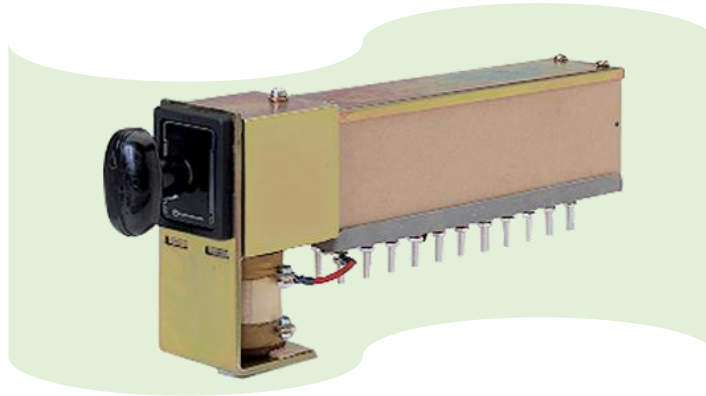


# TYPE WL LOCK-OUT RELAYS



## Abstract

The Type WL Lockout Relay is a control relay primarily used in applications requiring the simultaneous operation of a large number of contacts. The Type WL is available in two versions, a "handle trip" unit, which can be tripped manually or electrically or a "non-handle trip" unit, which will trip only in response to the application of the appropriate control voltage. Both versions are manually reset.

## Operation

The Type WL is a two position device supplied with a nameplate marked "TRIP" and "RESET" as shown on Page 63.

The rotor is held in the "reset" or normal position by means of a latch lever. The latch lever incorporates a roller which engages a holding cam that is secured to the rotor shaft. In the "reset" position the rotor is under torsion spring stored energy and remains in this position until the solenoid is energized. Upon energizing the solenoid coil, the plunger travels upward and actuates the latch lever causing the latch to pivot away from the holding cam allowing the torsion spring to move the rotor counterclockwise sixty (60) degrees to the "trip" position.

When the switch is tripped, the unit must be hand reset by turning the handle sixty (60) degrees clockwise until the holding cam strikes the position stop. When the rotor is turned to the full reset position, the latch lever, under spring pressure, will move into latching position. When the handle pressure is released, the latch roller will engage the holding cam thus retaining a positive "reset" position.

If the handle is not turned to the full reset position, the latch roller will not engage the holding cam and the rotor will return to the full "trip" position. The reset operation must then be physically repeated.

## Contacts

In the Type WL Switch one stage constitutes one circuit (one double series break contact) made up of two stationary contact fingers and one moving contact segment. The stationary contact fingers of a given stage are secured to a molded base of insulating material of high di-electric strength by studs which pass through the molded base and serve as terminals for circuit connections. The stationary contact fingers are mounted 180 degrees apart in an opposing manner.

The maximum number of stages is ten (10).

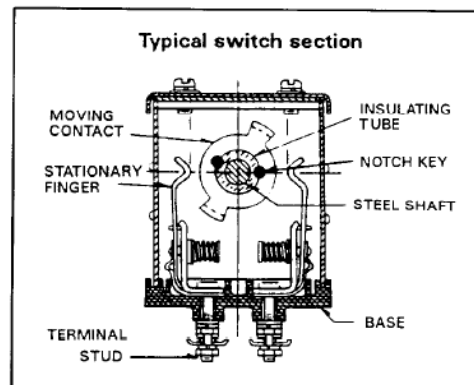
## Coils

A variety of trip coils for both DC and AC control voltages are available. Refer to Table II, page 62 for part numbers. Coils are supplied installed from the factory when ordered with a WL Relay.

## Ratings

Type WL switches are insulated for 600 volt service, and have a continuous current-carrying capacity of 20 amperes. The interrupting capacity depends upon voltage, current, and inductance of the circuit controlled.

	Interrupting rating in amperes	
	Inductive	Non-inductive
AC		
125 volt	30	50
250 volt	15	25
600 volt	3	5
DC		
125 volt	4	8
250 volt	1	2
600 volt	0.2	0.5



# HOW TO ORDER A TYPE WL SWITCH

1. Choose the style number from **Table I** below by the appropriate contacting, (Handle or Non-Handle Trip and Handle style).

Switches with Heavy-Duty Handles can be mounted on panels up to 2 inches thick by changing the mounting screw length. Switches with Modern Handles can be mounted on panels up to 1/8 inch thick.

2. Coil part numbers must be specified at the time of order. Specify Coil required from **Table II**. Those marked with an asterisk (\*) are considered to be standard for the operating voltage indicated.

These coils should not be used for 5 ampere series trip operation from secondary of current transformers, as the burden is too great. Time noted is in Milliseconds. Time may vary slightly for AC tripping, depending on point of AC cycles at which the coil is energized.

3. Add Coil Letter from Table II to the end of Chosen Part number from Table I.

**TABLE I**  
**WL SWITCH STYLES (less coils)**

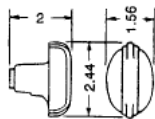
# of Stages	Style Numbers (Without Coils)				Rotor Contacts												
	Modern Handle		Heavy-Duty Handle		Coil	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20		
	Non-Trip By Handle	Trip By Handle	Non-Trip By Handle	Trip By Handle													
2	422D949G01	422D950G01	422D949G08	422D950G08	B	A	A										
3	422D919G02	422D950G02	422D949G09	422D950G09	B	A	A	A									
4	422D949G03	422D950G03	422D949G10	422D950G10	B	A	A	A	A								
5	422D949G04	422D950G04	422D949G11	422D950G11	B	A	A	A	A	A							
6	422D949G05	422D950G05	422D949G12	422D950G12	B	A	A	A	A	A	A						
8	422D949G06	422D950G06	422D949G13	422D950G13	B	A	A	A	A	A	A	A	A				
10	422D949G07	422D950G07	422D949G14	422D950G14	B	A	A	A	A	A	A	A	A	A	A	A	
2	422D949G15	422D950G15	422D949G41	422D950G41	B	B	A										
3	422D949G16	422D950G16	422D949G42	422D950G42	B	B	A	A									
4	422D949G17	422D950G17	422D949G43	422D950G43	B	B	A	A	A								
5	422D949G18	422D950G18	422D949G44	422D950G44	B	B	A	A	A	A							
6	422D949G19	422D950G19	422D949G45	422D950G45	B	B	A	A	A	A	A						
8	422D949G20	422D950G20	422D949G46	422D950G46	B	B	A	A	A	A	A	A	A	A			
10	422D949G21	422D950G21	422D949G47	422D950G47	B	B	A	A	A	A	A	A	A	A	A	A	
3	422D949G22	422D950G22	422D949G48	422D950G48	B	B	B	A									
4	422D949G23	422D950G23	422D949G49	422D950G49	B	B	B	A	A								
5	422D949G24	422D950G24	422D949G50	422D950G50	B	B	B	A	A	A							
6	422D949G25	422D950G25	422D949G51	422D950G51	B	B	B	A	A	A	A						
8	422D949G26	422D950G26	422D949G52	422D950G52	B	B	B	A	A	A	A	A	A	A			
10	422D949G27	422D950G27	422D949G53	422D950G53	B	B	B	A	A	A	A	A	A	A	A	A	
4	422D949G28	422D950G28	422D949G54	422D950G54	B	B	B	B	A								
5	422D949G29	422D950G29	422D949G55	422D950G55	B	B	B	B	A	A							
6	422D949G30	422D950G30	422D949G56	422D950G56	B	B	B	B	A	A	A						
8	422D949G31	422D950G31	422D949G57	422D950G57	B	B	B	B	A	A	A	A	A	A			
10	422D949G32	422D950G32	422D949G58	422D950G58	B	B	B	B	A	A	A	A	A	A	A	A	
5	422D949G33	422D950G33	422D949G59	422D950G59	B	B	B	B	B	A							
6	422D949G34	422D950G34	422D949G60	422D950G60	B	B	B	B	B	A	A						
8	422D949G35	422D950G35	422D949G61	422D950G61	B	B	B	B	B	A	A	A	A	A			
10	422D949G36	422D950G36	422D949G62	422D950G62	B	B	B	B	B	A	A	A	A	A	A	A	
6	422D949G37	422D950G37	422D949G63	422D950G63	B	B	B	B	B	B	A						
8	422D949G38	422D950G38	422D949G64	422D950G64	B	B	B	B	B	B	A	A	A	A			
10	422D949G39	422D950G39	422D949G65	422D950G65	B	B	B	B	B	B	A	A	A	A	A	A	

① On 250vdc Control Circuits, this contact must be connected in Series with the Coil Contact.

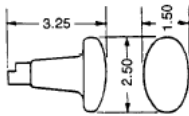
**TABLE II  
COIL OPERATING CHARACTERISTICS**

Code	Coil Style Number	Direct Current				Alternating Current - 60 Cycles					
		Ohms Resistance	Minimum Trip DC Volts	Control Voltage - DC				Ohms Impedance (not Tripped)	Minimum Trip AC Volts	Control Voltage - AC	
				24	48	125	250			110	220
				Time in Milliseconds						Time in Milliseconds	
A	701B500G01	.73	8.7	*16				6.2	50	*16	
B	701B201G01	2.69	17.1	16				21.0	95	19	
C	701B502G01	4.05	21.4	*17				30.0	115	16	
D	701B503G01	6.2	27.0	19		13		43.0	135	*17	
E	701B504G01	8.6	31.0	14		14		52.0	155	18	
F	701B505G01	12.2	33.0	14		14		97.0	200		
G	701B506G01	18.5	44.0	16		16		140.0	243		
H	701B507G01	28.0	54.0	*17		14		208.0	297		
I	701B508G01	45.5	70.0	19		15					
J	701B509G01	59.0	84.0	*16		17					
K	701B510G01	104.0	111.0								

**HANDLES**

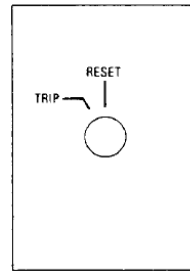


Modern Oval Handle  
Supplied as Standard on Type WL  
Switches for 1/8" panels



Heavy Duty Oval Handle  
Supplied as Standard on Type WL  
Switches for up to 2" panels

**NAMEPLATE**

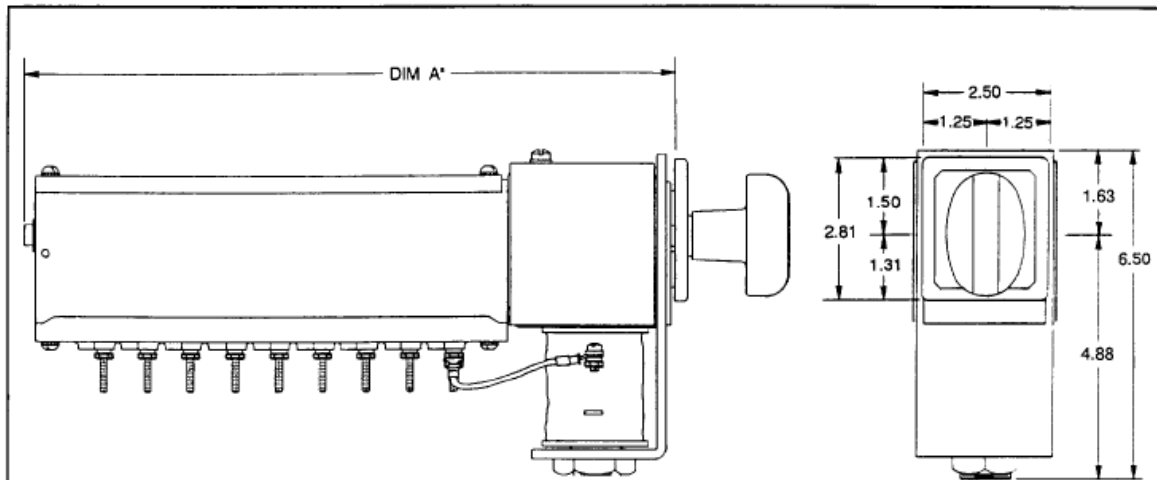


Supplied as Standard on  
all Type WL Switches.

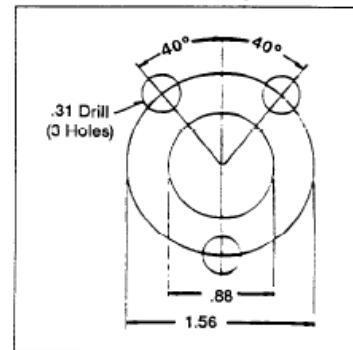
Other Engravings available  
upon Request.

Color: Black with Silver letters.

**Outline and Mounting Dimensions**



**Panel Drilling**



Number of Stages	Dimension A	Approximate Weight (lbs)
1 + 2	7.06	6.5
3	8.28	7.0
4	9.13	7.5
5	9.97	8.0
6	10.81	9.0
7 + 8	12.50	10.0
9 + 10	14.19	11.0