



|  |                                    |                 |                |                 |
|--|------------------------------------|-----------------|----------------|-----------------|
| 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             |
| IEC max current $I_e$ in DC1 with $L/R \leq 1$ ms with 4 poles in series | 400V                               | A               | 165            |                 |
|  | 600V                               | A               | 165            |                 |
|  | 800V                               | A               | 125            |                 |
|  | 1000V                              | A               | 100            |                 |
| 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)                               | $I_{th}$                           | 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                                | lbft            | 0.59           |                 |
|  | max                                | lbft            | 0.74           |                 |
| Max number of wires simultaneously connectable                           | nr.                                |                 |                | 2               |
| Conductor section  | 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      |
| <b>Mechanical features</b>   |                                    |                 |                |                 |
| Operating position   | normal                             |                 | vertical plan  |                 |
|  | allowable                          |                 | $\pm 30^\circ$ |                 |

|                                   |                                 |         |         |                          |
|-----------------------------------|---------------------------------|---------|---------|--------------------------|
| Fixing                            |                                 |         |         | Screw / DIN rail<br>35mm |
| Weight                            | g                               |         |         | 2460                     |
| <b>Operations</b>                 |                                 |         |         |                          |
| Mechanical life                   | cycles                          |         |         | 15000000                 |
| <b>Safety related data</b>        |                                 |         |         |                          |
| EMC compatibility                 |                                 |         |         | yes                      |
| <b>AC coil operating</b>          |                                 |         |         |                          |
| Rated AC voltage at 50/60Hz, 60Hz |                                 |         | min     | V 20                     |
|                                   |                                 |         | 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                        | max     | %Us     | ≤70 Us min               |
|                                   | of 50/60Hz coil powered at 60Hz |         |         |                          |
|                                   | pick-up                         | min     | %Us     | 80 Us min                |
|                                   |                                 | max     | %Us     | 110 Us max               |
|                                   | drop-out                        | max     | %Us     | ≤70 Us min               |
| AC operating voltage 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 ≤20°C 50Hz |                                 |         | W       | 1.3...1,5                |
| <b>DC coil operating</b>          |                                 |         |         |                          |
| DC rated control voltage          |                                 |         | min     | V 20                     |
|                                   |                                 |         | max     | V 250                    |
| DC operating voltage              |                                 |         |         |                          |
|                                   | pick-up                         | min     | %Us     | 85 Us min                |
|                                   |                                 | max     | %Us     | 110 Us max               |
|                                   | drop-out                        | max     | %Us     | ≤70 Us min               |
| Average coil consumption ≤20°C    |                                 |         | in-rush | W 70...80                |
|                                   |                                 |         | holding | W 1.3...1.5              |
| <b>Max cycles frequency</b>       |                                 |         |         |                          |
| Mechanical operation              | cycles/h                        |         |         | 2000                     |
| <b>Operating times</b>            |                                 |         |         |                          |
| 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 | °C |  | -40 |
|                       | max | °C |  | 70  |
| Storage temperature   |     |    |  |     |
|                       | min | °C |  | -50 |
|                       | max | °C |  | 80  |

Max altitude

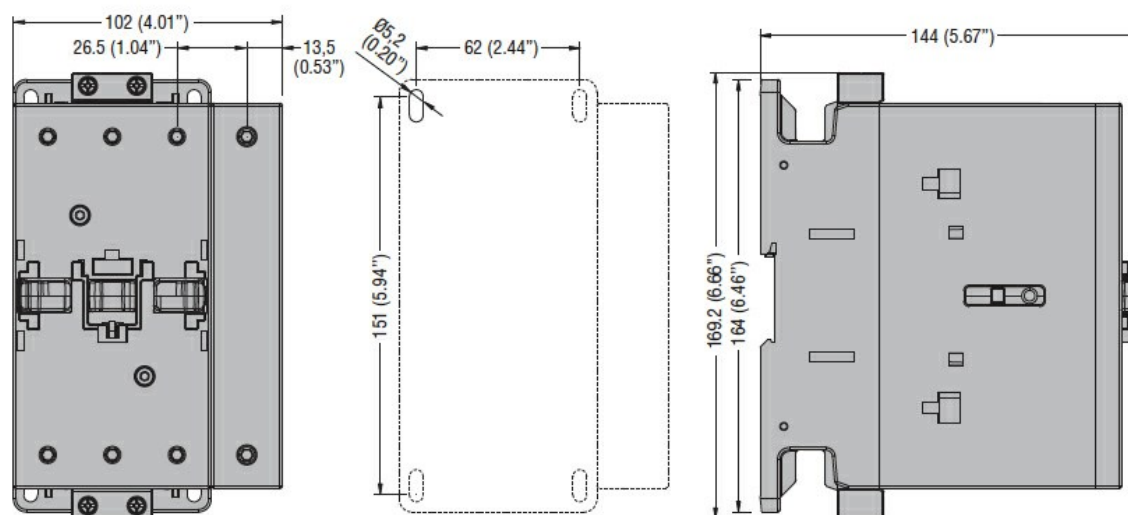
m 3000

**Resistance & Protection**

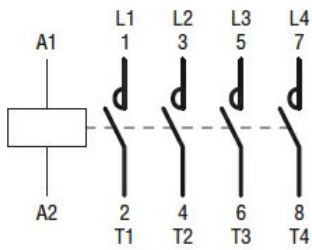
Pollution degree

3

**Dimensions**



**Wiring diagrams**



## Certifications and compliance

### Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1.

IEC/EN 60947-1

IEC/EN 60947-4-1

UL 60947-4-1

### Certificates

cULus