

# P30/P40 series

## Definite Purpose Magnetic Contactor 30/40 Ampere Full Load 40/50 Ampere Resistive AC & DC Coils

File E22575
File LR15734

Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

## **Features**

- AC and DC coils.
- Available with auxiliary switch.
- · Variety of main contact terminals.
- For control of motors, power supplies, heating elements and lighting.

#### Contact Data @ 25°C

Arrangements: Up to 4 Form X (4PST-NO-DM)

**Ratings:** See contact rating table. **Material:** Silver-cadmium oxide.

Expected Life: 200,000 operations at full load.

AC coil: 2 million operations, mechanical. DC coil: 10 million operations, mechanical.

Minimum Contact Data: 3A @ 120VAC.

#### **Main Contact Ratings**

		Motor Rating in Amps, 3Ø3P or 1Ø2P				Resistive	Tungsten
Ty	уре	Full Load	Locked Rotor		Rating	Rating	
		@ 600V	@ 240V	@480V	@ 600V	@ 600V	@277V
P	30	30A	180A	150A	120A	40A	40A
Р	40	40A	240A	200A	160A	50A	50A

P30 Electrical Discharge Lamp Control: 40A @ 240V (Delta), 40A @ 600V (Wye). P40 Electrical Discharge Lamp Control: 50A @ 600V (Wye).

Туре	Motor Rating in Horsepower				
Туре		@ 120V	@ 240V	@ 440-600V	
P30	1Ø2P	1.5HP	3HP	_	
	3Ø3P	3HP	7.5HP	7.5HP	
P40	1Ø2P	2HP	5HP	_	
	3Ø3P	5HP	10HP	15HP	

## **Auxiliary Snap-Action Switch**

**Arrangements:** Up to 2 Form C (DPDT). **Rating:** 10 amps at 120-250VAC @ 25°C.

Material: Silver.

## **Initial Dielectric Strength**

**Initial Breakdown Voltage:** 2,200V rms minimum between all elements and between all elements to ground.

## Coil Data @ 25°C

**Voltage:** From 12 to 120VDC, and 24 to 277VAC, 50/60 Hz. **Power:** DC, 7.5 W; AC, 92VA, In rush; 12 VA Sealed.

Duty Cycle: Continuous.

Insulation Class: Class A, standard, Class B available. Initial Insulation Resistance: 100 megohms, minimum.

#### **Coil Data**

Nominal VDC	Resistance (Ohms ± 10% @ 25° C)	Must Operate* Volts	Maximum Operating Volts	Nominal Coil Current (ma) @ Nominal Voltage
12	20.8	9	15	577
24	84	18	30	286
48	334	36	57	144
120	2,110	90	144	57

AC Voltage	Nominal	Must Operate*	
Rating	50/60 Hz.	50/60 Hz.	
24	24	20.4	
120	110/120	94	
240	208/240	177	
277	277	236	

<sup>\*</sup>Applicable for vertical mounting, but not for upside-down mounting.

Note: Coil suppression is recommended for all DC coil units, particulary 120 and

#### **Operate Data**

Must-Operate Voltage: See coil data tables.

#### **Environmental Data**

Temperature Range: -55°C to +65°C.

#### **Mechanical Data**

Mounting: Universal mounting bracket. See outline drawings.

Termination:

**Contacts:** Binder screw, box lug, captive pressure plate, combination screw and dual .250" (6.35mm) quick connect, or

screw and dual .250" (6.35mm) quick connect, or combination box lug and dual .250" (6.35mm) quick connect. See Main Contact Terminal Options photo.

Coil: Combination 8-32 screw and .250" (6.35mm) quick connect.

Aux. Switch: 187" (4.75mm) quick connect. Weight: 3 Pole Models: 25 oz. (709g) approximately. 4 Pole Models: 28 oz. (794g) approximately.

**Ordering Information** 

**P30** Ρ 42 Α P 1 -240 4 Typical Part No. ▶ 1. Type: P30 = Definite Purpose Contactor, 30 amp. P40 = Definite Purpose Contactor, 40 amp. 2. Auxiliary Switch: P = No Aux. Switch C = 1 Form C (SPDT) F = 2 Form C (DPDT) **3. Main Contact Arrangement:** 42 = 3 Form X (3PST-NO-DM) 47 = 4 Form X (4PST-NO-DM)2 Form X (DPST-NO-DM) 48 = 2 Form X (DPST-NO-DM)& 1 Form Y (SPST-NC-DB) & 2 Form Y (DPST-NC-DB) 1 Form X (SPST-NO-DB) 49 = 4 Form Y (4PST-NC-DB) 45 = & 2 Form Y (DPST-NC-DB) Other contact arrangements are available. 4. Coil Control Input: A = Alternating Current, 50/60 Hz. D = Direct Current 5. Mounting and Installed Accessories: 1 = Standard Mounting 6. Main Contact Terminals: 2 = Screw Terminals 5 = Captive Pressure Plate 3 = Screw Terminals & Dual .250" (6.35mm) Quick Connect 6 = Box Lug & Dual .250" (6.35mm) Quick Connect 4 = Box Lug7. Auxiliary Contact Terminals: P = No Auxiliary Switch C = .187" (4.75mm) Quick Connect 8. Coil Terminals: 1 = Combination 8-32\* Screw Terminal and .250" (6.35mm) Quick Connect 9. Coil Voltage: 24, 120, 240 or 277VAC

Our authorized distributors are more likely to maintain the following items in stock for immediate delivery.

P30P42A12P1-120 P40P42A12P1-24 P30P42D12P1-24 P40P42A12P1-120 P30P47A12P1-120 P40P42A12P1-240 P30P47D12P1-24 P40P42D12P1-24

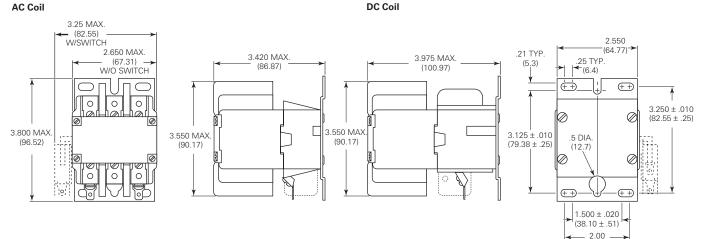
12. 24 or 120VDC

P&B

tyco Electronics

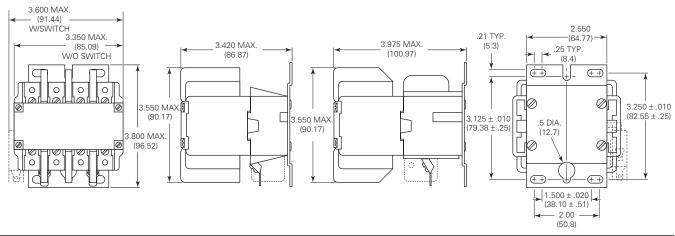
#### **Outline Dimensions**

## 3 Pole Models

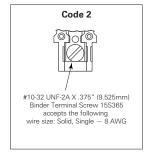


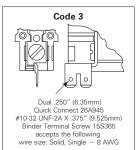
## 4 Pole Models

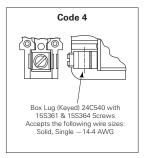
**AC Coil** DC Coil



## **Contact Terminal Options**









Stranded, Single —22-8 AWG Stranded, Double —22-16 AWG

Dual .250" (6.35mm) Quick Connect 26A945 Box Lug 9P30X3 Accepts the following wire sizes Solid, Single -14-4 AWG

Code 6

(50.8)

## **Main Contact Ordering and Replacement Information**

#### **Contact Replacement Kits**

Contact replacement kits for 3 pole models include 3 contact pressure springs, 3 movable contact assemblies and 6 stationary contact assemblies. Kits for 4 pole models include 4 contact pressure springs, 4 movable contact assemblies and 8 stationary contact assemblies. Contact replacement kits are for use only on those models with form X contact arrangements.

## Kits for P30 contactors:

- 3 Form X models Kit No. 9P30X1
- 4 Form X models Kit No. 9P30X2

#### Kits for P40 contactors:

- 3 Form X models Kit No. 9P40X1
- 4 Form X models Kit No. 9P40X2

#### To Replace Contacts:

- 1. Remove screws holding dust cover in place, and remove cover.
- 2. Compress and remove contact pressure springs.
- 3. Lift movable contacts and remove.
- 4. Remove screws holding stationary contact in place, and remove contacts.
- 5. Reverse the above procedure to install new stationary and movable contacts. Caution: Do not overtighten the screws, as it is possible to strip the threads.