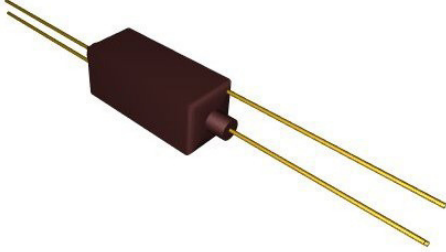


91W Series

High Insulation Resistance /High Voltage

PRODUCT DESCRIPTIONS



The 91W series lines up from 1 Form A to 3 FormA configuration with flexible board connection feature. This package allows flexible mounting positions. Mercury contacts provides higher contact rate, with high insulation resistance rated up to 10^{13} , which is ideal for very low current measurement with higher voltage application. Featured electrostatic shield improves signal noise ratio.

SPECIFICATIONS

91W 1 Form A		91W-1A21N3-61	
Parameters	Units	1 Form A	Test Conditions
Coil Specifications			
Nominal Coil Voltage	VDC	12.0	
Coil Resistance	Ω	400	$\pm 10\%$ @ 20°C
Operate Voltage	VDC Max	8.8	@ 20°C
Release Voltage	VDC Min	1.2	@ 20°C
Contact Ratings			
Switching Voltage	Volts	1000	Max DC/Peak AC resistance
Switching Current	Amps	1.0	Max DC/Peak AC resistance
Carry Current	Amps	5.2	Max DC/Peak AC resistance(@30°C)
	Amps	2.6	Max DC/Peak AC resistance(@60°C)
Contact Rating	Watts	50	Max DC/Peak AC resistance
Life Expectancy	$\times 10^6$ Cycle	1000	@ 1V 10mA
Contact Resistance	m Ω	80	Max initial @ operate voltage
Contact Resistance Stability	m Ω	2.0	Max initial @ operate voltage
Relay Specifications			
Insulation Resistance	Ω Min	10^{13}	@ 100V 20°C 65%RH
	Ω Min	10^{13}	Between contacts
	Ω Min	10^{13}	Contacts to shield
Dielectric Strength(Static)	VDC Min	2000	Contacts to coil
	VDC Min	2500	(Except shield to coil)
	VDC Min	2500	Between contacts
Operate Time (No Bounce)	msec Max	3.0	Contacts to shield
	msec Max	2.5	Contact/Shields to coil
Release Time	msec Max	2.5	@ nominal coil voltage 10~150Hz square wave Diode suppression
Measurement Reference Conditions		Environmental Ratings	
Temp: 15°C to 35°C Humidity: 25% to 75%RH Atmospheric Pressure: 860 to 1060hpa		Storage temp: -20°C to +80°C Operate temp: -10°C to +60°C Vibration: 20G's to 2000Hz Shock: 50G's	

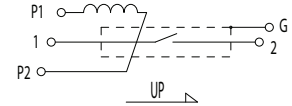
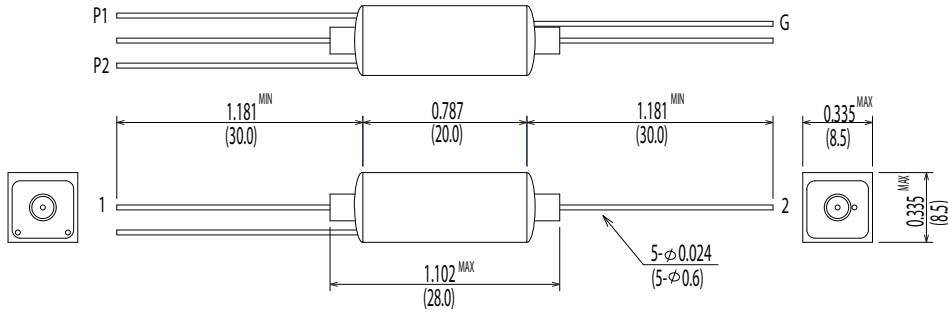
91W 2 Form A		91W-2A21N3-61	
Parameters	Units	2 Form A	Test Conditions
Coil Specifications			
Nominal Coil Voltage	VDC	12.0	
Coil Resistance	Ω	400	$\pm 10\%$ @ 20°C
Operate Voltage	VDC Max	8.8	@ 20°C
Release Voltage	VDC Min	1.2	@ 20°C
Contact Ratings			
Switching Voltage	Volts	1000	Max DC/Peak AC resistance
Switching Current	Amps	1.0	Max DC/Peak AC resistance
Carry Current	Amps	5.2	Max DC/Peak AC resistance(@30°C)
	Amps	2.6	Max DC/Peak AC resistance(@60°C)
Contact Rating	Watts	50	Max DC/Peak AC resistance
Life Expectancy	x10 ⁶ Cycle	1000	@ 1V 10mA
Contact Resistance	m Ω	80	Max initial @ operate voltage
Contact Resistance Stability	m Ω	2.0	Max initial @ operate voltage
Relay Specifications			
Insulation Resistance	Ω Min	10 ¹³	@ 100V 20°C 65%RH
	Ω Min	10 ¹³	Between contacts
	Ω Min	10 ¹³	Contacts to shield
Dielectric Strength(Static)	VDC Min	2000	Contacts to coil
	VDC Min	2500	(Except shield to coil)
	VDC Min	2500	Between contacts
Operate Time (No Bounce)	msec Max	3.0	Contacts to shield
	msec Max	2.5	Contact/Shields to coil
Release Time	msec Max	2.5	@ nominal coil voltage
			10~150Hz square wave
			Diode suppression
Measurement Reference Conditions		Environmental Ratings	
Temp: 15°C to 35°C Humidity: 25% to 75%RH Atmospheric Pressure: 860 to 1060hpa		Storage temp: -20°C to +80°C Operate temp: -10°C to +60°C Vibration: 20G's to 2000Hz Shock: 50G's	

91W 3 Form A		91W-3A21N3-61	
Parameters	Units	3 Form A	Test Conditions
Coil Specifications			
Nominal Coil Voltage	VDC	12.0	
Coil Resistance	Ω	300	$\pm 10\%$ @ 20°C
Operate Voltage	VDC Max	8.8	@ 20°C
Release Voltage	VDC Min	1.2	@ 20°C
Contact Ratings			
Switching Voltage	Volts	1000	Max DC/Peak AC resistance
Switching Current	Amps	1.0	Max DC/Peak AC resistance
Carry Current	Amps	5.2	Max DC/Peak AC resistance(@30°C)
	Amps	2.6	Max DC/Peak AC resistance(@60°C)
Contact Rating	Watts	50	Max DC/Peak AC resistance
Life Expectancy	x10 ⁶ Cycle	1000	@ 1V 10mA
Contact Resistance	m Ω	80	Max initial @ operate voltage
Contact Resistance Stability	m Ω	2.0	Max initial @ operate voltage
Relay Specifications			
Insulation Resistance	Ω Min	10 ¹³	@ 100V 20°C 65%RH
	Ω Min	10 ¹³	Between contacts
	Ω Min	10 ¹³	Contacts to shield
Dielectric Strength(Static)	VDC Min	2000	Contacts to coil
	VDC Min	2500	(Except shield to coil)
	VDC Min	2500	Between contacts
Operate Time (No Bounce)	msec Max	3.0	Contacts to shield
	msec Max	2.5	Contact/Shields to coil
Release Time	msec Max	2.5	@ nominal coil voltage
			10~150Hz square wave
			Diode suppression
Measurement Reference Conditions		Environmental Ratings	
Temp: 15°C to 35°C Humidity: 25% to 75%RH Atmospheric Pressure: 860 to 1060hpa		Storage temp: -20°C to +80°C Operate temp: -10°C to +60°C Vibration: 20G's to 2000Hz Shock: 50G's	

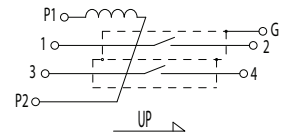
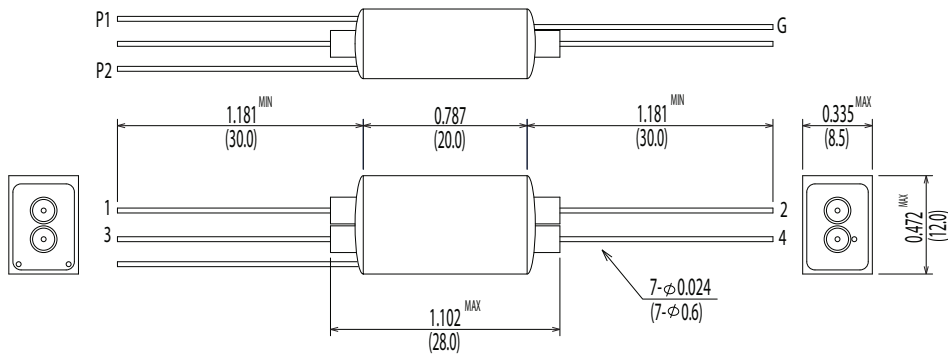
Dimensions All Dimensions are inches (mm)

Schematic <Top View>

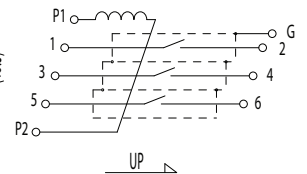
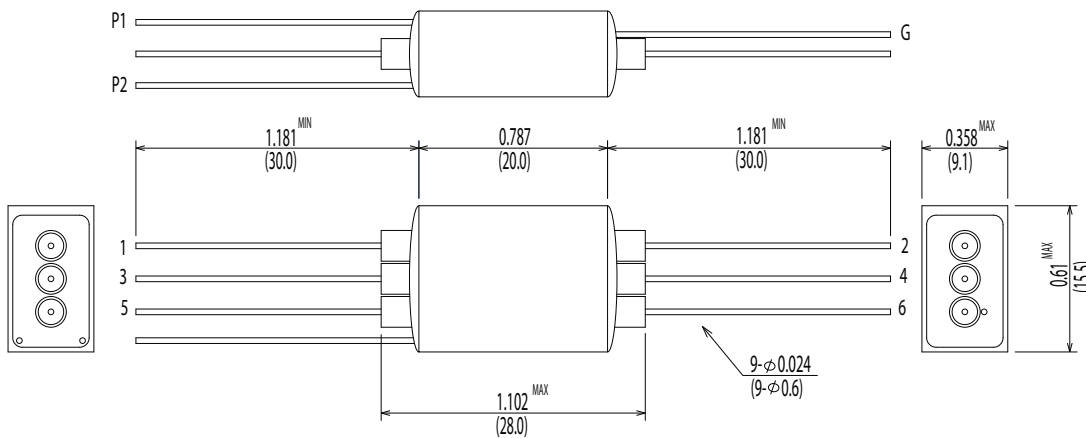
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91W-2A21N3-61



91W-3A21N3-61



Note: Hg wet contacts must be mounted within 30° of vertical plane.