

# THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 150A, AC COIL 50/60HZ, 230VAC



| Product designation Product type designation                    |                    |     | Power contactor<br>BF150 |
|---|--------------------|-----|--------------------------|
| Contact characteristics   |                    |     | D1 100                   |
| Number of poles   |                    | nr. | 3                        |
| Rated insulation voltage Ui IEC/EN                              |                    | V   | 1000                     |
| Rated impulse withstand voltage Uimp                            |                    | kV  | 8                        |
| Operational frequency   |                    |     |                          |
|   | min                | Hz  | 25                       |
|   | max                | Hz  | 400                      |
| IEC Conventional free air thermal current Ith                   |                    | Α   | 165                      |
| Operational current le  |                    |     |                          |
|   | AC-1 (≤40°C)       | Α   | 165                      |
|   | AC-1 (≤55°C)       | Α   | 135                      |
|   | AC-1 (≤70°C)       | Α   | 118                      |
|   | AC-3 (≤440V ≤55°C) | Α   | 150                      |
|   | AC-4 (400V)        | Α   | 70                       |
| Rated operational power AC-3 (T≤55°C)                           |                    |     |                          |
|   | 230V               | kW  | 45                       |
|   | 400V               | kW  | 75                       |
|   | 415V               | kW  | 75                       |
|   | 440V               | kW  | 75                       |
|   | 500V               | kW  | 90                       |
|   | 690V               | kW  | 110                      |
| 150   | 1000V              | kW  | 55                       |
| IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series | 40 AV /            | •   | 405                      |
|   | ≤24V               | A   | 165                      |
|   | 48V                | A   | 165                      |
|   | 75V<br>110V        | A   | 150                      |
|   | 220V               | A   | 10                       |
| IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series | 220 V              | Α   |                          |
| TEC max current le in DCT with E/R ≥ mis with 2 poles in series | ≤24V               | Α   | 165                      |
|   | 48V                | A   | 165                      |
|   | 75V                | A   | 165                      |
|   | 110V               | A   | 150                      |
|   | 220V               | A   | 14                       |
| IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series | 220 V              |     | 17                       |
|   | ≤24V               | Α   | 165                      |
|   | 48V                | Α   | 165                      |
|   | 75V                | Α   | 165                      |
|   | 110V               | Α   | 160                      |
|   | 220V               | Α   | 150                      |
| IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series |                    |     |                          |
| F   | ≤24V               | Α   | 165                      |
|   | 48V                | Α   | 165                      |
|   |                    |     |                          |



BF15000A230

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|  | 75V         | Α        | 165             |
|--|-------------|----------|-----------------|
|  | 110V        | Α        | 165             |
|  | 220V        | Α        | 165             |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | .0.43.4     |          | 4.0-            |
|  | ≤24V        | A        | 165             |
|  | 48V         | A        | 60              |
|  | 75V<br>110V | A        | 44              |
|  | 220V        | A<br>A   | 6<br>_          |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | 220 V       |          | _               |
| The max current le in boo-boo with bit 2 10ms with 2 poles in series | ≤24V        | Α        | 165             |
|  | 48V         | A        | 82              |
|  | 75V         | A        | 70              |
|  | 110V        | A        | 80              |
|  | 220V        | Α        | 7               |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |             |          |                 |
|  | ≤24V        | Α        | 165             |
|  | 48V         | Α        | 195             |
|  | 75V         | Α        | 110             |
|  | 110V        | Α        | 120             |
|  | 220V        | Α        | 120             |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |             |          |                 |
|  | ≤24V        | Α        | 165             |
|  | 48V         | Α        | 130             |
|  | 75V         | Α        | 130             |
|  | 110V        | Α        | 150             |
|  | 220V        | Α        | 150             |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |             | Α        | 1200            |
| Protection fuse  |             |          |                 |
|  | gG (IEC)    | Α        | 250             |
| ·  | aM (IEC)    | Α        | 160             |
| Making capacity (RMS value)  |             | Α        | 1500            |
| Breaking capacity at voltage   |             | _        |                 |
|  | 440V        | Α        | 1200            |
|  | 500V        | A        | 1025            |
| Decistance and the forest and the                                    | 690V        | A        | 905             |
| Resistance per pole (average value)                                  |             | mΩ       | 0.45            |
| Power dissipation per pole (average value)                           | 141-        | 147      | 10              |
|  | Ith<br>AC3  | W<br>W   | 12<br>10.1      |
| Tightoning torque for torminals                                      | AC3         | VV       | 10.1            |
| Tightening torque for terminals                                      | min         | Nim      | 6               |
|  | min         | Nm<br>Nm | 6<br>7          |
|  | max<br>min  | Ibin     | <i>7</i><br>4.4 |
|  | max         | lbin     | 4.4<br>5.2      |
| Tightening torque for coil terminal                                  | IIIaX       | ווטו     | J.L             |
| rightening torque for contentinal                                    | min         | Nm       | 0.8             |
|  | max         | Nm       | 1               |
|  | min         | lbft     | 0.59            |
|  | max         | lbft     | 0.74            |
| Conductor section  | Пил         | 1511     | J 1             |
| Flexible w/o lug conductor section                                   |             |          |                 |
|  | min         | mm²      | 1.5             |
|  |             |          |                 |



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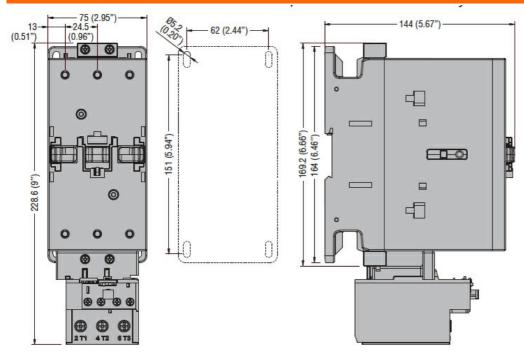
|   |   | max       | mm²       | 70                       |
|---|---|-----------|-----------|--------------------------|
|   | Flexible c/w lug conductor section      |           |           |                          |
|   | -                                       | min       | mm²       | 1.5                      |
|   |   | max       | mm²       | 70                       |
|   | tion according to IEC/EN 60529          |           |           | IP20 front               |
| Mechanical features                           |   |           |           |                          |
| Operating position                            |   |           |           |                          |
|   |   | normal    |           | Vertical plan            |
|   |   | allowable |           | ±30°                     |
| Fixing  |   |           |           | Screw / DIN rail<br>35mm |
| Weight  |   |           | g         | 2020                     |
| Operations                                    |   |           |           |                          |
| Mechanical life                               |   |           | cycles    | 15000000                 |
| Electrical life                               |   |           | cycles    | 800000                   |
| Safety related data                           |   |           |           |                          |
| EMC compatibility                             |   |           |           | yes                      |
| AC coil operating                             | 0/0011-                                 |           | 1.7       | 000                      |
| Rated AC voltage at 50                        | J/bUHZ                                  |           | V         | 230                      |
| AC operating voltage                          | at 50/001  - a ail a account det 501  - |           |           |                          |
|   | of 50/60Hz coil powered at 50Hz         |           |           |                          |
|   | pick-up                                 | max       | %Us       | 110                      |
|   | drop-out                                | IIIax     | /005      | 110                      |
|   | αιορ-οαι                                | min       | %Us       | 20                       |
|   |   | max       | %Us       | 55                       |
|   | of 50/60Hz coil powered at 60Hz         | тах       | 7000      |                          |
|   | pick-up                                 |           |           |                          |
|   | r · · · · · r                           | min       | %Us       | 85                       |
|   |   | max       | %Us       | 110                      |
|   | drop-out                                |           |           |                          |
|   |   | min       | %Us       | 40                       |
|   |   | max       | %Us       | 55                       |
| AC operating voltage a                        | at 20°C                                 |           |           |                          |
|   | of 50/60Hz coil powered at 50Hz         |           |           |                          |
|   |   | in-rush   | VA        | 300                      |
|   | -                                       | holding   | VA        | 20                       |
|   | of 50/60Hz coil powered at 60Hz         |           |           |                          |
|   |   | in-rush   | VA        | 300                      |
|   | . ( 001 )                               | holding   | VA        | 17                       |
|   | of 60Hz coil powered at 60Hz            |           | 1/4       | 200                      |
|   |   | in-rush   | VA<br>VA  | 300                      |
| Discinction at holding                        | <20°C 50H-                              | holding   | VA<br>W   | 6.5                      |
| Dissipation at holding s Max cycles frequency | <u></u>                                 |           | VV        | ບ.ວ                      |
| Mechanical operation                          |   |           | cycles/h  | 1500                     |
| Operating times                               |   |           | Cycles/II | 1300                     |
| Average time for Us co                        | ontrol                                  |           |           |                          |
| . Wordyo milo for 03 00                       | in AC                                   |           |           |                          |
|   | Closing NO                              |           |           |                          |
|   | 2.33mg 113                              | min       | ms        | 45                       |
|   |   | max       | ms        | 32                       |
|   | Opening NO                              |           |           |                          |
|   | . •                                     | min       | ms        | 9                        |
|   |   |           |           |                          |



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|                       |                          | max        | ms | 24   |
|-----------------------|--------------------------|------------|----|------|
| UL technical data     |                          |            |    |      |
| Yielded mechanical pe | erformance               |            |    |      |
|                       | 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 | Α  | 165  |
| Ambient conditions    |                          |            |    |      |
| Temperature           |                          |            |    |      |
|                       | Operating temperature    |            |    |      |
|                       |                          | min        | °C | -50  |
|                       |                          | max        | °C | 70   |
|                       | Storage temperature      |            |    |      |
|                       |                          | min        | °C | -60  |
|                       |                          | max        | °C | 80   |
| Max altitude          |                          |            | m  | 3000 |

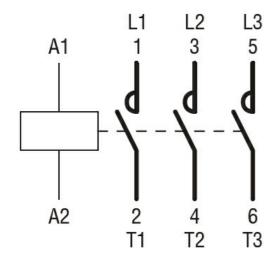
#### **Dimensions**



Wiring diagrams

**ENERGY AND AUTOMATION** 

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 150A, AC COIL 50/60HZ, 230VAC



#### 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