



105

# DELTRON

*controls* |  DIVISION OF DELTROL CORP.

# 105 SERIES RELAY

## 5 AND 10 AMP

### GENERAL PURPOSE

### PLUG-IN – OCTAL BASE

#### FEATURES

- Class F Coil Insulation System for 155°C Total Temperature
- Coil Molded in DuPont Rynite® for Environmental Protection
- Unique Armature Stop Maintains Adjustment

#### CONTACT DATA

**CONFIGURATION:**  
Thru 3PDT

#### MATERIALS:

**5 AMP:**

- 1/8" Diameter Moveable Fine Silver
- 3/16" Diameter Stationary Fine Silver

**10 AMP:**

- 3/16" Diameter Moveable Silver Cadmium Oxide
- 3/16" Diameter Stationary Fine Silver

Gold Flash is Standard on All Contacts

Gold Diffused Available on Special Order – Min. Qty. Req'd.

#### CONTACT RATINGS

MOVEABLE CONTACT SIZE	POLE CONFIGURATION	UL RATINGS
1/8" Diameter	thru 3PDT	5 amp or 1/8 HP at 120VAC 5 amp or 1/4 HP at 277VAC 5 amp at 28VDC
3/16" Diameter	thru DPDT	10 amp or 1/3 HP at 120VAC 10 amp or 1/2 HP at 277VAC 10 amp at 28VDC
3/16" Diameter	3PDT	6.6 amp at 120VAC

**UL RECOGNIZED FILE NO.:** E37066

**CSA CERTIFIED FILE NO.:** LR20690  
Not Applicable to 105T

#### EXPECTED LIFE

**Electrical At Rated Load (Minimum)**  
100,000 Operations

**Mechanical Life**  
10,000,000 Operations

#### DIELECTRIC STRENGTH

- 800 VRMS, 60 Hz Between Contacts
- 1500 VRMS, 60 Hz Between Other Elements

#### 105T SENSITIVE RELAY 5 AMP RATING ONLY

CONTACT CONFIG.	DC PULL-IN CURRENT	RESISTANCE IN OHMS ± 10%	NOMINAL COIL POWER
SPDT	11.2MA 7.2MA 5MA 3.6MA	1K 2.5K 5K 10K	125MW
DPDT	16MA 10MA 7.2MA 5MA	1K 2.5K 5K 10K	250MW
3PDT	19.5MA 12.3MA 8.7MA 6.1MA	1K 2.5K 5K 10K	375MW

#### MODELS

- 105:** Standard 8 or 11 Pin Socket Termination
- 105A:** Addition of Indicator Lamp – Indicates Voltage to the Coil (48V Not Available)
- 105G:** Uses Std. Cover With Neoprene Gasket
- 105T:** Sensitive Coil Version of 105 Uses 125MW Per Pole



#### COIL DATA – ALL VERSIONS EXCEPT SENSITIVE COIL 105T

	NOMINAL VOLTAGE	RESISTANCE IN OHMS ± 10%	NOMINAL COIL POWER
AC Coils Single Pole Units	6VAC	5.0	2.0VA
	12VAC	20	
	24VAC	80	
	48VAC	315	
	120VAC	2025	
AC Coils 2 & 3 Pole Units	240VAC	8000	2.2VA
	6VAC	4.5	
	12VAC	18	
	24VAC	72	
DC Coils 1-3 Pole Units	48VAC	285	1.2W
	120VAC	1850	
	240VAC	7200	
	6VDC	30	
	12VDC	120	
DC Coils 1-3 Pole Units	24VDC	480	1.2W
	48VDC	1850	
	110VDC	10,000	

**Coil Voltages:** AC: Up to 277 Volts/60 Hz  
DC: Up to 125 Volts

**Coil Treatment:** Molded Rynite® Std. Class F

**Insulation Resistance:** 100 Megohms Minimum

**UL Insulation System File No.:** E74443

S155D 155°C Total Temperature Std.  
(Covers S105 Class A and S130D Class B Requirements)

#### OPERATE DATA

**Pick Up (at 25°C):** AC Volts 85% or Less of Nominal  
DC Volts 75% or Less of Nominal

**Operate Time:** Approx. 15 Milliseconds

**Release Time:** Approx. 15 Milliseconds

#### ENVIRONMENTAL DATA

**Operating Ambient:** AC: -45° to 55°C  
DC: -45° to 70°C

**Coil Temperature Rise:** (25°C Ambient – Continuous Duty)  
AC: 45°C Approx. @ 60 Hz – Use at 50 Hz  
will Cause Slight Increase in Coil Rise  
DC: 25°C Approx.

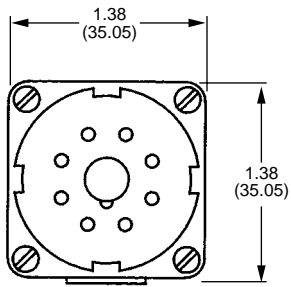
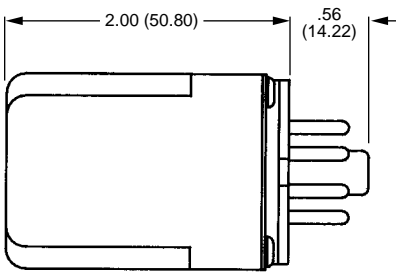
#### MECHANICAL DATA

**Terminals:** 8 or 11 Pin-Plug

**Cover:** Polycarbonate – Flammability Rating 94V2

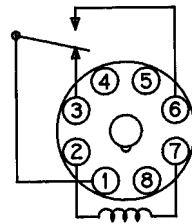
**Weight:** All Versions Approx. 3.0 oz. (85 g)

## DIMENSIONS [Unit Inch (mm)]

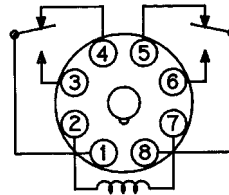


105/105T

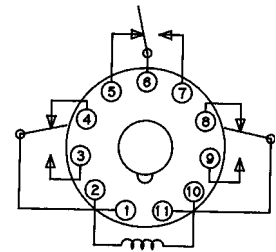
## SCHEMATICS



SPDT



DPDT



3PDT

## ORDERING INFORMATION

### 5 AMP Part Numbers

Model	Pole Configuration	AC Coils			DC Coils		
		24VAC	120VAC	240VAC	12VDC	24VDC	110VDC
105	SPDT	20105-82	20105-84	20105-85	20111-81	20111-82	20111-84
	DPDT	20107-82	20107-84*	20107-85	20113-81	20113-82	20113-84
	3PDT	20109-82	20109-84	20109-85	20115-81	20115-82	20115-84

### 10 AMP Part Numbers

105	SPDT	20106-82*	20106-84*	20106-85	20112-81	20112-82	20112-84
	DPDT	20108-82*	20108-84*	20108-85	20114-81*	20114-82*	20114-84*
	3PDT	20110-82*	20110-84*	20110-85*	20116-81*	20116-82*	20116-84*
105A	SPDT	20816-82	20816-83	20816-84	20992-81	20992-82	20992-84
	DPDT	20117-82*	20117-84*	20117-85*	20119-81	20119-82	20119-84
	3PDT	20118-82	20118-84*	20118-85	20120-81	20120-82	20120-84

### Sensitive Relay Part Numbers

Model	Pole Configuration	DC Resistance			
		1KΩ	2.5KΩ	5KΩ	10KΩ
105T	SPDT	20160-80	20160-81	20160-82	20160-83
	DPDT	20161-80	20161-81	20161-82	20161-83
	3PDT	20162-80	20162-81	20162-82	20162-83

\*Black Items Are Normally Stocked.

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

## SOCKETS

Figure 1

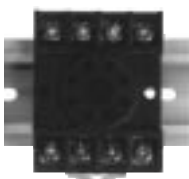
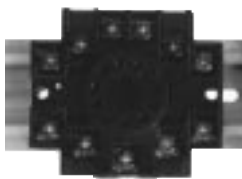


Figure 2



105 Accessory	Configuration	Rating	Part Numbers	Reference
Socket – 8 Pin Octal	DPDT	10 Amps @ 300VAC	20983-81*	Figure 1
Socket – 11 Pin Octal	3PDT	10 Amps @ 300VAC	20983-82*	Figure 2

See Page 30 for Dimensions and Specifications