



Product designation

Power contactor

Product type designation

BF150

**Contact characteristics**

|                                                                                |                                                    |        |
|--------------------------------------------------------------------------------|----------------------------------------------------|--------|
| Number of poles                                                                | Nr.                                                | 3      |
| 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 165  |
|                                                                                | AC-1 ( $\leq 55^\circ\text{C}$ )                   | A 135  |
|                                                                                | AC-1 ( $\leq 70^\circ\text{C}$ )                   | A 118  |
|                                                                                | AC-3 ( $\leq 440\text{V } \leq 55^\circ\text{C}$ ) | A 150  |
|                                                                                | AC-4 (400V)                                        | A 70   |
| Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )                     | 230V                                               | kW 45  |
|                                                                                | 400V                                               | kW 75  |
|                                                                                | 415V                                               | kW 75  |
|                                                                                | 440V                                               | kW 75  |
|                                                                                | 500V                                               | kW 90  |
|                                                                                | 690V                                               | kW 110 |
|                                                                                | 1000V                                              | kW 55  |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$                                  | A 165  |
|                                                                                | 48V                                                | A 165  |
|                                                                                | 75V                                                | A 150  |
|                                                                                | 110V                                               | A 10   |
|                                                                                | 220V                                               | A –    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series | $\leq 24\text{V}$                                  | A 165  |
|                                                                                | 48V                                                | A 165  |
|                                                                                | 75V                                                | A 165  |
|                                                                                | 110V                                               | A 150  |
|                                                                                | 220V                                               | A 14   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$                                  | A 165  |
|                                                                                | 48V                                                | A 165  |
|                                                                                | 75V                                                | A 165  |
|                                                                                | 110V                                               | A 160  |
|                                                                                | 220V                                               | A 150  |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | $\leq 24\text{V}$                                  | A 165  |
|                                                                                | 48V                                                | A 165  |

|                                                                      |           |      |      |
|----------------------------------------------------------------------|-----------|------|------|
|                                                                      | 75V       | A    | 165  |
|                                                                      | 110V      | A    | 165  |
|                                                                      | 220V      | A    | 165  |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |           |      |      |
|                                                                      | ≤24V      | A    | 165  |
|                                                                      | 48V       | A    | 60   |
|                                                                      | 75V       | A    | 44   |
|                                                                      | 110V      | A    | 6    |
|                                                                      | 220V      | A    | –    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |           |      |      |
|                                                                      | ≤24V      | A    | 165  |
|                                                                      | 48V       | A    | 82   |
|                                                                      | 75V       | A    | 70   |
|                                                                      | 110V      | A    | 80   |
|                                                                      | 220V      | A    | 7    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |           |      |      |
|                                                                      | ≤24V      | A    | 165  |
|                                                                      | 48V       | A    | 195  |
|                                                                      | 75V       | A    | 110  |
|                                                                      | 110V      | A    | 120  |
|                                                                      | 220V      | A    | 120  |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |           |      |      |
|                                                                      | ≤24V      | A    | 165  |
|                                                                      | 48V       | A    | 130  |
|                                                                      | 75V       | A    | 130  |
|                                                                      | 110V      | A    | 150  |
|                                                                      | 220V      | A    | 150  |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |           | A    | 1200 |
| Protection fuse                                                      |           |      |      |
|                                                                      | gG (IEC)  | A    | 250  |
|                                                                      | aM (IEC)  | A    | 160  |
| Making capacity (RMS value)                                          |           | A    | 1500 |
| Breaking capacity at voltage                                         |           |      |      |
|                                                                      | 440V      | A    | 1200 |
|                                                                      | 500V      | A    | 1025 |
|                                                                      | 690V      | A    | 905  |
| Resistance per pole (average value)                                  |           | m?   | 0.45 |
| Power dissipation per pole (average value)                           |           |      |      |
|                                                                      | Ith       | W    | 12   |
|                                                                      | AC3       | W    | 10.1 |
| 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 |
| 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 ±30°    |
| Fixing                                              |     |                  | Screw / DIN rail 35mm |
| Weight                                              |     | g                | 2020                  |
| Conductor section                                   |     |                  |                       |
| AWG/kcmil conductor section                         |     | max              | 2/0                   |
| Operations                                          |     |                  |                       |
| Mechanical life                                     |     | cycles           | 15000000              |
| Electrical life                                     |     | cycles           | 800000                |
| Safety related data                                 |     |                  |                       |
| EMC compatibility                                   |     |                  | yes                   |
| AC coil operating                                   |     |                  |                       |
| Rated AC voltage at 60Hz                            |     | V                | 460                   |
| AC operating voltage                                |     |                  |                       |
| of 60Hz coil powered at 60Hz                        |     |                  |                       |
| pick-up                                             |     | min              | %Us 80                |
|                                                     |     | max              | %Us 110               |
| drop-out                                            |     | min              | %Us 20                |
|                                                     |     | max              | %Us 55                |
| AC average coil consumption at 20°C                 |     |                  |                       |
| of 60Hz coil powered at 60Hz                        |     | in-rush holding  | VA 300                |
|                                                     |     |                  | VA 20                 |
| Dissipation at holding ≤20°C 50Hz                   |     | W                | 6.5                   |
| Max cycles frequency                                |     |                  |                       |
| Mechanical operation                                |     |                  | cycles/h 1500         |
| Operating times                                     |     |                  |                       |
| Average time for Us control in AC                   |     |                  |                       |
| Closing NO                                          |     | min              | ms 45                 |
|                                                     |     | max              | ms 32                 |
| Opening NO                                          |     | min              | ms 9                  |
|                                                     |     | max              | ms 24                 |
| UL technical data                                   |     |                  |                       |
| Yielded mechanical performance                      |     |                  |                       |
| for three-phase AC motor                            |     | 200/208V         | HP 50                 |
|                                                     |     | 220/230V         | HP 50                 |
|                                                     |     | 460/480V         | HP 100                |

|                                     |  |                       |      |     |
|-------------------------------------|--|-----------------------|------|-----|
|                                     |  | 575/600V              | HP   | 125 |
| General USE                         |  |                       |      |     |
| Contactor                           |  |                       |      |     |
|                                     |  | AC current            | A    | 165 |
| Short-circuit protection fuse, 600V |  |                       |      |     |
| High fault                          |  | Short circuit current | kA   | 100 |
|                                     |  | Fuse rating           | A    | 200 |
|                                     |  | Fuse class            | J    |     |
| Standard fault                      |  | Short circuit current | kA   | 10  |
|                                     |  | Fuse rating           | A    | 250 |
|                                     |  | Fuse class            | RK5  |     |
| Max altitude                        |  | m                     | 3000 |     |

## Ambient conditions

### Temperature

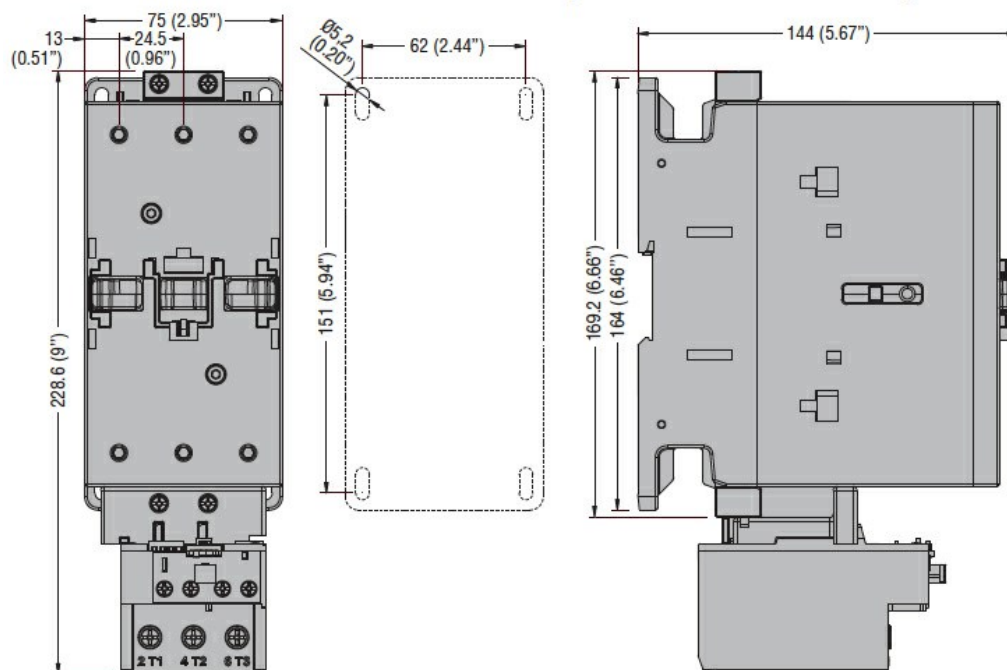
#### Operating temperature

|     |    |     |
|-----|----|-----|
| min | °C | -50 |
| max | °C | 70  |

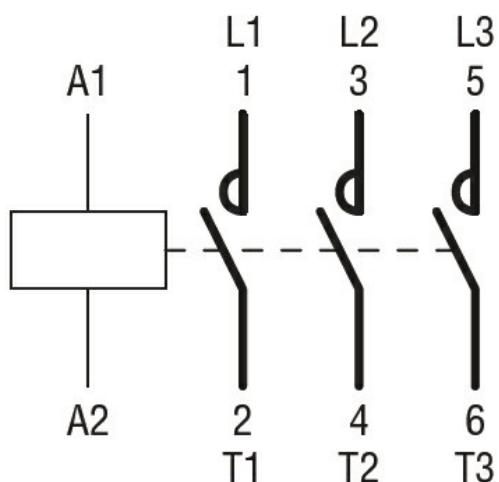
#### Storage temperature

|     |    |     |
|-----|----|-----|
| min | °C | -60 |
| max | °C | 80  |

## 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 60947-1

UL 60947-4-1

##### Certificates

CCC

cULus

#### ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching