



Power contactor
BF230

Product designation

Product type designation

Contact characteristics

| | | |
|---|--------------------|--------|
| 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 | 350 |
| Operational current I _e | AC-1 (≤40°C) | A 350 |
| | AC-1 (≤55°C) | A 290 |
| | AC-1 (≤70°C) | A 250 |
| | AC-3 (≤440V ≤55°C) | A 230 |
| | AC-4 (400V) | A 110 |
| Rated operational current AC-3 (T≤55°C) | 230V | A 230 |
| | 400V | A 230 |
| | 415V | A 230 |
| | 440V | A 230 |
| | 500V | A 184 |
| | 690V | A 165 |
| | 1000V | A 100 |
| Rated operational power AC-1 (T≤40°C) | 230V | kW 132 |
| | 400V | kW 230 |
| | 500V | kW 253 |
| | 690V | kW 397 |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series | ≤24V | A 350 |
| | 48V | A 350 |
| | 75V | A 350 |
| | 110V | A 145 |
| | 220V | A – |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series | ≤24V | A 350 |
| | 48V | A 350 |
| | 75V | A 350 |
| | 110V | A 270 |
| | 220V | A 225 |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series | ≤24V | A 350 |
| | 48V | A 350 |
| | 75V | A 350 |

| | | | |
|--|-----------------|------------------|------|
| | 110V | A | 270 |
| | 220V | A | 270 |
| | 330V | A | 225 |
| <hr/> | | | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 350 |
| | 110V | A | 350 |
| | 220V | A | 350 |
| <hr/> | | | |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 250 |
| | 110V | A | 135 |
| | 220V | A | – |
| <hr/> | | | |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 250 |
| | 110V | A | 225 |
| | 220V | A | 180 |
| <hr/> | | | |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 250 |
| | 110V | A | 250 |
| | 220V | A | 225 |
| | 330V | A | 180 |
| <hr/> | | | |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 250 |
| | 110V | A | 250 |
| | 220V | A | 225 |
| | 330V | A | 210 |
| | 460V | A | 180 |
| <hr/> | | | |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 1840 |
| <hr/> | | | |
| Protection fuse | | | |
| | gG (IEC) | A | 400 |
| | aM (IEC) | A | 250 |
| <hr/> | | | |
| Making capacity (RMS value) | | A | 2300 |
| <hr/> | | | |
| Breaking capacity at voltage | | | |
| | 440V | A | 1840 |
| | 500V | A | 1472 |
| | 690V | A | 1296 |
| <hr/> | | | |
| Resistance per pole (average value) | | mΩ | 0.18 |
| <hr/> | | | |
| Power dissipation per pole (average value) | | | |
| | I _{th} | W | 21 |
| | AC-3 | W | 9.3 |
| <hr/> | | | |
| Tightening torque for terminals | | | |
| | min | Nm | 18 |
| | max | Nm | 18 |
| | min | I _{bin} | 159 |
| | max | I _{bin} | 159 |

Tightening torque for coil terminal

| | | |
|-----|----|-----|
| min | Nm | 0.8 |
| max | Nm | 1 |

Power terminal protection according to IEC/EN 60529

IP00

Mechanical features

Operating position

| | |
|-----------|---------------|
| normal | Vertical plan |
| allowable | ±30° |

Fixing

Screw

Weight

g 4000

Operations

Mechanical life

cycles 10000000

Electrical life

cycles 1000000

Safety related data

Performance level B10d according to EN/ISO 13489-1

| | | |
|------------|--------|---------|
| rated load | cycles | 1000000 |
|------------|--------|---------|

EMC compatibility

yes

AC coil operating

Rated AC voltage at 50/60Hz, 60Hz

| | | |
|-----|---|-----|
| min | V | 60 |
| max | V | 130 |

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 average coil consumption at 20°C

of 50/60Hz coil powered at 50Hz

| | | |
|---------|----|-----------|
| in-rush | VA | 160...230 |
| holding | VA | 1.5...3.0 |

of 50/60Hz coil powered at 60Hz

| | | |
|---------|----|-----------|
| in-rush | VA | 160...230 |
| holding | VA | 1.5...3.0 |

of 60Hz coil powered at 60Hz

| | | |
|---------|----|-----------|
| in-rush | VA | 160...230 |
| holding | VA | 1.5...3.0 |

Dissipation at holding ≤20°C 50Hz

W 1.5...3.0

DC coil operating

DC rated control voltage

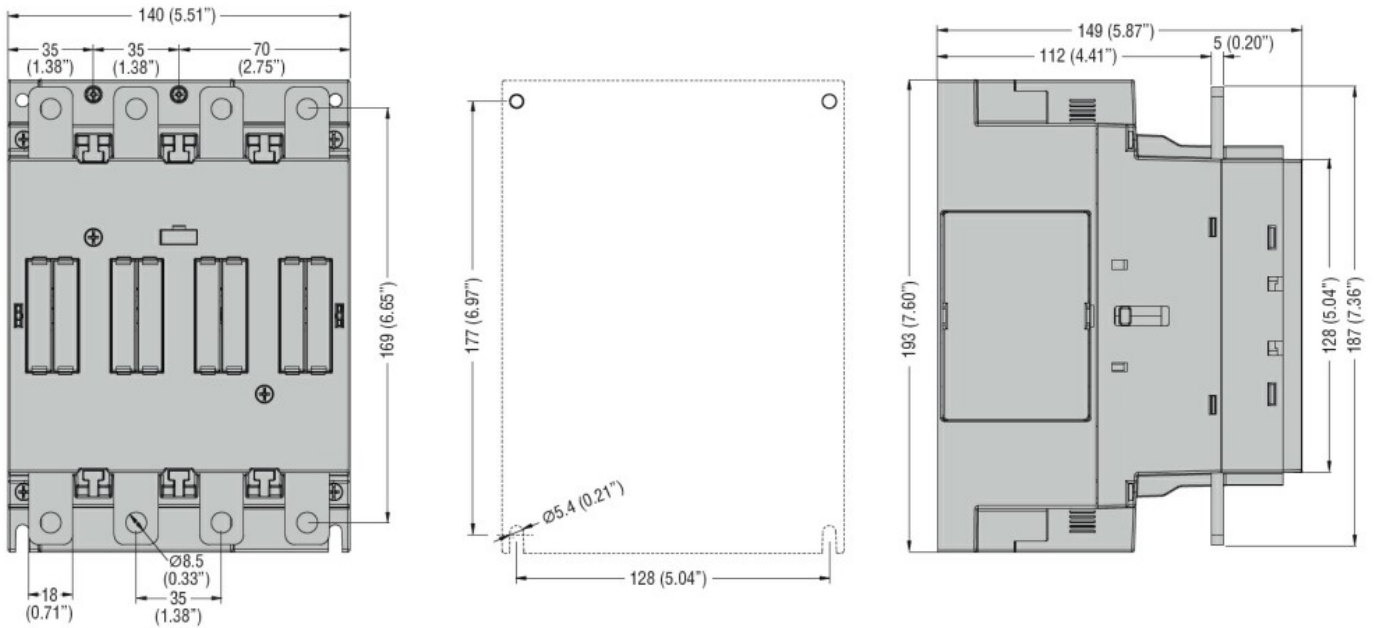
| | | |
|-----|---|-----|
| min | V | 60 |
| max | V | 130 |

DC operating voltage

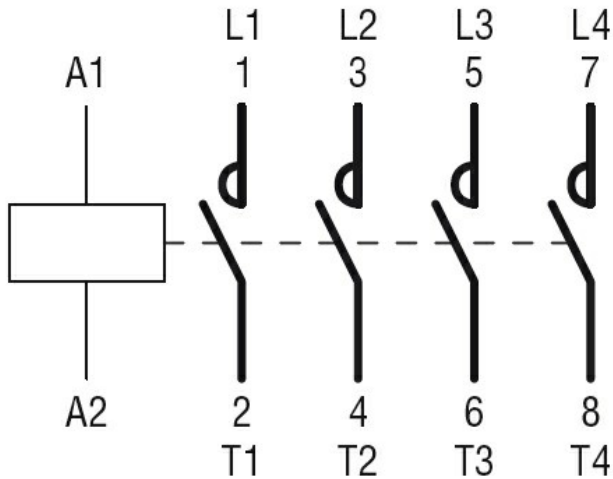
pick-up

| | | |
|-----|-----|------------|
| 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 | 160...230 |
| | | holding | W | 1.5...3.0 |
| Max cycles frequency | | | | |
| Mechanical operation | | | cycles/h | 1000 |
| Operating times | | | | |
| Average time for Us control | | | | |
| in AC | | | | |
| Closing NO | | min | ms | 50 |
| | | max | ms | 100 |
| Opening NO | | min | ms | 30 |
| | | max | ms | 75 |
| UL technical data | | | | |
| Yielded mechanical performance | | | | |
| for three-phase AC motor | | | | |
| | | 200/208V | HP | 75 |
| | | 220/230V | HP | 75 |
| | | 460/480V | HP | 150 |
| | | 575/600V | HP | 200 |
| General USE | | | | |
| Contactor | | AC current | A | 350 |
| Short-circuit protection fuse, 600V | | | | |
| High fault | | Short circuit current | kA | 100 |
| | | Fuse rating | A | 400 |
| | | Fuse class | | J |
| Standard fault | | Short circuit current | kA | 10 |
| | | Fuse rating | A | 400 |
| | | Fuse class | | RK5 |
| 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/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