

# WHITE-RODGERS DC PRODUCTS

## Type 70 and 71

### contactors

#### FEATURES

- High current capacity control
- Isolated or grounded coils
- Enclosed in dust-resistant case
- Longer steel encasement permits lower heat rise and more sensitive operation on Type 71

#### ENGINEERING DATA

##### Contacts

- Pole form– SPNO, SPDT
- Material– SPNO-copper or silver  
SPDT-copper and silver or all silver
- Termination–  $\frac{5}{16}$ "-24 UNF-2A thread

RATINGS					
Type	Volts DC	NO		NC	
		Cont.	Inrush	Cont.	Inrush
70	6	80A	300 A	60A	100 A
	12	80 A	150 A	60 A	60 A
	24 & 36	50 A	50 A	30 A	30 A
71	6	80A	300 A	60A	100 A
	12	80 A	150 A	60 A	60 A
	24 & 36	50 A	50 A	30 A	30 A

##### Coils

- Voltage–6 VDC through 36 VDC
- Termination–#10-32 UNF-2A thread
- Power (approximate)  
Type 70 intermittent 23 watts  
Type 70 continuous 9 watts  
Type 71 intermittent 25 watts  
Type 71 continuous 10 watts
- Connections
  1. Two coil terminals isolated from case
  2. One coil terminal with ground wire, one coil terminal isolated from case
  3. One coil lead common to NO terminal marked "BAT" (one terminal)
- Operate (77°F/25°C)  
75% of nominal coil voltage; 110% max. safe of nominal coil voltage



#### GENERAL DATA

- Dielectric Strength
  - 500 Volts
- Temperature Range
  - -40°F/-40°C to 122°F/50°C
- Mechanical Life (no load)
  - 250,000 operations
- Electrical Life (rated load)
  - 100,000 operations
- Mounting Position
  - Recommended mounting with cap down
- Vibration
  - 5 g's vertical and horizontal planes
- Weight (approximate)
  - Type 70–14.0 oz.
  - Type 71–17.0 oz.
- Duty Cycle
  - Continuous
  - Intermittent–10 seconds "on" maximum and minimum 60 seconds "off". One minute "on" maximum and minimum 6 minutes "off".
- Hardware Torque Specification
  - Contact Terminal: 45-55 inch-lbs.
  - Coil Terminal: 12-18 inch-lbs.
  - Mounting Bracket: 100 inch-lbs. max (a backup wrench must be used to hold the bottom nut stationary during installation)

COIL DATA					
TYPE 70			TYPE 71		
Volts DC	Resistance (Ohms)		Volts DC	Resistance (Ohms)	
	Int.	Cont.		Int.	Cont.
6	1.5	4.0	6	1.4	3.5
12	6.2	16.0	12	4.9	13.5
18	16.0	37.4	18	13.46	36.0
24	23.9	60.4	24	20.1	57.1
36	60.4	114.0	36	57.1	131.0

# TYPE 70/71 PART NUMBERING SYSTEM

**7x - xxxxx - x**

**Basic Part Number Series**  
Type 71 case is approx. 0.29" longer than Type 70

**Contact Form**  
1 - SPNO  
3 - SPDT

**Coil Voltage/Duty**  
08 - 6 Volt continuous  
09 - 6 Volt intermittent  
11 - 12 Volt continuous  
12 - 12 Volt intermittent  
14 - 18 Volt continuous  
15 - 18 Volt intermittent  
17 - 24 Volt continuous  
18 - 24 Volt intermittent  
20 - 36 Volt continuous  
21 - 36 Volt intermittent

**Coil Termination**  
(15 in-lb torque spec.)  
221 - Isolated coil, all Ag contacts  
222 - Coil terminal with ground wire, all Ag contacts  
224 - Isolated coil, Cu NO and Ag NC contacts  
225 - Coil terminal with ground wire, Cu NO and Ag NC contacts  
226 - Coil common to NO (stud marked "BAT"), Cu NO and Ag NC contacts

**Factory Assigned Specials**  
(where undefined, contact factory)  
2 - Hardware loosely assembled  
2B - Customer requested markings  
2C - Customer requested markings  
3 - Customer requested markings  
4 - Customer requested markings  
5 - Hardware bulk packed  
5C - Customer requested markings  
5F - Customer requested markings  
7 - No hardware included

Not all part number combinations are released. Please contact your Sales Representative for a list of active part numbers.

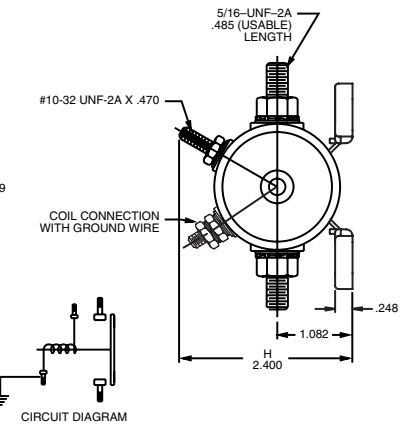
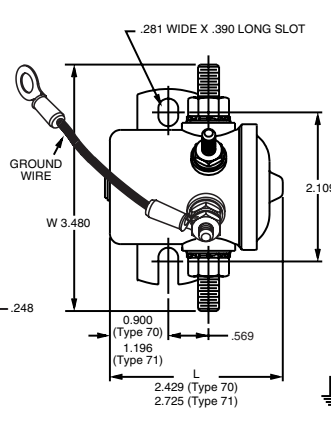
## APPLICATION NOTES

- A back-up wrench **MUST** be used to hold the bottom nut stationary during installation.
- Solenoids applied in battery charging circuits should be protected from higher than rated voltage during charging. The service life may be affected by this condition and the solenoid may or may not operate the circuit as intended.
- Circuits should be designed to provide safe operation should the solenoid fail in either the open or closed position.
- Special construction options, including a curved bracket, may be available under other part numbers, including 111-xxxD (short can), 111-xxxE (long can), 5608-x and 878x-x.

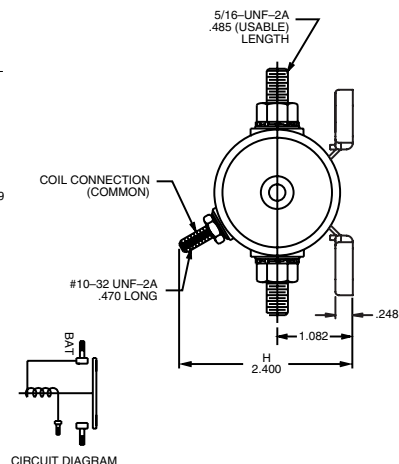
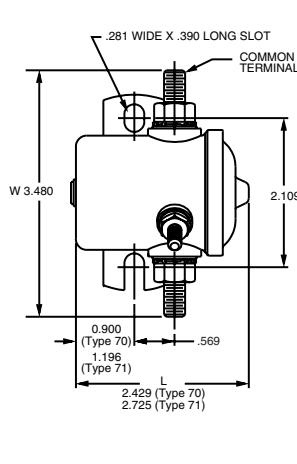
### SPNO - Isolated Coil



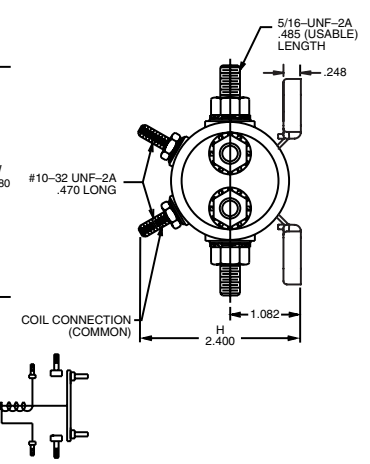
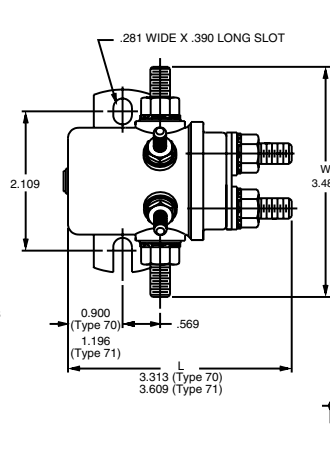
### Coil Terminal to Ground



### Coil Common to Load



### SPDT - Isolated Coil



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