



|   |                    |     | 1               |
|---|--------------------|-----|-----------------|
| Product designation   |                    |     | Power contactor |
| Product type designation  |                    |     | BF09            |
| 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   | 25              |
| Operational current le  |                    |     |                 |
|   | AC-1 (≤40°C)       | Α   | 25              |
|   | AC-1 (≤55°C)       | Α   | 20              |
|   | AC-1 (≤70°C)       | Α   | 18              |
|   | AC-3 (≤440V ≤55°C) | Α   | 9               |
|   | AC-4 (400V)        | Α   | 4.9             |
| Rated operational power AC-1 (T≤40°C)                           |                    |     |                 |
|   | 230V               | kW  | 9.5             |
|   | 400V               | kW  | 16              |
|   | 500V               | kW  | 21              |
| 150   | 690V               | kW  | 27              |
| IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series | .0.43.4            |     |                 |
|   | ≤24V               | A   | 15              |
|   | 48V                | A   | 13              |
|   | 75V                | A   | 12              |
|   | 110V<br>220V       | A   | 6               |
| IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series | Z20 V              | Α   | _               |
| TEC max current le in DCT with E/N 3 mis with 2 poles in series | ≤24V               | Α   | 18              |
|   | 48V                | A   | 18              |
|   | 75V                | A   | 17              |
|   | 110V               | A   | 12              |
|   | 220V               | Α   | 1               |
| IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series |                    |     | <u> </u>        |
|   | ≤24V               | Α   | 20              |
|   | 48V                | Α   | 20              |
|   | 75V                | Α   | 20              |
|   | 110V               | Α   | 15              |
|   | 220V               | Α   | 10              |
| IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series |                    |     |                 |
| ·   | ≤24V               | Α   | 20              |
|   | 48V                | Α   | 20              |
|   | 75V                | Α   | 20              |
|   | 110V               | Α   | 16              |
|   | 220V               | Α   | 12              |
|   |                    |     |                 |



| IFC may current le in D    | C3-DC5 with L/R ≤ 15ms with 1 poles in series     |          |       |      |
|----------------------------|---|----------|-------|------|
| ILO IIIAX CUITEIILIE III L | 100-000 With E/IX 3 Tollis With 1 poles in selles | <04)/    | ۸     | 4.0  |
|                            |   | ≤24V     | A     | 10   |
|                            |   | 48V      | Α     | 9    |
|                            |   | 75V      | Α     | 8    |
|                            |   | 110V     | Α     | 2    |
|                            |   | 220V     | Α     |      |
| IEC max current le in D    | C3-DC5 with L/R ≤ 15ms with 2 poles in series     |          |       |      |
|                            |   | ≤24V     | Α     | 13   |
|                            |   | 48V      | Α     | 11   |
|                            |   | 75V      | Α     | 10   |
|                            |   | 110V     | Α     | 7    |
|                            |   | 220V     | A     | 2    |
| IFO I                      | 000 D05 with 1/D < 45 with 0 in in                | 220 V    |       |      |
| IEC max current le in L    | C3-DC5 with L/R ≤ 15ms with 3 poles in series     |          | _     |      |
|                            |   | ≤24V     | Α     | 15   |
|                            |   | 48V      | Α     | 15   |
|                            |   | 75V      | Α     | 13   |
|                            |   | 110V     | Α     | 11   |
|                            |   | 220V     | Α     | 6    |
| IEC may current le in D    | C3-DC5 with L/R ≤ 15ms with 4 poles in series     | 2201     |       |      |
| ILO IIIAX CUITEIILIE III L | 100-000 With E/IX 3 Tollis With 4 poles in selles | <04)/    | ۸     | 4.5  |
|                            |   | ≤24V     | A     | 15   |
|                            |   | 48V      | Α     | 15   |
|                            |   | 75V      | Α     | 15   |
|                            |   | 110V     | Α     | 12   |
|                            |   | 220V     | Α     | 7    |
| Short-time allowable cu    | urrent for 10s (IEC/EN60947-1)                    |          | Α     | 150  |
| Protection fuse            | ,   |          |       |      |
| 1 101001101111000          |   | gG (IEC) | Α     | 25   |
|                            |   |          |       |      |
| 14.11                      |   | aM (IEC) | Α .   | 10   |
| Making capacity (RMS)      | ·   |          | Α     | 90   |
| Breaking capacity at vo    | Itage   |          |       |      |
|                            |   | 440V     | Α     | 72   |
|                            |   | 500V     | Α     | 72   |
|                            |   | 690V     | Α     | 71   |
| Resistance per pole (av    | verage value)                                     |          | mΩ    | 2.5  |
| Power dissipation per p    |   |          | 11132 |      |
| i owei dissipation per p   | olo (avelage value)                               | ITL      | 14/   | 1.6  |
|                            |   | Ith      | W     | 1.6  |
|                            |   | AC-3     | W     | 0.2  |
| Tightening torque for te   | rminals   |          |       |      |
|                            |   | min      | Nm    | 1.5  |
|                            |   | max      | Nm    | 1.8  |
|                            |   | min      | lbin  | 1.1  |
|                            |   | max      | Ibin  | 1.5  |
| Tightening torque for co   | nil terminal                                      | ших      |       |      |
| riginierinig torque for co | on terminal                                       |          | Nime  | 0.0  |
|                            |   | min      | Nm    | 0.8  |
|                            |   | max      | Nm    | 1    |
|                            |   | min      | Ibin  | 0.8  |
|                            |   | max      | lbin  | 0.74 |
| Max number of wires si     | multaneously connectable                          |          | Nr.   | 2    |
| Conductor section          | •   |          |       |      |
|                            | AWG/Kcmil   |          |       |      |
|                            | /WY O/NOTHII                                      | may      |       | 10   |
|                            | Florible m/s has as a large search                | max      |       | 10   |
|                            | Flexible w/o lug conductor section                | _        | _     |      |
|                            |   | min      | mm²   | 1    |
|                            |   |          |       |      |





SCHÜTZ BF09T4A, 4P (4S), 25A AC1, 230V 50/60HZ - IEC/EN/BS 60335-1

|                            |   |                   |                | •                |
|----------------------------|---|-------------------|----------------|------------------|
|                            | Elevible a horizon a andreada a catica        | max               | mm²            | 6                |
|                            | Flexible c/w lug conductor section            | min               | mm²            | 1                |
|                            |   | min               | mm²            | 1<br>4           |
|                            | Flexible with insulated spade lug conductor   | max               | mm²            | 4                |
|                            | The sibile with insulated space lug conductor | min               | mm²            | 1                |
|                            |   | max               | mm²            | 4                |
|                            |   | - Indx            |                | IP20 when        |
| Power terminal protect     | ction according to IEC/EN 60529               |                   |                | properly wired   |
| Mechanical features        |   |                   |                |                  |
| Operating position         |   |                   |                |                  |
|                            |   | normal            |                | Vertical plan    |
|                            |   | allowable         |                | ±30°             |
| Fixing                     |   |                   |                | Screw / DIN rail |
|                            |   |                   |                | 35mm             |
| Weight                     |   |                   | g              | 356              |
| Conductor section          | ANA/O/I                                       |                   |                |                  |
|                            | AWG/kcmil conductor section                   |                   |                | 10               |
| Operations                 |   | max               |                | 10               |
| Operations Mechanical life |   |                   | cycles         | 20000000         |
| Electrical life            | ·   |                   | cycles         | 2000000          |
| Safety related data        |   |                   | Cycles         | 2000000          |
|                            | 0d according to EN/ISO 13489-1                |                   |                |                  |
| i onomianos ievei bi       | od decorating to 2.14.166 To 166 T            | rated load        | cycles         | 2000000          |
|                            |   | mechanical load   | cycles         | 20000000         |
| Mirror contats accordi     | ng to IEC/EN 609474-4-1                       |                   |                | yes              |
| EMC compatibility          |   |                   |                | yes              |
| AC coil operating          |   |                   |                |                  |
| Rated AC voltage at 6      | 0Hz   |                   | V              | 230              |
| AC operating voltage       |   |                   |                |                  |
|                            | of 60Hz coil powered at 60Hz                  |                   |                |                  |
|                            | pick-up                                       |                   |                |                  |
|                            |   | min               | %Us            | 80               |
|                            |   | max               | %Us            | 110              |
|                            | drop-out                                      |                   | 0/11-          | 20               |
|                            |   | min<br>max        | %Us<br>%Us     | 20<br>55         |
| AC average coil consu      | umption at 20°C                               | ıııax             | /oUS           | JJ               |
| AS average coll collst     | of 60Hz coil powered at 60Hz                  |                   |                |                  |
|                            | 3. 301 12 3011 poworod at 301 12              | in-rush           | VA             | 75               |
|                            |   | holding           | VA             | 9                |
| Dissipation at holding     |   |                   | W              | 2.5              |
| Max cycles frequency       |   |                   |                |                  |
| Mechanical operation       |   |                   | cycles/h       | 3600             |
| Operating times            |   |                   |                |                  |
| Average time for Us c      | ontrol  |                   |                |                  |
|                            | in AC   |                   |                |                  |
|                            | Closing NO                                    |                   |                |                  |
|                            |   | min               | ms             | 8                |
|                            |   |                   |                | 0.4              |
|                            | _   | max               | ms             | 24               |
|                            | Opening NO                                    |                   |                |                  |
|                            | Opening NO                                    | max<br>min<br>max | ms<br>ms<br>ms | 10 20            |



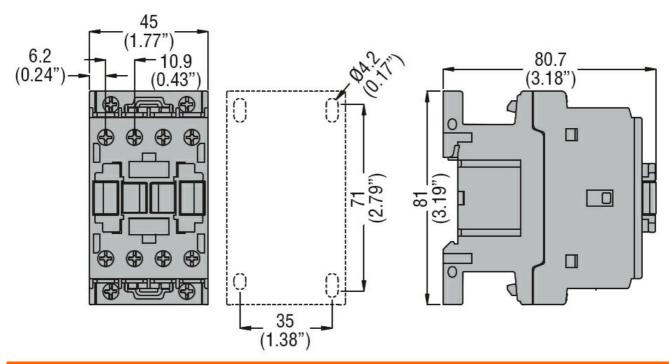


SCHÜTZ BF09T4A, 4P (4S), 25A AC1, 230V 50/60HZ - IEC/EN/BS 60335-1

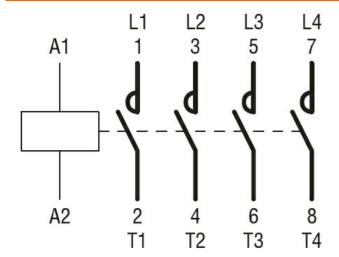
| Closing NC                               |                           |                       |          |       |
|--|---------------------------|-----------------------|----------|-------|
|  | · ·                       | min                   | ms       | 14    |
|  |                           | max                   | ms       | 28    |
|  | Opening NC                |                       |          |       |
|  | , ,                       | min                   | ms       | 7     |
|  |                           | max                   | ms       | 18    |
| UL technical data                        |                           |                       |          |       |
| Full-load current (FLA)                  | for three-phase AC motor  |                       |          |       |
| , ,                                      | ·                         | at 480V               | Α        | 7.6   |
|  |                           | at 600V               | Α        | 0.375 |
| Yielded mechanical pe                    | erformance                |                       |          |       |
| •  | for single-phase AC motor |                       |          |       |
|  | 3 1 3 1                   | 110/120V              | HP       | 0.75  |
|  |                           | 230V                  | HP       | 2     |
|  | for three-phase AC motor  |                       | <u> </u> |       |
|  |                           | 200/208V              | HP       | 3     |
|  |                           | 220/230V              | HP       | 3     |
|  |                           | 460/480V              | HP       | 5     |
|  |                           | 575/600V              | HP       | 7.5   |
| General USE                              |                           |                       |          |       |
| 000.0.                                   | Contactor                 |                       |          |       |
|  | oomaste.                  | AC current            | Α        | 25    |
| Short-circuit protection                 | fuse 600V                 | 7 to danoin           | - , ,    |       |
| C. C | High fault                |                       |          |       |
|  | i ligit idak              | Short circuit current | kA       | 100   |
|  |                           | Fuse rating           | A        | 30    |
|  |                           | Fuse class            | ,,       | J     |
|  | Standard fault            | 1 000 01000           |          |       |
|  | Staridard radit           | Short circuit current | kA       | 5     |
|  |                           | Fuse rating           | A        | 60    |
| Ambient conditions                       |                           | . doo raanig          | , ,      |       |
| Temperature                              |                           |                       |          |       |
| · simporatoro                            | Operating temperature     |                       |          |       |
|  | opolating tompolation     | min                   | °C       | -50   |
|  |                           | max                   | °C       | 70    |
|  | Storage temperature       | max                   |          | . •   |
|  | C.C. ago tomporataro      | min                   | °C       | -60   |
|  |                           | max                   | °C       | 80    |
| Max altitude                             |                           | max                   | m        | 3000  |
| Resistance & Protection                  | n                         |                       | .,,,     |       |
| Pollution degree                         |                           |                       | <u> </u> | 3     |
| Dimensions                               |                           |                       |          |       |
| <del>Dii</del> nonolono                  |                           |                       |          |       |



**ENERGY AND AUTOMATION** 



## Wiring diagrams



## Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60335-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching