| | | | |
|---|---|---|---|
| Product designation | | | Power contactor |
| Product type designation | | | BF230 |
| **Contact characteristics** | | | |
| Number of poles | | Nr. | 4 |
| Rated insulation voltage Ui IEC/EN | | V | 1000 |
| Rated impulse withstand voltage Uimp | | kV | 8 |
| Operational frequency | | | |
| | min | Hz | 25 |
| | max | Hz | 400 |
| IEC Conventional free air thermal current Ith | | A | 350 |
| Operational current Ie | | | |
| | AC-1 (≤40°C) | A | 350 |
| | AC-1 (≤55°C) | A | 290 |
| | AC-1 (≤70°C) | A | 250 |
| | AC-4 (400V) | A | 110 |
| Rated operational power AC-1 (T≤40°C) | | | |
| | 230V | kW | 132 |
| | 400V | kW | 230 |
| | 500V | kW | 253 |
| | 690V | kW | 397 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 1 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 350 |
| | 110V | A | 145 |
| | 220V | A | – |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 2 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 350 |
| | 110V | A | 270 |
| | 220V | A | 225 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 3 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 350 |
| | 110V | A | 270 |
| | 220V | A | 270 |
| | 330V | A | 225 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 350 |
| | 110V | A | 350 |
| | 220V | A | 350 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 250 |
| | 110V | A | 135 |
| | 220V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 350 |

| | | | |
|---|---|---|---|
| | 48V | A | 350 |
| | 75V | A | 250 |
| | 110V | A | 225 |
| | 220V | A | 180 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 250 |
| | 110V | A | 250 |
| | 220V | A | 225 |
| | 330V | A | 180 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 350 |
| | 48V | A | 350 |
| | 75V | A | 250 |
| | 110V | A | 250 |
| | 220V | A | 225 |
| | 330V | A | 210 |
| | 460V | A | 180 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 1840 |
| Protection fuse | | | |
| | gG (IEC) | A | 400 |
| | aM (IEC) | A | 250 |
| Making capacity (RMS value) | | A | 1955 |
| Breaking capacity at voltage | | | |
| | 440V | A | 1955 |
| | 500V | A | 1564 |
| | 690V | A | 1377 |
| Resistance per pole (average value) | | m? | 0.18 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 21 |
| | AC3 | W | 9.3 |
| Tightening torque for terminals | | | |
| | min | Nm | 18 |
| | max | Nm | 18 |
| | min | lbin | 159 |
| | max | lbin | 159 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |
| Power terminal protection according to IEC/EN 60529 | | | IP00 |
| **Mechanical features** | | | |
| Operating position | | | |
| | normal | | Vertical plan |
| | allowable | | ±30° |
| Fixing | | | Screw |
| Weight | | g | 4000 |
| **Operations** | | | |
| Mechanical life | | cycles | 10000000 |
| Electrical life | | cycles | 1000000 |
| **Safety related data** | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load | cycles | 1000000 |

| | | | | |
|---|---|---|---|---|
| EMC compatibility | | | | yes |
| **AC coil operating** | | | | |
| Rated AC voltage at 50/60Hz, 60Hz | | | | |
| | | min | V | 250 |
| | | max | V | 500 |
| AC operating voltage | | | | |
| | of 50/60Hz coil powered at 50Hz | | | |
| | pick-up | | | |
| | | min | %Us | 80 Us min |
| | | max | %Us | 110 Us max |
| | drop-out | | | |
| | | max | %Us | ≤70 Us min |
| | of 50/60Hz coil powered at 60Hz | | | |
| | pick-up | | | |
| | | min | %Us | 80 Us min |
| | | max | %Us | 110 Us max |
| | drop-out | | | |
| | | max | %Us | ≤70 Us min |
| AC average coil consumption at 20°C | | | | |
| | of 50/60Hz coil powered at 50Hz | | | |
| | | in-rush | VA | 160…230 |
| | | holding | VA | 1.5...3.0 |
| | of 50/60Hz coil powered at 60Hz | | | |
| | | in-rush | VA | 160…230 |
| | | holding | VA | 1.5...3.0 |
| | of 60Hz coil powered at 60Hz | | | |
| | | in-rush | VA | 160…230 |
| | | holding | VA | 1.5...3.0 |
| Dissipation at holding ≤20°C 50Hz | | | W | 1.5...3.0 |
| **DC coil operating** | | | | |
| DC rated control voltage | | | | |
| | | min | V | 250 |
| | | max | V | 500 |
| DC operating voltage | | | | |
| | pick-up | | | |
| | | min | %Us | 85 Us min |
| | | max | %Us | 110 Us max |
| | drop-out | | | |
| | | max | %Us | ≤70 Us min |
| Average coil consumption ≤20°C | | | | |
| | | in-rush | W | 160…230 |
| | | holding | W | 1.5...3.0 |
| **Max cycles frequency** | | | | |
| Mechanical operation | | | cycles/h | 1000 |
| **Operating times** | | | | |
| Average time for Us control | | | | |
| | in AC | | | |
| | Closing NO | | | |
| | | min | ms | 50 |
| | | max | ms | 100 |
| | Opening NO | | | |
| | | min | ms | 35 |
| | | max | ms | 75 |
| **UL technical data** | | | | |

| | | | | |
|---|---|---|---|---|
| Yielded mechanical performance | | | | |
| | for three-phase AC motor | | | |
| | | 200/208V | HP | 75 |
| | | 220/230V | HP | 75 |
| | | 460/480V | HP | 150 |
| | | 575/600V | HP | 200 |
| General USE | | | | |
| | Contactor | | | |
| | | AC current | A | 350 |
| Short-circuit protection fuse, 600V | | | | |
| | High fault | | | |
| | | Short circuit current | kA | 100 |
| | | Fuse rating | A | 400 |
| | | Fuse class | | J |
| | Standard fault | | | |
| | | Short circuit current | kA | 10 |
| | | Fuse rating | A | 400 |
| | | Fuse class | | RK5 |
| **Ambient conditions** | | | | |
| Temperature | | | | |
| | Operating temperature | | | |
| | | min | °C | -40 |
| | | max | °C | 70 |
| | Storage temperature | | | |
| | | min | °C | -50 |
| | | max | °C | 80 |
| Max altitude | | | m | 3000 |
| **Resistance & Protection** | | | | |
| Pollution degree | | | | 3 |
| **ETIM classification** | | | | |
| ETIM 8.0 | | | | EC000066 - Power contactor, AC switching |