

| Product designation                                 |   |              |      | Auxiliary contactor |
|---|---|--------------|------|---------------------|
| Product type designat                               | lion  |              |      | BF00                |
| Contact characteristic                              |   |              |      | Broo                |
| Number of poles                                     |   |              | Nr.  | 4                   |
| Rated insulation voltage                            | ge 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    | 10                  |
| Operational current le                              |   |              |      |                     |
| 1   |   | AC-1 (≤55°C) | А    | 0                   |
| Protection fuse                                     |   | - ( )        |      |                     |
|   |   | gG (IEC)     | А    | 25                  |
| Tightening torque for t                             | terminals   | 9- ()        |      |                     |
|   |   | 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                 |
|   |   | 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                   |
|   |   | max          | mm²  | 6                   |
|   | Flexible c/w lug conductor section                  |              |      |                     |
|   |   | min          | mm²  | 1                   |
|   |   | max          | mm²  | 4                   |
|   | Flexible with insulated spade lug conductor section |              |      |                     |
|   |   | min          | mm²  | 1                   |
|   |   | max          | mm²  | 4                   |
| Power terminal protection according to IEC/EN 60529 |   |              |      | IP20 when           |
|   |   |              |      | properly wired      |
| Mechanical features                                 |   |              |      |                     |
| Operating position                                  |   |              |      |                     |
|   |   | normal       |      | Vertical plan       |
|   |   | allowable    |      | ±30°                |
|   |   |              |      |                     |



| Fixing  |                                     |   | Screw / DIN rail<br>35mm  |
|---|-------------------------------------|---|---|
| Weight  |                                     | g   | 366   |
| Conductor section   |                                     |   |   |
| AWG/kcmil conductor section   |                                     |   |   |
|   | max                                 |   | 10  |
| Auxiliary contact characteristics   |                                     |   | 4.0   |
| Thermal current lth   |                                     | А   | 10  |
| IEC/EN 60947-5-1 designation  |                                     |   | A600 - P600   |
| Operating current AC15  | 0001/                               | ٨   | 0   |
|   | 230V                                | A   | 3   |
|   | 400V                                | A   | 1.9   |
| Operating surrent DC12  | 500V                                | A   | 1.4   |
| Operating current DC12  | 110\/                               | ٨   | E 7   |
| On exerting our mont DC12   | 110V                                | A   | 5.7   |
| Operating current DC13  | 241/                                | ۸   | F 7   |
|   | 24V<br>48V                          | A   | 5.7<br>2.9  |
|   | 48V<br>60V                          | A<br>A  | 2.9<br>2.3  |
|   | 110V                                | A   | 2.3<br>1.25   |
|   | 125V                                | A   | 1.25  |
|   | 220V                                | A   | 0.55  |
|   | 600V                                | A   | 0.2   |
| Operations  | 0001                                | Λ   | 0.2   |
| Mechanical life   |                                     | cycles  | 20000000  |
| Safety related data   |                                     | eyelee  | 2000000   |
|   |                                     |   |   |
| Performance level B10d according to EN/ISO 13489-1  |                                     |   |   |
| Performance level B10d according to EN/ISO 13489-1  | mechanical load                     | cvcles  | 20000000  |
|   | mechanical load                     | cycles  | 20000000<br>YES   |
| Mirror contats according to IEC/EN 609474-4-1   | mechanical load                     | cycles  | YES   |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility  | mechanical load                     | cycles  |   |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating   | mechanical load                     | •   | YES<br>yes  |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz   | mechanical load                     | cycles<br>V   | YES   |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage   | mechanical load                     | •   | YES<br>yes  |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz   | mechanical load                     | •   | YES<br>yes  |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage   |                                     | V   | YES<br>yes<br>48  |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz   | mechanical load                     | •   | YES<br>yes  |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up  | min                                 | V<br>%Us  | YES<br>yes<br>48<br>80  |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz   | min                                 | V<br>%Us  | YES<br>yes<br>48<br>80  |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out  | min<br>max                          | V<br>%Us<br>%Us   | YES<br>yes<br>48<br>80<br>110                                       |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out  | min<br>max<br>min                   | V<br>%Us<br>%Us<br>%Us                                      | YES<br>yes<br>48<br>80<br>110<br>20                                 |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out  | min<br>max<br>min                   | V<br>%Us<br>%Us<br>%Us                                      | YES<br>yes<br>48<br>80<br>110<br>20                                 |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out  | min<br>max<br>min                   | V<br>%Us<br>%Us<br>%Us                                      | YES<br>yes<br>48<br>80<br>110<br>20                                 |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out  | min<br>max<br>min<br>max            | V<br>%Us<br>%Us<br>%Us<br>%Us                               | YES<br>yes<br>48<br>80<br>110<br>20<br>55<br>75<br>9                |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out<br>AC average coil consumption at 20°C<br>of 60Hz coil powered at 60Hz   | min<br>max<br>min<br>max<br>in-rush | V<br>%Us<br>%Us<br>%Us<br>%Us<br>VA                         | YES<br>yes<br>48<br>80<br>110<br>20<br>55<br>75                     |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out<br>AC average coil consumption at 20°C<br>of 60Hz coil powered at 60Hz   | min<br>max<br>min<br>max<br>in-rush | V<br>%Us<br>%Us<br>%Us<br>%Us<br>%Us<br>VA<br>VA<br>VA<br>W | YES<br>yes<br>48<br>80<br>110<br>20<br>55<br>75<br>9<br>2.5         |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out<br>AC average coil consumption at 20°C<br>of 60Hz coil powered at 60Hz<br>Dissipation at holding ≤20°C 50Hz<br>Max cycles frequency<br>Mechanical operation  | min<br>max<br>min<br>max<br>in-rush | V<br>%Us<br>%Us<br>%Us<br>%Us<br>VA<br>VA                   | YES<br>yes<br>48<br>80<br>110<br>20<br>55<br>75<br>9<br>2.5         |
| pick-up<br>drop-out<br>AC average coil consumption at 20°C  | min<br>max<br>min<br>max<br>in-rush | V<br>%Us<br>%Us<br>%Us<br>%Us<br>%Us<br>VA<br>VA<br>VA<br>W | YES<br>yes<br>48<br>80<br>110<br>20<br>55<br>75<br>9<br>2.5         |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out<br>AC average coil consumption at 20°C<br>of 60Hz coil powered at 60Hz<br>Dissipation at holding ≤20°C 50Hz<br>Max cycles frequency<br>Mechanical operation<br>Operating times   | min<br>max<br>min<br>max<br>in-rush | V<br>%Us<br>%Us<br>%Us<br>%Us<br>%Us<br>VA<br>VA<br>VA<br>W | YES<br>yes<br>48<br>80<br>110<br>20<br>55<br>75<br>9<br>2.5         |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out<br>AC average coil consumption at 20°C<br>of 60Hz coil powered at 60Hz<br>Dissipation at holding ≤20°C 50Hz<br>Max cycles frequency<br>Mechanical operation<br>Operating times<br>Average time for Us control<br>in AC | min<br>max<br>min<br>max<br>in-rush | V<br>%Us<br>%Us<br>%Us<br>%Us<br>%Us<br>VA<br>VA<br>VA<br>W | YES<br>yes<br>48<br>80<br>110<br>20<br>55<br>75<br>9<br>2.5         |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out<br>AC average coil consumption at 20°C<br>of 60Hz coil powered at 60Hz<br>Dissipation at holding ≤20°C 50Hz<br>Max cycles frequency<br>Mechanical operation<br>Operating times<br>Average time for Us control          | min<br>max<br>min<br>max<br>in-rush | V<br>%Us<br>%Us<br>%Us<br>%Us<br>%Us<br>VA<br>VA<br>VA<br>W | YES<br>yes<br>48<br>80<br>110<br>20<br>55<br>75<br>9<br>2.5<br>3600 |
| Mirror contats according to IEC/EN 609474-4-1<br>EMC compatibility<br>AC coil operating<br>Rated AC voltage at 60Hz<br>AC operating voltage<br>of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out<br>AC average coil consumption at 20°C<br>of 60Hz coil powered at 60Hz<br>Dissipation at holding ≤20°C 50Hz<br>Max cycles frequency<br>Mechanical operation<br>Operating times<br>Average time for Us control<br>in AC | min<br>max<br>min<br>max<br>in-rush | V<br>%Us<br>%Us<br>%Us<br>%Us<br>%Us<br>VA<br>VA<br>VA<br>W | YES<br>yes<br>48<br>80<br>110<br>20<br>55<br>75<br>9<br>2.5         |

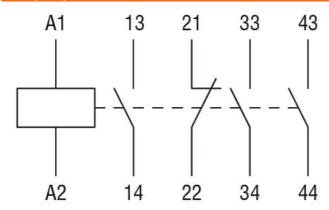


CONTROL RELAY WITH AC COIL 60HZ, 48VAC, 3NO AND 1NC

| UL technical data                      | Opening NG<br>Closing NC<br>Opening NG     | min<br>max<br>min<br>max  | ms<br>ms<br>ms<br>ms<br>ms | 10<br>20<br>14<br>28<br>7<br>18 |
|--|--|---|----------------------------|---------------------------------|
| General USE<br>A                       | uxiliary contacts                          |   |                            |                                 |
| Contact rating of auxiliary            | contacts according to UL                   | AC current  | A                          | 10<br>A600 - P600               |
| Ambient conditions<br>Temperature<br>O | perating temperature<br>torage temperature | min<br>max<br>min   | ℃<br>℃<br>℃                | -50<br>70<br>-60                |
| Max altitude                           |  | max   | °C<br>m                    | 80<br>3000                      |
|  | 7")<br>10.9<br>0.43")                      | (3)<br>(62.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(61.2)<br>(. | 30.7<br>.18")<br>          | 3                               |



## 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 CCC cULus EAC ETIM classification

ETIM 8.0

EC000196 -Contactor relay