WHITE-RODGERS
DC PRODUCTS

Type 70 and 71 solenoids

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					
		NO		NC	
Type	Volts DC	Cont.	Inrush	Cont.	Inrush
70	6	80A	800 A	60A	100 A
	12	80 A	400 A	60 A	60 A
	24 & 36	50 A	200 A	30 A	30 A
71	6	80A	1000 A	60A	100 A
	12	80 A	500 A	60 A	60 A
	24 & 36	50 A	250 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. Coil isolated (two terminals)
  2. One coil lead grounded to case (one terminal)
  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

COIL DATA					
TYPE 70			TYPE 71		
	Resistance (Ohms)			Resistance (Ohms)	
Volts DC	Int.	Cont.	Volts DC	Int.	Cont.
6	1.5	4.0	6	1.4	3.5
12	6.2	16.0	12	4.9	13.5
18	20.3	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

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 is plunger vertical with cap down

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.

WHITE-RODGERS

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R-4003
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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 grounded to case, all Ag contacts
224 – Isolated coil, Cu NO and Ag NC contacts
225 – Coil grounded to case, Cu NO and Ag NC contacts
226 – Coil common to NO (stud marked “BAT”), Cu NO and Ag NC contacts

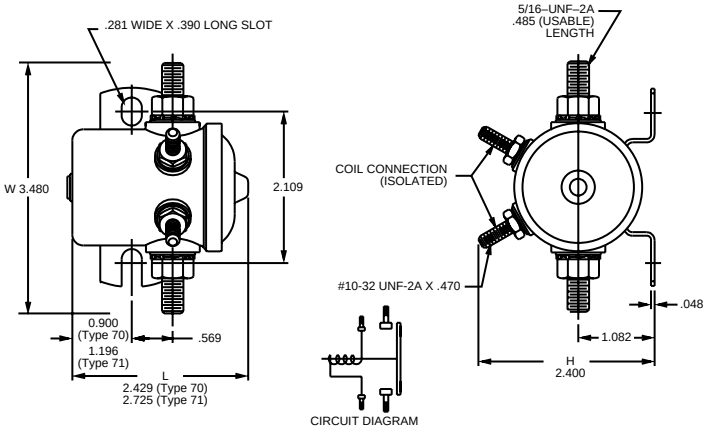
Hardware

2 – Hardware loosely assembled
3 – Hardware bulk packed (not assigned to new part numbers)
4 – Hardware loosely assembled (not assigned to new part numbers)
5 – Hardware bulk packed
7 – No hardware included

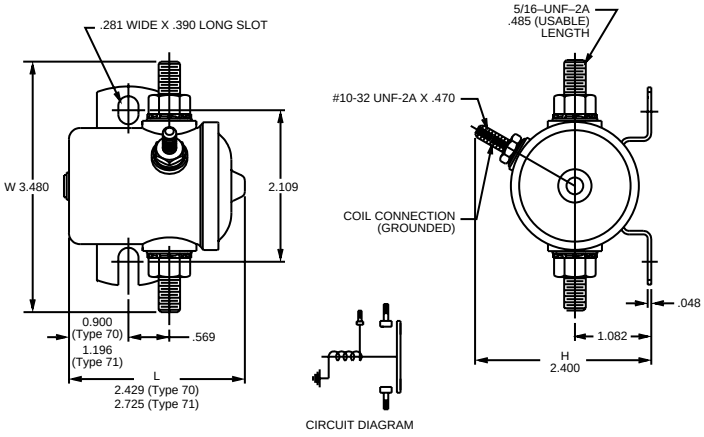
APPLICATION NOTES

- Not all part number combinations are available. Please contact your Sales Representative for available part numbers.
- Special construction options, including a curved bracket, may be available under other part numbers, including 111-xxxD, 111-xxxE, 5608-x and 878x-x.
- 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.
- A back-up wrench must be used to hold the bottom nut stationary during installation.

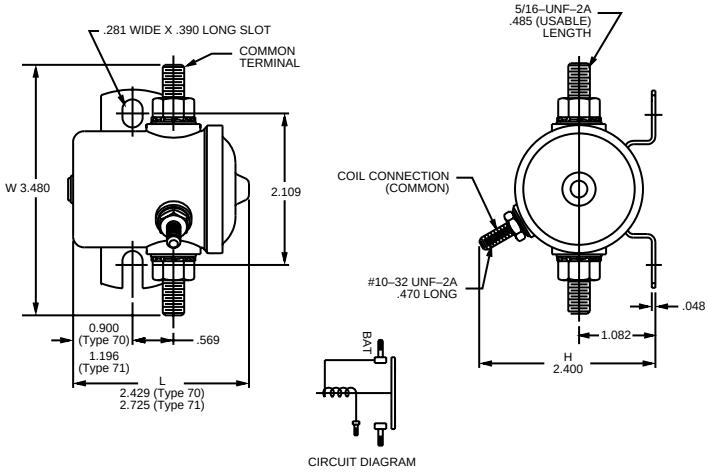
SPNO – Isolated Coil



Coil Grounded to Case



Coil Common to Load



SPDT – Isolated Coil