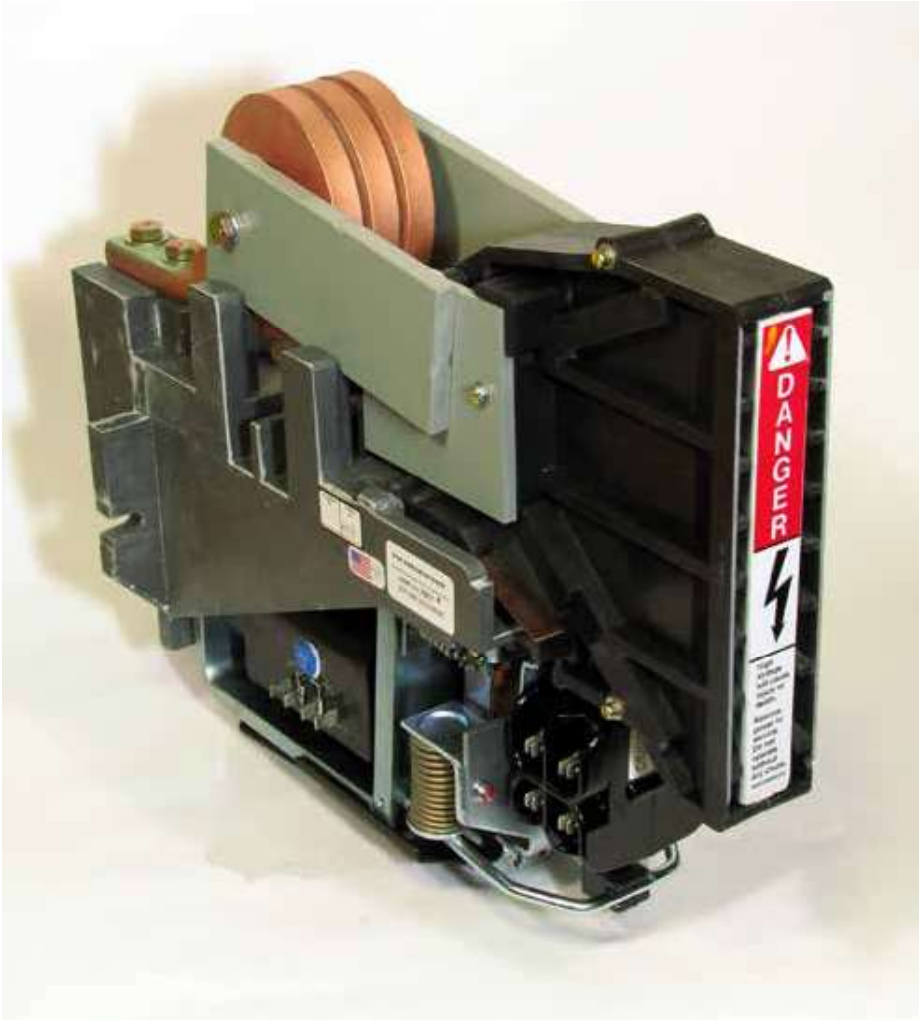
*Hubbell Industrial Controls, Inc.*

# Type 716 1600 Ampere 1500 Volt DC Contactor

**42716**

Catalog 42716 • May 2015, Replaces March 2013




**Highlights**

- Non-polarized arc chute (series blowout coil) design as standard
- Optional polarized arc chute (permanent magnet type) design available – Consult factory
- Silver alloy main contacts
- Arc chute safety interlock
- Trifurcated main contacts
- Silver-plated current-carrying parts
- High dielectric and mechanical strength

For regenerative and non-regenerative systems requiring limited interrupting capacity, the Type 716 is ideal. Applications include gas and oil well drilling equipment, transit and rail systems, adjustable speed drives, electric haul trucks, mining machinery, fuel cells, uninterruptible power supplies, and crane controls. A single pole, single throw normally open power contactor, it is rated at 1600 Ampere continuous duty at 1500 VDC in still air.

# 716

# DC CONTACTOR

**Amazingly Reliable – Hubbell Industrial Controls Devices**

The Hubbell ICD family of rugged, high-performance DC devices are in great demand by industries needing reliable, solid state, adjustable controls. Products include contators, limit switches, crane controls, fire pump controls, transfer switches, motor controllers and resistors. Hubbell ICD has a device ideal for a wide range of applications. And if it's from Hubbell, you know you're getting amazingly reliable technology.

It has a maximum interrupting rating of 2400 kW (within the limits of 2400 V maximum and 2400 A maximum) utilizing a non-polarized arc interruption system.

Highly reliable and consistent main contact closure is assured by its tri-furcated stationary main contact design, with wiping action. Silver alloy main contacts provide long life. Silver-plated copper terminals allow for excellent electrical connections and corrosion resistance. Non-tracking molded glass polyester parts provide high dielectric and mechanical strength, and zinc- dichromate plated non-current-carrying steel parts offer excellent corrosion resistance. Operating coils are of molded construction for protection from corrosion, foreign material and moisture contamination, and damaging physical abuse.

Front-accessible wear parts ease inspection, maintenance, and repair functions. A secure latch spring closure for arc chute is easily removed without the use of tools, while mechanical interlock prevents contact closure if arc chute is not properly installed.

An optional four-circuit auxiliary contact block (total of eight auxiliary circuits are available on special order – consult factory) is available in any combination of normally open and normally closed circuits. Dual bifurcated, chisel-point moveable (H-bridge design) contacts of fine silver provide exceptionally high switching reliability and are suitable for low power signals.

## Product Listing

### Special Purpose – Type 716 Series

**Ordering Information**

➢ Catalogue Number as follows:

14-193-221-□□–□

ⓐ ⓑ

ⓐ Next two digits specify coil voltage per coil voltage suffix table.

ⓑ Last digit specifies auxiliary contact arrangement.

## Specifications

### Type 716

**Main Pole Configuration**
Single pole, normally open (SPNO)

**Contactor Rating**
Continuous open air rating = 1600 Amps @ 40°C ambient
Maximum break current = 2400 Amps
Maximum make current = 10,000 Amps
Maximum interrupting capacity = 2400kW (within limits of 2400 Amps, and 2400 V MAX)
Thru-Current Capability = 30,000 Amps
Special ratings available. Consult factory.

**Auxiliary Interlock Rating**
Resistance Load
125 VDC or less, 10 Amps
250 VDC, 2.5 Amps

**Mounting**
Mounts on 3 in. (76.2 mm) wide support with three ⅜ in. (M8) screws

**Arc Chute Clearance**
3 in. min. (face to nearest conductive surface)

**Power Connections**
Top and bottom of contactor
Two ⅜ in.–16 tapped holes per terminal

**Coil Connections**
Four ¼ in. fastons
Two tabs each side of line

**Auxiliary Contact Connections**
Two ¼ in. (6.35 mm) faston tabs per terminals

**Weight**
60 lbs. (27 kg)

### COIL SUFFIX

| DC VOLTS COIL VOLTAGE | SUFFIX |
|---|---|
| 12 | 51 |
| 28 | 52 |
| 36 | 53 |
| 48 | 54 |
| 74 | 56 |
| 96 | 57 |
| 125 | 58 |
| 250 | 59 |

### AUXILIARY CONTACTS [ab]

| CONFIGURATION | CODE |
|---|---|
| 1 NO & 3 NC | 1 |
| 2 NO & 2 NC | 2 |
| 3 NO & 1 NC | 3 |
| 4 NO & 0 NC | 4 |
| 0 NO & 4 NC | 5 |
| None | 7 |

a A maximum of two 4 circuit auxiliaries may be added. Consult factory.

b Special configurations available. Consult factory.

| CONTACTOR | Description | Configuration | Rated Voltage | Catalog No. | Approx. Wt. lbs. (kg) |
|---|---|---|---|---|---|
|  716, 1600 Ampere | Contactor without auxiliary contact [a] | Single pole, normally open contactor | 1500 V | 14-193-221-xxx | 60 (27.2) |

### OPERATING COILS

| VOLTS DC | OHMS (20°C) |
|---|---|
| 12 | 3.1 |
| 24 | 12 |
| 36 | 26 |
| 48 | 41 |
| 74 | 120 |
| 96 | 173 |
| 125 | 270 |
| 250 | 1044 |

Coil voltage tolerance 80% to 110% of rated voltage.

Minimum pickup voltage is 60% of rated coil volts, with cold (20°) coil and 80% of rated coil volts with hot (140°) coil. Dropout is from 5% to 25% of rated coil volts. All temperatures in °C.

# Replacement Parts

Special Purpose - Type 716

**Coils, DC, Cont.**

| Type | Coil Voltage | Catalog No. |
|---|---|---|
| 716 | 12V | **14-183-296-503** |
| | 24V | **14-183-296-502** |
| | 36V | **14-183-296-504** |
| | 48V | **14-183-296-505** |
| | 74V | **14-183-296-501** |
| | 96V | **14-183-296-506** |
| | 125V | **14-183-296-507** |
| | 250V | **14-183-296-508** |

**Auxiliary Contact Blocks**

| Type | Size | Arrangement | | Catalog No. |
|---|---|---|---|---|
| | | NO | NC | |
| 716 | 1600A | 1 | 3 | **14-192-890-524** |
| | | 2 | 2 | **14-192-890-523** |
| | | 3 | 1 | **14-192-890-513** |
| | | 4 | 0 | **14-192-890-522** |
| | | 0 | 4 | **14-192-890-525** |

**Main Contacts**

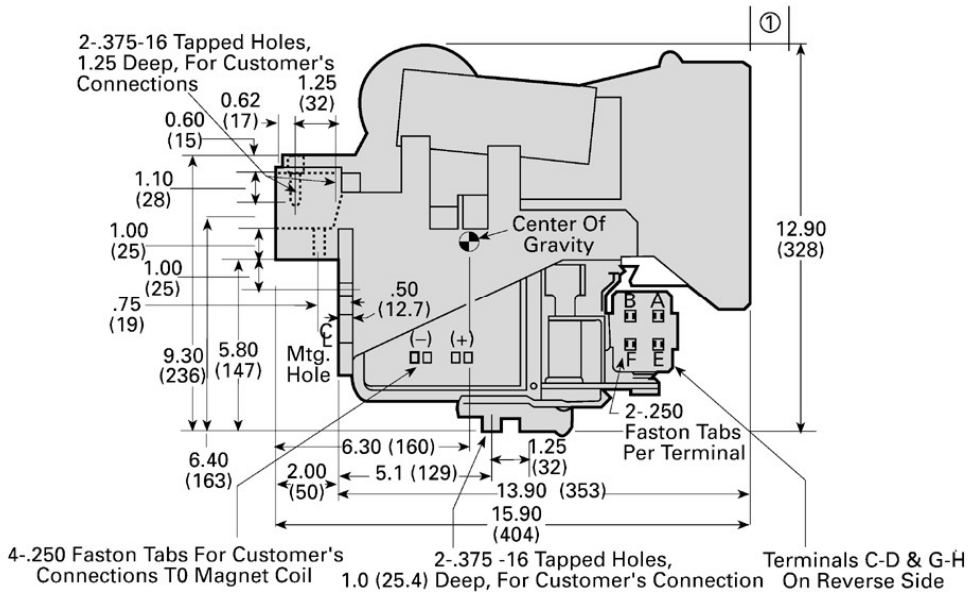
| Type | Size | Contact Type | Catalog No. |
|---|---|---|---|
| 716 | 1600A | - | **14-192-908-801** |

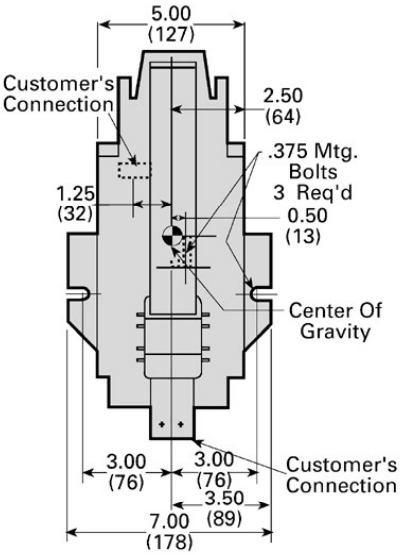
**Arc Chutes**

| Type | Size | Polarity/ Capacity | Catalog No. |
|---|---|---|---|
| 716 | 1600A | - | **14-192-908-802** |

# Outline Drawings

Special Purpose – Type 716




① Electrical clearance to ground 3.00 (76).

All dimensions shown in inches. For reference purposes only. Not to be used for design or construction purposes.


hubbell industrial controls, inc.

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