

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 50/60HZ, 24VAC, 2NO AND 2NC



Product designation Power contactor Product type designation BF80

| Product type designation | | | BF80 |
|--|--------------------|-----|----------|
| Contact characteristics | | | |
| Number of poles | | Nr. | 4 |
| Rated insulation voltage Ui IEC/EN | | V | 1000 |
| Rated impulse withstand voltage Uimp | | kV | 8 |
| Operational frequency | | | |
| 2 t | min | Hz | 25 |
| | max | Hz | 400 |
| IEC Conventional free air thermal current Ith | | Α | 115 |
| Operational current le | | | |
| | AC-1 (≤40°C) | Α | 115 |
| | AC-1 (≤55°C) | Α | 95 |
| | AC-1 (≤70°C) | Α | 80 |
| | AC-3 (≤440V ≤55°C) | Α | 80 |
| | AC-4 (400V) | A | 38 |
| Rated operational current AC-3 (T≤55°C) | 710 4 (4007) | | |
| Nated operational current AO-0 (1300 O) | 230V | Α | 80 |
| | 400V | A | 80 |
| | 400 V 415 V | | 80 |
| | | A | |
| | 440V | A | 80 |
| | 500V | A | 78 57 |
| | 690V | A | 57 |
| Data dan anational narrows AC 4 (Tx40°C) | 1000V | Α | 28 |
| Rated operational power AC-1 (T≤40°C) | 0001/ | | 40 |
| | 230V | kW | 43 |
| | 400V | kW | 76 |
| | 500V | kW | 95 |
| 01 11 11 11 11 11 11 11 11 11 11 11 11 1 | 690V | kW | 120 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | Α | 640 |
| Protection fuse | | | |
| | gG (IEC) | Α | 125 |
| | aM (IEC) | A | 80 |
| Making capacity (RMS value) | | Α | 800 |
| Breaking capacity at voltage | | | |
| | 440V | Α | 640 |
| | 500V | Α | 625 |
| | 690V | Α | 456 |
| Resistance per pole (average value) | | mΩ | 0.6 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 7.9 |
| | AC-3 | W | 3.8 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | | | |



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| Min | | | | | |
|---|------------------------|------------------------------------|--------------|-----------|---------------|
| Tightening torque for coil terminal min min min min loin 0.8 max Nm 1 min 1 loin 0.8 max Nm 1 min 1 loin 0.8 max Nm 1 min 1 loin 0.74 max Nm 1 min 1 loin 0.74 max Nm 2 min 1 loin 0.74 min 1 loin | | | min | lbin | 2.95 |
| Min | | | max | lbin | 3.69 |
| Max number of wires simultaneously connectable Nr. 2 | Tightening torque for | coil terminal | | | |
| Max number of wires simultaneously connectable Nit 2 | | | min | | 0.8 |
| Max number of wires simultaneously connectable Nr. 2 | | | | | |
| Max number of wires simultaneously connectable Nr. 2 Conductor section max 2 Flexible w/o lug conductor section min mm² 1.5 Flexible c/w lug conductor section min mm² 35 Flexible c/w lug conductor section min mm² 1.5 Power terminal protection according to IEC/EN 60529 IP20 front IP20 front Mechanical features In ormal allowable ±30° ±30° Prixing Screw / DIN rail 35mm Welght 2 strew / DIN rail 35mm Weight g 1360 1300000 130000 130000 130000 | | | min | lbin | |
| AWG/Kcmil | | | max | lbin | |
| AWG/Kcmil max | Max number of wires | simultaneously connectable | | Nr. | 2 |
| Flexible w/o lug conductor section min mm | Conductor section | | | | |
| Flexible w/o lug conductor section | | AWG/Kcmil | | | |
| Persiste CW lug conductor section | | | max | | 2 |
| Preside c/w lug conductor section min max mm² 35 35 35 35 35 35 35 3 | | Flexible w/o lug conductor section | | | |
| Flexible c/w lug conductor section | | | min | mm² | 1.5 |
| Process | | | max | mm² | 35 |
| Part | | Flexible c/w lug conductor section | | | |
| Propertianal protection according to IEC/EN 60529 Propertianal protection allowable Propertianal protection Propertianal protection Propertianal protection Propertianal protection Protection Propertianal protection Protec | | · · | min | mm² | 1.5 |
| Note | | | max | mm² | 35 |
| Notes Note | Power terminal protect | ction according to IEC/EN 60529 | | | |
| Departing position | | | | | |
| Normal allowable Normal allo | | | | | |
| Simple S | . 01 | | normal | | Vertical plan |
| Screw / DIN rail 35mm 35mm | | | | | |
| Meight Simm | | | | | |
| Weight | Fixing | | | | |
| Departions Mechanical life Cycles 15000000 | Weight | | | a | |
| Mechanical life Cycles 15000000 | _ | | | <u> </u> | |
| Electrical life cycles 1300000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 1300000 mechanical load cycles 15000000 EMC compatibility yes AC coil operating Rated AC voltage at 50/60Hz | | | | cvcles | 15000000 |
| Performance level B10d according to EN/ISO 13489-1 rated load mechanical load cycles 1300000 mechanical load cycles 15000000 mechanical load cycles 150000000 mechanical load cycles 150000000 mechanical load cycles 150000000 mechanical load cycles 150000000 mecha | | | | | |
| Performance level B10d according to EN/ISO 13489-1 rated load cycles 1300000 mechanical load cycles 15000000 EMC compatibility yes AC coil operating Rated AC voltage at 50/60Hz Rated AC voltage at 50/60Hz of 50/60Hz coil powered at 50Hz pick-up min wlus 80 max wlus 110 drop-out min wlus 20 max wlus 55 of 50/60Hz coil powered at 60Hz pick-up of 50/60Hz coil powered at 60Hz pick-up amax wlus 55 of 50/60Hz coil powered at 60Hz pick-up min wlus 85 max wlus 110 drop-out min wlus 40 max wlus 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 210 | | | | 0,0.00 | |
| Rated load Cycles 1300000 mechanical load Cycles 15000000 mechanical load Cycles Total Cycles | | Od according to EN/ISO 13489-1 | | | |
| Mechanical load Cycles 15000000 | | | rated load | cycles | 1300000 |
| EMC compatibility AC coil operating Rated AC voltage at 50/60Hz 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 85 max %Us 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz | | | | - | |
| Rated AC voltage at 50/60Hz V 24 | FMC compatibility | | THOOHAI HOAA | - Cy 0100 | |
| 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 amin %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 | | | | | yes |
| 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 85 max %Us 110 drop-out 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 | | 50/60Hz | | \/ | 24 |
| 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 85 max %Us 110 drop-out min %Us 85 max %Us 110 drop-out min %Us 85 max %Us 155 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 210 | | 50/00112 | | V | 24 |
| Pick-up min %Us 80 max %Us 110 Moderate min %Us 20 max %Us 55 Moderate min %Us 55 Moderate min %Us 55 Moderate min %Us 85 max %Us 110 Moderate min %Us 85 max %Us 110 Moderate min %Us 40 max %Us 55 Moderate Moder | AC operating voitage | of EO/COLLT and powered at EOLLT | | | |
| Min MUs 80 max MUs 110 Mus 20 max MUs 55 Mus 55 Mus Mu | | | | | |
| Max %Us 110 | | pick-up | | 0/116 | 0.0 |
| drop-out min %Us 20 max %Us 55 | | | | | |
| min %Us 20 max %Us 55 | | draw and | max | %US | 110 |
| max %Us 55 | | drop-out | • | 0/11- | 20 |
| 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 | | | | | |
| 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 | | (TO/001) | max | %Us | 55 |
| 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 | | | | | |
| max %Us 110 | | pick-up | | | |
| 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 | | | | | |
| min %Us 40 max %Us 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 210 | | | max | %Us | 110 |
| max %Us 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 210 | | drop-out | | | |
| AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 210 | | | min | | |
| of 50/60Hz coil powered at 50Hz in-rush VA 210 | | | max | %Us | 55 |
| in-rush VA 210 | AC average coil cons | umption at 20°C | | | |
| | | of 50/60Hz coil powered at 50Hz | | | |
| holding VA 15 | | | in-rush | VA | 210 |
| | | | | VA | |



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| | of 50/60Hz coil pow | vered at 60Hz | | | |
|-------------------------|----------------------------------|---------------|------------|----------|------|
| | 0. 00/00 <u>_</u> 00 po. | | in-rush | VA | 195 |
| | | | holding | VA | 13 |
| | of 60Hz coil powere | ed at 60Hz | <u> </u> | | |
| | · | | 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 co | | | | | |
| | in AC | 0 | | | |
| | | Closing NO | | | 4.0 |
| | | | min | ms | 12 |
| | | Opening NO | max | ms | 28 |
| | | Opening NO | min | ms | 8 |
| | | | max | ms | 22 |
| | | Closing NC | max | 1113 | 22 |
| | | Closing 140 | min | ms | 11 |
| | | | max | ms | 29 |
| | | Opening NC | | - | - |
| | | 1 0 | min | ms | 6 |
| | | | max | ms | 14 |
| | in DC | | | | |
| | | Closing NO | | | |
| | | | min | ms | 40 |
| | | | max | ms | 85 |
| | | Opening NO | | | |
| | | | min | ms | 20 |
| | | | max | ms | 55 |
| UL technical data | A O (I II) | | | | |
| Rated operational volta | | | | V | 600 |
| Full-load current (FLA) | for three-phase AC | motor | | | |
| | | | at 480V | A | 77 |
| Violded mechanical na | rformana. | | at 600V | Α | 77 |
| Yielded mechanical pe | errormance for three-phase AC | motor | | | |
| | ioi unee-piiase AC | motor | 200/208V | HP | 25 |
| | | | 220/230V | HP | 30 |
| | | | 460/480V | HP | 60 |
| | | | 575/600V | HP | 75 |
| General USE | | | 213,320 | | |
| | Contactor | | | | |
| | | | AC current | Α | 115 |
| Ambient conditions | | | | | |
| Temperature | | | | | |
| | Operating temperat | ture | | | |
| | - | | min | °C | -50 |
| | | | max | °C | 70 |
| | Storage temperatur | re | | | |
| | | | min | °C | -60 |
| | | | max | °C | 80 |
| Max altitude | | | | m | 3000 |
| | | | | | |

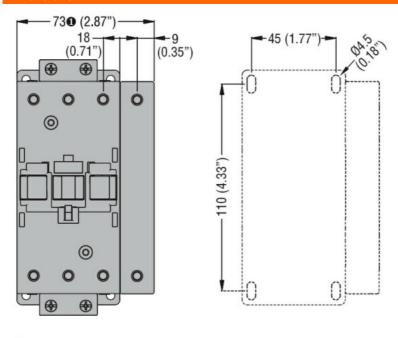
ENERGY AND AUTOMATION

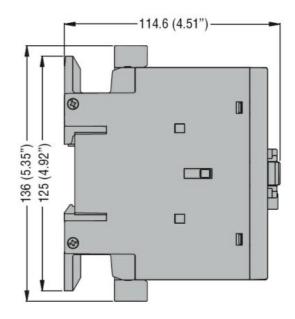
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Resistance & Protection

Pollution degree 3

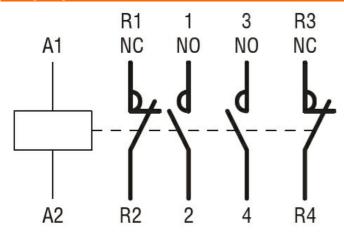
Dimensions





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