

# KSeriesContactors

## DC Electrically Held Units

For factory-direct application assistance, contact the HARTMAN product team at (419) 521-9500, Fax (419) 526-2749.

*K Series contactors are among the smallest, lightest 200-400amp contactors currently available in the aerospace industry. They are designed for use in DC power distribution systems for private, military and commercial aircraft; or ground vehicle applications.*

**Built to meet  
or exceed the  
requirements  
of Mil-R-6106**



Buss Bar Mount Version



Chassis Mount Version

| Part No.* | Voltage | Current Rating | Mounting |
|-----------|---------|----------------|----------|
| K-200A3C  | 28Vdc   | 200 Amps       | Chassis  |
| K-200B3C  | 28Vdc   | 200 Amps       | Buss Bar |
| K-300A5C  | 28Vdc   | 300 Amps       | Chassis  |
| K-300B5C  | 28Vdc   | 300 Amps       | Buss Bar |
| K-400A5C  | 28Vdc   | 400 Amps       | Chassis  |
| K-400B5C  | 28Vdc   | 400 Amps       | Buss Bar |

\* Each have 2 Form Z auxiliary contacts and coil suppression

### Physical

- Environmentally sealed
- Repairable
- 0.50 lbs. - 0.75 lbs.

### Environmental

- Temperature range -55 to +85°C
- 25G shock
- 10G vibration

### Power switching

- S.P.S.T. normally open
- 28 Volts
- 200-400A make/carry/break
- 1000-2000A inrush
- 2000-4000A maximum interrupt

### Auxiliary switching\*\*

- Up to 2 Form Z
- Up to 2 Form C
- 5 ampere 28 Vdc or 115 Vac

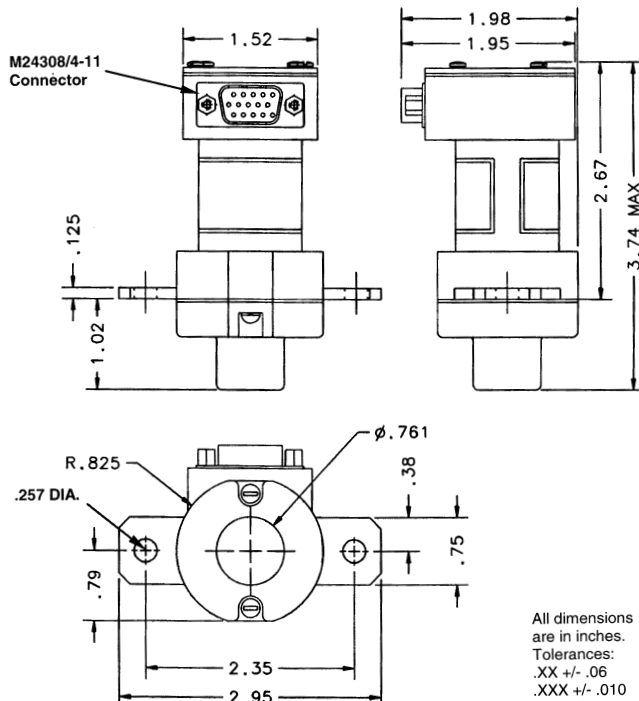
### Coil voltage and power

- 28V/9.1W nominal
- Self economizing

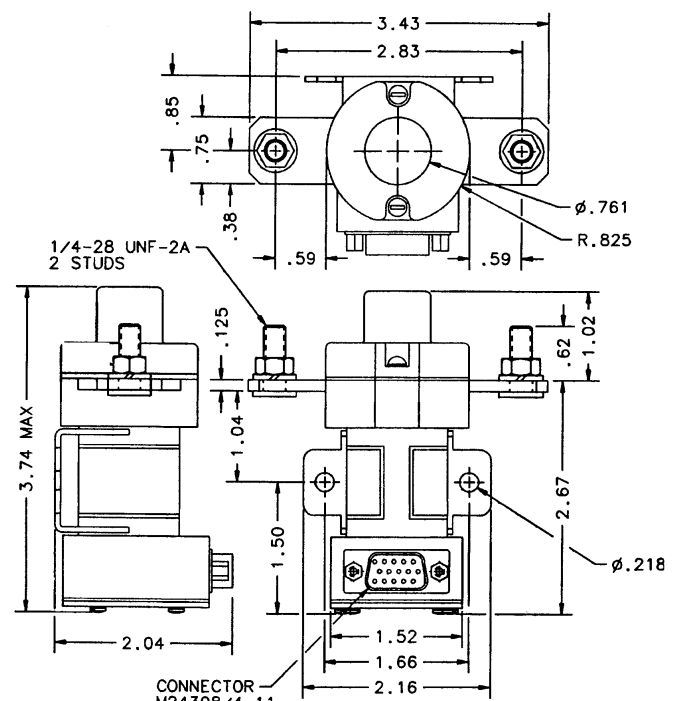
\*\* Other auxiliary arrangements or no auxiliary contacts available

## Typical Contactor Dimensions

### Buss Bar Mount Version



### Chassis Mount Version



All dimensions are in inches.  
Tolerances:  
.XX +/- .06  
.XXX +/- .010

Note : Dimensions shown are for K-300 Series contactors. K-200 Series contactors are slightly smaller in size; K-400 Series contactors are slightly larger in size.

## General Operating Specifications

### Physical Data

|                               |                     |
|-------------------------------|---------------------|
| Main contact arrangement      | SPST-NO             |
| Form                          | X                   |
| Auxiliary contact arrangement | Up to 2 Form Z or C |
| Weight                        | 0.50 lbs - 0.75 lbs |

### Environmental Data

|                                  |               |
|----------------------------------|---------------|
| Shock, 11ms 1/2 sine (operating) | 25 Gpeak      |
| Vibration, sine 10-2000 Hz       | 10 Grms       |
| Vibration, random 10-2000 Hz     | 5 Grms        |
| Operating temperature range      | -55 to +85°C  |
| Storage temperature range        | -55 to +125°C |

### Main Contacts Electrical Data

|                                                        |                               |
|--------------------------------------------------------|-------------------------------|
| Rated operating voltage                                | 32 Vdc maximum                |
| Load polarity (make, carry, break)                     | Bi-directional                |
| Continuous current carry                               | 200 Amps/300 Amps/400 Amps    |
| In-rush current                                        | 1000 Amps/1500 Amps/2000 Amps |
| Maximum interrupt (50 times)                           | 2000 Amps/3000 Amps/4000 Amps |
| Electrical current switching life @ 28Vdc              |                               |
| Resistive load (make, carry, break)                    | 50K cycles minimum            |
| Motor load (make, carry, break)                        | 50K cycles minimum            |
| Inductive load (make, carry, break)                    | 50K cycles minimum            |
| Maximum contact voltage drop @ rated amps (see note 2) | 0.125 Vdc                     |
| Insulation resistance @ 500 Vdc                        | 100 Milliohms                 |
| Dielectric withstanding voltage @ sea level            | 1800 Vrms                     |
| (leakage less than 1.0 mA, 1 minute continuous)        |                               |

### Auxiliary Contacts Electrical Data

|                                    |                |
|------------------------------------|----------------|
| Rated operating voltage            | 28 Vdc/115 Vac |
| Load polarity (make, carry, break) | Bi-directional |
| Continuous current carry           | 5 Amps         |
| Low level (see note 1)             | 1 mA           |

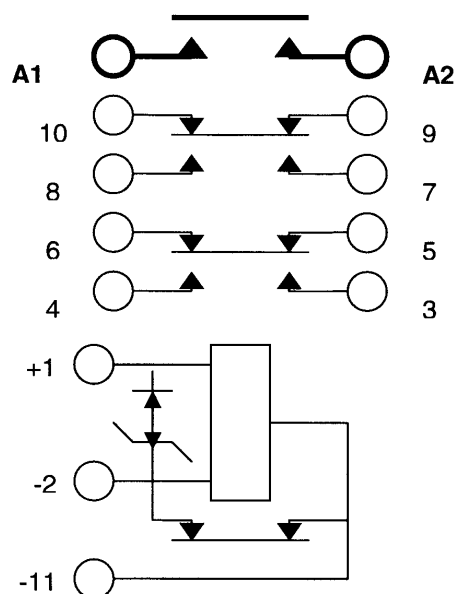
### Mechanical Data

|                                            |               |
|--------------------------------------------|---------------|
| Operate time @ 18-32 Vdc                   | 35 Ms maximum |
| Dropout time @ 18-32 Vdc                   | 20 Ms maximum |
| Bounce @ 18-32 Vdc                         | 4 Ms maximum  |
| Mechanical life @ 25% rated resistive load | 100K cycles   |

### Coil Data

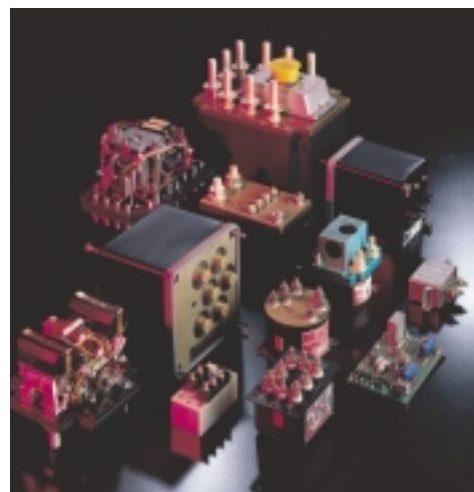
|                                      |                    |
|--------------------------------------|--------------------|
| Duty cycle                           | Continuous         |
| Maximum operate voltage              | 32 Vdc             |
| Nominal operate voltage              | 28 Vdc             |
| Maximum pickup voltage               | 16 Vdc             |
| Maximum dropout voltage (see note 3) | 9 Vdc              |
| Coil current @ 32 Vdc and -55°C      |                    |
| Inrush (12 mS max)                   | 5.5 Amps maximum   |
| Holding                              | 0.400 Amps maximum |
| Nominal coil resistance @ 22°C       |                    |
| Pickup                               | 5.5 ohms           |
| Holding                              | 86.5 ohms          |
| Nominal coil power                   | 9.1 watts          |
| Coil transient suppression           | 42 Vdc maximum     |

### Typical Schematic Diagram



### Notes

- Auxiliary contacts are gold plated. 1 mA rating does not apply if contacts have switched loads above 1 mA.
- 150 mV After Life test.
- Dropout is 3.5 Vdc max when used as a start contactor with the coil center tap utilized.



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