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| Product type designation BF00 Contact characteristics Number of poles Rated inpulse withstand voltage Uinp KV 6 Operational frequency min Hz 25 max Hz 400 IEC Conventional frequency min Hz 25 max Hz 400 IEC Conventional frequency Min Hz 25 max Hz 400 IEC Conventional frequency Min Hz 25 max Hz 400 IEC Conventional frequency Ge (IEC) A 0 Short-time allowable current lth A 0 Protection fuse GG (IEC) A 25 Tightening torque for terminals min Km 1.5 max Km 1.5 Tightening torque for coil terminal Min Km 1.5 Min Km 1.5 Nm Km 1. | Product designation | | | | Auxiliary contactor |
|--|--------------------------|--|--------------|------|---------------------|
| 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 10 Operational current le A 10 0 Operational current le AC-1 (=55°C) A 0 Short-time allowable current for 10s (IEC/EN60947-1) A 0 Protection fuse gG (IEC) A 25 Tightening torque for terminals min 1.5 max Nm 1.5 Tightening torque for coil terminal min Nm 1.5 1.5 1.5 Tightening torque for coil terminal min Nm 0.8 max Nm 1.5 Tightening torque for coil terminal min Nm 1.5 1.5 1.5 Tightening torque for coil terminal min Nm 1.6 1.5 1.5 Tightening torque for coil terminal min Nm 1.6 | Product type designation | ition | | | BF00 |
| Rated insulation voltage UI IEC/EN V 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 max HZ 400 10 Operational current le A 10 0 Operational current le AC-1 (=55°C) A 0 Short-time allowable current for 10s (IEC/EN60947-1) A 0 0 Protection fuse gG (IEC) A 25 Tightening torque for terminals min Nm 1.5 max Nm 1.5 max Nm Tightening torque for coil terminal min Nm 1.5 Tightening torque for coil terminal min Nm 1.5 Tightening torque for coil terminal min Nm 1.6 Max number of wires simultaneously connectable Nr. 2 Conductor section Max number of wires simultaneously connectable Nr. 2 Conductor section Flexible c/w lug conductor section max mm² 1 | | CS | | | |
| Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 max Hz 400 IEC Conventional free air thermal current lth A 10 Operational current le AC-1 (=55°C) A 0 Short-time allowable current for 10s (IEC/EN60947-1) A 0 Protection fuse gG (IEC) A 25 Tightening torque for terminals min Nm 1.5 Tightening torque for coil terminal min Nm 1.5 Tightening torque for coil terminal min Nm 1.5 Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil min min mm² Flexible w/o lug conductor section min mm² 1 Flexible c/w lug conductor section min mm² 1 max mm² 1 max ma² Max number of wires simultaneously connectable Nr. 2 0 Flexible w/o lug conductor section min mm² 1 max < | | | | | |
| Operational frequency min Hz 25 max Hz 400 IEC Conventional free air thermal current lth A 10 Operational current le AC-1 (=55°C) A 0 Short-time allowable current for 10s (IEC/EN60947-1) A 0 Protection fuse gG (IEC) A 25 Tightening torque for terminals min Nm 1.5 max Nm 1.8 min Ibin 1.1 max Nm 1.8 min Ibin 1.5 Tightening torque for coil terminal min Nm 1.5 1.5 Tightening torque for coil terminal min Nm 1.5 1.5 Tightening torque for coil terminal min Nm 1.5 1.5 Tightening torque for coil terminal min Nm 1.5 1.5 Conductor section Max number of wires simultaneously connectable Nr. 2 2 Conductor section max 10 10 10 10 10 Flexible w/o lug conductor section min | | | | | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | | | | kV | 6 |
| max Hz 400 IEC Conventional free air thermal current lth A 10 Operational current le AC-1 (=55°C) A 0 Short-time allowable current for 10s (IEC/EN60947-1) A 0 Protection fuse gG (IEC) A 25 Tightening torque for terminals min Nm 1.5 max Nm 1.8 min Ibin 1.1 Tightening torque for coil terminal min Nm 0.8 max Nm 1.8 Tightening torque for coil terminal min Nm 1.5 Tightening torque for coil terminal 0.8 Max number of wires simultaneously connectable Nr. 2 Conductor section Max number of wires simultaneously connectable Nr. 2 Conductor section Flexible w/o lug conductor section min mm 10 Flexible c/w lug conductor section min mm 1 Max nmm2 1 max mm2 1 Flexible w/w lug conductor section min | Operational frequence | У | | | |
| IEC Conventional free air thermal current lth A 10 Operational current le AC-1 (=55°C) A 0 Short-time allowable current for 10s (IEC/EN60947-1) A 0 Protection fuse gG (IEC) A 25 Tightening torque for terminals min Nm 1.5 min Nm 1.5 max Nm 1.6 Tightening torque for coil terminal min Nm 1.5 Tightening torque for coil terminal min Nm 1.5 Tightening torque for coil terminal min Nm 0.8 Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 Flexible c/w lug conductor section min mm² 1 Flexible c/w lug conductor section min mm² 1 Flexible with insulated spade lug conductor section min mm² 1 | | | min | | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | | | max | | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | | | | A | 10 |
| Short-time allowable current for 10s (IEC/EN60947-1) A 0 Protection fuse gG (IEC) A 25 Tightening torque for terminals min Nm 1.5 max Nm 1.8 min Ibin 1.1 max Ibin 1.5 1.5 1.5 Tightening torque for coil terminal min Nm 0.8 1.8 Max number of wires simultaneously connectable Nr 2 2 Conductor section MWG/Kcmil min min mm² 1 Flexible w/o lug conductor section min mm² 1 max mm² 1 Flexible c/w lug conductor section min min mm² 1 max 10 1 Flexible with insulated spade lug conductor section min mm² 1 max 1 max 1 max 1 | Operational current le | 9 | | | |
| Protection fuse gG (IEC) A 25 Tightening torque for terminals min Nm 1.5 max Nm 1.8 min Ibin 1.1 max Ibin 1.5 max Nm 1.5 Tightening torque for coil terminal min Nm 0.8 max Nm 1 Max number of wires simultaneously connectable Nr 2 0.74 0.74 Conductor section Max 10 10 10 0.74 Flexible w/o lug conductor section min mm² 1 1 Flexible c/w lug conductor section min mm² 1 1 Flexible with insulated spade lug conductor section min min mm² 1 | | | AC-1 (=55°C) | | |
| gG (IEC) A 25 Tightening torque for terminals min Nm 1.5 max Nm 1.8 min Ibin 1.1 max Ibin 1.5 max Nm 1.8 Tightening torque for coil terminal min Ibin 1.5 Tightening torque for coil terminal min Nm 0.8 max Nm 1 min 10 Max number of wires simultaneously connectable Nr. 2 Conductor section min mm² 1 Max number of wires simultaneously conductor section max 10 Flexible w/o lug conductor section min mm² 1 max mm² 6 1 Flexible c/w lug conductor section min mm² 1 max mm² 1 max 1 | | current for 10s (IEC/EN60947-1) | | Α | 0 |
| Tightening torque for terminals min Nm 1.5 max Nm 1.8 min Ibin 1.1 max Ibin 1.5 1.5 Tightening torque for coil terminal min Nm 0.8 max Nm 1 min Ibin 0.8 max Ibin 0.74 0.8 max Ibin 0.74 Max number of wires simultaneously connectable Nr. 2 0.74 Conductor section Max 10 10 Flexible w/o lug conductor section min mm² 1 Max max mm² 1 max Flexible c/w lug conductor section min mm² 1 max mm² 1 max 10 Flexible c/w lug conductor section min mm² 1 max mm² 1 max 1 Flexible with insulated spade lug conductor section min mm² 1 | Protection fuse | | | | |
| 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 Nm 1 Max number of wires simultaneously connectable Nr. 2 0 Conductor section Nr. 2 0 Flexible w/o lug conductor section min mm² 1 max mm² 1 1 Flexible c/w lug conductor section min mm² 1 max mm² 1 1 max mm² 1 1 Flexible c/w lug conductor section min mm² 1 max mm² 1 1 1 max mm² 1 1 1 max mm² 1 1 1 1 | | | gG (IEC) | Α | 25 |
| maxNm1.8minIbin1.1maxIbin1.5Tightening torque for coil terminalminNm0.8maxNm1minIbin0.8maxNm1minIbin0.8maxIbin0.74Max number of wires simultaneously connectableNr.2Conductor sectionNr.2Conductor sectionmax10Flexible w/o lug conductor sectionminmm²Flexible c/w lug conductor sectionminmm²flexible c/w lug conductor sectionminmm²flexible c/w lug conductor sectionminmm²flexible with insulated spade lug conductor section1 | Tightening torque for | terminals | | | |
| min lbin 1.1 max lbin 1.5 Tightening torque for coil terminal min Nm 0.8 max Nm 1 min lbin 0.8 max Nm 1 min lbin 0.8 max Nm 1 min lbin 0.8 max lbin 0.74 Max number of wires simultaneously connectable Nr. 2 Conductor section Nr. 2 Conductor section max 10 Flexible w/o lug conductor section max mm² flexible c/w lug conductor section min mm² flexible c/w lug conductor section min mm² flexible with insulated spade lug conductor section min mm² | | | min | Nm | 1.5 |
| max Ibin 1.5 Tightening torque for coil terminal min Nm 0.8 max Nm 1 min Ibin 0.8 max Ibin 0.8 max Ibin 0.74 Max number of wires simultaneously connectable Nr. 2 Conductor section Nr. 2 AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² flexible c/w lug conductor section min mm² min mm² 1 max mm² 1 flexible c/w lug conductor section min mm² flexible with insulated spade lug conductor section min mm² | | | max | Nm | 1.8 |
| Tightening torque for coil terminal min Nm 0.8 max Nm 1 min Ibin 0.8 max Ibin 0.74 Max number of wires simultaneously connectable Nr. 2 Conductor section Nr. 2 AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² Max mm² 1 max mm² 1 Flexible c/w lug conductor section min mm² min mm² 1 max mm² 1 Flexible c/w lug conductor section min mm² Min min mm² 1 max mm² 1 1 max mm² | | | min | | |
| 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 Nr. 2 AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² Max mm² 1 max mm² 1 Flexible c/w lug conductor section min mm² Flexible c/w lug conductor section 1 1 max mm² 1 1 Flexible with insulated spade lug conductor section 1 1 Max mm² | | | max | lbin | 1.5 |
| max Nm 1 min lbin 0.8 max lbin 0.74 Max number of wires simultaneously connectable Nr. 2 Conductor section Nr. 2 AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² Flexible c/w lug conductor section min mm² Flexible c/w lug conductor section min mm² Flexible with insulated spade lug conductor section 1 | Tightening torque for | coil terminal | | | |
| min Ibin 0.8 Max number of wires simultaneously connectable Nr. 2 Conductor section Nr. 2 AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 Flexible c/w lug conductor section min mm² 1 Flexible c/w lug conductor section min mm² 1 Flexible with insulated spade lug conductor section min mm² 1 | | | min | Nm | 0.8 |
| max Ibin 0.74 Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 Flexible c/w lug conductor section min mm² 1 Flexible c/w lug conductor section min mm² 1 Flexible with insulated spade lug conductor section min mm² 1 Flexible with insulated spade lug conductor section min mm² 4 | | | max | Nm | |
| Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 Flexible c/w lug conductor section min mm² 6 Flexible c/w lug conductor section min mm² 1 Flexible with insulated spade lug conductor section min mm² 1 Flexible with insulated spade lug conductor section min mm² 4 | | | min | | |
| Conductor section AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² max mm² 6 Flexible c/w lug conductor section min mm² min mm² 1 max mm² 4 Flexible with insulated spade lug conductor section Flexible with insulated spade lug conductor section | | | max | lbin | 0.74 |
| AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 max mm² 6 Flexible c/w lug conductor section min mm² 1 max mm² 1 1 max mm² 4 1 Flexible with insulated spade lug conductor section Flexible with insulated spade lug conductor section Flexible with insulated spade lug conductor section | Max number of wires | simultaneously connectable | | Nr. | 2 |
| max 10 Flexible w/o lug conductor section min mm² 1 max mm² 6 Flexible c/w lug conductor section min mm² 1 max mm² 1 1 max mm² 1 1 max mm² 1 1 max mm² 4 1 | Conductor section | | | | |
| Flexible w/o lug conductor section min mm² 1 max mm² 6 Flexible c/w lug conductor section min mm² 1 max mm² 1 1 max mm² 1 1 max mm² 4 1 Flexible with insulated spade lug conductor section Flexible with insulated spade lug conductor section 1 | | AWG/Kcmil | | | |
| min mm² 1 max mm² 6 Flexible c/w lug conductor section min mm² 1 max mm² 1 1 max mm² 4 1 Flexible with insulated spade lug conductor section Flexible with insulated spade lug conductor section 1 | | | max | | 10 |
| max mm² 6 Flexible c/w lug conductor section min mm² 1 max mm² 1 max mm² 4 | | Flexible w/o lug conductor section | | | |
| Flexible c/w lug conductor section min mm ² 1 max mm ² 4 Flexible with insulated spade lug conductor section | | | min | mm² | |
| min mm ² 1 max mm ² 4 Flexible with insulated spade lug conductor section | | | max | mm² | 6 |
| max mm² 4 Flexible with insulated spade lug conductor section | | Flexible c/w lug conductor section | | | |
| Flexible with insulated spade lug conductor section | | | min | | |
| | | | | mm² | 4 |
| min mm ² 1 | | Flexible with insulated spade lug conductor sect | | | |
| | | | min | mm² | 1 |
| max mm ² 4 | | | max | mm² | |
| Power terminal protection according to IEC/EN 60529 IP20 when wired | | ction according to IEC/EN 60529 | | | IP20 when wired |
| Mechanical features | | | | | |
| Operating position | Operating position | | | | |
| normal Vertical plan | | | | | |
| allowable ±30° | | | allowable | | ±30° |



| Fixing | | | Screw / DIN rail 35mm |
|--|-------------------------------------|---|--|
| Weight | | g | 350 |
| Conductor section | | | |
| AWG/kcmil conductor section | | | |
| | max | | 10 |
| Auxiliary contact characteristics | | _ | |
| Thermal current Ith | | А | 10 |
| IEC/EN 60947-5-1 designation | | | A600 - P600 |
| Operating current AC15 | | | _ |
| | 230V | А | 3 |
| | 400V | A | 1.9 |
| | 500V | A | 1.4 |
| Operating current DC12 | 44014 | | |
| | 110V | A | 5.7 |
| Operating current DC13 | • · · · | | |
| | 24V | A | 5.7 |
| | 48V | A | 2.9 |
| | 60V | A | 2.3 |
| | 110V | A | 1.25 |
| | 125V 220V | A | 1.1 0.55 |
| | 600V | A A | 0.55 |
| Operations | 000 v | A | 0.2 |
| Vechanical life | | cycles | 20000000 |
| Safety related data | | Cycles | 20000000 |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | | o volo o | 2000000 |
| | mechanical load | 0.00000 | |
| Mirror contats according to IEC/EN 609474-4-1 | mechanical load | cycles | 20000000 YES |
| | mechanical load | cycles | YES |
| EMC compatibility | mechanical load | cycles | |
| EMC compatibility AC coil operating | | | YES yes |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz | | V | YES |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage | | | YES yes |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz | | | YES yes |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage | | V | YES yes 230 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz | min | V %Us | YES yes 230 80 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up | | V | YES yes 230 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz | min | V %Us | YES yes 230 80 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up | min max | V %Us %Us | YES yes 230 80 110 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out | min max min | V %Us %Us %Us | YES yes 230 80 110 20 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out AC average coil consumption at 20°C | min max min | V %Us %Us %Us | YES yes 230 80 110 20 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out | min max min | V %Us %Us %Us | YES yes 230 80 110 20 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out AC average coil consumption at 20°C | min max min max | V %Us %Us %Us %Us | YES yes 230 80 110 20 55 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out AC average coil consumption at 20°C of 60Hz coil powered at 60Hz | min max min max in-rush | V %Us %Us %Us %Us VA | YES yes 230 80 110 20 55 75 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out AC average coil consumption at 20°C of 60Hz coil powered at 60Hz Dissipation at holding =20°C 50Hz | min max min max in-rush | V %Us %Us %Us %Us VA VA | YES yes 230 80 110 20 55 75 9 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out AC average coil consumption at 20°C of 60Hz coil powered at 60Hz Dissipation at holding =20°C 50Hz Max cycles frequency | min max min max in-rush | V %Us %Us %Us %Us VA VA | YES yes 230 80 110 20 55 75 9 2.5 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out AC average coil consumption at 20°C of 60Hz coil powered at 60Hz Dissipation at holding =20°C 50Hz Max cycles frequency Mechanical operation | min max min max in-rush | V %Us %Us %Us %Us %Us VA VA VA W | YES yes 230 80 110 20 55 75 9 2.5 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out AC average coil consumption at 20°C of 60Hz coil powered at 60Hz Dissipation at holding =20°C 50Hz Max cycles frequency Mechanical operation Operating times | min max min max in-rush | V %Us %Us %Us %Us %Us VA VA VA W | YES yes 230 80 110 20 55 75 9 2.5 |
| pick-up drop-out AC average coil consumption at 20°C | min max min max in-rush | V %Us %Us %Us %Us %Us VA VA VA W | YES yes 230 80 110 20 55 75 9 2.5 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out AC average coil consumption at 20°C of 60Hz coil powered at 60Hz Dissipation at holding =20°C 50Hz Max cycles frequency Mechanical operation Operating times Average time for Us control | min max min max in-rush | V %Us %Us %Us %Us %Us VA VA VA W | YES yes 230 80 110 20 55 75 9 2.5 |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up drop-out AC average coil consumption at 20°C of 60Hz coil powered at 60Hz Dissipation at holding =20°C 50Hz Max cycles frequency Mechanical operation Operating times Average time for Us control in AC | min max min max in-rush | V %Us %Us %Us %Us %Us VA VA VA W | YES yes 230 80 110 20 55 75 9 2.5 |

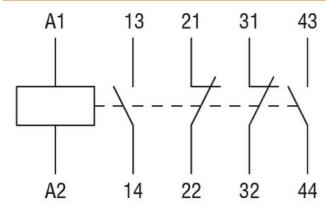


CONTROL RELAY WITH AC COIL 60HZ, 230VAC, 2NO AND 2NC

| | | Opening NO | min max | ms ms | 10 20 |
|---|---------------------------|--|--|----------|-------------|
| | | Closing NC | min max | ms ms | 14 28 |
| | | Opening NC | min max | ms ms | 7 18 |
| UL technical data General USE | | | | | |
| | Auxiliary contacts | | AC current | А | 10 |
| _ | ary contacts according to | o UL | | | A600 - P600 |
| Ambient conditions Temperature | Operating temperature |) | min | °C | -50 |
| | | | max | °C | 70 |
| | Storage temperature | | min max | °C °C | -60 80 |
| Max altitude Resistance & Protection Pollution degree Dimensions | on | | | m | 3000 3 |
| | | 04.2fr) 00.1fr (62.7) 35 .38") | (3) (0) (0) (0) (0) (0) (0) (0) (0) (0) (0 | 0.7 | |



Wiring diagrams



Certifications and compliance

| Compliance | | |
|---------------------|------------------------|------------|
| | CSA C22.2 n° 60947-1 | |
| | CSA C22.2 n° 60947-5-1 | |
| | IEC/EN 60947-1 | |
| | IEC/EN 60947-5-1 | |
| | UL 60947-1 | |
| | UL 60947-5-1 | |
| Certificates | | |
| | 000 | |
| | cULus | |
| | EAC | |
| ETIM classification | | |
| | | EC000196 - |

ETIM 8.0

EC000196 Contactor relay