in either 0.1" (2.54mm) grid or in-line arrangement.

### TECHNICAL DATA

Socket contact material	Spring brass, tin plated
Socket body material	
2 and 4 pole models	Polyester
6 pole models	Phenolic
Maximum current	10 A
Voltage drop	30 mV max. at 10 A
Dielectric strength	1,000 Vrms
Insulation resistance	10 <sup>9</sup> megΩ

### GROUNDING PROVISIONS

**Pre-installed on sockets:** Not for use at 5A AC and above.

**Grounding Strip:** Mounting stud of relay contacts grounding strip. Grounding strip is grounded with screw or rivet through round hole in socket.

**Grounding Terminal (PC sockets only):** Mounting stud of relay contacts ground terminal through square hole in socket.

#### STRIP

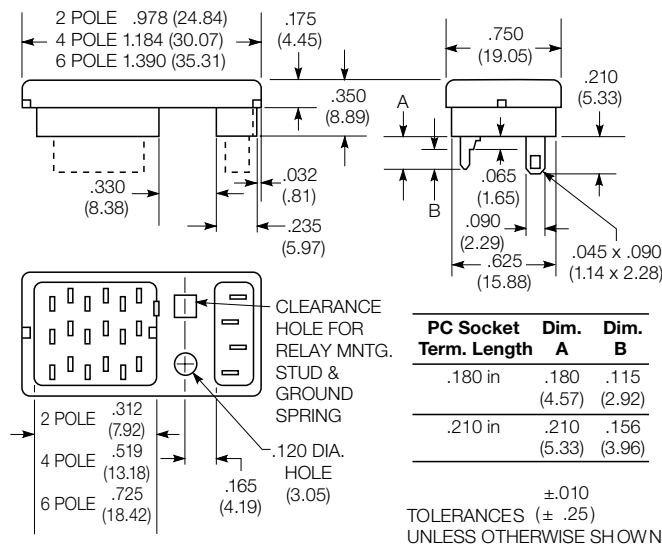


#### TERMINAL



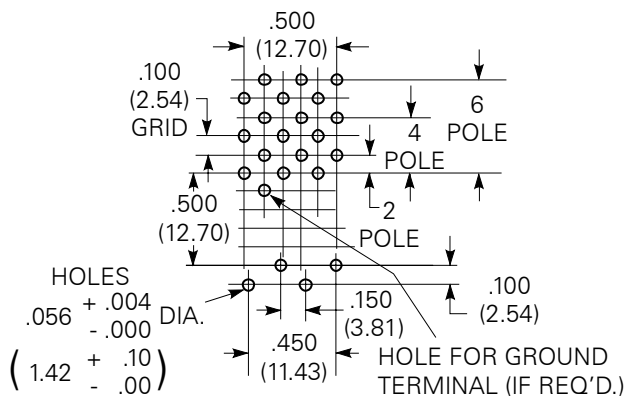
### DIMENSIONS

#### Solder and PC terminal sockets

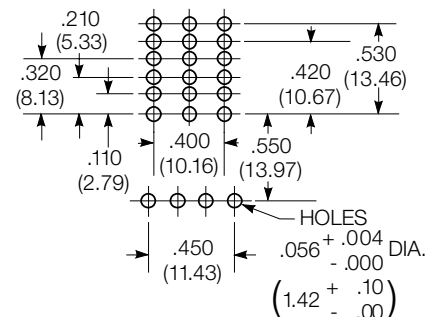


### PCB layout

#### Sockets with staggered PC terminals



#### Sockets with inline PC terminals

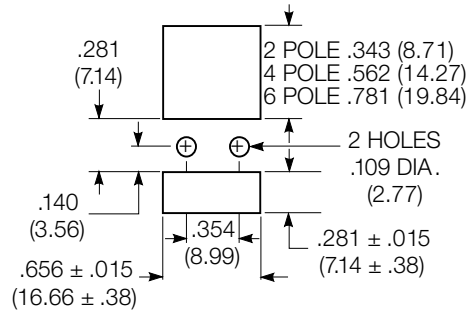


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### PCB layout (top view)

#### Sockets with solder terminals



## PRODUCT INFORMATION

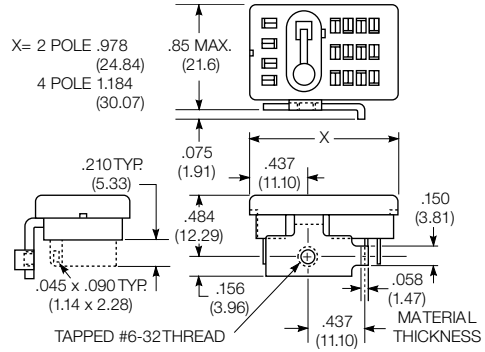
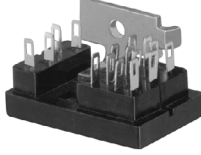
Product code	Poles	Version	Grounding provision	Part Number
27E125	2	Solder terminals	Strip	<a href="#">1393143-8</a>
27E126	4			<a href="#">1393143-9</a>
27E127	6			<a href="#">1-1393143-0</a>
27E162	2		None	<a href="#">1-1393143-6</a>
27E163	4			<a href="#">1-1393143-7</a>
27E164	6			<a href="#">1-1393143-8</a>
27E128	2	PCB terminals, .180" (4.57mm) long, staggered layout	Strip	<a href="#">1-1393143-1</a>
27E129	4			<a href="#">1-1393143-2</a>
27E130	6			<a href="#">1-1393143-3</a>
27E212	2		None	<a href="#">2-1393143-4</a>
27E213	4			<a href="#">2-1393143-5</a>
27E271	6			<a href="#">3-1393143-1</a>
27E193	2	Terminal	<a href="#">2-1393143-1</a>	
27E194	4		<a href="#">2-1393143-2</a>	
27E636	2	PCB terminals, .210" (5.33mm) long, staggered layout	Strip	<a href="#">5-1393143-0</a>
27E637	4			<a href="#">5-1393143-1</a>
27E342	2	PCB terminals, .180" (4.57mm) long, in-line layout	None	<a href="#">3-1393143-6</a>
27E629	4			<a href="#">4-1393143-8</a>
27E630	6			<a href="#">4-1393143-9</a>

#### Caution:

Printed circuit sockets are manufactured with "floating" (loose) terminals. This permits them to align with holes in the circuit board and with the relay terminals. During the mounting and soldering of the socket, vertical float should be eliminated and the terminals seated on the board. (This may be accomplished by inserting a dummy relay in the socket.) Failure to eliminate float may cause fracture of the solder joint or separation of the copper conductor from the printed circuit board when a relay is inserted in the socket after soldering.

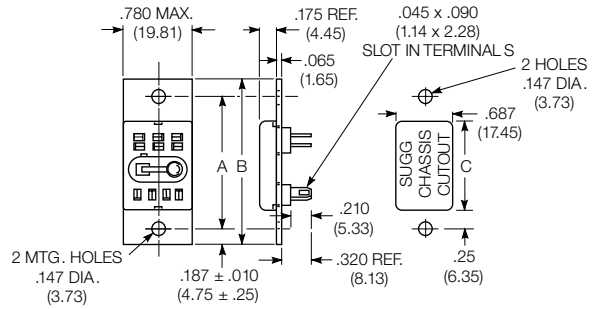
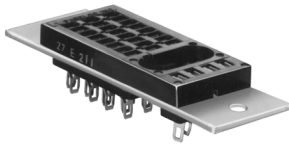
**BRACKET MOUNT SOCKET 27E317 and 27E152**

Allows solder terminal relay to mount flat on a chassis.



**FLANGE MOUNT SOCKET 27E446, 27E447**

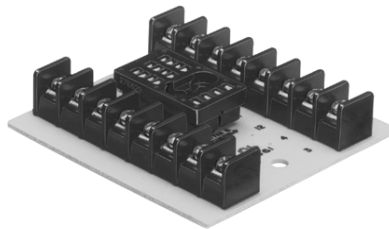
Solder terminal socket with tin-plated terminals and grounding strip pre-assembled on .065" (1.65mm) steel mounting plate. Requires only one chassis cutout.



Socket	Poles	Dim A	Dim B	Dim C
27E446	2	1.437 (36.50)	1.811 (46.02)	.937 (23.80)
27E447	4	1.690 (42.92)	2.062 (52.37)	1.125 (28.58)

**TRACK MOUNT SOCKETS**  
**27E460, 27E461, 27E462**

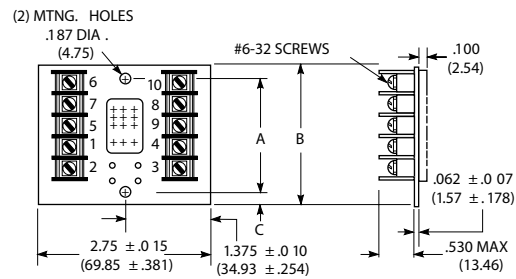
Provides front wiring, screw terminal connections for R10 family relays. No grounding provision.



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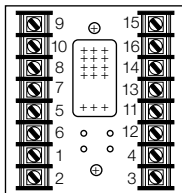
## SIGNAL RELAYS

### 2 pole terminal wiring code

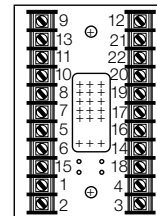


Socket	Poles	Dim A	Dim B	Dim C
27E460	2	1.800 (45.72)	2.20 (55.88)	.20 (5.08)
27E461	4	2.126 (54.00)	2.80 (71.12)	.331 (8.56)
27E462	6	2.812 (71.42)	3.80 (96.52)	.494 (12.54)

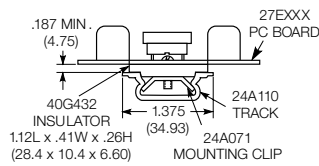
### 4 pole terminal wiring code



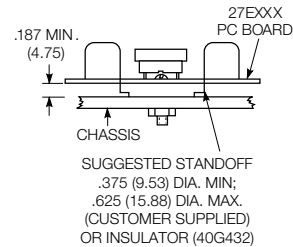
### 6 pole terminal wiring code



### Suggested track mounting



### Suggested chassis mounting



## PRODUCT INFORMATION

Product code	Poles	Terminal type	Mount type	Grounding provision	Part number
27E317	2	Solder	Bracket	Strip	<a href="#">3-1393143-4</a>
27E152	4				<a href="#">1-1393143-5</a>
27E446	2		Flange		<a href="#">4-1393143-1</a>
27E447	4				<a href="#">4-1393143-2</a>
27E460	2	Screw	Track/ chassis	None	<a href="#">1393837-1</a>
27E461	4				<a href="#">4-1393143-4</a>
27E462	6				<a href="#">4-1393143-5</a>

**HOLD DOWN SPRING**

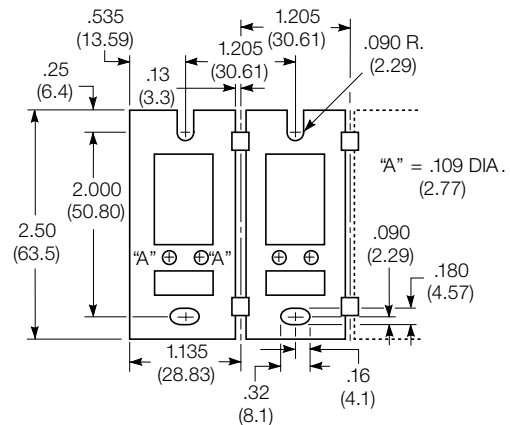


**HOLD DOWN STRAP (PC SOCKETS ONLY)**



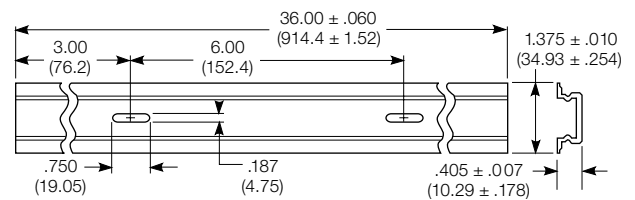
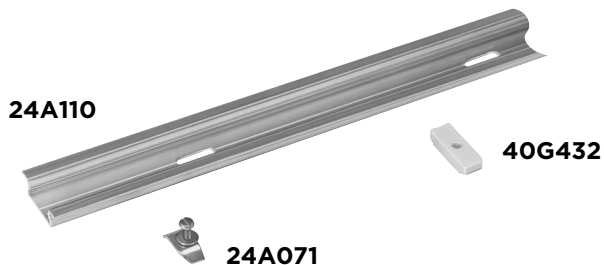
**37D645 - MOUNTING STRIP**

Strip of .060" (1.52mm) aluminum contains ten pre-punched, breakaway mounting plates. Each plate accommodates a 2, 4, 6 or 8 pole solder terminal R10 relay or socket to facilitate chassis- or rack mounting.



**24A110 - MOUNTING TRACK**

Mounting track is designed to accept snap-mount sockets, as well as other P&B screw terminal sockets. Track is made of lightweight, sturdy extruded aluminum and is shipped in three-foot (914cm) lengths with mounting holes on six-inch (152mm) centers. Track can be cut to shorter lengths or used end-to-end.



## PRODUCT INFORMATION

TE Part Number	Arrangement	Part Number
20C249	Hold down spring for 2 pole R10 relays	3-1393159-5
20C250	Hold down spring for 4 pole R10 relays	3-1393159-6
20C251	Hold down spring for 6 pole R10 relays	3-1393159-7
20C266	Hold down spring for 8 pole R10 relays	4-1393159-1
20C259	Hold down strap for R10 relays in PC sockets	4-1393159-0
20C300	Hold down spring for 2 pole R10S relays	4-1393159-4
20C301	Hold down spring for 4 pole R10S relays	4-1393159-5
37D645	Mounting strip - accepts 10 relays or sockets	7-1393143-3
24A110	Mounting track	1419111-6
24A071	Steel mounting clip with #6-32 screw - use with 27E46_ sockets on 24A110 track	1419111-5
40G432	Plastic insulator - use with use with 27E46_ sockets on chassis or with 24A071 clip on 24A110 track	9-1393159-5

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