



| Product designation | | | Power contactor |
|---|---|------|-----------------|
| Product type designation | | | BF38 |
| Contact characteristics | | | |
| Number of poles | | Nr. | 4 |
| 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 | 56 |
| Operational current le | | | _ |
| | AC-1 (≤40°C) | Α | 56 |
| | AC-1 (≤40°C) with 16mm² wire and fork end | lugA | 60 |
| | AC-1 (≤55°C) | Α | 45 |
| | AC-1 (≤55°C) with 16mm² wire and fork end | lugA | 48 |
| | AC-1 (≤70°C) | Α | 40 |
| | AC-1 (≤70°C) with 16mm² wire and fork end | lugA | 42 |
| | ^ AC-3 (≤440V ≤55°C) | Ã | 38 |
| | AC-4 (400V) | Α | 15.5 |
| Rated operational power AC-1 (T≤40°C) | - () | | |
| 1 1 - (/ | 230V | kW | 21 |
| | 400V | kW | 36 |
| | 500V | kW | 45 |
| | 690V | kW | 62 |
| IEC max current le in DC1 with L/R ≤ 1ms wit | | | |
| 120 max carrent is in 201 mai 2/11 = mic mic | | Α | 35 |
| | 48V | Α | 30 |
| | 75V | A | 23 |
| | 110V | A | 8 |
| | 220V | A | _ |
| IEC max current le in DC1 with L/R ≤ 1ms wit | | | |
| TEC MAX current le in DCT with E/IC 3 mis wit | 11 2 poles ili series ≤24V | Α | 36 |
| | 48V | | |
| | 75V | A | 34 |
| | | A | 29 |
| | 110V | A | 32 |
| IFO | 220V | Α | 4 |
| IEC max current le in DC1 with L/R ≤ 1ms wit | • | | 0.0 |
| | ≤24V | A | 36 |
| | 48V | A | 34 |
| | 75V | A | 33 |
| | 110V | A | 34 |
| | 220V | A | 30 |
| IEC max current le in DC1 with L/R ≤ 1ms wit | • | | |
| | ≤24V | Α | 36 |
| | 48V | Α | 34 |
| | | | |



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, DC COIL, 24VDC

| | 75V | Α | 33 |
|--|----------|----------|------|
| | 110V | Α | 34 |
| | 220V | Α | 38 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| 120 max surrent to in 200 200 with 2112 Tomo with 1 polos in series | ≤24V | Α | 24 |
| | 48V | A | 20 |
| | 75V | | |
| | | A | 17 |
| | 110V | A | 2,5 |
| 150 H | 220V | Α | |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | _ | |
| | ≤24V | Α | 28 |
| | 48V | Α | 25 |
| | 75V | Α | 22 |
| | 110V | Α | 18 |
| | 220V | Α | 3 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | Α | 32 |
| | 48V | Α | 28 |
| | 75V | Α | 28 |
| | 110V | Α | 23 |
| | 220V | Α | 25 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | 2201 | - , , | |
| 120 max current le in 200-200 with 2/10 2 forms with 4 poics in series | ≤24V | Α | 32 |
| | 48V | A | 28 |
| | | | |
| | 75V | A | 28 |
| | 110V | A | 23 |
| 01 4 (40 (50 (50 (50 (50 (50 (50 (| 220V | A | 15 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | Α | 320 |
| Protection fuse | | | |
| | gG (IEC) | Α | 63 |
| | aM (IEC) | Α | 40 |
| Making capacity (RMS value) | | Α | 380 |
| Breaking capacity at voltage | | | |
| | 440V | Α | 304 |
| | 500V | Α | 240 |
| | 690V | Α | 192 |
| Resistance per pole (average value) | | mΩ | 2 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 6 |
| | AC-3 | W | 2.9 |
| Tightening torque for terminals | AO-3 | v v | ۷.5 |
| rightening torque for terminals | main | Nlm | 2.5 |
| | min | Nm Næ | 2.5 |
| | max | Nm | 3 |
| | min | lbin | 1.8 |
| | max | lbin | 2.2 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |
| | min | lbin | 0.8 |
| | max | lbin | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |

AWG/Kcmil





FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, DC COIL, 24VDC

| Flexible w/o lug conductor section min mm² 2.5 max mm² 16 | | | | | | • |
|---|-------------------------|---------------------------|-----------------------|-----------------|--------------|--------------------------|
| Flexible c/w lug conductor section | | Flevible w/o lug conduc | tor section | max | | 6 |
| Flexible c/w lug conductor section | | i lexible w/o lug conduc | IUI SEUIUII | min | mm² | 2.5 |
| Flexible c/w lug conductor section | | | | | | |
| Principal Pri | | Flexible c/w lug conduc | tor section | max | | - |
| Flexible with insulated spade lug conductor section | | 3 | | min | mm² | 1 |
| Max or | | | | max | mm² | 10 |
| Power terminal protection according to IEC/EN 60529 Power terminal protection allowable Power terminal protection Power terminal protection | | Flexible with insulated s | spade lug conductor s | ection | | |
| Power terminal protection according to IEC/EN 60529 IP20 when properly wired Mechanical features Vertical plan allowable ±30° Screw / DIN rai 35mm | | | | min | | |
| Proverterminal protection according to IEC/EN 60829 Properly wired Mechanical features Perfect ferminal protection Property wired management of the property of th | | | | max | mm² | |
| Mechanical features | Power terminal protect | tion according to IEC/EN | 60529 | | | |
| Operating position Normal allowable Vertical plan ±30° Fixing Screw / DIN rai 35mm Weight g 656 Conductor section max 6 Operations Mechanical life cycles 20000000 Electrical life cycles 20000000 Safety related data rated load cycles 1400000 Performance level B10d according to EN/ISO 13489-1 rated load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 yes 20000000 EMC compatibility yes 20000000 DC coil operating v 24 DC coil operating voltage v 24 DC operating voltage min %Us 70 pick-up min %Us 10 drop-out min %Us 10 drop-out min %Us 10 Average coil consumption ≤20°C in-rush holding %Us 5.4 Mechanical operating times cycles/h </td <td>Mechanical features</td> <td></td> <td></td> <td></td> <td></td> <td>property miss</td> | Mechanical features | | | | | property miss |
| Fixing | Operating position | | | | | |
| Screw / DIN rai 35mm 35mm | | | | normal | | Vertical plan |
| Meight Section Sect | | | | allowable | | ±30° |
| Weight g 656 Conductor section MWG/kcmil conductor section max 6 Operations Mechanical life cycles 20000000 Electrical life cycles 1400000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles | Fixing | | | | | Screw / DIN rail 35mm |
| AWG/kcmil conductor section max | Weight | | | | g | |
| AWG/kcmil conductor section max | Conductor section | | | | | |
| Operations Mechanical life cycles 20000000 Electrical life cycles 1400000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 1400000 cycles 200000000 Mirror contats according to IEC/EN 609474-4-1 yes yes EMC compatibility yes DC coil operating DC rated control voltage y 24 DC operating voltage min max wolts 70 max yus 125 drop-out min max wolts 10 max yus 125 drop-out min max wolts 10 max yus 14 Average coil consumption ≤20°C in-rush holding W 5.4 max Max cycles frequency Mechanical operation cycles/h 3600 Operating times Average time for Us control in AC Closing NO min max ms 8 max ms 24 | | AWG/kcmil conductor s | section | | | |
| Mechanical life | | | | max | | 6 |
| Electrical life cycles 1400000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 1400000 mechanical load cycles 200000000 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility yes DC rated control voltage V 24 DC operating voltage pick-up min %Us 70 max %Us 125 drop-out min %Us 10 max %Us 10 max %Us 40 Average coil consumption ≤20°C in-rush w 5.4 holding W 5.4 Max cycles frequency Mechanical operation Closing NO Min ms 8 max ms 24 Opening NO min ms 8 max ms 24 Opening NO min ms 5 | Operations | | | | | |
| Safety related data Performance level B10d according to EN/ISO 13489-1 rated load mechanical load cycles 1400000 20000000000000000000000000000000 | Mechanical life | | | | cycles | |
| Performance level B10d according to EN/ISO 13489-1 rated load mechanical load ground in the property of th | | | | | cycles | 1400000 |
| Rated load Ra | | | | | | |
| Mirror contats according to IEC/EN 609474-4-1 mechanical load cycles 20000000 BMC compatibility yes DC coll operating yes DC rated control voltage V 24 DC operating voltage min %Us 70 pick-up min %Us 70 drop-out min %Us 125 drop-out min %Us 10 Max cycles (consumption ≤20°C in-rush holding W 5.4 holding Max cycles frequency w 5.4 Mechanical operation cycles/h 3600 Operating times Average time for Us control min ms 8 Closing NO min ms 24 Opening NO min ms 5 | Performance level B10 | 0d according to EN/ISO 1 | 3489-1 | | | 4.400000 |
| Mirror contats according to IEC/EN 609474-4-1 EMC compatibility DC coil operating DC rated control voltage pick-up pick-up min %Us 70 max %Us 125 drop-out min %Us 10 max %Us 40 Average coil consumption ≤20°C in-rush holding W 5.4 holding W 5.4 Max cycles frequency Mechanical operation Operating times Average time for Us control in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 | | | | | - | |
| EMC compatibility yes DC coil operating | Mirror contate accordi | og to IEC/EN 600474 4 1 | | mechanicai ioau | cycles | |
| DC coil operating V 24 DC operating voltage min %Us 70 max %Us 125 drop-out min %Us 10 max %Us 40 Average coil consumption ≤20°C in-rush W 5.4 holding W 5.4 Max cycles frequency cycles/h 3600 Mechanical operation cycles/h 3600 Operating times min ms 8 max ms 24 Opening NO min ms 8 max ms 24 Opening NO min ms 5 | | 119 10 IEC/EIN 609474-4-1 | | | | |
| DC rated control voltage DC operating voltage Pick-up Min %Us 70 max %Us 125 max %Us 125 max %Us 125 max %Us 125 max %Us 40 max %Us 5.4 max 60 max %Us 5.4 max %Us %Us 5.4 max %Us %Us 5.4 max %Us %Us | | | | | | yes |
| DC operating voltage pick-up | | ne | | | V | 24 |
| Pick-up | | 90 | | | • | |
| min max %Us 70 max 70 max %Us 125 70 max %Us 125 10 max %Us 40 10 max %Us 40 40 Average coil consumption ≤20°C in-rush Molding W 5.4 molding 5.4 molding 5.4 molding Molding W 5.4 molding 5.4 molding Molding W 5.4 molding Molding Molding W 5.4 molding Molding Molding Molding Molding Molding Molding Molding Molding | 20 operating remage | pick-up | | | | |
| Max %Us 125 drop-out min %Us 10 max %Us 40 Average coil consumption ≤20°C in-rush W 5.4 holding Hol | | Frem alp | | min | %Us | 70 |
| min %Us 10 max %Us 40 Average coil consumption ≤20°C in-rush W 5.4 holding W 5.4 Max cycles frequency Mechanical operation cycles/h 3600 Operating times Average time for Us control in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 | | | | max | %Us | 125 |
| max%Us40Average coil consumption ≤20°Cin-rush koldingW5.4 koldingMax cycles frequencyMechanical operationcycles/h3600Operating timesAverage time for Us controlin ACminms8 koldingClosing NOminms8 koldingmaxms24 koldingOpening NOminms5 kolding | | drop-out | | | | |
| Average coil consumption ≤20°C in-rush W 5.4 holding W 5.4 Max cycles frequency Mechanical operation cycles/h 3600 Operating times Average time for Us control in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 | | | | min | | |
| in-rush | | | | max | %Us | 40 |
| Max cycles frequency Mechanical operation cycles/h 3600 Operating times Average time for Us control in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 | Average coil consump | tion ≤20°C | | | | |
| Max cycles frequency Mechanical operation cycles/h 3600 Operating times Average time for Us control in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 | | | | | | |
| Mechanical operation cycles/h 3600 Operating times Average time for Us control in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 | NA | | | holding | W | 5.4 |
| Operating times Average time for Us control | | | | | ovel = = //- | 2600 |
| Average time for Us control in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 | | | | | cycles/n | 3000 |
| in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 | - | ontrol | | | | |
| Closing NO min ms 8 max ms 24 Opening NO min ms 5 | Average unite 101 US CC | | | | | |
| min ms 8 max ms 24 Opening NO min ms 5 | | | Closing NO | | | |
| max ms 24 Opening NO min ms 5 | | | 2.30 | min | ms | 8 |
| Opening NO min ms 5 | | | | | | |
| min ms 5 | | | Opening NO | | | |
| max ms 15 | | | | min | ms | 5 |
| | | | | max | ms | 15 |

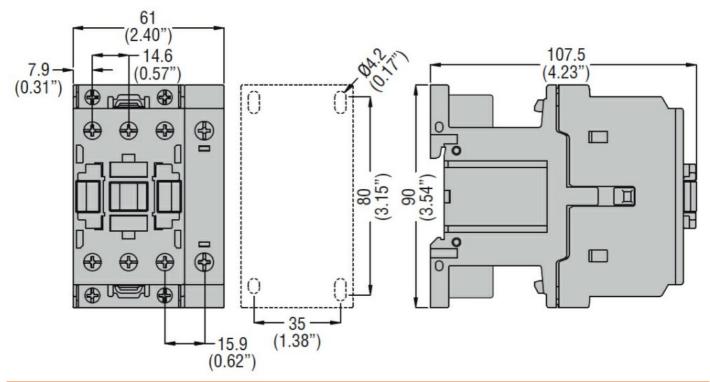




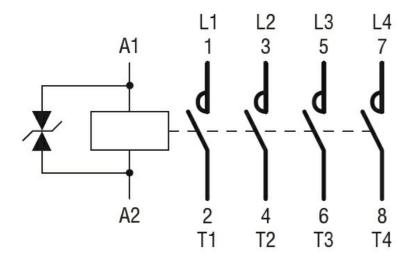
FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, DC COIL, 24VDC

| | Closing NC | | | |
|-----------------------------|---------------------------|-----------------------|------------|------------|
| | 3.23m.g.1.2 | min | ms | 9 |
| | | max | ms | 20 |
| | Opening NC | | | |
| | a paramig | min | ms | 9 |
| | | max | ms | 17 |
| | in DC | | | |
| | Closing NO | | | |
| | ŭ | min | ms | 54 |
| | | max | ms | 66 |
| | Opening NO | | | |
| | | min | ms | 14 |
| | | max | ms | 17 |
| UL technical data | | | | |
| Full-load current (FLA) | for three-phase AC motor | | | |
| | | at 480V | Α | 40 |
| | | at 600V | Α | 32 |
| Yielded mechanical pe | erformance | | | |
| • | for single-phase AC motor | | | |
| | | 110/120V | HP | 3 |
| | | 230V | HP | 7.5 |
| | for three-phase AC motor | | | _ |
| | | 200/208V | HP | 10 |
| | | 220/230V | HP | 15 |
| | | 460/480V | HP | 30 |
| | | 575/600V | HP | 30 |
| General USE | | | | |
| | Contactor | | | |
| | | AC current | Α | 55 |
| Short-circuit protection | fuse, 600V | | | |
| | High fault | | | |
| | | Short circuit current | kA | 100 |
| | | Fuse rating | Α | 100 |
| | | Fuse class | | J |
| | Standard fault | | | |
| | | Short circuit current | kA | 5 |
| | | Fuse rating | Α | 150 |
| Ambient conditions | | | | |
| Temperature | | | | |
| | Operating temperature | | ۰. | 50 |
| | | min | °C | -50 -70 |
| | Otomore to an autom | max | °C | 70 |
| | Storage temperature | | ° ^ | CO |
| | | min | °C | -60 |
| Mov oltitude | | max | °C | 80 |
| Max altitude | 20 | | m | 3000 |
| Resistance & Protection | ON | | | 2 |
| Pollution degree Dimensions | | | | 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

EAC

ETIM classification



BF38T4D024

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, DC COIL, 24VDC

ETIM 8.0

EC000066 -Power contactor, AC switching