

# DELTRON

## controls



DIVISION OF DELTRON CORP.

# 310 10 AND 15 AMP MINIATURE RELAYS



### SINGLE POLE DOUBLE THROW (SPDT)

Part Number	Coil Voltage (V)	Coil Res. (Ohms)	Power	Contact Rating	Type
31000-81*	12DC	160	0.9W	15A	SPDT Standard Plug-in/ Solder
31000-82*	24DC	650			
31000-84	100/110DC	11,000			
31004-81	12AC	46	1.2VA		
31004-82	24AC	180			
31004-84*	110/120AC	4,430			
31004-85	220/240AC	18,790			
31008-81	12DC	160	0.9W	15A	SPDT Standard PCB
31008-82	24DC	650			
31012-82	24AC	180	1.2VA		
31012-84	110/120AC	4,430			
31012-85	220/240AC	18,790			

### CONTACT DATA

#### Contact Ratings:

**SPDT:** 15A, 110VAC, 24VDC (Resistive); 10A, 110VAC (Inductive); 7A, 24VDC (Inductive); 15A, 240VAC, 28VDC (Resistive); 5A, 120VAC Tungsten (TV-5); 1/2 HP, 120VAC; 470VA, 120VAC (Pilot Duty)

**DPDT:** 10A, 110VAC, 24VDC (Resistive); 7.5A, 110VAC (Inductive); 5A, 24VDC (Inductive); 13A, 120VAC, 28VDC (Resistive); 12A, 240VAC (Resistive); 3A, 120VAC, Tungsten (TV-3); 1/2HP, 120VAC; 1/3HP, 240VAC, 345VA, 120/240VAC (Pilot Duty)

**4PDT:** 10A, 240VAC, 28VDC (Resistive); 1/2HP, 240VAC, 10A, 110VAC, 24VDC (Resistive); 7.5A, 110VAC (Inductive); 5A, 24VDC (Inductive)

**Contact Material:** Silver Cadmium Oxide

**Max. Operating Voltage:** 250VAC, 125VDC

**Max. Operating Current:**

**SPDT:** 15A

**DPDT/4PDT:** 10A

**Max. Switching Capacity:**

**SPDT, Resistive:** 1,700VA, 360W

**DPDT/4PDT, Resistive:** 1,100VA, 240W

### DOUBLE POLE DOUBLE THROW (DPDT)

Part Number	Coil Voltage (V)	Coil Res. (Ohms)	Power	Contact Rating	Type
31001-80	6DC	40	0.9W	10A	DPDT Standard Plug-in/ Solder
31001-81*	12DC	160			
31001-82*	24DC	650			
31001-83	48DC	2,600			
31001-84	100/110DC	11,000			
31005-81	12AC	46	1.2VA		
31005-82	24AC	180			
31005-84*	110/120AC	4,430			
31005-85	220/240AC	18,790			
31009-81	12DC	160	0.9W	10A	DPDT Standard PCB
31009-82	24DC	650			
31009-84	100/110DC	11,000			
31013-81	12AC	46	1.2VA		
31013-82	24AC	180			
31013-84	110/120AC	4,430			
31013-85	220/240AC	18,790			

### COIL DATA (% of rated voltage)

**Pickup Voltage:** 80% max.

**Dropout Voltage:** 30% min. (AC); 10% min. (DC)

**Maximum Voltage:** 110%

### CHARACTERISTIC DATA

**Initial Contact Resistance:** 50mΩ max.

**Operate Time:** 25ms max.

**Release Time:** 25ms max.

**Insulation Resistance:** 100MΩ min. (at 500VDC)

**Dielectric Strength:** 2,000VAC, 50/60Hz for 1 minute

*Between contacts of same polarity:* 1,000VAC, 50/60Hz for 1 minute

**Ambient Temperature:** -40° to 70°C

**Service Life:**

**Mechanical:** 50,000,000 operations min.

**Electrical:**

**SPDT:** 200,000 operations min. at 15A, 110VAC, 24VDC (Resistive); 10A, 110VAC (inductive); 7A, 24VDC (Inductive)

**DPDT:** 500,000 operations min. at 10A, 110VAC, 24VDC (Resistive); 7.5A 110VAC (Inductive); 5A, 24VDC (Inductive)

**4PDT:** 200,000 operations at 10A, 110VAC, 24VDC (Resistive); 7.5A 110VAC (Inductive); 5A, 24VDC (Inductive)

### CONSTRUCTION DATA

**Termination:** Plug-in/Solder and PCB terminals

**Weight:**

**SPDT/DPDT:** 1.41 oz (40g)

**4PDT:** 2.47 oz (70g)

### FOUR POLE DOUBLE THROW (4PDT)

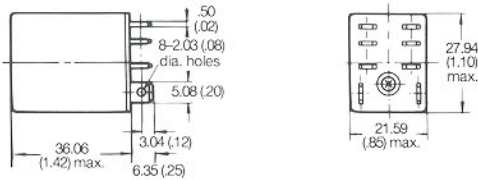
Part Number	Coil Voltage (V)	Coil Res. (Ohms)	Power	Contact Rating	Type
31003-81*	12DC	100	1.5W	10A	4PDT Standard Plug-in/ Solder
31003-82*	24DC	350			
31003-83	48DC	1,600			
31003-84	100/110DC	6,900			
31007-81	12AC	20	1.95VA		
31007-82	24AC	78			
31007-84*	120AC	2,200			
31007-85	240AC	9,000			
31011-81	12DC	100	1.5W	10A	4PDT Standard PCB
31011-82	24DC	350			
31011-84	100/110DC	6,900			
31015-81	12AC	20	1.95VA		
31015-82	24AC	78			
31015-84	120AC	2,200			
31015-85	240AC	9,000			

\*Black Items Are Normally Stocked.

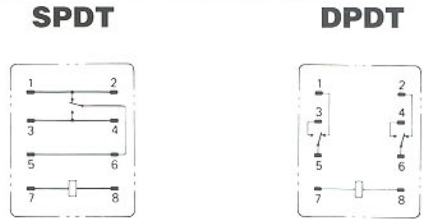
Blue Items Are Non Stock – Minimum Quantity May Be Required.

# Dimensions

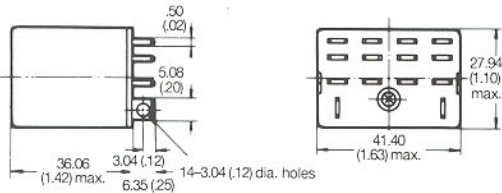
## SPDT AND DPDT PLUG-IN/SOLDER



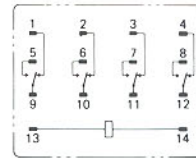
## TERMINAL ARRANGEMENT PLUG-IN/SOLDER



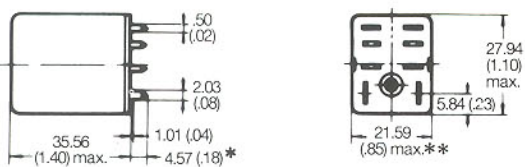
## 4 POLE DOUBLE THROW PLUG-IN/SOLDER



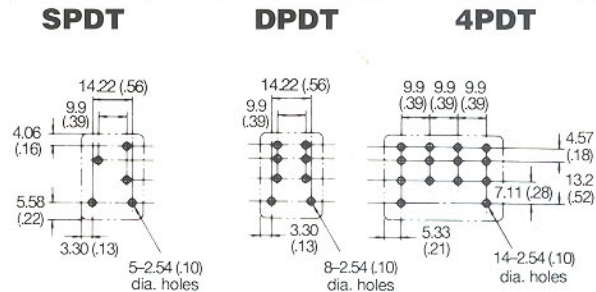
## TERMINAL ARRANGEMENT PLUG-IN/SOLDER



## SPDT, DPDT AND 4PDT PRINTED CIRCUIT BOARD TERMINALS



## MOUNTING HOLES FOR PRINTED CIRCUIT TERMINALS



### NOTE:

\*The above dimensions apply to DPDT and 4PDT. For SPDT this dimension is 6.35 (.25).

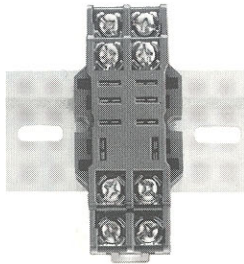
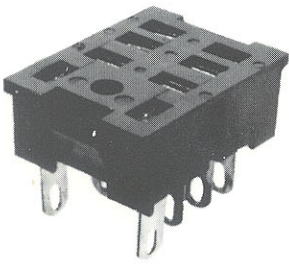
\*\*The above dimension applies to SPDT and DPDT. Refer to 4PDT plug-in drawing for this dimension.

### SOCKETS FOR MODEL 310 RELAY

Part Number	Configuration	Description	Figure †
33000-80	SPDT, DPDT	Back Connect Solder Lug	1
33001-80	SPDT, DPDT	Back Connect PC Terminals	2
33004-80	SPDT, DPDT	DIN Rail w/Pressure Clamp Screws	3
33006-80	4PDT	Back Connect Solder Lug	4
33007-80	4PDT	Back Connect PC Terminals	5
33008-80	4PDT	DIN Rail w/Pressure Clamp Screws	6

† Refer to 300 Series Socket Sheet for drawings.





# 310 Sockets



## SINGLE POLE DOUBLE THROW & DOUBLE POLE DOUBLE THROW

Figure 1

### SOLDER LUG, BACK CONNECTING P/N 33000-80

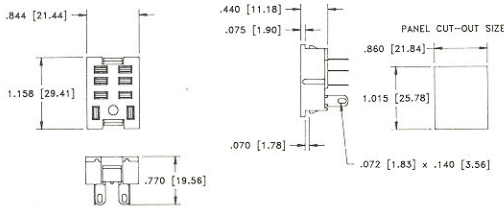


Figure 2

### PC TERMINAL, BACK CONNECTING P/N 33001-80

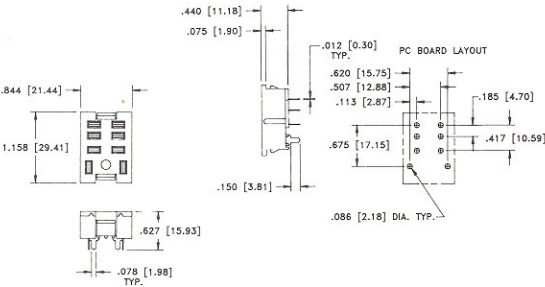
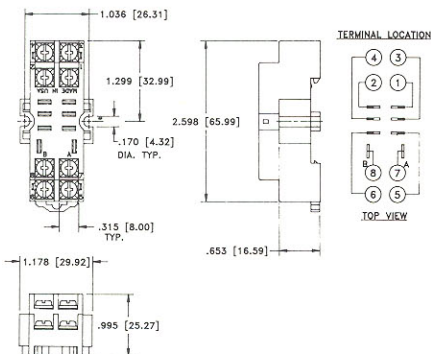


Figure 3

### DIN RAIL MOUNT W/PRESSURE CLAMP SCREWS P/N 33004-80



## 4 POLE DOUBLE THROW

Figure 4

### SOLDER LUG, BACK CONNECTING P/N 33006-80

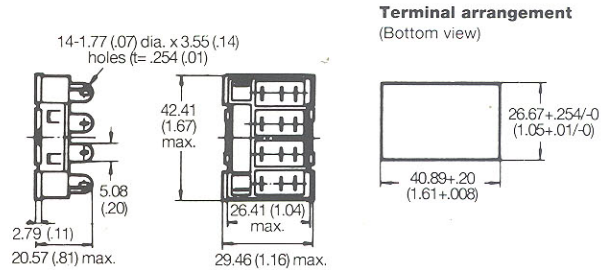


Figure 5

### PC TERMINAL, BACK CONNECTING P/N 33007-80

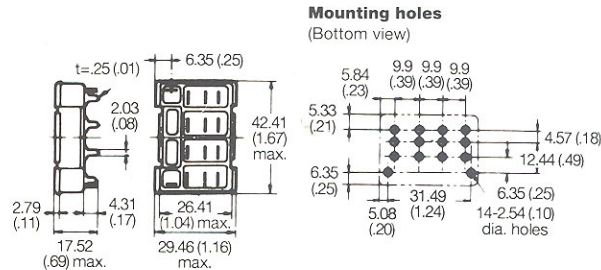


Figure 6

### DIN RAIL MOUNT W/PRESSURE CLAMP SCREWS P/N 33008-80

