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

File 252808

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.

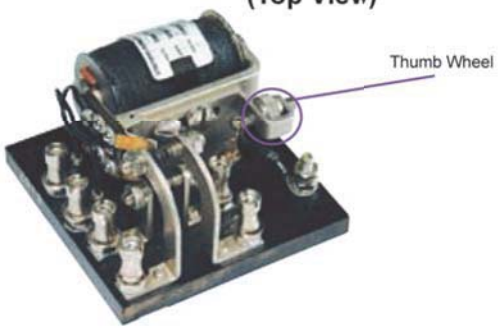
Remove all power to make adjustments

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	27390 or 27390D (Din Rail Mount) (P or PGF versions)	
Accessories		
Enclosure	Clear Polycarbonate	
Weight	7.5oz (241 grams)	

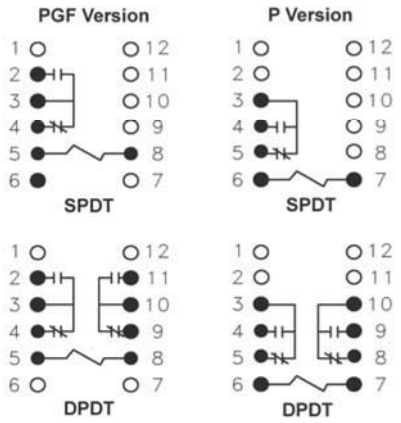
PGF / P Version

Panel Mount Wire Diagram (Top View)



Sensitive - Low Input Power Relays
2 to 5 Amps

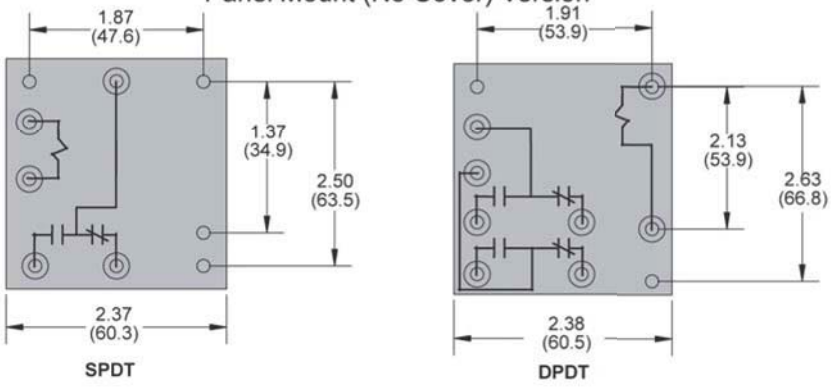
Wire Diagram



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

Panel Mount (No Cover) Version



Section 6

Ordering Code 112 XBX PGF 42mA AC

Series
112

Contact Arrangement
XAX (SPDT) - (1 form C)
XBX (DPDT) - (2 form C)

Construction
Panel Mount - No CODE
Plug-in / Front removable cover - CODE PGF
Plug-in - CODE P

Coil Current
Choose coil from tables on next page based on current or voltage. Specify by current (mA AC or mA DC)

CAUTION: DISCONNECT POWER WHILE MAKING ADJUSTMENTS

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Coil Specifications

112 Coils SPDT

AC Coils, 50/60HZ			DC Coils		
Minimum milliamps	Minimum voltage	Impedance ohms	Minimum milliamps	Minimum voltage	Resistance ±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	60.0	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 ±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	60.0	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

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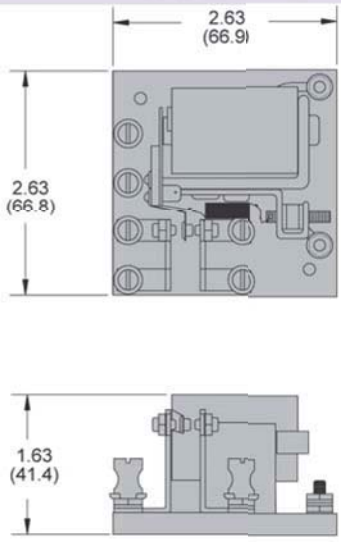
Panel Mount Wire Diagram (Top View)

PGF / P Version

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

Max Outline Dimensions
Dimensions Shown in inches & (millimeters)

Panel Mount



PGF / P Versions