

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 - x xx x x x - 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 |

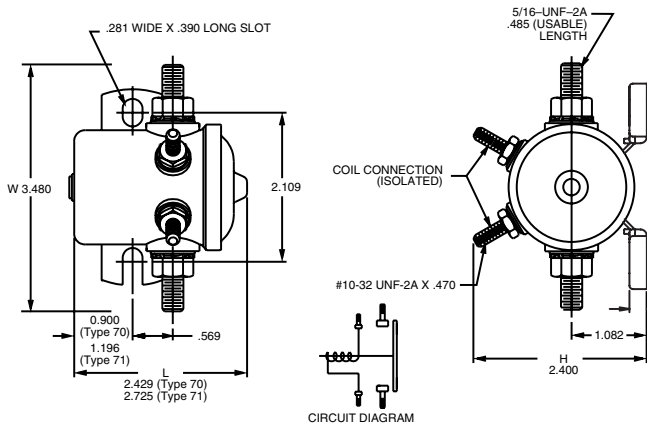
| Factory Assigned Specials (where undefined, contact factory) |
|---|
| 2 – Hardware loosely assembled |
| 2B – Customer requested markings |
| 2C – Customer requested markings |
| 3 – Customer requested markings |
| 4 – Customer requested markings |
| 5 – Hardware bulk packed |
| 5C – Customer requested 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.

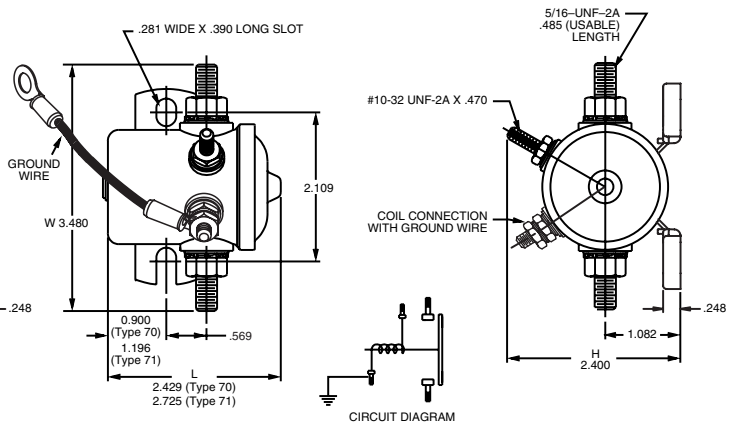
APPLICATION NOTES

- 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.

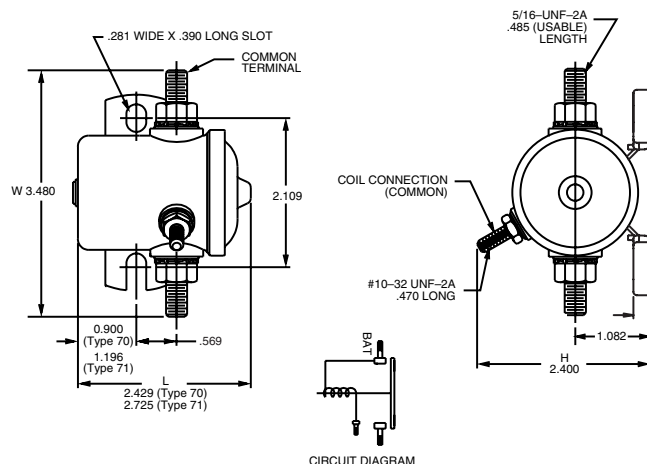
SPNO – Isolated Coil



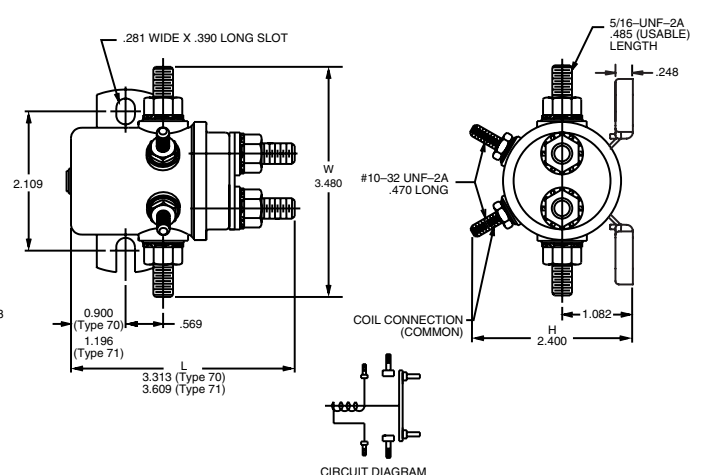
Coil Terminal to Ground



Coil Common to Load



SPDT – Isolated Coil



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