

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 100A, AC COIL 60HZ, 120VAC



| Product designation | | | Power contactor |
|---|--------------------|-----|-----------------|
| Product type designation | | | BF65 |
| Contact characteristics | | | B1 00 |
| Number of poles | | Nr. | 4 |
| Rated insulation voltage Ui IEC/EN | | V | 1000 |
| Rated impulse withstand voltage Uimp | | kV | 8 |
| Operational frequency | | | |
| oporational requestoy | min | Hz | 25 |
| | max | Hz | 400 |
| IEC Conventional free air thermal current Ith | THO A | A | 100 |
| Operational current le | | | |
| oporational outront to | AC-1 (≤40°C) | Α | 100 |
| | AC-1 (≤55°C) | A | 80 |
| | AC-1 (≤70°C) | A | 70 |
| | AC-3 (≤440V ≤55°C) | A | 65 |
| | AC-4 (400V) | Α | 31 |
| Rated operational current AC-3 (T≤55°C) | 710 1 (1001) | | <u> </u> |
| Traise operational current, to a (1-00 b) | 230V | Α | 65 |
| | 400V | Α | 65 |
| | 415V | Α | 65 |
| | 440V | Α | 65 |
| | 500V | Α | 53 |
| | 690V | Α | 47 |
| | 1000V | Α | 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 | Α | 50 |
| | 48V | Α | 50 |
| | 75V | Α | 50 |
| | 110V | Α | 8 |
| | 220V | Α | _ |
| IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series | | | |
| | ≤24V | Α | 70 |
| | 48V | Α | 70 |
| | 75V | Α | 70 |
| | 110V | Α | 60 |
| | 220V | Α | 9 |
| IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series | | | |
| | ≤24V | Α | 70 |
| | 4014 | | |

48V

75V

Α

70

70



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| | 110V | Α | 60 |
|--|--------------|--------|----------|
| | 220V | Α | 90 |
| IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | Α | 70 |
| | 48V | Α | 70 |
| | 75V | Α | 70 |
| | 110V | Α | 70 |
| | 220V | Α | 110 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | Α | 35 |
| | 48V | Α | 25 |
| | 75V | A | 25 |
| | 110V | A | 3 |
| 150 | 220V | Α | _ |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | -0.4V | | 45 |
| | ≤24V | A | 45 |
| | 48V | A | 40 |
| | 75V 110V | A | 40 |
| | 220V | A | 30 |
| IEC may current to in DC2 DC5 with L/D < 15mg with 2 males in series | 2200 | A | 5 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | ≤24V | ۸ | EE |
| | ≥24V 48V | A A | 55 50 |
| | 75V | A | 50 |
| | 110V | A | 35 |
| | 220V | A | 52 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | 220 V | | 32 |
| TEO Max current le in 600-600 with E/N 3 Toms with 4 poles in series | ≤24V | Α | 60 |
| | 48V | A | 60 |
| | 75V | A | 60 |
| | 110V | A | 50 |
| | 220V | Α | 65 |
| Short-time allowable current for 10s (IEC/EN60947-1) | - | Α | 640 |
| Protection fuse | | | |
| | gG (IEC) | Α | 125 |
| | aM (IEC) | Α | 80 |
| Making capacity (RMS value) | , | Α | 650 |
| Breaking capacity at voltage | | | |
| | 440V | Α | 520 |
| | 500V | Α | 425 |
| | 690V | Α | 376 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| · · · · · · · · | Ith | W | 8 |
| | AC-3 | W | 3.4 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | lbin | 2.95 |
| | max | Ibin | 3.69 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |
| | | | |



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| AWG/Kcmil Max | | | min | Ibin | 0.8 |
|---|------------------------|------------------------------------|-----------------|---------------|------------------|
| AWG/Kcmil | | | max | lbin | 0.74 |
| AWG/Kcmil Piexible w/o lug conductor section Piexible w/o lug conductor section Piexible c/w lug conductor sectio | Max number of wires | simultaneously connectable | | Nr. | 2 |
| Flexible w/o lug conductor section min max mm² 1.5 mmx mm² 3.5 | Conductor section | | | | |
| Flexible w/o lug conductor section | | AWG/Kcmil | | | |
| Pictible c/w lug conductor section | | | max | | 2 |
| Plexible c/w lug conductor section min min max min | | Flexible w/o lug conductor section | | | |
| Plexible c/w lug conductor section | | | min | mm² | 1.5 |
| Minimate Minimate | | | max | mm² | 35 |
| Power terminal protection according to IEC/EN 60529 max mm² 35 Mechanical features normal allowable vertical plan ±30° Fixing 3 1240 Fixing g 1240 Conductor section max 2 Meight cycles 15000000 Conductor section max 2 Operations cycles 15000000 Mechanical life cycles 15000000 Electrical life cycles 1400000 Safety related data cycles 1400000 Performance level B10d according to EN/ISO 13489-1 rated load expression cycles 15000000 Mirror contats according to IEC/EN 609474-4-1 yes xes EMC compatibility yes xes AC operating voltage of 60Hz coil powered at 60Hz pick-up min %Us 10 AC operating voltage of 60Hz coil powered at 60Hz pick-up min %Us 50 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz coil powered at 60Hz holding in-rush vs Vs 120 <t< td=""><td></td><td>Flexible c/w lug conductor section</td><td></td><td></td><td></td></t<> | | Flexible c/w lug conductor section | | | |
| Power terminal protection according to IEC/EN 60529 IP20 front Mechanical features | | | min | mm² | 1.5 |
| Mechanical features Operating position normal allowable a | | | max | mm² | 35 |
| Operating position normal allowable Vertical plan allowable ±30° Fixing Screw / DIN rail 35mm 35mm 35mm Weight g 1240 <td>Power terminal protect</td> <td>ction according to IEC/EN 60529</td> <td></td> <td></td> <td>IP20 front</td> | Power terminal protect | ction according to IEC/EN 60529 | | | IP20 front |
| Normal allowable Normal 130° | Mechanical features | | | | |
| Fixing Screw / DIN rail Screw / DIN rail Screw / DIN rail Smm Smm | Operating position | | | | |
| Fixing Screw / DIN rail Screw / DIN rail Screw / DIN rail Smm Smm | | | normal | | Vertical plan |
| Samm Weight Samm Samm | | | allowable | | |
| Weight | Fixing | | | | Screw / DIN rail |
| Conductor section Mackenil conductor section Mackenical life cycles 15000000 Electrical life cycles 1400000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 1400000 cycles Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes AC coil operating Rated AC voltage at 60Hz V 120 AC operating voltage of 60Hz coil powered at 60Hz min %Us 80 max %Us 20 Mackerage coil consumption at 20°C of 60Hz coil powered at 60Hz in-rush holding VA 210 holding VA 210 holding VA 25 Dissipation at holding ≤20°C 50Hz W 5 Max cycles frequency Mechanical operation cycles/h 360 | | | | | 35mm |
| 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 Fated load cycles 1400000 mechanical load cycles 15000000 Mirror contats according to IEC/EN 609474-4-1 EMB Compatibility yes AC coll operating of 60Hz coil powered at 60Hz pick-up min will wills 80 max wills 110 drop-out min wills 80 max wills 110 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz Dissipation at holding ≤20°C 50Hz Max cycles frequency Mechanical operating Mechanical operating Mechanical operation cycles/h 3600 Operating times | Weight | | | 9 | 1240 |
| Max Z 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 contats according to IEC/EN 609474-4-1 yes yes EMC compatibility yes yes AC coil operating V 120 AC operating voltage min %Us 80 AC operating voltage min %Us 80 drop-out min %Us 80 drop-out min %Us 55 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz in-rush holding VA 210 Dissipation at holding ≤20°C 50Hz W 5 Max cycles frequency yes 5 Mechanical operation cycles/h 3600 | Conductor section | | | | |
| 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 1400000 mechanical load cycles 15000000 mechanical load cycles 1100 mechanical load cycles 15000000 mechanical load cycles <t< td=""><td></td><td>AWG/kcmil conductor section</td><td></td><td></td><td></td></t<> | | AWG/kcmil conductor section | | | |
| Mechanical life cycles 15000000 Electrical life cycles 1400000 Safety related data rated load reprintmental load | | | max | | 2 |
| Electrical life cycles 140000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 1400000 mechanical load cycles 15000000 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility yes AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up min wus 80 max wus 110 drop-out min wus 55 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz of 60Hz coil powered at 60Hz pick-up min wus 55 AC average coil consumption at 120°C of 60Hz coil powered at 60Hz in-rush holding VA 210 holding VA 15 Dissipation at holding ≤20°C 50Hz Max cycles frequency Mechanical operation cycles/h 3600 Operating times | Operations | | | | |
| Safety related data Performance level B10d according to EN/ISO 13489-1 rated load mechanical load cycles of 1400000 mechanical load cycles of 15000000 1400000 mechanical load cycles of 15000000 Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes AC coil operating V 120 Rated AC voltage at 60Hz V 120 AC operating voltage 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 holding VA 210 holding Dissipation at holding ≤20°C 50Hz W 5 Max cycles frequency Mechanical operation cycles/h 3600 Operating times | Mechanical life | | | cycles | 15000000 |
| Performance level B10d according to EN/ISO 13489-1 rated load mechanical load cycles 1400000 15000000 Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes AC coil operating V 120 Rated AC voltage at 60Hz V 120 AC operating voltage min %Us 80 pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 AC average coil consumption at 20°C in-rush holding VA 210 A coverage coil consumption at bolding ≤20°C 50Hz W 5 Max cycles frequency W 5 Mechanical operation cycles/h 3600 | Electrical life | | | cycles | 1400000 |
| rated load mechanical load cycles volume 1400000 volume Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes AC coil operating V 120 Rated AC voltage at 60Hz V 120 AC operating voltage min %Us 80 max %Us 110 drop-out Min wax %Us 110 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 cycles/h 3600 Mechanical operation cycles/h 3600 | Safety related data | | | | |
| Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes AC coil operating V 120 Rated AC voltage at 60Hz V 120 AC operating voltage min %Us 80 pick-up max %Us 110 drop-out min %Us 20 max %Us 55 AC average coil consumption at 20°C in-rush VA 210 holding VA 15 Dissipation at holding ≤20°C 50Hz W 5 Max cycles frequency Mechanical operation cycles/h 3600 | Performance level B1 | 0d according to EN/ISO 13489-1 | | | |
| Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coil operating Rated AC voltage at 60Hz 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 Mechanical operation Operating times yes yes yes AC 20 yes AC 20 110 120 AC 20 AC 20 | | | rated load | cycles | 1400000 |
| EMC compatibility yes AC coil operating Rated AC voltage at 60Hz 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 Mechanical operation Cycles/h 3600 Operating times | | | mechanical load | cycles | 15000000 |
| AC coil operating Rated AC voltage at 60Hz V 120 AC operating voltage min %Us 80 max %Us 110 max %Us 110 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 | Mirror contats accord | ing to IEC/EN 609474-4-1 | | - | yes |
| AC coil operating Rated AC voltage at 60Hz V 120 AC operating voltage min %Us 80 max %Us 110 max %Us 110 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 | EMC compatibility | - | | | yes |
| Rated AC voltage at 60Hz 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 | | | | | |
| 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 Max cycles frequency Mechanical operation Cycles/h 3600 Operating times | | 60Hz | | V | 120 |
| 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 Max cycles frequency Mechanical operation Cycles/h 3600 Operating times | | | | | |
| pick-up min %Us 80 max %Us 110 Morp-out min %Us 20 max %Us 55 Max cycles frequency W 5 Max cycles/h 3600 Operating times Morp More was Morp Morp | , 5 9 - | of 60Hz coil powered at 60Hz | | | |
| min %Us 80 max %Us 110 drop-out min min %Us 20 max %Us 55 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz in-rush holding VA 210 holding VA 15 Dissipation at holding ≤20°C 50Hz W 5 Max cycles frequency W 5 Mechanical operation cycles/h 3600 Operating times | | · | | | |
| drop-out min win will will will will will will wil | | 10.00 | min | %Us | 80 |
| drop-out min max %Us 20 max 20 max 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 W 5 Mechanical operation cycles/h 3600 Operating times | | | | | |
| 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 | | drop-out | | - | |
| max %Us 55 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz in-rush holding VA 210 holding Dissipation at holding ≤20°C 50Hz W 5 Max cycles frequency W 5 Mechanical operation cycles/h 3600 Operating times | | -r | min | %Us | 20 |
| 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 | | | | | |
| 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 | AC average coil cons | umption at 20°C | | | |
| 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 | J | • | | | |
| holdingVA15Dissipation at holding ≤20°C 50HzW5Max cycles frequencyStreet of the cycles/h3600Mechanical operationCycles/h3600Operating times | | 2. 23. 12 33 po 3 at 30. 12 | in-rush | VA | 210 |
| Dissipation at holding ≤20°C 50Hz W 5 Max cycles frequency Mechanical operation cycles/h 3600 Operating times | | | | | |
| Max cycles frequency Mechanical operation cycles/h 3600 Operating times | Dissipation at holding | ≤20°C 50Hz | 110101119 | | |
| Mechanical operation cycles/h 3600 Operating times | | | | ** | |
| Operating times | | | | cycles/h | 3600 |
| | | | | 0,0100/11 | |
| | | control | | | |

in AC

Closing NO





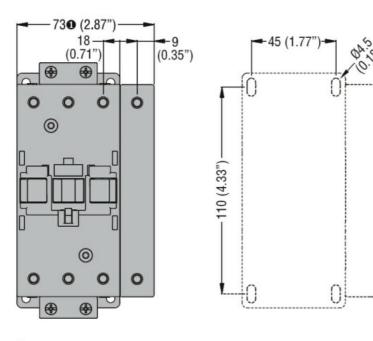
FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 100A, AC COIL 60HZ, 120VAC

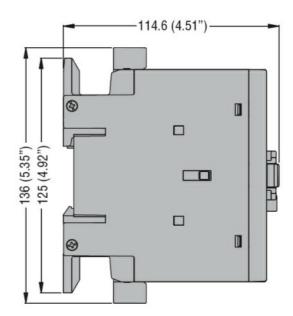
| | | min | ms | 12 |
|--------------------------|--------------------------|-----------------------|----|------|
| | | max | ms | 28 |
| | Opening NO | | | |
| | | min | ms | 8 |
| | | max | ms | 22 |
| | in DC | | | |
| | Closing NO | | | |
| | | min | ms | 40 |
| | | max | ms | 85 |
| | Opening NO | | | |
| | | min | ms | 20 |
| | | max | ms | 55 |
| UL technical data | | | | |
| Full-load current (FLA) | for three-phase AC motor | | | |
| | | at 480V | Α | 65 |
| | | at 600V | Α | 62 |
| Yielded mechanical per | formance | | | |
| | 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 | Α | 100 |
| Short-circuit protection | fuse, 600V | | | |
| | High fault | | | |
| | | Short circuit current | kA | 100 |
| | | Fuse rating | Α | 200 |
| | | Fuse class | | J |
| | Standard fault | | | |
| | | Short circuit current | kA | 10 |
| | | Fuse rating | Α | 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 & Protectio | n | | | |
| Pollution degree | | | | 3 |
| Dimensions | | | | |



ENERGY AND AUTOMATION

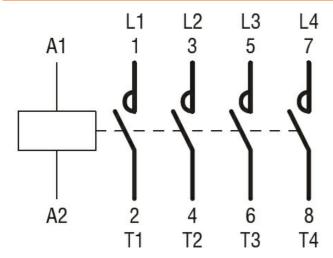
FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 100A, AC COIL 60HZ,





BF80T2 82mm/3.23"

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