



Product designation

Power contactor

Product type designation

11BF50

Contact characteristics

| | | |
|------------------------------------------------------------|-----------------------------------------------------------------------|-----------|
| Number of poles | nr. | 3 |
| Rated insulation voltage U_i | V | 1000 |
| Rated impulse withstand voltage U_{imp} | kV | 8 |
| Operating frequency | | |
| | Operational frequency min | Hz 25 |
| | Operational frequency max | Hz 400 |
| Conventional free air thermal current I_{th} | A | 90 |
| Operating current | | |
| | Operational current AC1 ($\leq 40^\circ\text{C}$) | A 90 |
| | Operational current AC3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 50 |
| | Operational current AC4 (400V) | A 28 |
| Rated operational power AC1 ($T \leq 40^\circ\text{C}$) | | |
| | 230V kW | 34 |
| | 400V kW | 59 |
| | 500V kW | 74 |
| | 690V kW | 98 |
| Rated operational power AC3A ($T \leq 55^\circ\text{C}$) | | |
| | Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 230V kW | 14.3 |
| | Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 400V kW | 25 |
| | Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 415V kW | 27.2 |
| | Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 440V kW | 27.2 |
| | Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 500V kW | 33.2 |
| | Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 690V kW | 43.5 |
| | Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 1000V kW | 25 |
| Short-time allowable current for 10s (IEC/EN60947-1) | A | 390 |
| Protection fuse | | |
| | gG (IEC) | A 100 |
| | aM (IEC) | A 50 |
| Making capacity (RMS value) | A | 800 |
| Breaking capacity at voltage | | |
| | Breaking capacity 440V | A 800 |
| | Breaking capacity 500V | A 660 |
| | Breaking capacity 690V | A 500 |
| Resistance per pole (average value) | m Ω | 0.8 |
| Power dissipation per pole (average value) | | |
| | Power dissipation pole (average value) I_{th} | W 6.5 |
| | AC3 | W 2 |
| Tightening torque for terminals | | |
| | min | Nm 4 |
| | max | Nm 5 |
| | min | lbft 2.95 |
| | max | lbft 3.7 |

Tightening torque for coil terminal

| | | |
|-----|------|------|
| min | Nm | 0.8 |
| max | Nm | 1 |
| min | lbft | 0.8 |
| max | lbft | 0.74 |

max number of wires simultaneously connectable

nr. 1

Conductor section

AWG

| | |
|-----|-----|
| min | 14 |
| max | 2/0 |

Flexible w/o lug conductor section

| | | |
|-----|-----------------|----|
| min | mm ² | 6 |
| max | mm ² | 50 |

Flexible c/w lug conductor section

| | | |
|-----|-----------------|----|
| min | mm ² | 6 |
| max | mm ² | 50 |

Power terminal protection according to IEC/EN 60529

IP20 front

Auxiliary contact characteristics

Operational current AC1 (≤40°C)

A 90

Operating current DC13

110V A Screw / DIN rail
35mm

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

m 3000

Operating position

normal
allowable Vertical plan
±30°

Mounting

Screw / DIN rail
35mm

Weight

g 1355

Operations

Mechanical life

Cycles 15000000

Electrical life

Cycles 1500000

Safety related data

Performance level B10d according to EN/ISO 13489-1

| | | |
|-----------------|-------|----------|
| rated load | Cicli | 1500000 |
| mechanical load | Cicli | 15000000 |

Mirror contacts according to IEC/EN 60947-4-1

yes

EMC compatibility

yes

AC coil operating

AC operating voltage

of 50/60Hz coil powered at 50Hz
pick-up

| | | |
|-----|-----|-----|
| min | %Us | 0.8 |
| max | %Us | 1.1 |

drop-out

| | | | | |
|--------------------------------------------------|--|----------|-----|------|
| | | min | %Us | 0.2 |
| | | max | %Us | 0.55 |
| of 50/60Hz coil powered at 60Hz | | | | |
| pick-up | | min | %Us | 0.85 |
| | | max | %Us | 1.1 |
| drop-out | | min | %Us | 0.4 |
| | | max | %Us | 0.55 |
| of 60Hz coil powered at 60Hz | | | | |
| pick-up | | min | %Us | 0.8 |
| | | max | %Us | 1.1 |
| drop-out | | min | %Us | 0.2 |
| | | max | %Us | 0.55 |
| AC operating voltage | | | | |
| of 50/60Hz coil powered at 50Hz | | in-rush | VA | 200 |
| | | holding | VA | 18 |
| of 50/60Hz coil powered at 60Hz | | in-rush | VA | 200 |
| | | holding | VA | 15 |
| of 60Hz coil powered at 60Hz | | in-rush | VA | 220 |
| | | holding | VA | 18 |
| Dissipation at holding ≤20°C 50Hz | | W | | 6 |
| DC coil operating | | | | |
| DC operating voltage | | | | |
| Average coil consumption ≤20°C | | | | |
| | | in-rush | W | 45 |
| | | holding | W | 75 |
| Max cycles frequency | | | | |
| Mechanical operations | | Cycles/h | | 3600 |
| Operating times | | | | |
| Average time for Us control | | | | |
| in AC | | | | |
| Closing NO | | min | ms | 13 |
| | | max | ms | 28 |
| Opening NO | | min | ms | 6 |
| | | max | ms | 19 |
| in DC | | | | |
| Closing NO | | min | ms | 40 |
| | | max | ms | 85 |
| Opening NO | | min | ms | 20 |
| | | max | ms | 55 |
| UL technical data | | | | |
| Full-load current (FLA) for three-phase AC motor | | | | |
| at 480V | | A | | 40 |
| at 600V | | A | | 41 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|-------------|----|----|
| at 200/208V | hp | 10 |
| at 220/230V | hp | 15 |
| at 460/480V | hp | 30 |
| at 575/600V | hp | 40 |

General USE

Contactor

AC current A 90

Other features

Pollution degree

3

Certifications and compliance

Certifications

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

Compliance

CCC

CSA

cULus

EAC

ETIM 6 classification

EC000066 - Power contactor, AC switching