



|                                                                                |                                  |                 |            |                 |
|--------------------------------------------------------------------------------|----------------------------------|-----------------|------------|-----------------|
| Product designation                                                            |                                  |                 |            | Power contactor |
| Product type designation                                                       |                                  |                 |            | BFD150          |
| <b>Contact characteristics</b>                                                 |                                  |                 |            |                 |
| Number of poles                                                                | Nr.                              |                 |            | 4               |
| Rated insulation voltage $U_i$ IEC/EN                                          | V                                |                 |            | 1000            |
| Rated impulse withstand voltage $U_{imp}$                                      | kV                               |                 |            | 8               |
| Operational frequency                                                          | min                              | Hz              | 25         |                 |
|                                                                                | max                              | Hz              | 400        |                 |
| IEC Conventional free air thermal current $I_{th}$                             | A                                |                 |            | 165             |
| Operational current $I_e$                                                      | AC-1 ( $\leq 40^\circ\text{C}$ ) |                 | A          | 160             |
|                                                                                | 400V                             | A               | 165        |                 |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | 600V                             | A               | 165        |                 |
|                                                                                | 800V                             | A               | 125        |                 |
|                                                                                | 1000V                            | A               | 100        |                 |
|                                                                                |                                  |                 | A          | 1200            |
| Short-time allowable current for 10s (IEC/EN60947-1)                           |                                  |                 | A          | 1200            |
| Protection fuse                                                                | gG (IEC)                         |                 | A          | 250             |
|                                                                                | aM (IEC)                         |                 | A          | 160             |
| Resistance per pole (average value)                                            |                                  |                 | m $\Omega$ | 0.45            |
| Power dissipation per pole (average value)                                     | lth                              |                 | W          | 12              |
|                                                                                |                                  |                 |            |                 |
| Tightening torque for terminals                                                | min                              | Nm              | 6          |                 |
|                                                                                | max                              | Nm              | 7          |                 |
|                                                                                | min                              | lbin            | 4.4        |                 |
|                                                                                | max                              | lbin            | 5.2        |                 |
| Tightening torque for coil terminal                                            | min                              | Nm              | 0.8        |                 |
|                                                                                | max                              | Nm              | 1          |                 |
|                                                                                | min                              | lbin            | 0.59       |                 |
|                                                                                | max                              | lbin            | 0.74       |                 |
| Max number of wires simultaneously connectable                                 |                                  |                 | Nr.        | 2               |
| Conductor section                                                              | AWG/Kcmil                        |                 |            |                 |
|                                                                                |                                  |                 | max        | 2/0             |
| Flexible w/o lug conductor section                                             | min                              | mm <sup>2</sup> | 1.5        |                 |
|                                                                                | max                              | mm <sup>2</sup> | 70         |                 |
| Flexible c/w lug conductor section                                             | min                              | mm <sup>2</sup> | 1.5        |                 |
|                                                                                | max                              | mm <sup>2</sup> | 70         |                 |
| Power terminal protection according to IEC/EN 60529                            |                                  |                 |            | IP20 front      |

**Mechanical features**

|                    |                             |                              |
|--------------------|-----------------------------|------------------------------|
| Operating position | normal allowable            | Vertical plan $\pm 30^\circ$ |
| Fixing             |                             | Screw / DIN rail 35mm        |
| Weight             |                             | g 2460                       |
| Conductor section  | AWG/kcmil conductor section |                              |
|                    | max                         | 2/0                          |

**Operations**

|                 |        |          |
|-----------------|--------|----------|
| Mechanical life | cycles | 15000000 |
|-----------------|--------|----------|

**Safety related data**

|                   |     |
|-------------------|-----|
| EMC compatibility | yes |
|-------------------|-----|

**AC coil operating**

|                                   |     |     |                  |
|-----------------------------------|-----|-----|------------------|
| Rated AC voltage at 50/60Hz, 60Hz | min | V   | 100              |
|                                   | max | V   | 250              |
| AC operating voltage              |     |     |                  |
| of 50/60Hz coil powered at 50Hz   |     |     |                  |
| pick-up                           | min | %Us | 80 Us min        |
|                                   | max | %Us | 110 Us max       |
| drop-out                          | min | %Us | 20               |
|                                   | max | %Us | $\leq 70$ Us min |
| of 50/60Hz coil powered at 60Hz   |     |     |                  |
| pick-up                           | min | %Us | 80 Us min        |
|                                   | max | %Us | 110 Us max       |
| drop-out                          | min | %Us | 20               |
|                                   | max | %Us | $\leq 70$ Us min |

**AC average coil consumption at 20°C**

|                                 |         |    |           |
|---------------------------------|---------|----|-----------|
| of 50/60Hz coil powered at 50Hz | in-rush | VA | 70...175  |
|                                 | holding | VA | 1.7...3.5 |
| of 50/60Hz coil powered at 60Hz | in-rush | VA | 70...175  |
|                                 | holding | VA | 1.7...3.5 |
| of 60Hz coil powered at 60Hz    | in-rush | VA | 70...175  |
|                                 | holding | VA | 1.7...3.5 |

**Dissipation at holding  $\leq 20^\circ\text{C}$  50Hz**

|  |   |           |
|--|---|-----------|
|  | W | 1.3...1,5 |
|--|---|-----------|

**DC coil operating**

|                          |     |     |                  |
|--------------------------|-----|-----|------------------|
| DC rated control voltage | min | V   | 100              |
|                          | max | V   | 250              |
| DC operating voltage     |     |     |                  |
| pick-up                  | min | %Us | 80 Us min        |
|                          | max | %Us | 110 Us max       |
| drop-out                 | max | %Us | $\leq 70$ Us min |

Average coil consumption  $\leq 20^{\circ}\text{C}$

|         |   |           |
|---------|---|-----------|
| in-rush | W | 70...80   |
| holding | W | 1.3...1.5 |

**Max cycles frequency**

|                      |          |      |
|----------------------|----------|------|
| Mechanical operation | cycles/h | 2000 |
|----------------------|----------|------|

**Operating times**

Average time for Us control

in AC

|            |     |    |    |
|------------|-----|----|----|
| Closing NO | min | ms | 45 |
|            | max | ms | 40 |
| Opening NO | min | ms | 24 |
|            | max | ms | 60 |

in DC

|            |     |    |    |
|------------|-----|----|----|
| Closing NO | min | ms | 45 |
|            | max | ms | 90 |
| Opening NO | min | ms | 24 |
|            | max | ms | 60 |

**UL technical data**

General USE

Contactor

|            |   |     |
|------------|---|-----|
| AC current | A | 165 |
|------------|---|-----|

4 poles in series DC1

|      |   |     |
|------|---|-----|
| 600V | A | 165 |
|------|---|-----|

**Ambient conditions**

Temperature

Operating temperature

|     |                    |     |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -40 |
| max | $^{\circ}\text{C}$ | 70  |

Storage temperature

|     |                    |     |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -50 |
| max | $^{\circ}\text{C}$ | 80  |

Max altitude

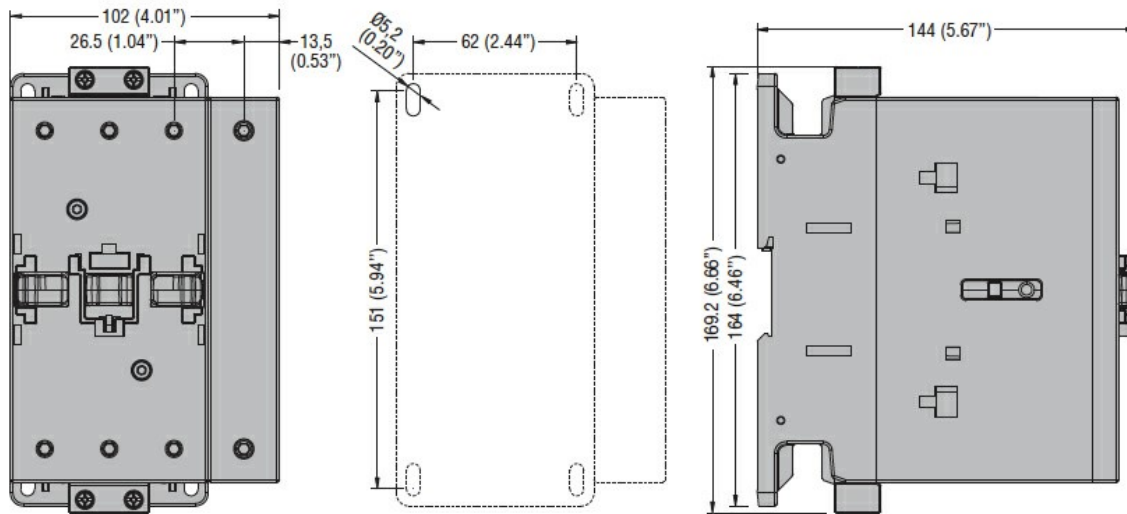
|   |      |
|---|------|
| m | 3000 |
|---|------|

**Resistance & Protection**

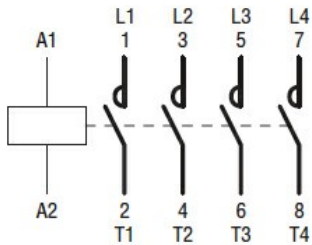
Pollution degree

3

**Dimensions**



### Wiring diagrams



### Certifications and compliance

#### Compliance

CSA C22.2 n° 60947-1  
 CSA C22.2 n° 60947-4-1  
 IEC/EN/BS 60947-1  
 IEC/EN/BS 60947-4-1  
 UL 60947-1  
 UL 60947-4-1

#### Certificates

cULus

### ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching