



Product designation

Power contactor

Product type designation

BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 38 |
| | 400V | kW 65 |
| | 500V | kW 82 |
| | 690V | kW 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |

| | | | |
|--|----------|------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | | |
|---|---------------------------------|------------------|------------------|-----------------------|
| | | min | I _{bin} | 0.8 |
| | | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | | Nr. | 2 |
| Conductor section | AWG/Kcmil | | | |
| | | max | | 2 |
| Flexible w/o lug conductor section | | min | mm ² | 1.5 |
| | | max | mm ² | 35 |
| Flexible c/w lug conductor section | | min | mm ² | 1.5 |
| | | max | mm ² | 35 |
| 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 | 1020 |
| Conductor section | AWG/kcmil conductor section | | | |
| | | max | | 2 |
| Operations | | | | |
| Mechanical life | | | cycles | 15000000 |
| Electrical life | | | cycles | 1400000 |
| Safety related data | | | | |
| Performance level B10d according to EN/ISO 13489-1 | | rated load | cycles | 1400000 |
| | | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | | yes |
| EMC compatibility | | | | yes |
| AC coil operating | | | | |
| Rated AC voltage at 50/60Hz | | | V | 24 |
| AC operating voltage | of 50/60Hz coil powered at 50Hz | | | |
| | pick-up | min | %U _s | 80 |
| | | max | %U _s | 110 |
| | drop-out | min | %U _s | 20 |
| | | max | %U _s | 55 |
| | of 50/60Hz coil powered at 60Hz | | | |
| | pick-up | min | %U _s | 85 |
| | | max | %U _s | 110 |
| | drop-out | min | %U _s | 40 |
| | | max | %U _s | 55 |
| AC average coil consumption at 20°C | of 50/60Hz coil powered at 50Hz | | | |
| | | in-rush | VA | 210 |
| | | holding | VA | 15 |

of 50/60Hz coil powered at 60Hz

| | | |
|---------|----|-----|
| in-rush | VA | 195 |
| holding | VA | 13 |

of 60Hz coil powered at 60Hz

| | | |
|---------|----|-----|
| in-rush | VA | 210 |
| holding | VA | 15 |

Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz

| | |
|---|---|
| W | 5 |
|---|---|

Max cycles frequency

Mechanical operation

| | |
|----------|------|
| cycles/h | 3600 |
|----------|------|

Operating times

Average time for Us control

in AC

Closing NO

| | | |
|-----|----|----|
| min | ms | 12 |
| max | ms | 28 |

Opening NO

| | | |
|-----|----|----|
| min | ms | 8 |
| max | ms | 22 |

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 | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

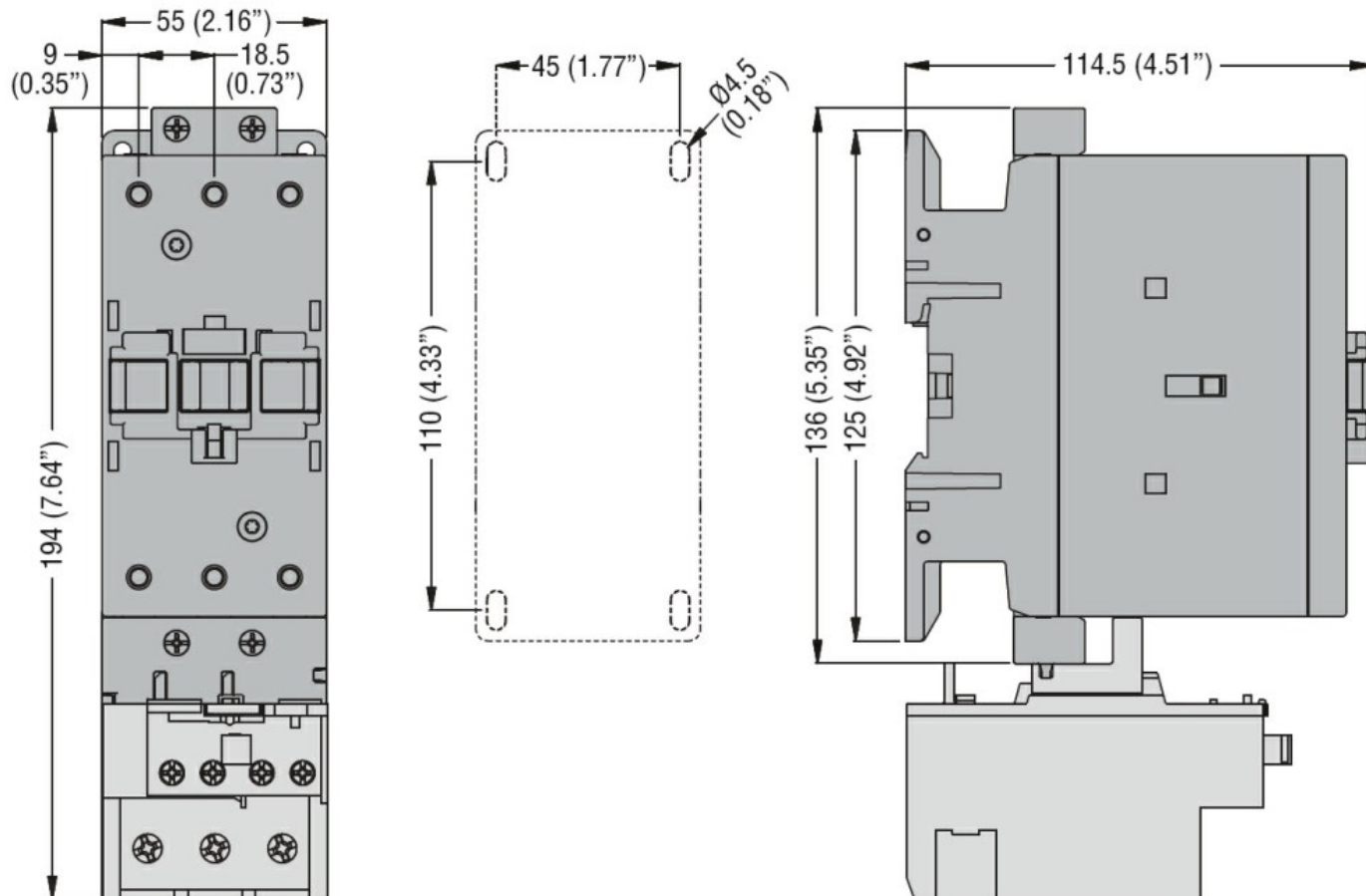
Operating temperature

| | | |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -50 |
| max | $^{\circ}\text{C}$ | 70 |

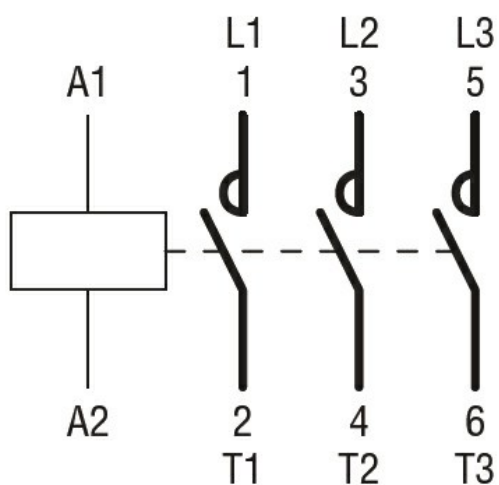
Storage temperature

| | | |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -60 |
|-----|--------------------|-----|

| | | | |
|------------------------------------|-----|----|------|
| | 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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation

Power contactor

Product type designation

BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 38 |
| | 400V | kW 65 |
| | 500V | kW 82 |
| | 690V | kW 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |

| | | | |
|--|----------|------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | | |
|---|---------------------------------|------------------|------------------|-----------------------|
| | | min | I _{bin} | 0.8 |
| | | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | | Nr. | 2 |
| Conductor section | AWG/Kcmil | | | |
| | | max | | 2 |
| Flexible w/o lug conductor section | | min | mm ² | 1.5 |
| | | max | mm ² | 35 |
| Flexible c/w lug conductor section | | min | mm ² | 1.5 |
| | | max | mm ² | 35 |
| 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 | 1020 |
| Conductor section | AWG/kcmil conductor section | | | |
| | | max | | 2 |
| Operations | | | | |
| Mechanical life | | | cycles | 15000000 |
| Electrical life | | | cycles | 1400000 |
| Safety related data | | | | |
| Performance level B10d according to EN/ISO 13489-1 | | rated load | cycles | 1400000 |
| | | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | | yes |
| EMC compatibility | | | | yes |
| AC coil operating | | | | |
| Rated AC voltage at 50/60Hz | | | V | 48 |
| AC operating voltage | of 50/60Hz coil powered at 50Hz | | | |
| | pick-up | min | %U _s | 80 |
| | | max | %U _s | 110 |
| | drop-out | min | %U _s | 20 |
| | | max | %U _s | 55 |
| | of 50/60Hz coil powered at 60Hz | | | |
| | pick-up | min | %U _s | 85 |
| | | max | %U _s | 110 |
| | drop-out | min | %U _s | 40 |
| | | max | %U _s | 55 |
| AC average coil consumption at 20°C | of 50/60Hz coil powered at 50Hz | | | |
| | | in-rush | VA | 210 |
| | | holding | VA | 15 |

of 50/60Hz coil powered at 60Hz

| | | |
|---------|----|-----|
| in-rush | VA | 195 |
| holding | VA | 13 |

of 60Hz coil powered at 60Hz

| | | |
|---------|----|-----|
| in-rush | VA | 210 |
| holding | VA | 15 |

Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz

| | |
|---|---|
| W | 5 |
|---|---|

Max cycles frequency

Mechanical operation

| | |
|----------|------|
| cycles/h | 3600 |
|----------|------|

Operating times

Average time for Us control

in AC

Closing NO

| | | |
|-----|----|----|
| min | ms | 12 |
| max | ms | 28 |

Opening NO

| | | |
|-----|----|----|
| min | ms | 8 |
| max | ms | 22 |

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 | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

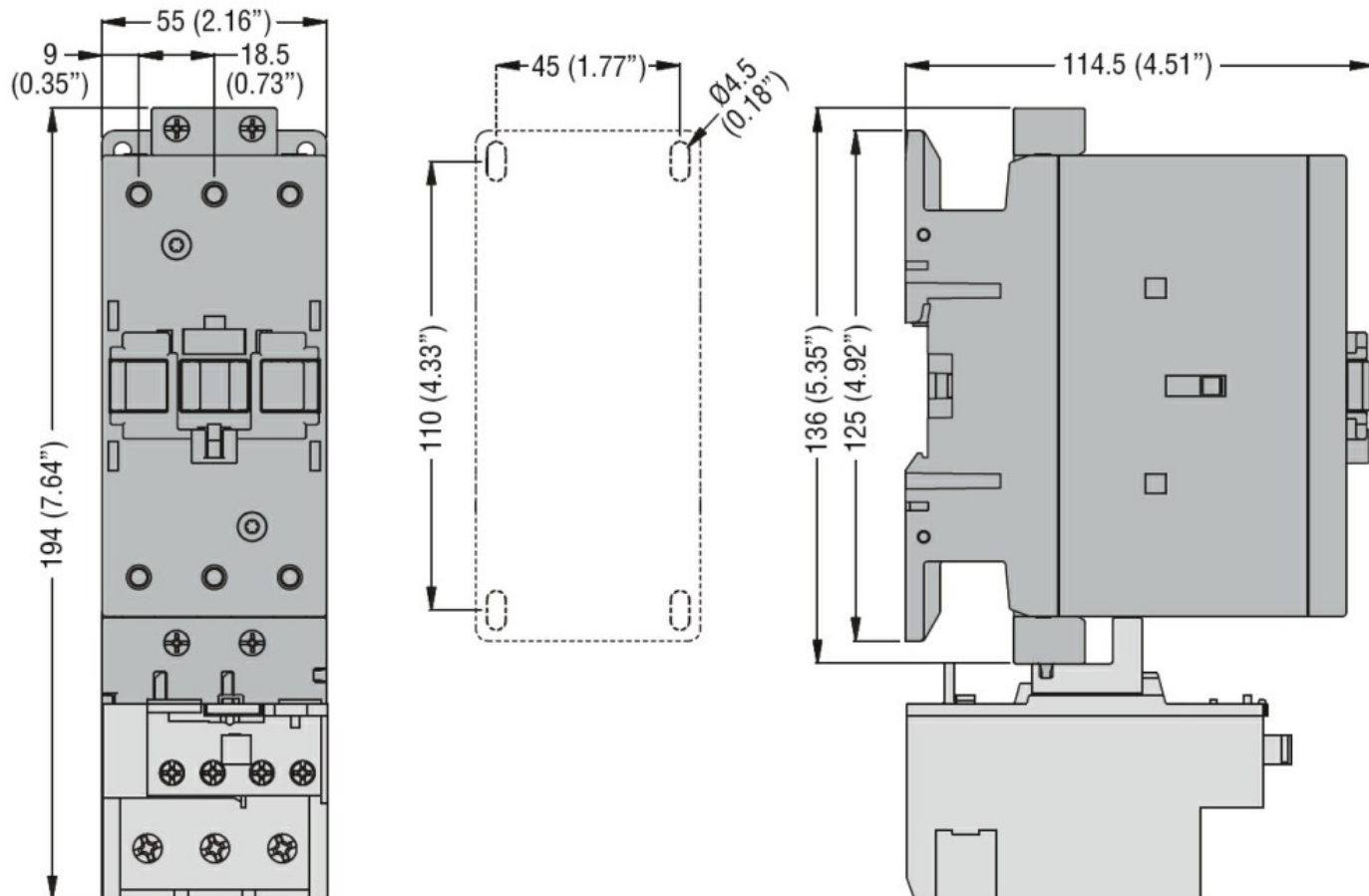
Operating temperature

| | | |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -50 |
| max | $^{\circ}\text{C}$ | 70 |

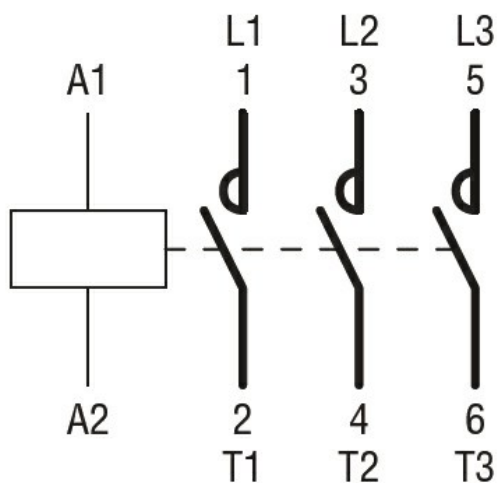
Storage temperature

| | | |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -60 |
|-----|--------------------|-----|

| | | | |
|------------------------------------|-----|----|------|
| | 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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation

Power contactor

Product type designation

BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V kW | 18.5 |
| | 400V kW | 30 |
| | 415V kW | 37 |
| | 440V kW | 37 |
| | 500V kW | 37 |
| | 690V kW | 45 |
| | 1000V kW | 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V kW | 38 |
| | 400V kW | 65 |
| | 500V kW | 82 |
| | 690V kW | 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ A | 50 |
| | 48V A | 50 |
| | 75V A | 50 |
| | 110V A | 8 |
| | 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 | 70 |
| | 48V A | 70 |
| | 75V A | 70 |
| | 110V A | 60 |
| | 220V A | 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ A | 70 |
| | 48V A | 70 |
| | 75V A | 70 |

| | | | |
|--|----------|------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | | |
|---|---------------------------------|------------------|------------------|-----------------------|
| | | min | I _{bin} | 0.8 |
| | | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | | Nr. | 2 |
| Conductor section | AWG/Kcmil | | | |
| | | max | | 2 |
| Flexible w/o lug conductor section | | min | mm ² | 1.5 |
| | | max | mm ² | 35 |
| Flexible c/w lug conductor section | | min | mm ² | 1.5 |
| | | max | mm ² | 35 |
| 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 | 1020 |
| Conductor section | AWG/kcmil conductor section | | | |
| | | max | | 2 |
| Operations | | | | |
| Mechanical life | | | cycles | 15000000 |
| Electrical life | | | cycles | 1400000 |
| Safety related data | | | | |
| Performance level B10d according to EN/ISO 13489-1 | | rated load | cycles | 1400000 |
| | | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | | yes |
| EMC compatibility | | | | yes |
| AC coil operating | | | | |
| Rated AC voltage at 50/60Hz | | | V | 110 |
| AC operating voltage | of 50/60Hz coil powered at 50Hz | | | |
| | pick-up | min | %U _s | 80 |
| | | max | %U _s | 110 |
| | drop-out | min | %U _s | 20 |
| | | max | %U _s | 55 |
| | of 50/60Hz coil powered at 60Hz | | | |
| | pick-up | min | %U _s | 85 |
| | | max | %U _s | 110 |
| | drop-out | min | %U _s | 40 |
| | | max | %U _s | 55 |
| AC average coil consumption at 20°C | of 50/60Hz coil powered at 50Hz | | | |
| | | in-rush | VA | 210 |
| | | holding | VA | 15 |

of 50/60Hz coil powered at 60Hz

| | | |
|---------|----|-----|
| in-rush | VA | 195 |
| holding | VA | 13 |

of 60Hz coil powered at 60Hz

| | | |
|---------|----|-----|
| in-rush | VA | 210 |
| holding | VA | 15 |

Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz

| | |
|---|---|
| W | 5 |
|---|---|

Max cycles frequency

Mechanical operation

| | |
|----------|------|
| cycles/h | 3600 |
|----------|------|

Operating times

Average time for Us control

in AC

Closing NO

| | | |
|-----|----|----|
| min | ms | 12 |
| max | ms | 28 |

Opening NO

| | | |
|-----|----|----|
| min | ms | 8 |
| max | ms | 22 |

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 | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

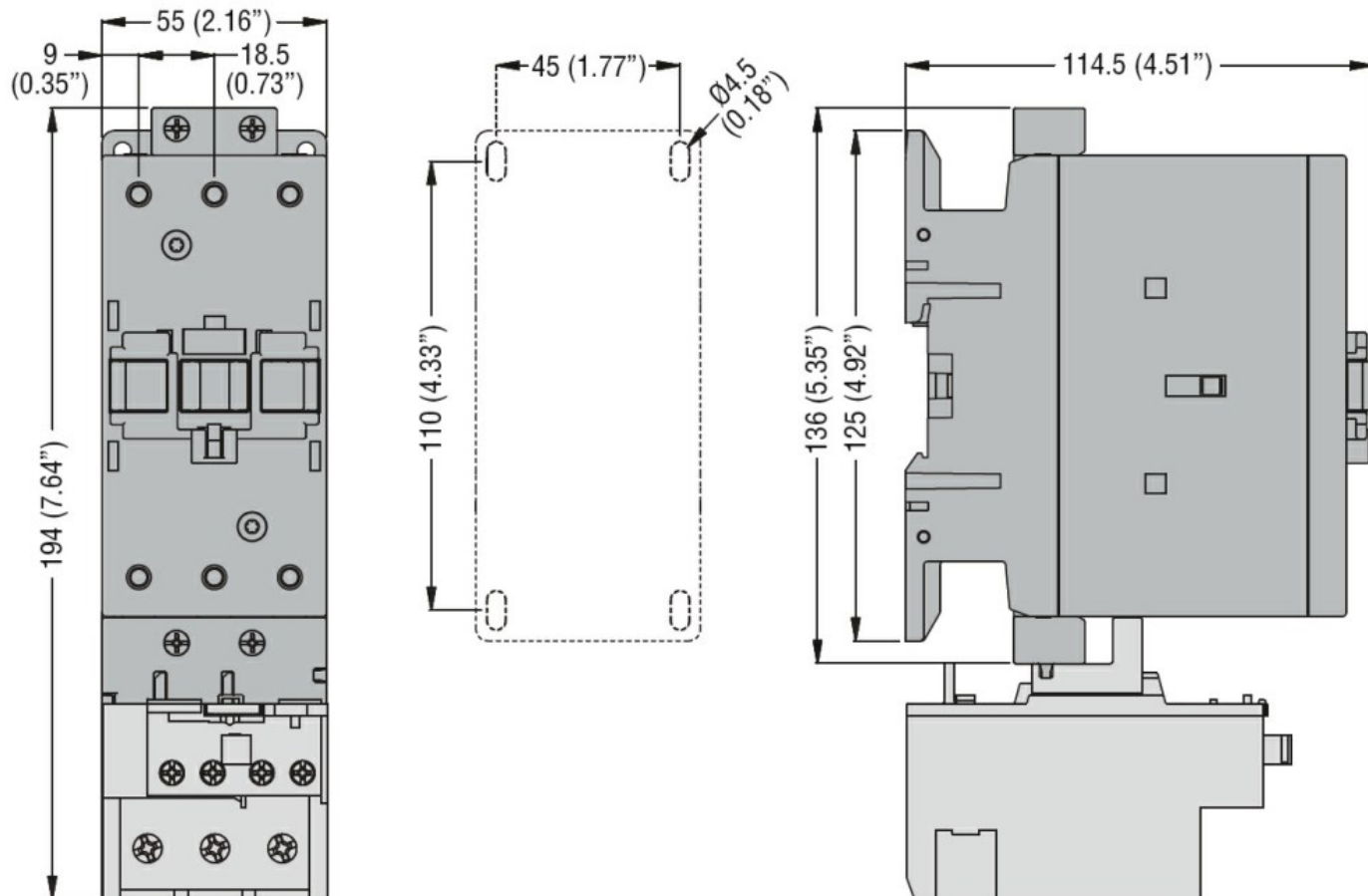
Operating temperature

| | | |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -50 |
| max | $^{\circ}\text{C}$ | 70 |

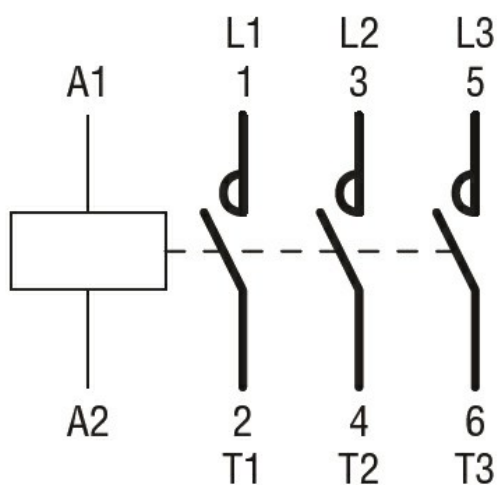
Storage temperature

| | | |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -60 |
|-----|--------------------|-----|

| | | | |
|------------------------------------|-----|----|------|
| | 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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation

Power contactor

Product type designation

BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 90 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |

| | | | |
|--|------------------------------------|------|------|
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |
| | min | Ibin | 0.8 |
| | max | Ibin | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| | Flexible w/o lug conductor section | | |

| | | | |
|---|-------------------------------|------------------|--------------------------|
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| Flexible c/w lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| 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 | 1020 |
| Operations | | | |
| Mechanical life | | cycles | 15000000 |
| Electrical life | | cycles | 1400000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load mechanical load | cycles cycles | 1400000 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| EMC compatibility | | | yes |
| AC coil operating | | | |
| Rated AC voltage at 50/60Hz | | V | 230 |
| AC operating voltage | | | |
| of 50/60Hz coil powered at 50Hz | | | |
| pick-up | | | |
| | min | %Us | 80 |
| | max | %Us | 110 |
| drop-out | | | |
| | min | %Us | 20 |
| | max | %Us | 55 |
| of 50/60Hz coil powered at 60Hz | | | |
| pick-up | | | |
| | min | %Us | 85 |
| | max | %Us | 110 |
| drop-out | | | |
| | min | %Us | 40 |
| | max | %Us | 55 |
| AC average coil consumption at 20°C | | | |
| of 50/60Hz coil powered at 50Hz | | | |
| | in-rush | VA | 210 |
| | holding | VA | 15 |
| of 50/60Hz coil powered at 60Hz | | | |
| | in-rush | VA | 195 |
| | holding | VA | 13 |
| of 60Hz coil powered at 60Hz | | | |
| | in-rush | VA | 210 |
| | holding | VA | 15 |
| Dissipation at holding ≤20°C 50Hz | | W | 5 |
| Max cycles frequency | | | |
| Mechanical operation | | cycles/h | 3600 |
| Operating times | | | |
| Average time for Us control | | | |

in AC

Closing NO

| | | |
|-----|----|----|
| min | ms | 12 |
| max | ms | 28 |

Opening NO

| | | |
|-----|----|----|
| min | ms | 8 |
| max | ms | 22 |

UL technical data

Full-load current (FLA) for three-phase AC motor

| | | |
|---------|---|----|
| at 480V | A | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

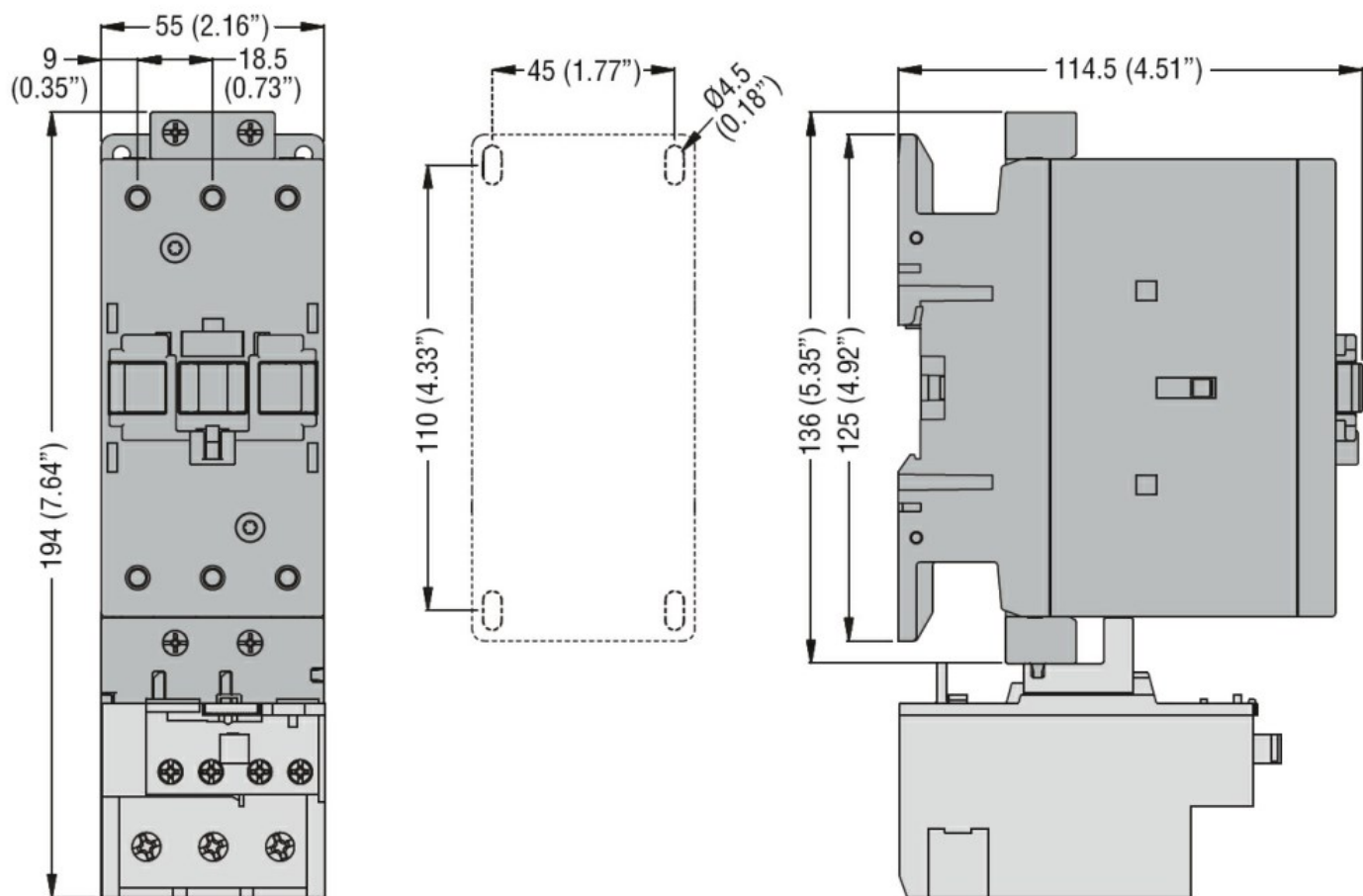
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

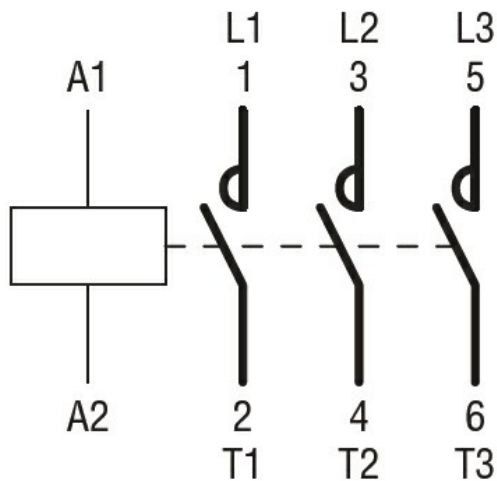
Pollution degree

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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation

Power contactor

Product type designation

BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 38 |
| | 400V | kW 65 |
| | 500V | kW 82 |
| | 690V | kW 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |

| | | | |
|--|----------|------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | | |
|---|---------------------------------|------------------|------------------|-----------------------|
| | | min | I _{bin} | 0.8 |
| | | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | | Nr. | 2 |
| Conductor section | AWG/Kcmil | | | |
| | | max | | 2 |
| Flexible w/o lug conductor section | | min | mm ² | 1.5 |
| | | max | mm ² | 35 |
| Flexible c/w lug conductor section | | min | mm ² | 1.5 |
| | | max | mm ² | 35 |
| 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 | 1020 |
| Conductor section | AWG/kcmil conductor section | | | |
| | | max | | 2 |
| Operations | | | | |
| Mechanical life | | | cycles | 15000000 |
| Electrical life | | | cycles | 1400000 |
| Safety related data | | | | |
| Performance level B10d according to EN/ISO 13489-1 | | rated load | cycles | 1400000 |
| | | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | | yes |
| EMC compatibility | | | | yes |
| AC coil operating | | | | |
| Rated AC voltage at 50/60Hz | | | V | 400 |
| AC operating voltage | of 50/60Hz coil powered at 50Hz | | | |
| | pick-up | min | %U _s | 80 |
| | | max | %U _s | 110 |
| | drop-out | min | %U _s | 20 |
| | | max | %U _s | 55 |
| | of 50/60Hz coil powered at 60Hz | | | |
| | pick-up | min | %U _s | 85 |
| | | max | %U _s | 110 |
| | drop-out | min | %U _s | 40 |
| | | max | %U _s | 55 |
| AC average coil consumption at 20°C | of 50/60Hz coil powered at 50Hz | | | |
| | | in-rush | VA | 210 |
| | | holding | VA | 15 |

of 50/60Hz coil powered at 60Hz

| | | |
|---------|----|-----|
| in-rush | VA | 195 |
| holding | VA | 13 |

of 60Hz coil powered at 60Hz

| | | |
|---------|----|-----|
| in-rush | VA | 210 |
| holding | VA | 15 |

Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz

| | |
|---|---|
| W | 5 |
|---|---|

Max cycles frequency

Mechanical operation

| | |
|----------|------|
| cycles/h | 3600 |
|----------|------|

Operating times

Average time for Us control

in AC

Closing NO

| | | |
|-----|----|----|
| min | ms | 12 |
| max | ms | 28 |

Opening NO

| | | |
|-----|----|----|
| min | ms | 8 |
| max | ms | 22 |

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 | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

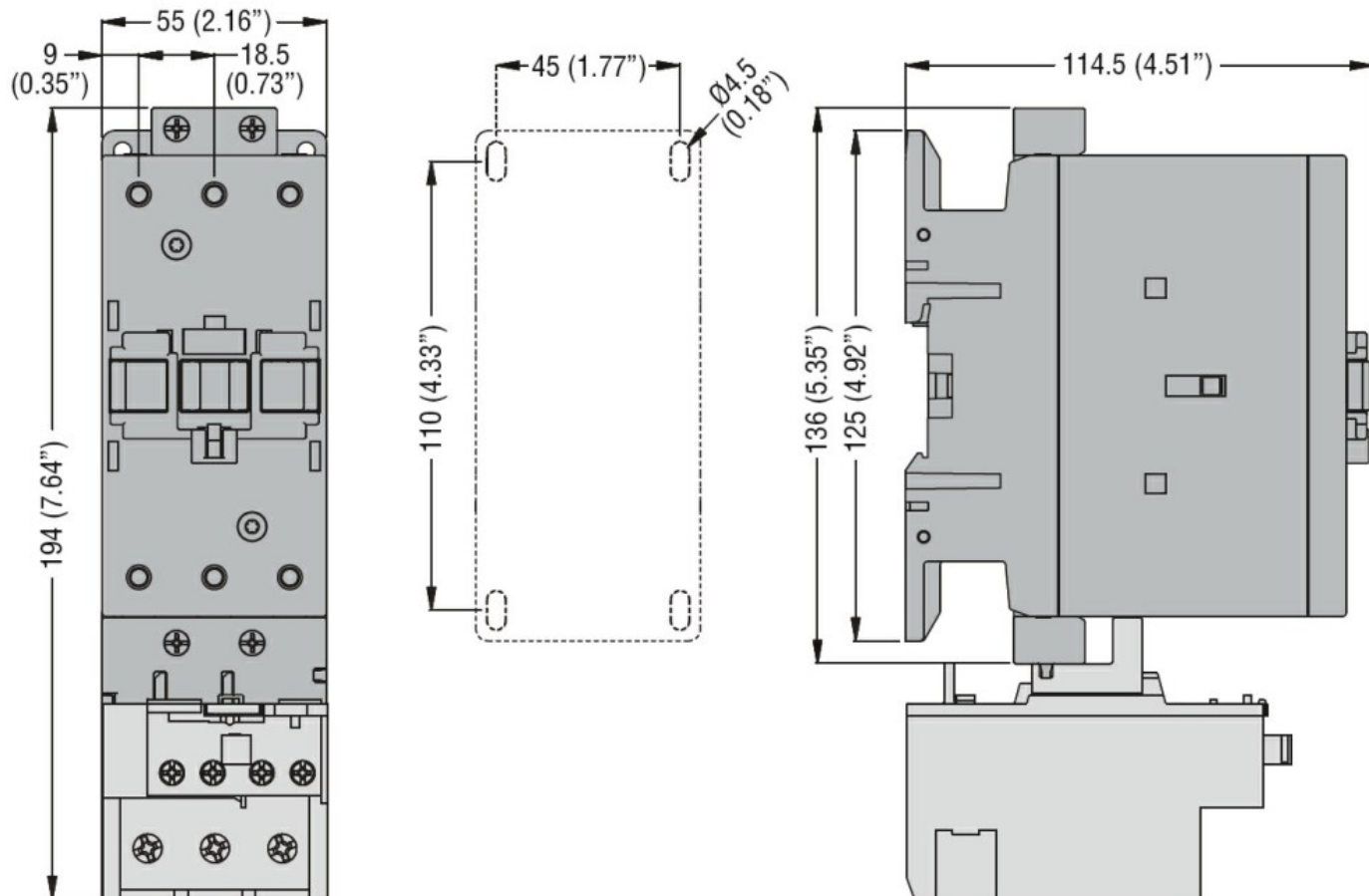
Operating temperature

| | | |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -50 |
| max | $^{\circ}\text{C}$ | 70 |

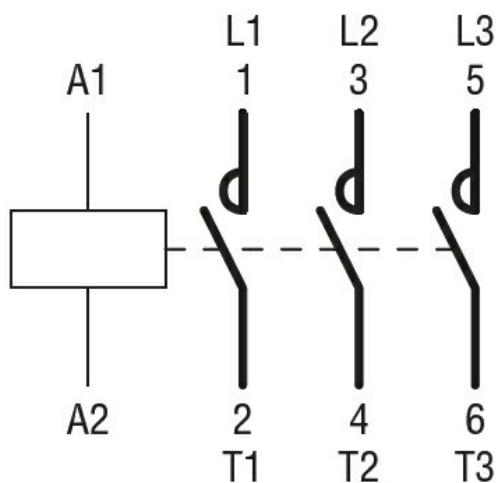
Storage temperature

| | | |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -60 |
|-----|--------------------|-----|

| | | | |
|------------------------------------|-----|----|------|
| | 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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation

Power contactor

Product type designation

BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 38 |
| | 400V | kW 65 |
| | 500V | kW 82 |
| | 690V | kW 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |

| | | | |
|--|----------|------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | |
|---|------------------|------------------|-----------------------|
| | min | I _{bin} | 0.8 |
| | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| AWG/Kcmil | | | |
| | max | | 2 |
| Flexible w/o lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| Flexible c/w lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| 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 | 1020 |
| Conductor section | | | |
| AWG/kcmil conductor section | | | |
| | max | | 2 |
| Operations | | | |
| Mechanical life | | cycles | 15000000 |
| Electrical life | | cycles | 1400000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load | cycles | 1400000 |
| | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| EMC compatibility | | | yes |
| AC coil operating | | | |
| Rated AC voltage at 60Hz | | V | 24 |
| AC operating voltage | | | |
| of 60Hz coil powered at 60Hz | | | |
| pick-up | | | |
| | min | %U _s | 80 |
| | max | %U _s | 110 |
| drop-out | | | |
| | min | %U _s | 20 |
| | max | %U _s | 55 |
| AC average coil consumption at 20°C | | | |
| of 60Hz coil powered at 60Hz | | | |
| | in-rush | VA | 210 |
| | holding | VA | 15 |
| Dissipation at holding ≤20°C 50Hz | | W | 5 |
| Max cycles frequency | | | |
| Mechanical operation | | cycles/h | 3600 |
| Operating times | | | |
| Average time for U _s control | | | |
| in AC | | | |
| Closing NO | | | |

| | | | | |
|-------|------------|-----|----|----|
| in DC | Opening NO | min | ms | 12 |
| | | max | ms | 28 |
| | | min | ms | 8 |
| | | max | ms | 22 |
| | 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 | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

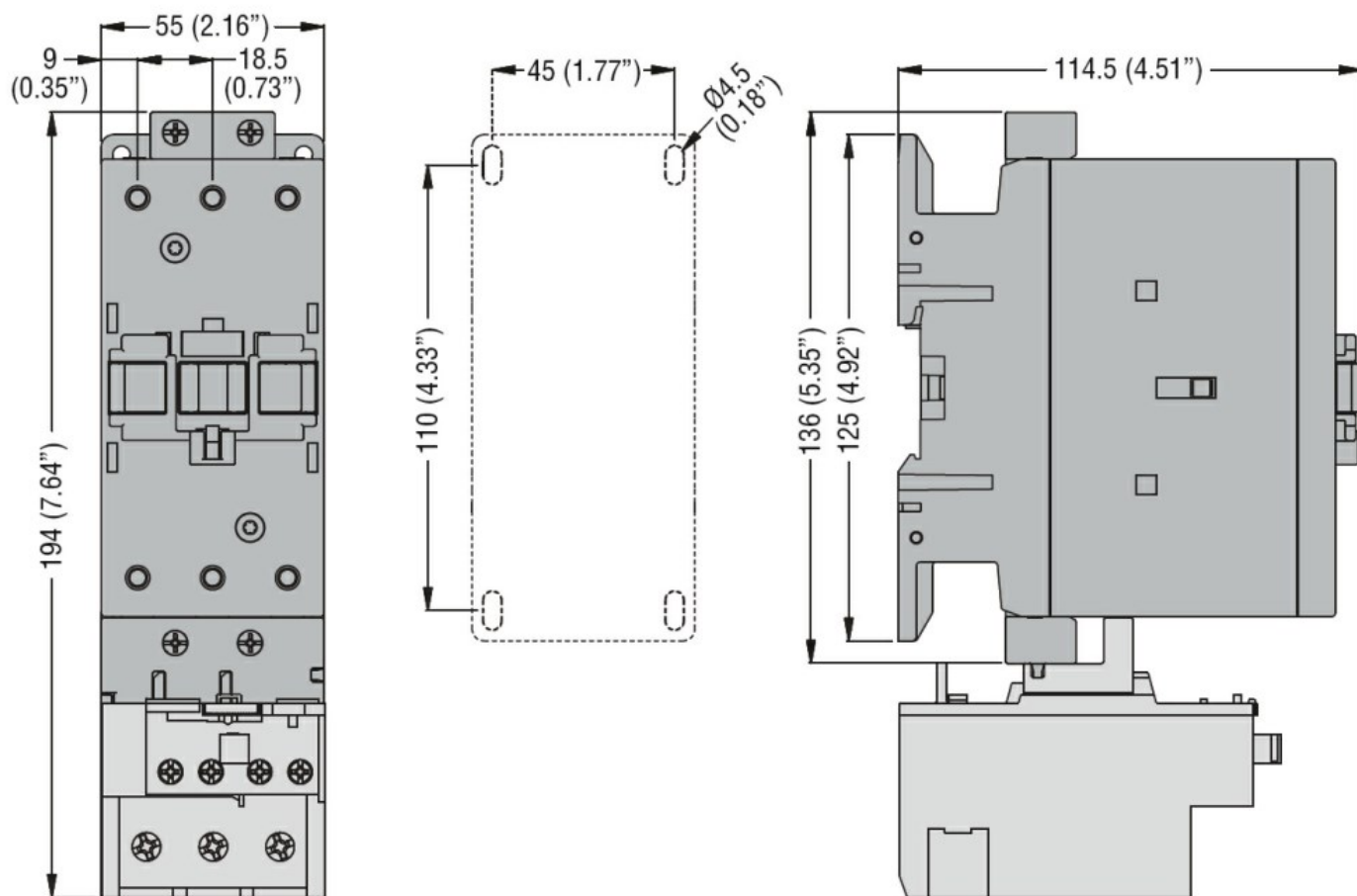
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

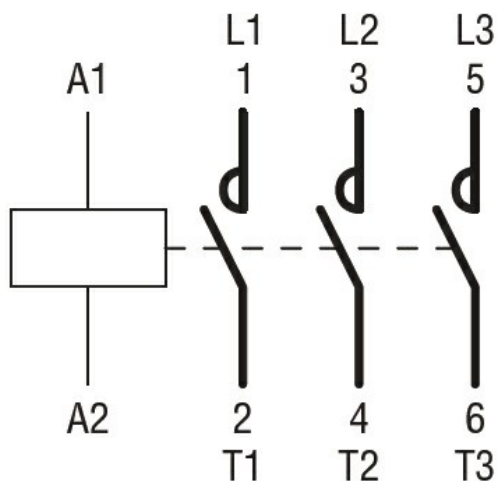
Pollution degree

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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation
Product type designation

Power contactor
BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 38 |
| | 400V | kW 65 |
| | 500V | kW 82 |
| | 690V | kW 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |

| | | | |
|--|----------|------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | |
|---|-----------------|------------------|------------------|
| | min | I _{bin} | 0.8 |
| | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| AWG/Kcmil | | | |
| | max | | 2 |
| Flexible w/o lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| Flexible c/w lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| Power terminal protection according to IEC/EN 60529 | | | IP20 front |
| Mechanical features | | | |
| Operating position | | | |
| | normal | | Vertical plan |
| | allowable | | ±30° |
| Fixing | | | Screw / DIN rail |
| | | | 35mm |
| Weight | | g | 1020 |
| Conductor section | | | |
| AWG/kcmil conductor section | | | |
| | max | | 2 |
| Operations | | | |
| Mechanical life | | cycles | 15000000 |
| Electrical life | | cycles | 1400000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load | cycles | 1400000 |
| | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| EMC compatibility | | | yes |
| AC coil operating | | | |
| Rated AC voltage at 60Hz | | V | 48 |
| 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 | VA | 210 |
| | holding | VA | 15 |
| Dissipation at holding ≤20°C 50Hz | | W | 5 |
| Max cycles frequency | | | |
| Mechanical operation | | cycles/h | 3600 |
| Operating times | | | |
| Average time for U _s control | | | |
| in AC | | | |
| Closing NO | | | |

| | | | | |
|-------|------------|-----|----|----|
| in DC | Opening NO | min | ms | 12 |
| | | max | ms | 28 |
| | Closing NO | min | ms | 8 |
| | | max | ms | 22 |
| | Opening 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 | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

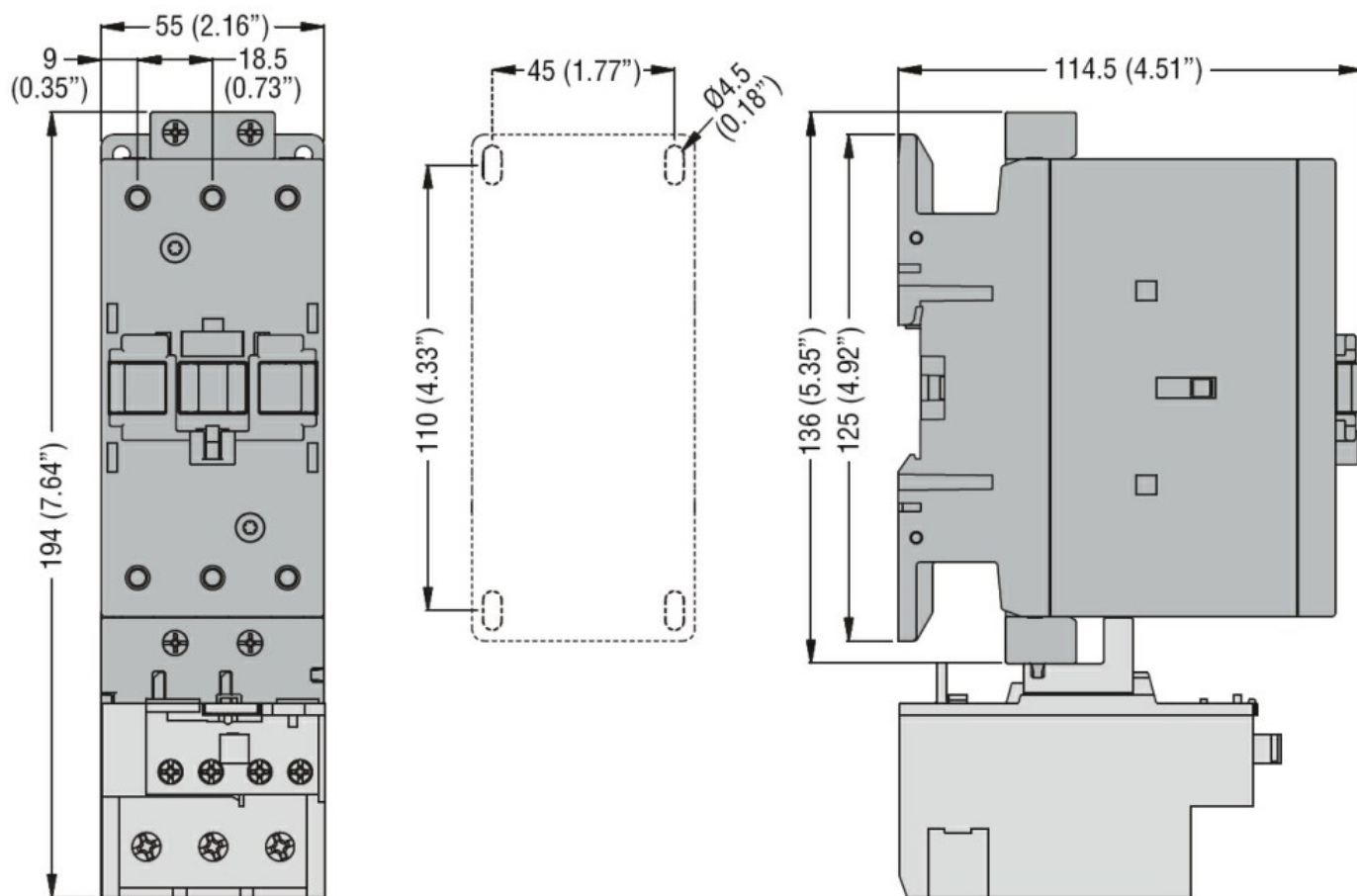
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|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

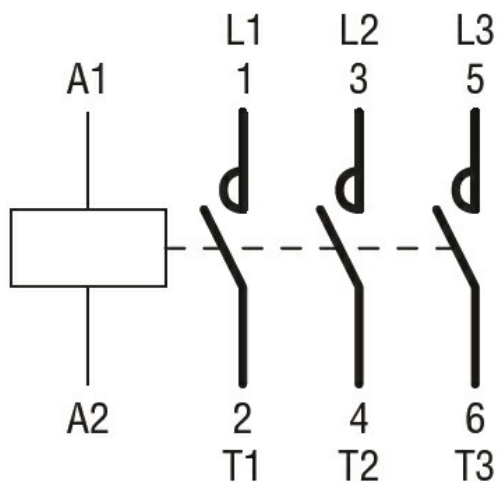
Pollution degree

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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation

Power contactor

Product type designation

BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 38 |
| | 400V | kW 65 |
| | 500V | kW 82 |
| | 690V | kW 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |

| | | | |
|--|----------|------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | |
|---|------------------|------------------|-----------------------|
| | min | I _{bin} | 0.8 |
| | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| AWG/Kcmil | | | |
| | max | | 2 |
| Flexible w/o lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| Flexible c/w lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| 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 | 1020 |
| Conductor section | | | |
| AWG/kcmil conductor section | | | |
| | max | | 2 |
| Operations | | | |
| Mechanical life | | cycles | 15000000 |
| Electrical life | | cycles | 1400000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load | cycles | 1400000 |
| | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| EMC compatibility | | | yes |
| AC coil operating | | | |
| Rated AC voltage at 60Hz | | V | 120 |
| AC operating voltage | | | |
| of 60Hz coil powered at 60Hz | | | |
| pick-up | | | |
| | min | %U _s | 80 |
| | max | %U _s | 110 |
| drop-out | | | |
| | min | %U _s | 20 |
| | max | %U _s | 55 |
| AC average coil consumption at 20°C | | | |
| of 60Hz coil powered at 60Hz | | | |
| | in-rush | VA | 210 |
| | holding | VA | 15 |
| Dissipation at holding ≤20°C 50Hz | | W | 5 |
| Max cycles frequency | | | |
| Mechanical operation | | cycles/h | 3600 |
| Operating times | | | |
| Average time for U _s control | | | |
| in AC | | | |
| Closing NO | | | |

| | | | | |
|-------|------------|-----|----|----|
| in DC | Opening NO | min | ms | 12 |
| | | max | ms | 28 |
| | | min | ms | 8 |
| | | max | ms | 22 |
| | 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 | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

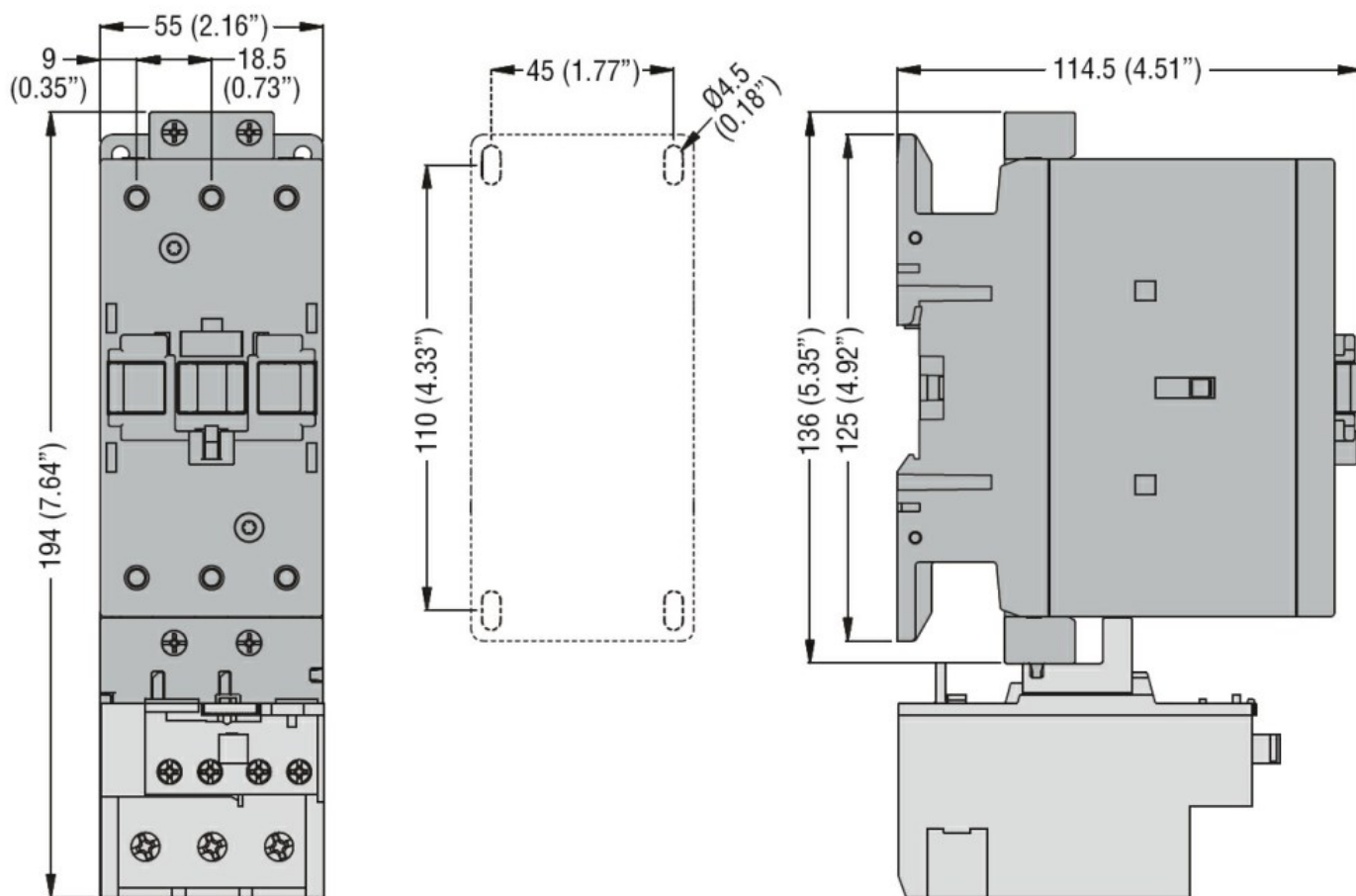
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

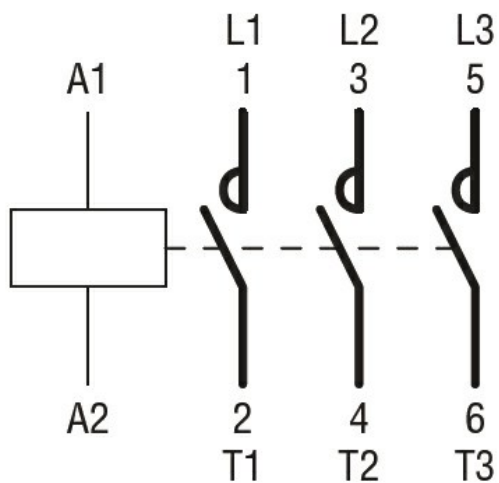
Pollution degree

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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation
Product type designation

Power contactor
BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 38 |
| | 400V | kW 65 |
| | 500V | kW 82 |
| | 690V | kW 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |

| | | | |
|--|----------|------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | |
|---|------------------|------------------|-----------------------|
| | min | I _{bin} | 0.8 |
| | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| AWG/Kcmil | | | |
| | max | | 2 |
| Flexible w/o lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| Flexible c/w lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| 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 | 1020 |
| Conductor section | | | |
| AWG/kcmil conductor section | | | |
| | max | | 2 |
| Operations | | | |
| Mechanical life | | cycles | 15000000 |
| Electrical life | | cycles | 1400000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load | cycles | 1400000 |
| | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| EMC compatibility | | | yes |
| AC coil operating | | | |
| Rated AC voltage at 60Hz | | V | 220 |
| AC operating voltage | | | |
| of 60Hz coil powered at 60Hz | | | |
| pick-up | | | |
| | min | %U _s | 80 |
| | max | %U _s | 110 |
| drop-out | | | |
| | min | %U _s | 20 |
| | max | %U _s | 55 |
| AC average coil consumption at 20°C | | | |
| of 60Hz coil powered at 60Hz | | | |
| | in-rush | VA | 210 |
| | holding | VA | 15 |
| Dissipation at holding ≤20°C 50Hz | | W | 5 |
| Max cycles frequency | | | |
| Mechanical operation | | cycles/h | 3600 |
| Operating times | | | |
| Average time for U _s control | | | |
| in AC | | | |
| Closing NO | | | |

| | | | | |
|-------|------------|-----|----|----|
| in DC | Opening NO | min | ms | 12 |
| | | max | ms | 28 |
| | | min | ms | 8 |
| | | max | ms | 22 |
| | 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 | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

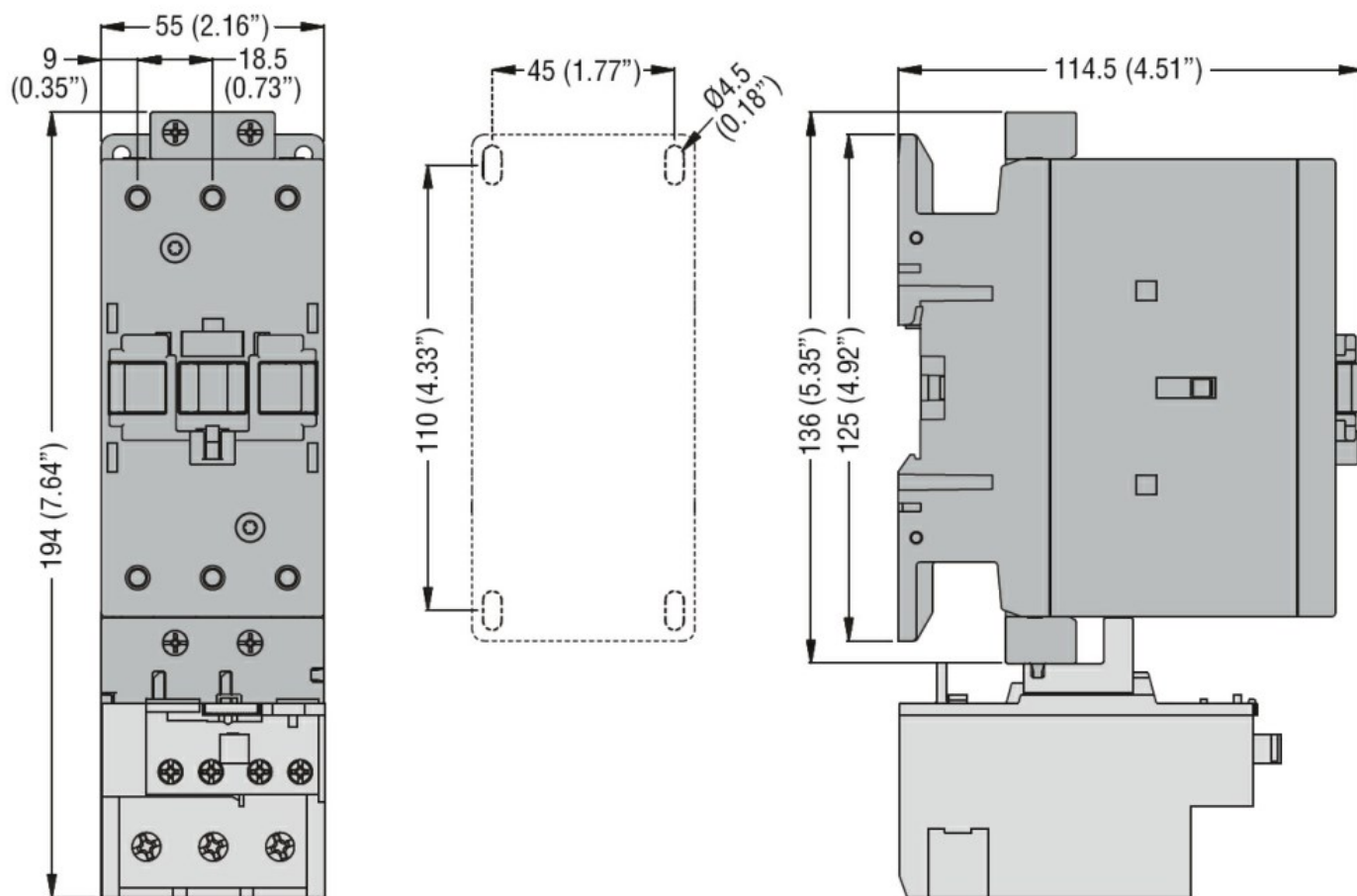
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

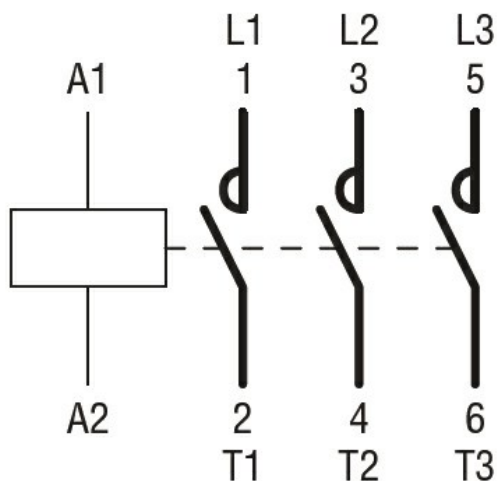
Pollution degree

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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation

Power contactor

Product type designation

BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 38 |
| | 400V | kW 65 |
| | 500V | kW 82 |
| | 690V | kW 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |

| | | | |
|--|----------|------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | |
|---|------------------|------------------|-----------------------|
| | min | I _{bin} | 0.8 |
| | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| AWG/Kcmil | | | |
| | max | | 2 |
| Flexible w/o lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| Flexible c/w lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| 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 | 1020 |
| Conductor section | | | |
| AWG/kcmil conductor section | | | |
| | max | | 2 |
| Operations | | | |
| Mechanical life | | cycles | 15000000 |
| Electrical life | | cycles | 1400000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load | cycles | 1400000 |
| | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| EMC compatibility | | | yes |
| AC coil operating | | | |
| Rated AC voltage at 60Hz | | V | 230 |
| AC operating voltage | | | |
| of 60Hz coil powered at 60Hz | | | |
| pick-up | | | |
| | min | %U _s | 80 |
| | max | %U _s | 110 |
| drop-out | | | |
| | min | %U _s | 20 |
| | max | %U _s | 55 |
| AC average coil consumption at 20°C | | | |
| of 60Hz coil powered at 60Hz | | | |
| | in-rush | VA | 210 |
| | holding | VA | 15 |
| Dissipation at holding ≤20°C 50Hz | | W | 5 |
| Max cycles frequency | | | |
| Mechanical operation | | cycles/h | 3600 |
| Operating times | | | |
| Average time for U _s control | | | |
| in AC | | | |
| Closing NO | | | |

| | | | | |
|-------|------------|-----|----|----|
| in DC | Opening NO | min | ms | 12 |
| | | max | ms | 28 |
| | | min | ms | 8 |
| | | max | ms | 22 |
| | 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 | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

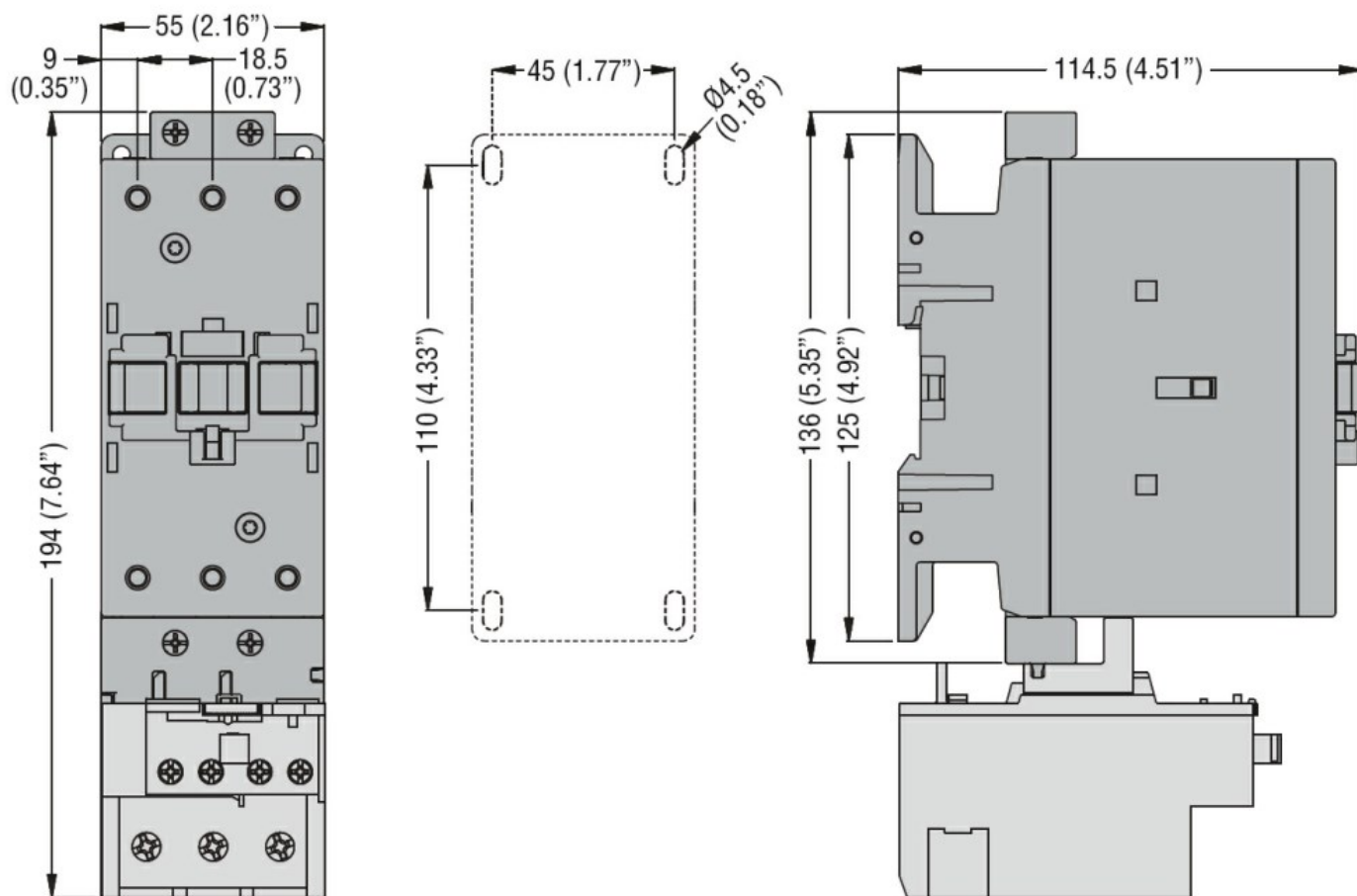
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

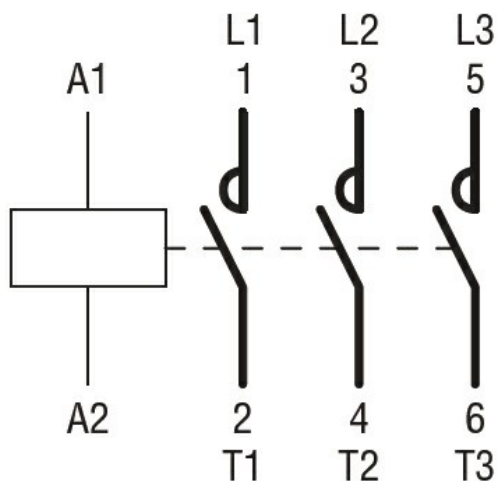
Pollution degree

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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation

Power contactor

Product type designation

BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 38 |
| | 400V | kW 65 |
| | 500V | kW 82 |
| | 690V | kW 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |

| | | | |
|--|----------|------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | Ibin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | |
|---|------------------|------------------|-----------------------|
| | min | I _{bin} | 0.8 |
| | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| AWG/Kcmil | | | |
| | max | | 2 |
| Flexible w/o lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| Flexible c/w lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| 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 | 1020 |
| Conductor section | | | |
| AWG/kcmil conductor section | | | |
| | max | | 2 |
| Operations | | | |
| Mechanical life | | cycles | 15000000 |
| Electrical life | | cycles | 1400000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load | cycles | 1400000 |
| | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| 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 | VA | 210 |
| | holding | VA | 15 |
| Dissipation at holding ≤20°C 50Hz | | W | 5 |
| Max cycles frequency | | | |
| Mechanical operation | | cycles/h | 3600 |
| Operating times | | | |
| Average time for U _s control | | | |
| in AC | | | |
| Closing NO | | | |

| | | | | |
|-------|------------|-----|----|----|
| in DC | Opening NO | min | ms | 12 |
| | | max | ms | 28 |
| | | min | ms | 8 |
| | | max | ms | 22 |
| | 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 | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

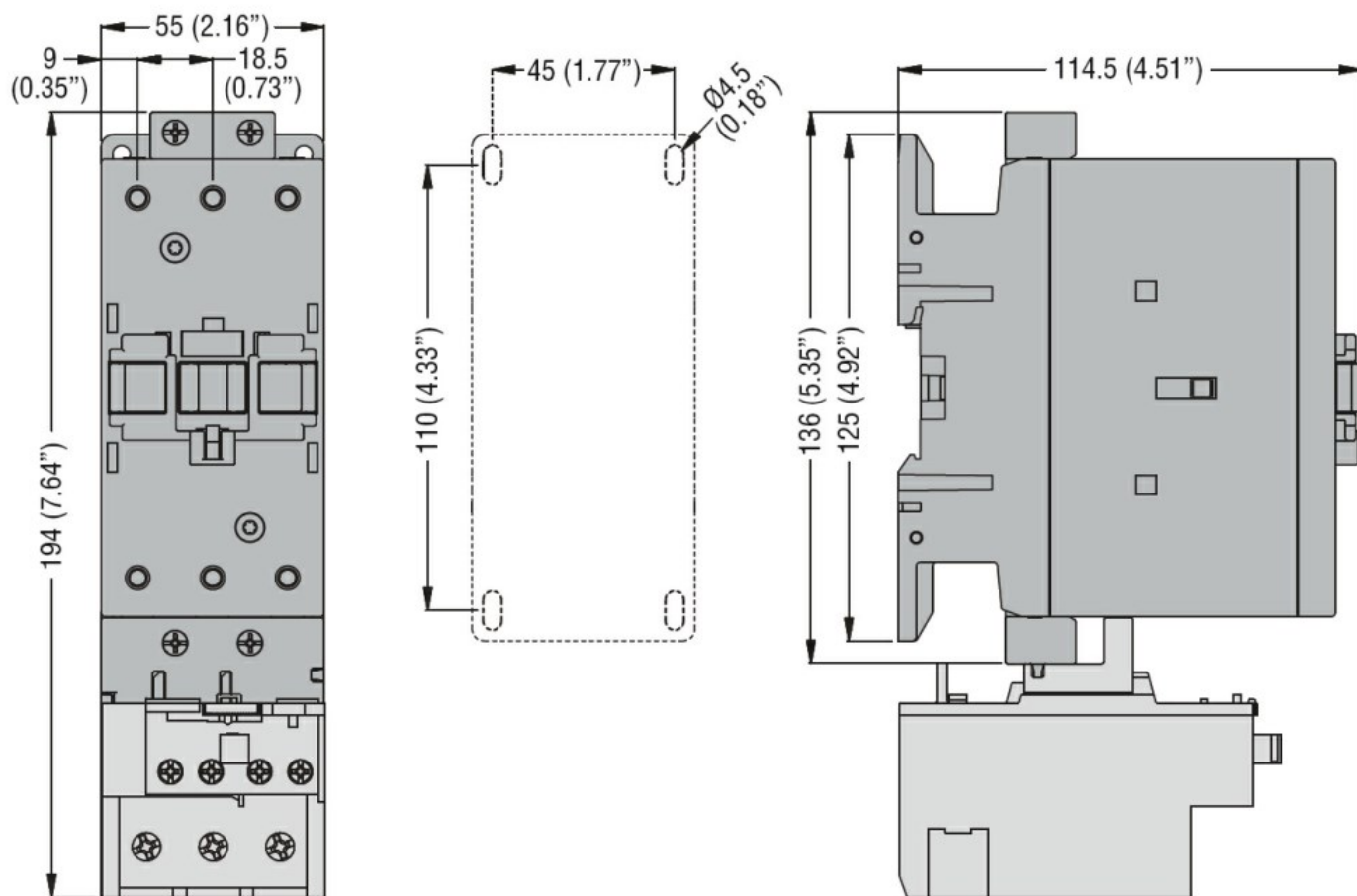
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

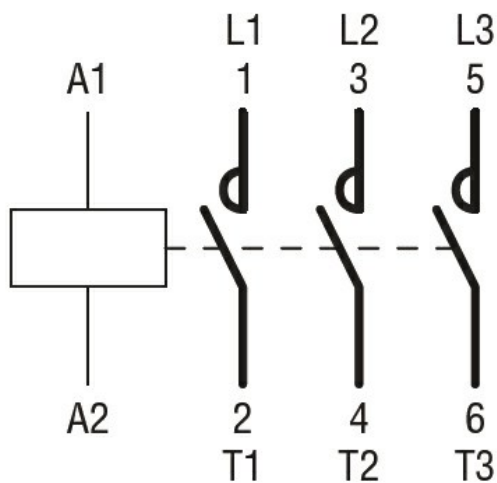
Pollution degree

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

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching



Product designation

Power contactor

Product type designation

BF65

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 | 100 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 100 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 80 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 70 |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A 65 |
| | AC-4 (400V) | A 31 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 18.5 |
| | 400V | kW 30 |
| | 415V | kW 37 |
| | 440V | kW 37 |
| | 500V | kW 37 |
| | 690V | kW 45 |
| | 1000V | kW 30 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 38 |
| | 400V | kW 65 |
| | 500V | kW 82 |
| | 690V | kW 114 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 50 |
| | 48V | A 50 |
| | 75V | A 50 |
| | 110V | A 8 |
| | 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 70 |
| | 48V | A 70 |
| | 75V | A 70 |
| | 110V | A 60 |
| | 220V | A 9 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 70 |
| | 48V | A 70 |
| | 75V | A 70 |

| | | | |
|--|-----------------|------------------|------|
| | 110V | A | 60 |
| | 220V | A | 90 |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | A | 70 |
| | 110V | A | 70 |
| | 220V | A | 110 |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 35 |
| | 48V | A | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 55 |
| | 48V | A | 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 640 |
| Protection fuse | | | |
| | gG (IEC) | A | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | A | 650 |
| Breaking capacity at voltage | | | |
| | 440V | A | 520 |
| | 500V | A | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | I _{th} | W | 8 |
| | AC3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | I _{bin} | 2.95 |
| | max | I _{bin} | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |

| | | | |
|---|------------------|------------------|-----------------------|
| | min | I _{bin} | 0.8 |
| | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| AWG/Kcmil | | | |
| | max | | 2 |
| Flexible w/o lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| Flexible c/w lug conductor section | | | |
| | min | mm ² | 1.5 |
| | max | mm ² | 35 |
| 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 | 1020 |
| Conductor section | | | |
| AWG/kcmil conductor section | | | |
| | max | | 2 |
| Operations | | | |
| Mechanical life | | cycles | 15000000 |
| Electrical life | | cycles | 1400000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load | cycles | 1400000 |
| | mechanical load | cycles | 15000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| EMC compatibility | | | yes |
| AC coil operating | | | |
| Rated AC voltage at 60Hz | | V | 575 |
| AC operating voltage | | | |
| of 60Hz coil powered at 60Hz | | | |
| pick-up | | | |
| | min | %U _s | 80 |
| | max | %U _s | 110 |
| drop-out | | | |
| | min | %U _s | 20 |
| | max | %U _s | 55 |
| AC average coil consumption at 20°C | | | |
| of 60Hz coil powered at 60Hz | | | |
| | in-rush | VA | 210 |
| | holding | VA | 15 |
| Dissipation at holding ≤20°C 50Hz | | W | 5 |
| Max cycles frequency | | | |
| Mechanical operation | | cycles/h | 3600 |
| Operating times | | | |
| Average time for U _s control | | | |
| in AC | | | |
| Closing NO | | | |

| | | | | |
|-------|------------|-----|----|----|
| in DC | Opening NO | min | ms | 12 |
| | | max | ms | 28 |
| | Closing NO | min | ms | 8 |
| | | max | ms | 22 |
| in DC | Opening NO | min | ms | 40 |
| | | max | ms | 85 |
| | Closing NO | min | ms | 20 |
| | | max | ms | 55 |

UL technical data

Full-load current (FLA) for three-phase AC motor

| | | |
|---------|---|----|
| at 480V | A | 65 |
| at 600V | A | 62 |

Yielded mechanical performance

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 20 |
| 220/230V | HP | 25 |
| 460/480V | HP | 50 |
| 575/600V | HP | 60 |

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 100 |
|------------|---|-----|

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 | 200 |
| Fuse class | | RK5 |

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

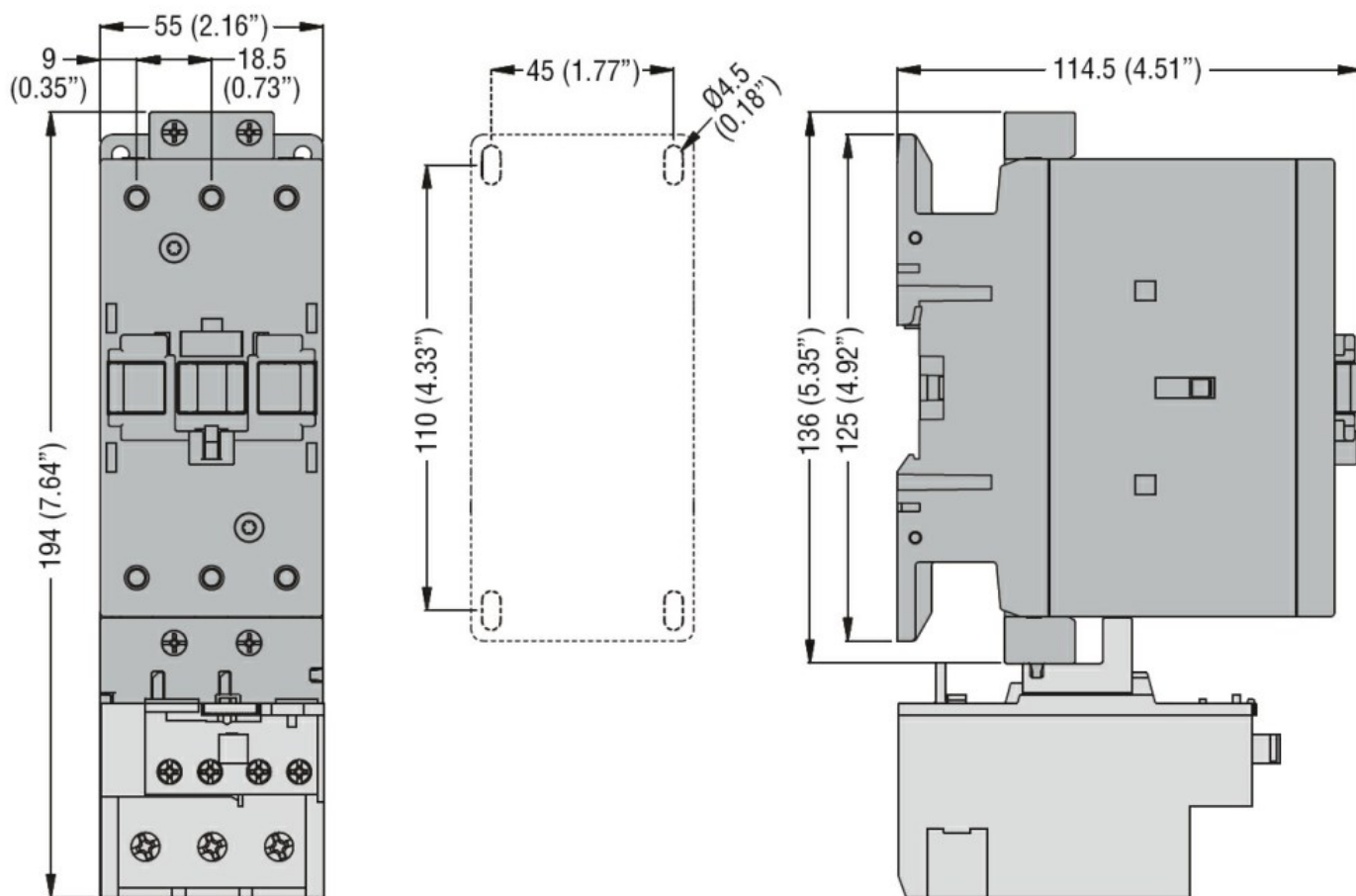
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

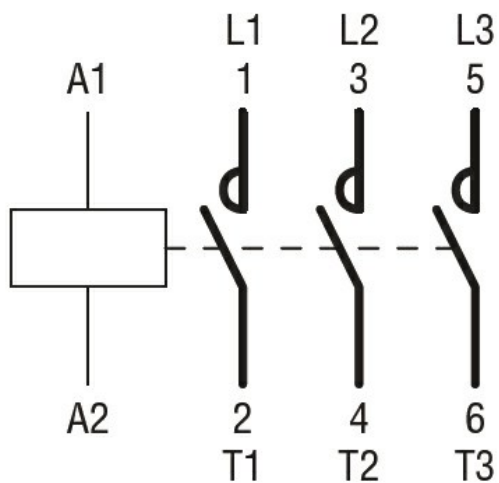
Pollution degree

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Wiring diagrams



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