

# 112 Series - Low Coil Power - Industrial Pin Out SPDT, DPDT, 2 Amp



The 112 series relays are capable of sensing extremely low current flow. They are frequently used to detect ground faults or in applications where applied voltage varies significantly. DC versions can sense currents as low as 0.61mA and tolerate voltages up to 10X minimum. AC versions can sense currents as low as 0.74mA and can tolerate voltages up to 5X minimum. Single pole DC coil versions use as little as 12mW of power while double pole versions can be as low as 60mW. Single pole AC coil version use as little as 160mVA while double pole versions can be as low as 800mVA. Pick-up or drop-out current can be fine tuned by end user via knurled thumbwheel after loosening locknut.

\*\*\*Remove all power to make adjustments\*\*\*

## GENERAL SPECIFICATIONS (@ 25° C)

### Contacts:

Contact Configuration	SPDT, DPDT	
Contact Material	Silver	
Contact Rating		
120 / 240VAC Resistive	2 Amp	
28VDC Resistive	2 Amp	
Contact Resistance, Initial	100 milliohms max @ 6VDC	

### Coil:

Coils Available	AC and DC	
Minimum Coil Power		
Single Pole	160mVA	10mW
Double Pole	800mVA	60mW
3 Pole	-	-
4 Pole	-	-
Duty	Continuous	

### Timing:

Operate Time (max)	20mS
Release Time (max)	20mS

### Dielectric Strength:

Across Open Contacts	500Vrms
Between Mutally Insulated Points	1500Vrms
Insulation Resistance	1,000 Mohms min @ 500VDC

### Temperature:

Operating	-20 to 60°C (-4 to 140°F)
Storage	-40 to 105°C (-40 to 221°F)

### Life Expectancy:

Electrical (full load operations)	100,000
Mechanical (no load operations)	500,000

### Miscellaneous:

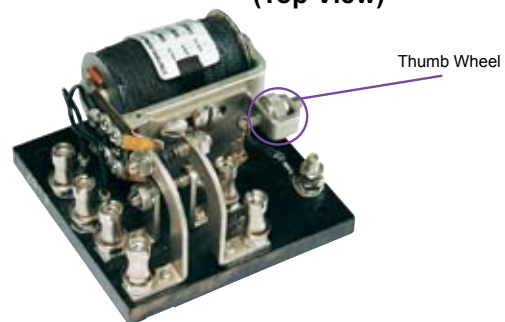
Mounting Position	Any
Mating Socket	27390D (P or PGF versions)

Accessories	
Enclosure	Clear Polycarbonate
Weight	7.5oz (241 grams)

PGF / P  
Version



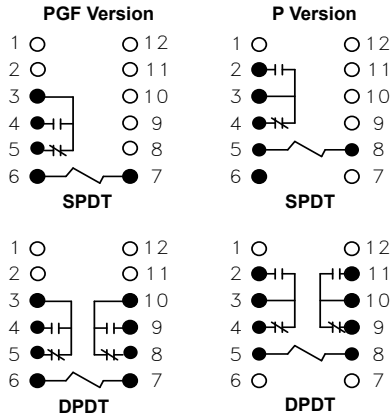
Panel Mount Wire Diagram  
(Top View)



# Sensitive - Low Input Power Relays

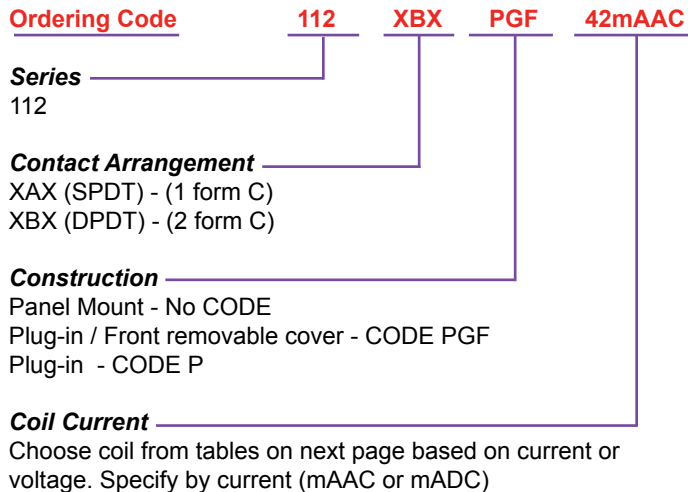
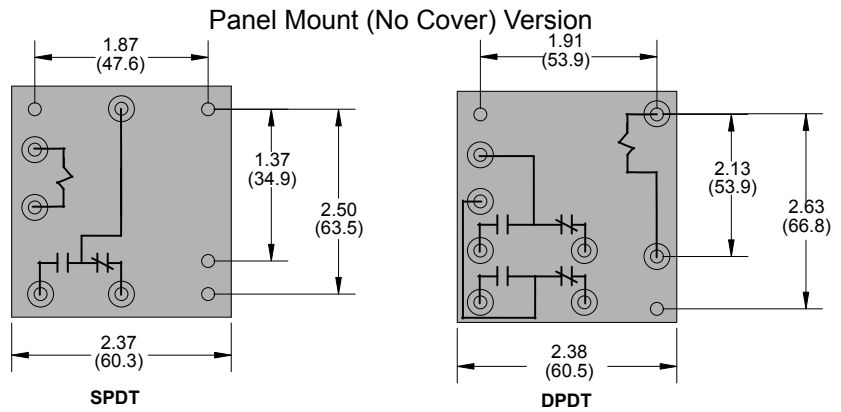
## 2 to 5 Amps

### Wire Diagram



112-PGF relays have front removable covers permitting access to user adjustable fine turning of pick-up or drop out while in socket

112-P relays are covered and adjustable but must be removed from socket to detach cover



**CAUTION: DISCONNECT POWER WHILE MAKING ADJUSTMENTS**

# 112 Series - Low Coil Power - Industrial Pin Out SPDT, DPDT, 2 Amp

## Coil Specifications

112 Coils SPDT					
AC Coils, 50/60HZ			DC Coils		
Minimum milliamps	Minimum voltage	Impedance ohms	Minimum milliamps	Minimum voltage	Resistance $\pm 7.5\%$
177.0	1.0	6.0	145.0	0.08	0.55
143.0	1.4	9.0	117.0	0.10	0.84
116.0	1.6	13.0	95.0	0.12	1.26
91.0	2.0	22.0	73.0	0.15	2.10
74.0	2.5	34.0	60.0	0.19	3.10
52.5	3.5	65.0	43.0	0.25	5.80
41.5	4.3	100.0	33.0	0.30	9.0
38.0	5.0	130.0	31.0	0.39	12.50
31.5	6.0	190.0	26.0	0.49	19.0
23.0	8.5	370.0	18.8	0.62	33.0
19.0	12.0	630.0	15.5	0.78	50.0
15.7	13.5	860.0	12.8	0.95	74.0
11.8	16.0	1350.0	9.7	1.30	129.0
9.7	20.0	2070.0	7.9	1.60	197.0
7.7	23.0	3000.0	6.3	2.0	312.0
6.0	33.0	5500.0	4.9	2.50	504.0
4.7	43.0	9230.0	3.8	3.20	840.0
3.9	55.0	14300.0	3.2	3.90	1220.0
3.0	67.0	22500.0	2.4	4.80	1990.0
2.3	87.0	38500.0	1.8	6.40	3450.0
1.9	103.0	53000.0	1.6	8.00	5050.0
1.5	130.0	85000.0	1.3	9.70	7700.0
1.2	146.0	120600.0	1.0	11.70	11700.0
0.95	168.0	177000.0	0.84	16.00	19000.0
0.74	225.0	300000.0	0.61	21.00	34000.0

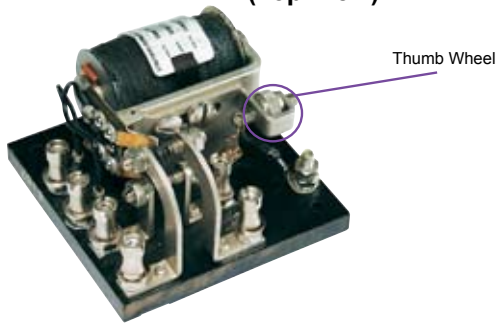
  

112 Coils DPDT					
AC Coils, 50/60HZ			DC Coils		
Minimum milliamps	Minimum voltage	Impedance ohms	Minimum milliamps	Minimum voltage	Resistance $\pm 7.5\%$
390.0	2.3	6.0	323.0	0.18	0.55
310.0	2.8	9.0	260.0	0.22	0.84
250.0	3.3	13.0	211.0	0.27	1.26
200.0	4.4	22.0	165.0	0.37	2.10
160.0	5.5	34.0	133.0	0.41	3.10
114.0	6.9	65.0	95.0	0.55	5.80
91.0	9.1	100.0	76.0	0.68	9.0
83.0	10.8	130.0	69.0	0.86	12.50
69.0	13.1	190.0	57.0	1.09	19.0
50.0	20.6	370.0	42.0	1.37	33.0
42.0	26.5	630.0	35.0	1.72	50.0
35.0	30.0	860.0	29.0	2.11	74.0
26.0	35.0	1350.0	22.0	2.77	129.0
22.0	45.5	2070.0	18.0	3.46	197.0
16.4	49.0	3000.0	14.0	4.33	312.0
13.0	72.0	5500.0	11.0	5.47	504.0
10.2	95.0	9230.0	8.5	7.11	840.0
8.5	122.0	14300.0	7.0	8.53	1220.0
6.5	146.0	22500.0	5.5	10.80	1990.0
4.9	190.0	38500.0	4.0	14.10	3450.0
4.3	230.0	53000.0	3.5	17.70	5050.0

# Sensitive - Low Input Power Relays

## 2 - 5 Amp

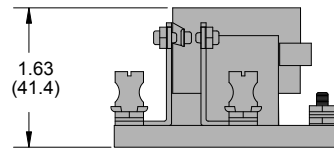
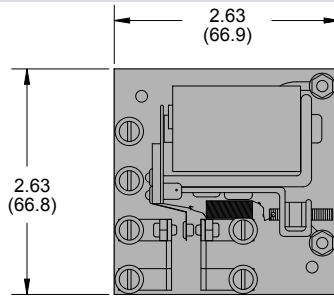
**Panel Mount Wire Diagram  
(Top View)**



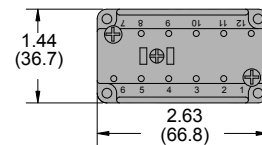
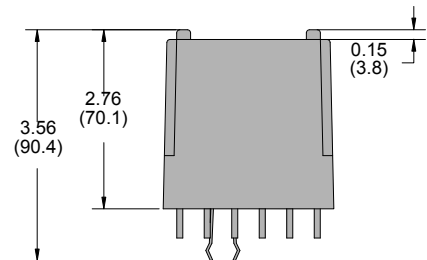
### Outline Dimensions

Dimensions Shown in inches & (millimeters)

#### Panel Mount



#### PGF / P Versions



**PGF / P  
Version**

Maximum AC coil voltage 5 x minimum  
Maximum DC coil voltage 10 x minimum  
Neither to exceed 300 volts