



| Product designation | | | Power contactor |
|---|--------------------|-----|-----------------|
| Product type designation | | | BF18 |
| Contact characteristics | | | |
| Number of poles | | Nr. | 3 |
| Rated insulation voltage Ui IEC/EN | | V | 690 |
| Rated impulse withstand voltage Uimp | | kV | 6 |
| Operational frequency | | | |
| | min | Hz | 25 |
| | max | Hz | 400 |
| IEC Conventional free air thermal current Ith | | Α | 32 |
| Operational current le | | | |
| | AC-1 (≤40°C) | Α | 32 |
| | AC-1 (≤55°C) | Α | 26 |
| | AC-1 (≤70°C) | Α | 23 |
| | AC-3 (≤440V ≤55°C) | Α | 18 |
| | AC-4 (400V) | Α | 8.5 |
| Rated operational power AC-3 (T≤55°C) | | | |
| | 230V | kW | 4 |
| | 400V | kW | 7.5 |
| | 415V | kW | 9 |
| | 440V | kW | 9 |
| | 500V | kW | 10 |
| | 690V | kW | 10 |
| Rated operational power AC-1 (T≤40°C) | | | |
| | 230V | kW | 12 |
| | 400V | kW | 21 |
| | 500V | kW | 26 |
| | 690V | kW | 36 |
| IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series | | | |
| | ≤24V | Α | 17 |
| | 48V | Α | 15 |
| | 75V | Α | 15 |
| | 110V | Α | 6 |
| | 220V | A | _ |
| IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series | | | |
| | ≤24V | Α | 20 |
| | 48V | Α | 20 |
| | 75V | Α | 20 |
| | 110V | Α | 13 |
| · | 220V | Α | 1 |
| IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series | | | |
| | ≤24V | Α | 22 |
| | 48V | Α | 22 |
| | 75V | Α | 20 |
| | | | 4.0 |

110V

16



| | 220V | Α | 11 |
|--|--------------|-------|-----|
| IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | Α | 22 |
| | 48V | Α | 22 |
| | 75V | Α | 20 |
| | 110V | Α | 18 |
| | 220V | Α | 13 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| · | ≤24V | Α | 12 |
| | 48V | Α | 11 |
| | 75V | Α | 11 |
| | 110V | Α | 2 |
| | 220V | A | _ |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | 220 V | | |
| The max current to in 500-500 with E/N = 10m3 with 2 poles in series | ≤24V | Α | 15 |
| | 48V | A | |
| | 48 V 75 V | | 13 |
| | | A | 13 |
| | 110V | A | 8 |
| 150 | 220V | A | 2 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | -0.01 | | 4.0 |
| | ≤24V | A | 18 |
| | 48V | Α | 18 |
| | 75V | Α | 16 |
| | 110V | Α | 12 |
| | 220V | Α | 6 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | Α | 18 |
| | 48V | Α | 18 |
| | 75V | Α | 16 |
| | 110V | Α | 13 |
| | 220V | Α | 8 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | Α | 200 |
| Protection fuse | | | |
| | gG (IEC) | Α | 32 |
| | aM (IEC) | Α | 20 |
| Making capacity (RMS value) | , , | Α | 180 |
| Breaking capacity at voltage | | | |
| | 440V | Α | 144 |
| | 500V | A | 120 |
| | 690V | A | 94 |
| Resistance per note (average value) | 090 v | mΩ | 2.5 |
| Resistance per pole (average value) | | 11177 | ۷.ن |
| Power dissipation per pole (average value) | 141 | 107 | 2.0 |
| | Ith | W | 2.6 |
| Title de la constant | AC-3 | W | 0.8 |
| Tightening torque for terminals | | | 4.5 |
| | min | Nm | 1.5 |
| | max | Nm | 1.8 |
| | min | Ibin | 1.1 |
| | max | Ibin | 1.5 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |
| | min | Ibin | 0.8 |
| | | | |



ENERGY AND AUTOMATION

| | | max | Ibin | 0.74 |
|--|---|---|---------------------------------|---|
| Max number of wires | simultaneously connectable | | Nr. | 2 |
| Conductor section | 1110/16 | | | |
| | AWG/Kcmil | | | 4.0 |
| | Florible w/o han and ductor and in | max | | 10 |
| | Flexible w/o lug conductor section | min | mm² | 1 |
| | | min | mm² | 6 |
| | Flexible c/w lug conductor section | max | 111111 | 0 |
| | Ticklibic 6/W lag conductor section | min | mm² | 1 |
| | | max | mm² | 4 |
| | Flexible with insulated spade lug conductor section | | | <u>.</u> |
| | | min | mm² | 1 |
| | | max | mm² | 4 |
| Dower terminal protect | ation according to IFC/FN 60520 | | | IP20 when |
| | ction according to IEC/EN 60529 | | | properly wired |
| Mechanical features | | | | |
| Operating position | | | | |
| | | normal | | Vertical plan |
| | | allowable | | ±30° |
| Fixing | | | | Screw / DIN rail |
| | | | ~ | 35mm |
| Weight Conductor section | | | g | 358 |
| Conductor Section | AWG/kcmil conductor section | | | |
| | AVVG/KCITIII COTIQUCTOF Section | max | | 10 |
| Auxiliary contact chara | acteristics | max | | 10 |
| Thermal current Ith | | | Α | 10 |
| | | | | |
| IEC/EN 60947-5-1 de | signation | | | A600 - P600 |
| IEC/EN 60947-5-1 de Operating current AC | | | | A600 - P600 |
| Operating current AC | | 230V | A | A600 - P600 3 |
| | | 230V 400V | A A | |
| | | | | 3 |
| | 15 | 400V | Α | 3 1.9 |
| Operating current AC | 12 | 400V | Α | 3 1.9 |
| Operating current AC | 12 | 400V 500V | A A | 3 1.9 1.4 |
| Operating current AC | 12 | 400V 500V 110V 24V | A A A | 3 1.9 1.4 5.7 |
| Operating current AC | 12 | 400V 500V 110V 24V 48V | A A A | 3 1.9 1.4 5.7 5.7 2.9 |
| Operating current AC | 12 | 400V 500V 110V 24V 48V 60V | A A A A | 3 1.9 1.4 5.7 5.7 2.9 2.3 |
| Operating current AC | 12 | 400V 500V 110V 24V 48V 60V 110V | A A A A A | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 |
| Operating current AC | 12 | 400V 500V 110V 24V 48V 60V 110V 125V | A A A A A A | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 |
| Operating current AC | 12 | 400V 500V 110V 24V 48V 60V 110V 125V 220V | A A A A A A | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 |
| Operating current ACCOPERATION OPERATION CURRENT DCCOPERATION CURRENT CURRE | 12 | 400V 500V 110V 24V 48V 60V 110V 125V | A A A A A A | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 |
| Operating current ACCO Operating current DCCO Operating current DCCO Operating current DCCO | 12 | 400V 500V 110V 24V 48V 60V 110V 125V 220V | A A A A A A A | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 |
| Operating current ACCO Operating current DCCO Operating current DCCO Operations Operations Mechanical life | 12 | 400V 500V 110V 24V 48V 60V 110V 125V 220V | A A A A A A A A Cycles | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 |
| Operating current ACCOOPERATION OPERATIONS Operations Mechanical life Electrical life | 12 | 400V 500V 110V 24V 48V 60V 110V 125V 220V | A A A A A A A | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 |
| Operating current ACCOOPERATING CURRENT DCCOOPERATING CURRENT DCCOOPERATIONS Operations Mechanical life Electrical life Safety related data | 12 | 400V 500V 110V 24V 48V 60V 110V 125V 220V | A A A A A A A A Cycles | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 |
| Operating current ACCO Operating current DCCO Operating current DCCO Operations Mechanical life Electrical life Safety related data | 12 | 400V 500V 110V 24V 48V 60V 110V 125V 220V | A A A A A A A Cycles cycles | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 |
| Operating current ACCO Operating current DCCO Operating current DCCO Operations Mechanical life Electrical life Safety related data | 12 13 0d according to EN/ISO 13489-1 | 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V | A A A A A A A A Cycles | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 |
| Operating current ACCOOPERATION COPERATION CURRENT DCCOOPERATION COPERATION C | 12 13 0d according to EN/ISO 13489-1 | 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V | A A A A A A A Cycles cycles | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 1600000 |
| Operating current ACCOOPERATION COPERATION CURRENT DCCOOPERATION COPERATION C | 12 13 0d according to EN/ISO 13489-1 | 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V | A A A A A A A Cycles cycles | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 1600000 1600000 200000000 |
| Operating current ACCO Operating current DCCO Operating current DCCO Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi | 12 13 0d according to EN/ISO 13489-1 | 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V | A A A A A A A Cycles cycles | 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 1600000 1600000 200000000 yes |



ENERGY AND AUTOMATION

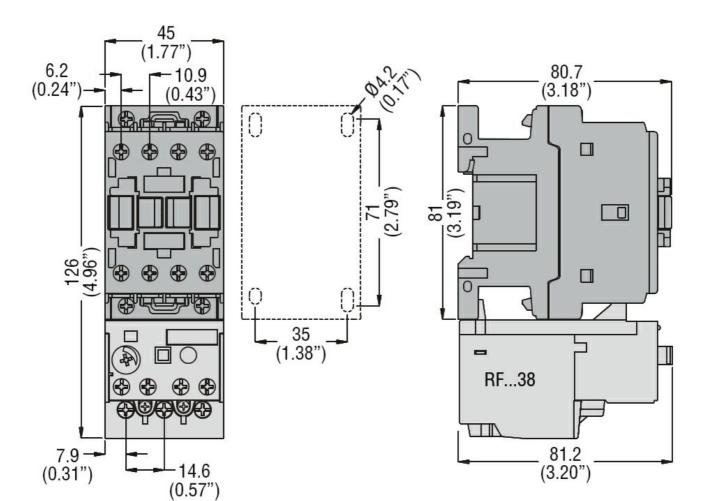
| Rated AC voltage at | 50/60Hz | | | V | 230 |
|---|---|---|--|---|---|
| C operating voltage | | | | | |
| | of 50/60Hz coil power | | | | |
| | | pick-up | | | |
| | | | min | %Us | 80 |
| | | | max | %Us | 110 |
| | | drop-out | | 0/11 | 0.0 |
| | | | min | %Us | 20 |
| | . (50/0011 '1 | | max | %Us | 55 |
| | of 50/60Hz coil power | | | | |
| | | pick-up | | 0/11- | 0.5 |
| | | | min | %Us | 85 |
| | | duam aut | max | %Us | 110 |
| | | drop-out | min | %Us | 20 |
| | | | min | %Us | 20 55 |
| C average seil sens | numntion at 20°C | | max | /008 | 55 |
| C average coil cons | | od at EOU- | | | |
| | of 50/60Hz coil power | c u สเ วบที่2 | in-rush | VA | 75 |
| | | | | VA VA | 75 9 |
| | of 50/60Hz apil powers | od at 60∐- | holding | VA | 9 |
| | of 50/60Hz coil power | ou al uui72 | in-rush | VA | 70 |
| | | | holding | VA VA | 70 6.5 |
| | of 60Hz coil powered a | at 60Hz | Holding | ٧٨ | 0.0 |
| | or bonz con powered a | al ounz | in-rush | VA | 75 |
| | | | m-rusn | | |
| | | | holding | ١/٨ | α |
| Discipation at holding | . <20°C 50∐- | | holding | VA | 9 |
| Dissipation at holding | | | holding | VA W | 9 2.5 |
| Max cycles frequency | / | | | W | 2.5 |
| Max cycles frequency Mechanical operation | / | | | | 2.5 |
| Max cycles frequency Mechanical operation Operating times | / | | | W | 2.5 |
| Max cycles frequency Mechanical operation Operating times | control | | | W | 2.5 |
| lax cycles frequency lechanical operation operating times | / | Closing NO | | W | 2.5 |
| lax cycles frequency lechanical operation perating times | control | Closing NO | | W cycles/h | 2.5 |
| lax cycles frequency lechanical operation operating times | control | Closing NO | min | W cycles/h ms | 2.5 3600 |
| Max cycles frequency Mechanical operation Operating times | control | - | | W cycles/h | 2.5 |
| Max cycles frequency Mechanical operation Operating times | control | Closing NO Opening NO | min | W cycles/h ms | 2.5 3600 |
| Max cycles frequency Mechanical operation Operating times | control | - | min max | W cycles/h ms ms | 2.5 3600 8 24 |
| Max cycles frequency Mechanical operation Operating times | control | Opening NO | min max min | W cycles/h ms ms | 2.5 3600 8 24 10 |
| Max cycles frequency Mechanical operation Operating times | control | - | min max min | W cycles/h ms ms | 2.5 3600 8 24 10 |
| Max cycles frequency Mechanical operation Operating times | control | Opening NO | min max min max | W cycles/h ms ms ms | 2.5 3600 8 24 10 20 |
| Max cycles frequency Mechanical operation Operating times | control | Opening NO | min max min max min | w cycles/h ms ms ms | 2.5 3600 8 24 10 20 |
| Max cycles frequency Mechanical operation Operating times | control | Opening NO Closing NC | min max min max min | w cycles/h ms ms ms | 2.5 3600 8 24 10 20 |
| Max cycles frequency Mechanical operation Operating times | control | Opening NO Closing NC | min max min max min max | ms ms ms ms ms | 2.5 3600 8 24 10 20 14 28 |
| Max cycles frequency Mechanical operation Operating times Everage time for Us o | control | Opening NO Closing NC | min max min max min max min | ms ms ms ms ms | 2.5 3600 8 24 10 20 14 28 |
| Max cycles frequency Mechanical operation Derating times Everage time for Us of | control | Opening NO Closing NC Opening NC | min max min max min max min | ms ms ms ms ms | 2.5 3600 8 24 10 20 14 28 |
| Max cycles frequency Mechanical operation Derating times Everage time for Us of | control in AC | Opening NO Closing NC Opening NC | min max min max min max min | ms ms ms ms ms | 2.5 3600 8 24 10 20 14 28 |
| Max cycles frequency Mechanical operation Operating times Everage time for Us of | control in AC | Opening NO Closing NC Opening NC | min max min max min max min max | ms ms ms ms ms ms | 2.5 3600 8 24 10 20 14 28 7 18 |
| Max cycles frequency Mechanical operation Operating times Average time for Us of Us of Us technical data Full-load current (FLA | control in AC A) for three-phase AC more | Opening NO Closing NC Opening NC | min max min max min max min max | w cycles/h ms ms ms ms ms ms | 2.5 3600 8 24 10 20 14 28 7 18 |
| Max cycles frequency Mechanical operation Deprating times Exercise time for Us of | control in AC A) for three-phase AC more performance | Opening NO Closing NC Opening NC | min max min max min max min max | w cycles/h ms ms ms ms ms ms | 2.5 3600 8 24 10 20 14 28 7 18 |
| Max cycles frequency Mechanical operation Operating times Average time for Us of Us of Us technical data Full-load current (FLA | control in AC A) for three-phase AC more | Opening NO Closing NC Opening NC | min max min max min max at 480V at 600V | w cycles/h ms ms ms ms ms ms | 2.5 3600 8 24 10 20 14 28 7 18 |
| Max cycles frequency Mechanical operation Deprating times Average time for Us of | control in AC A) for three-phase AC more performance | Opening NO Closing NC Opening NC | min max min max min max min max | w cycles/h ms ms ms ms ms ms | 2.5 3600 8 24 10 20 14 28 7 18 |
| Max cycles frequency Mechanical operation Deprating times Exercise time for Us of | control in AC A) for three-phase AC more performance | Opening NO Closing NC Opening NC tor | min max min max min max at 480V at 600V | ms ms ms ms ms A A | 2.5 3600 8 24 10 20 14 28 7 18 |



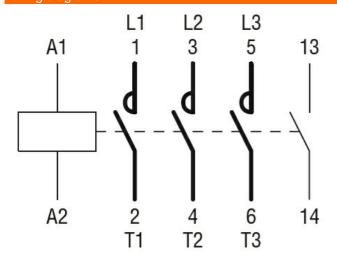
ENERGY AND AUTOMATION

| | | | | _ |
|--------------------------|--------------------------------|-----------------------|-------|-------------|
| | | 220/230V | HP | 5 |
| | | 460/480V | HP | 10 |
| | | 575/600V | HP | 15 |
| General USE | | | | |
| | Contactor | | | |
| | | AC current | Α | 32 |
| | Auxiliary contacts | | | |
| | raxilary contacto | AC voltage | V | 600 |
| | | AC current | A | 10 |
| | | | V | |
| | | DC voltage | | 250 |
| | | DC current | Α | |
| Short-circuit protection | | | | |
| | High fault | | | |
| | | Short circuit current | kA | 100 |
| | | Fuse rating | Α | 60 |
| | | Fuse class | | J |
| | Standard fault | | | |
| | | Short circuit current | kA | 5 |
| | | Fuse rating | Α | 80 |
| Contact rating of auxili | ary contacts according to UL | . acc raining | - , , | A600 - P600 |
| Ambient conditions | ary corrected according to the | | | 71000 1 000 |
| | | | | |
| Temperature | O confirmation and an | | | |
| | Operating temperature | | 0.0 | |
| | | min | °C | -50 |
| | | max | °C | 70 |
| | Storage temperature | | | |
| | | min | °C | -60 |
| | | max | °C | 80 |
| Max altitude | | | m | 3000 |
| Resistance & Protection | on | | | |
| Pollution degree | | | | 3 |
| Dimensions | | | | |
| Difficiono | | | | |





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





CONTACTEUR BF1810A, 3P+1NO, 18A AC3, 230V 50/60HZ

| cULus |
|-------|
| FAC |

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching