



| Product designation | | | Power contactor |
|--|--------------------|-----|-----------------|
| Product type designation | | | BF65 |
| Contact characteristics | | | |
| Number of poles | | Nr. | 4 |
| Rated insulation voltage Ui IEC/EN | | V | 1000 |
| Rated impulse withstand voltage Uimp | | kV | 8 |
| Operational frequency | | i v | 0 |
| operational frequency | min | Hz | 25 |
| | max | Hz | 400 |
| IEC Conventional free air thermal current Ith | ΠΙάλ | A | 100 |
| | | A | 100 |
| Operational current le | | ٨ | 400 |
| | AC-1 (≤40°C) | A | 100 |
| | AC-1 (≤55°C) | A | 80 |
| | AC-1 (≤70°C) | A | 70 |
| | AC-3 (≤440V ≤55°C) | A | 65 |
| | AC-4 (400V) | A | 31 |
| Rated operational current AC-3 (T≤55°C) | | | |
| | 230V | А | 65 |
| | 400V | А | 65 |
| | 415V | А | 65 |
| | 440V | А | 65 |
| | 500V | А | 53 |
| | 690V | А | 47 |
| | 1000V | А | 25 |
| Rated operational power AC-1 (T≤40°C) | | | |
| | 230V | kW | 38 |
| | 400V | kW | 65 |
| | 500V | kW | 82 |
| | 690V | kW | 114 |
| IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series | | | |
| | ≤24V | А | 50 |
| | 48V | А | 50 |
| | 75V | А | 50 |
| | 110V | А | 8 |
| | 220V | А | _ |
| IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series | | | |
| | ≤24V | А | 70 |
| | 48V | A | 70 |
| | 48V 75V | A | 70 |
| | 110V | A | 60 |
| | 220V | | |
| IFC may current to in DC1 with L/D < 1 me with 2 notes in series | 2200 | A | 9 |
| IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series | -0111 | ۸ | 70 |
| | ≤24V | A | 70 |
| | 48V | A | 70 |
| | 75V | А | 70 |

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FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 100A, AC COIL 50/60HZ, 110VAC

| | 110V | А | 60 |
|---|------------|------|----------|
| | 220V | А | 90 |
| IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | А | 70 |
| | 48V | А | 70 |
| | 75V | А | 70 |
| | 110V | А | 70 |
| | 220V | А | 110 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | А | 35 |
| | 48V | А | 25 |
| | 75V | А | 25 |
| | 110V | А | 3 |
| | 220V | А | _ |
| IEC max current le in DC3-DC5 with L/R \leq 15ms with 2 poles in series | | | |
| | ≤24V | А | 45 |
| | 48V | A | 40 |
| | 48V 75V | A | 40 |
| | 110V | A | 30 |
| | 220V | A | 5 |
| IEC max current le in DC3-DC5 with L/R \leq 15ms with 3 poles in series | 220 V | Λ | 0 |
| | ≤24V | А | 55 |
| | 48V | A | 50 |
| | 48V 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 55 52 |
| IFC may surrent to in DC2 DC5 with L/D < 15ms with 4 poles in series | 220 V | A | 52 |
| IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 4 poles in series | -041/ | | <u></u> |
| | ≤24V | A | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | A | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | А | 640 |
| Protection fuse | | _ | |
| | gG (IEC) | Α | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | Α | 650 |
| Breaking capacity at voltage | | | |
| | 440V | А | 520 |
| | 500V | А | 425 |
| | 690V | A | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | lth | W | 8 |
| | AC-3 | 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 |
| | | | |



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 100A, AC COIL 50/60HZ,

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110VAC

| Conductor section AWG/Kcmil Flexible w/o lug conductor section Flexible c/w lug conductor section Power terminal protection according to IEC/EN 60529 Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz | min max max min max min max normal allowable max | Ibin Ibin Nr. mm² mm² mm² g g cycles cycles | 0.8 0.74 2 2 1.5 35 1.5 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 15000000 1400000 |
|---|---|--|---|
| Flexible w/o lug conductor section Flexible c/w lug conductor section Power terminal protection according to IEC/EN 60529 Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | max min max min max normal allowable max | Nr. mm² mm² mm² g g cycles cycles | 2 2 1.5 35 1.5 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 15000000 |
| Conductor section AWG/Kcmil Flexible w/o lug conductor section Flexible c/w lug conductor section Power terminal protection according to IEC/EN 60529 Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz | min max min max normal allowable max | mm² mm² mm² g | 2 1.5 35 1.5 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 15000000 |
| AWG/Kcmil Flexible w/o lug conductor section Flexible c/w lug conductor section Power terminal protection according to IEC/EN 60529 Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | min max min max normal allowable max | mm² mm² mm² g g cycles cycles | 1.5 35 1.5 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 2 |
| Flexible w/o lug conductor section Flexible c/w lug conductor section Power terminal protection according to IEC/EN 60529 Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz | min max min max normal allowable max | mm² mm² mm² g g cycles cycles | 1.5 35 1.5 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 2 |
| Flexible c/w lug conductor section Power terminal protection according to IEC/EN 60529 Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | min max min max normal allowable max | mm² mm² mm² g g cycles cycles | 1.5 35 1.5 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 2 |
| Flexible c/w lug conductor section Power terminal protection according to IEC/EN 60529 Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | max min max normal allowable max | mm² mm² mm² g g cycles cycles | 35 1.5 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 15000000 |
| Power terminal protection according to IEC/EN 60529 Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | max min max normal allowable max | mm² mm² mm² g g cycles cycles | 35 1.5 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 15000000 |
| Power terminal protection according to IEC/EN 60529 Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | min max normal allowable max | mm² mm² g cycles cycles | 1.5 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 15000000 |
| Power terminal protection according to IEC/EN 60529 Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | max normal allowable max rated load | mm² g cycles cycles | 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 15000000 |
| Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | max normal allowable max rated load | mm² g cycles cycles | 35 IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 15000000 |
| Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | normal allowable max | g cycles cycles | IP20 front Vertical plan ±30° Screw / DIN rai 35mm 1240 2 15000000 |
| Mechanical features Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | allowable max | cycles cycles | Vertical plan ±30° Screw / DIN rai 35mm 1240 2 15000000 |
| Operating position Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | allowable max | cycles cycles | ±30° Screw / DIN rai 35mm 1240 2 2 |
| Fixing Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | allowable max | cycles cycles | ±30° Screw / DIN rai 35mm 1240 2 2 |
| Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | max | cycles cycles | ±30° Screw / DIN rai 35mm 1240 2 2 |
| Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | rated load | cycles cycles | 35mm 1240 2 15000000 |
| Weight Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | rated load | cycles cycles | 1240 2 15000000 |
| Conductor section AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | rated load | cycles cycles | 2 15000000 |
| AWG/kcmil conductor section Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | rated load | cycles | 15000000 |
| Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | rated load | cycles | 15000000 |
| Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | rated load | cycles | 15000000 |
| Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | | cycles | |
| Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | | cycles | |
| Safety related data Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | | | 1400000 |
| Performance level B10d according to EN/ISO 13489-1 mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | | cvcles | |
| mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | | cvcles | |
| mecha Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | | | 1400000 |
| Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | ameaneaa | cycles | 15000000 |
| EMC compatibility AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | | 0,0100 | yes |
| AC coil operating Rated AC voltage at 50/60Hz AC operating voltage | | | yes |
| Rated AC voltage at 50/60Hz AC operating voltage | | | , |
| AC operating voltage | | V | 110 |
| | | | |
| 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 | | %Us | 85 |
| | min | %Us %Us | 85 110 |
| drop-out | max | /005 | 110 |
| a op-out | min | %Us | 40 |
| | max | %Us | 40 55 |
| AC average coil consumption at 20°C | mux | /000 | |
| of 50/60Hz coil powered at 50Hz | | | |
| | | | |
| | in-rush | VA | 210 |

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FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 100A, AC COIL 50/60HZ, 110VAC

| | of 50/60Hz coil powe | ered at 60Hz | | | |
|-------------------------|-------------------------|--------------|-----------------------|----------|------|
| | | | in-rush | VA | 195 |
| | | | holding | VA | 13 |
| | of 60Hz coil powered | d at 60Hz | | | |
| | - | | in-rush | VA | 210 |
| | | | holding | VA | 15 |
| Dissipation at holding | g ≤20°C 50Hz | | | W | 5 |
| Max cycles frequency | | | | | |
| Mechanical operation | | | | cycles/h | 3600 |
| Operating times | - | | | | |
| Average time for Us of | control | | | | |
| worage anto for eet | in AC | | | | |
| | | Closing NO | | | |
| | | | min | ms | 12 |
| | | | | | 28 |
| | | | max | ms | 20 |
| | | Opening NO | | | 0 |
| | | | 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 (FL/ | A) for three-phase AC m | notor | | | |
| | | | at 480V | А | 65 |
| | | | at 600V | А | 62 |
| Yielded mechanical p | performance | | | | |
| | for three-phase AC r | motor | | | |
| | · · | | 200/208V | HP | 20 |
| | | | 220/230V | HP | 25 |
| | | | 460/480V | HP | 50 |
| | | | 575/600V | HP | 60 |
| General USE | | | 01010001 | | 00 |
| | Contactor | | | | |
| | Contactor | | AC current | ۸ | 100 |
| Chart aireuit rate d'a | | | AC current | A | 100 |
| Short-circuit protectic | | | | | |
| | High fault | | | | 100 |
| | | | Short circuit current | kA | 100 |
| | | | Fuse rating | A | 200 |
| | | | Fuse class | | J |
| | Standard fault | | | | |
| | | | Short circuit current | kA | 10 |
| | | | Fuse rating | А | 200 |
| | | | Fuse class | | RK5 |
| Ambient conditions | | | | | |
| Femperature | | | | | |
| | Operating temperatu | ıre | | | |
| | | | min | °C | -50 |
| | | | | °C | 70 |
| | | | max | U U | |
| | Storage temperature | 2 | max | U | |
| | Storage temperature | 9 | min | ℃ | -60 |

The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding BF65T4A110



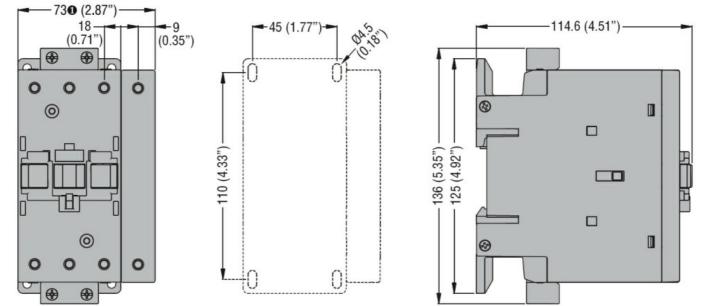
FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 100A, AC COIL 50/60HZ,

ENERGY AND AUTOMATION

110VAC

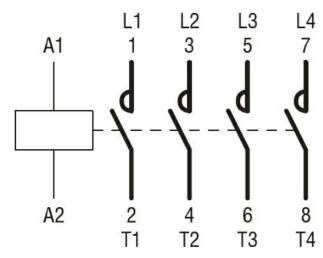
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BF80T2 82mm/3.23"

Wiring diagrams



Certifications and compliance

| Complianc | e | |
|-------------|---|-----|
| | 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 | |
| Certificate | 3 | |
| | CCC | |
| | cULus | |
| ETIM class | sification | |
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FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 100A, AC COIL 50/60HZ, 110VAC

ETIM 8.0

EC000066 -Power contactor, AC switching