



105 ML

# DELTROL

## controls



DIVISION OF DELTROL CORP.

# 105ML

## SERIES MAGNETIC LATCHING RELAY 5 & 10 AMP PLUG-IN OCTAL BASE

### FEATURES

- Snap-action, One Piece Armature Eliminates Interconnections
- Molded Class F Coils Handle High Ambient Temperatures, Resist Moisture and Dust
- High Impact Polycarbonate Dust Cover

### CONTACT DATA

**Configuration:**  
Thru 5PDT

**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	RATINGS
1/8" Diameter	SPDT	5 amp or 1/8 HP at 120VAC
	DPDT	
	3PDT	5 amp or 1/4 HP at 240VAC
	4PDT	
3/16" Diameter	5PDT	5 amp at 28VDC
	SPDT	10 amp or 1/3 HP at 120VAC
	DPDT	
	3PDT	10 amp or 1/2 HP at 240VAC
	4PDT	
5PDT	10 amp at 28VDC	

### EXPECTED LIFE

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

**Mechanical Life**  
10,000,000 Cycles

### DIELECTRIC STRENGTH

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

### MODEL

**105ML:** General Purpose Relay Terminates to Standard Pin Type Octal Receptacles, Deltrol Type 105 Sockets for SPDT and DPDT, Conxall Type 77-20 Sockets for 3PDT, 4PDT and 5PDT

### COIL DATA

	NOMINAL VOLTAGE	RESISTANCE IN OHMS ± 10%	NOMINAL COIL POWER
AC Coils	6VAC	4.5	3.5VA
	12VAC	18	
	24VAC	72	
	120VAC	1850	
	240VAC	7200	
DC Coils	6VDC	20	2W
	12VDC	80	
	24VDC	315	
	110VDC	6800	

**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. 20 Milliseconds

**Release Time:** Approx. 20 Milliseconds

### ENVIRONMENTAL DATA

**Operating Ambient:** AC: -45° to 70°C  
DC: -45° to 85°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: 45°C Approx.

### MECHANICAL DATA

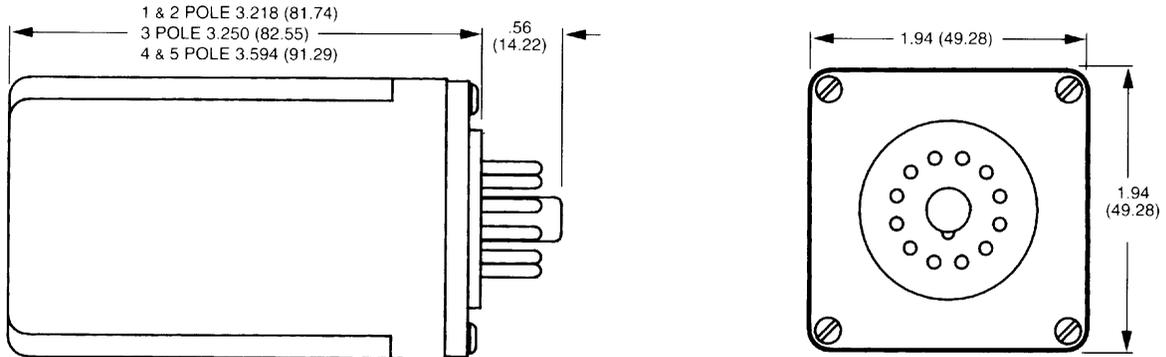
**Terminals:** Octal Type with 8, 11, 20 pins

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

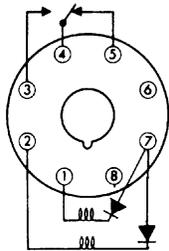
**Weight:** Approx. 8.6 oz. (244 g)



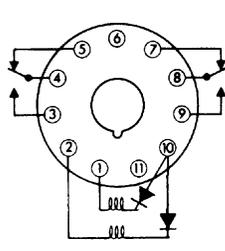
## DIMENSIONS [Unit Inch (mm)]



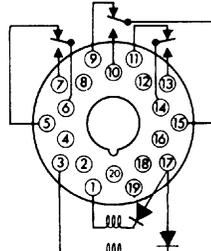
### 105ML WIRING DIAGRAMS



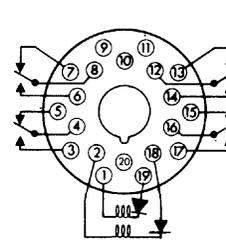
105ML - AC SPDT



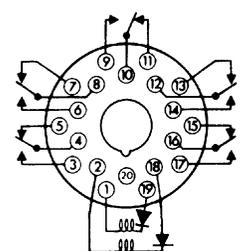
105ML - AC DPDT



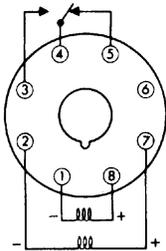
105ML - AC 3PDT



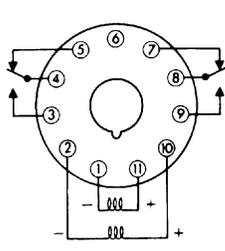
105ML - AC 4PDT



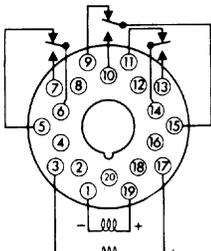
105ML - AC 5PDT



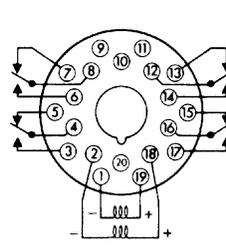
105ML - DC SPDT



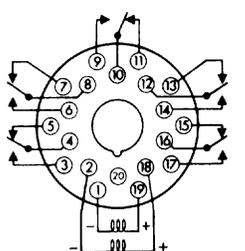
105ML - DC DPDT



105ML - DC 3PDT



105ML - DC 4PDT



105ML - DC 5PDT

(Shown With Pin 1 Energized)

## ORDERING INFORMATION

### 10 AMP Part Numbers

Pole Configuration	AC Coils			DC Coils		
	24VAC	120VAC	240VAC	12VDC	24VDC	110VDC
SPDT	20034-82	20034-83*	20034-84	20037-81	20037-82*	20037-84
DPDT	20035-82	20035-83*	20035-84	20038-81	20038-82*	20038-84
3PDT	20036-82	20036-83	20036-84	20039-81	20039-82	20039-84
4PDT	20263-82	20263-83	20263-84	20261-81	20261-82	20261-83
5PDT	20267-82	20267-83	20267-84	20265-81	20265-82	20265-83

\*Black Items Are Normally Stocked.

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

