

# ELTROL **CONTROLS** DIVISION OF DELTROL CORP.

# 165ML/166MI

5 & 10 AMP PLUG-IN MAGNETIC LATCHING RELAYS

#### **FEATURES**

- Compact Size Fits in Standard Rectangular 11 Blade Socket
- Positive Magnetic Latch Maintains Status without Power
- Single Coil Resets by Reversing Polarity
- Dual Coil Resets by Energizing Reset Winding

#### **CONTACT DATA**

#### CONFIGURATION:

AC & DC Single Coil thru 3PDT DC Dual Coil thru DPDT

#### **MATERIALS:**

5 AMP:

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

3/16" Diameter Moveable Silver Cadmium Oxide

3/16" Diameter Stationary Fine Silver

Gold Flash Standard on All Contacts

Gold Diffused Available on Special Order - Min. Qty. Reg'd.

# **CONTACT RATINGS**

MODEL	POLE CONFIGURATION	UL RATINGS		
165ML	thru 3PDT	5 amp or 1/8 HP at 120VAC 5 amp or 1/4 HP at 277VAC 2 amp at 600VAC 5 amp at 28VDC		
166ML	thru 3PDT	10 amp or 1/3 HP at 120VAC 10 amp or 1/2 HP at 277VAC* 10 amp at 28VDC 1 HP at 277VAC – 3 phase 3 amp or 1/2 HP at 600VAC 12 FLA, 35 LRA at 15VAC		

<sup>\* 3</sup> Pole Devices Rated at 6-2/3 Amp When Switching Greater Than 150VAC, Unless Polarity is the Same on All Poles.

**UL RECOGNIZED FILE NO.:** E37066 US and Canadian Recognition

## **EXPECTED LIFE**

**Electrical At Rated Load (Minimum)** 

100,000 Operations Except as Noted

**Mechanical Life** 

10,000,000 Operations

#### DIELECTRIC STRENGTH

800 VRMS. 60 Hz Between Contacts 2200 VRMS, 60 Hz Between All Other Elements

#### **MODELS**

165ML: 5 Amp Single or Dual Coil 166ML: 10 Amp Single or Dual Coil

165MLB: 5 Amp ML Relay with Push to Test Button 166MLB: 10 Amp ML Relay with Push to Test Button

Other Suffixes Available

F-Flange Cover, P-Printed Circuit Terminals

TM-Top Mount Cover

# R: IR

# **COIL DATA**

	NOMINAL VOLTAGE	RESISTANCE IN OHMS ± 10%	NOMINAL COIL POWER
AC Single Coil	6VAC 12VAC 24VAC 48VAC 120VAC 240VAC	4.5 18 72 285 1850 7200	4.0VA
DC Single Coil	6VDC 12VDC 24VDC 48VDC 110VDC	24 96 375 1500 8000	1.5W
DC Dual Coil	6VDC 12VDC 24VDC 48VDC 110VDC	19 75 300 1200 6300	1.9W

AC: Up to 277 Volts/60 Hz Coil Voltages:

DC: Up to 125 Volts

Coil Treatment: Single Coil: Molded Rynite® Std. Class F Dual Coil: Acetate Wrapped Class B

Insulation Resistance: 100 Megohms Minimum

UL Insulation System File No.: E74443

S130 130°C Total Temperature - Class B S155D 155°C Total Temperature - Class F

#### **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

## **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: 35°C Approx.

# **MECHANICAL DATA**

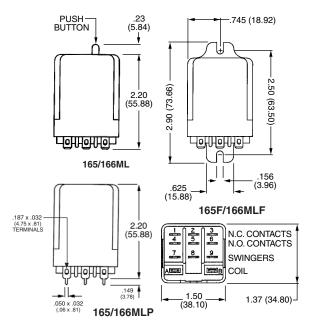
Terminals: All Versions (Except P suffix)

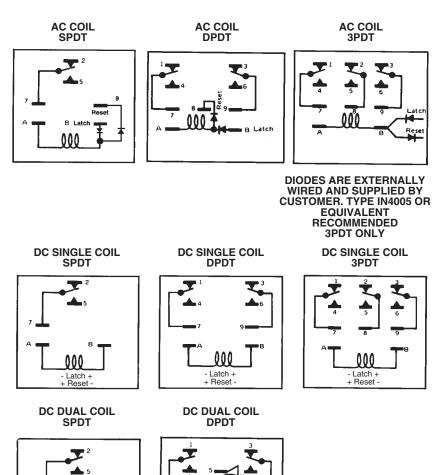
.187" x .020" Quick Connect/Solder P Suffix Version Printed Circuit Pins

Cover: Clear Polycarbonate - Flammability Rating 94V2

Weight: Approx. 3.5 oz. (142 g)

# **DIMENSIONS** [Unit Inch (mm)] **SCHEMATICS**





# **ORDERING INFORMATION**

10 AMP Part Numbers - Single Coil Versions

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AC Coils					DC Coils					
MODEL	POLE CONFIGURATION	24VAC	120VAC	240VAC	12VDC	24VDC	110VDC			
166ML	SPDT DPDT 3PDT	20523-82 20525-82 20527-82	20523-84 20525-84* 20527-84	20523-85 20525-85 20527-85	20529-81 20531-81 20533-81	20529-82 20531-82 20533-82	20529-84 20531-84 20533-84			
10 AMP Part Numbers – Dual Coil Versions										
166ML	SPDT DPDT				20535-81 20537-81	20535-82 20537-82	20535-84 20537-84			
166ML										

<sup>\*</sup> Black Items are Normally Stocked.

Blue Items are Non-Stock. Minimum may be required.

#### SOCKETS

See Page 30 for Dimensions and Specifications

DC DUAL COIL 3PDT NOT AVAILABLE

