



105 ML

# DELTRON

## controls



DIVISION OF DELTRON 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, Deltron Type 105 Sockets for SPDT and DPDT, Conxall Type 77-20 Sockets for 3PDT, 4PDT and 5PDT

### COIL DATA

|          | NOMINAL VOLTAGE | RESISTANCE IN OHMS<br>± 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.

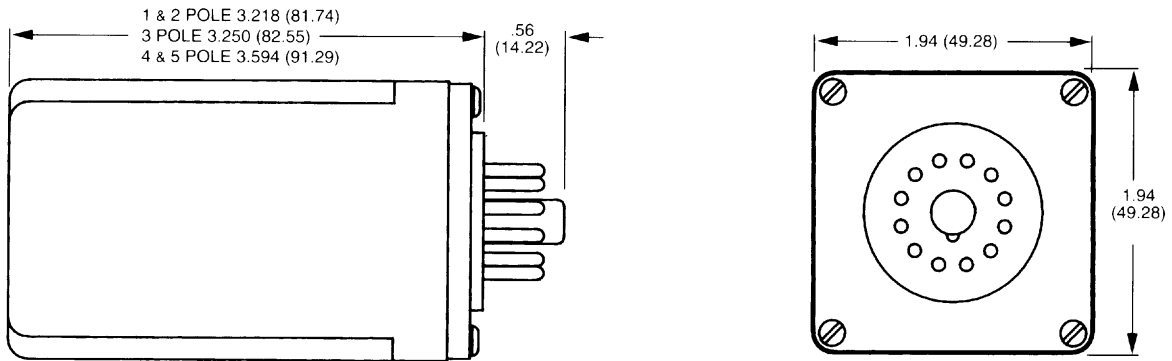
### MECHANICAL DATA

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

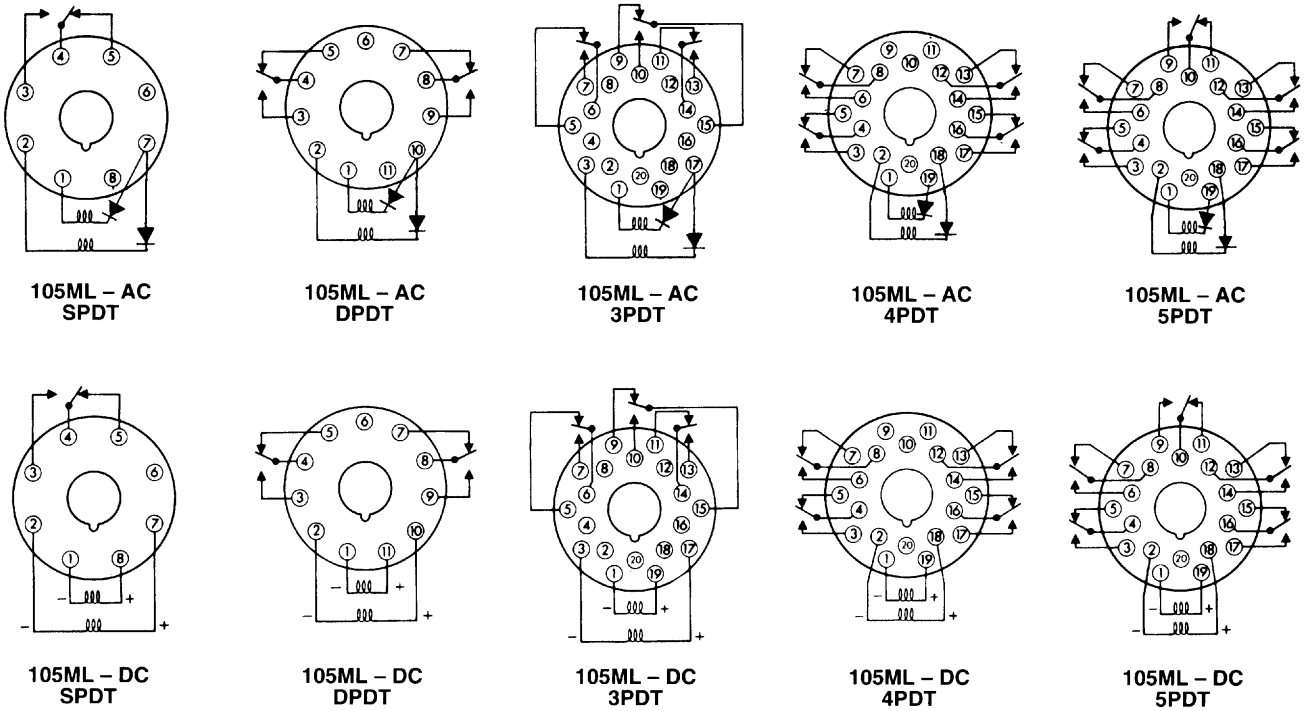
**Cover:** Polycarbonate – Flammability Rating 94V2

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

# DIMENSIONS [Unit Inch (mm)]



## 105ML WIRING DIAGRAMS



(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.