

| | | | | |
|-------------------------------------------------------------------------------------|---------------------------------------------------|----|-----|-----------------|
| Product designation | | | | Power contactor |
| Product type designation | | | | BF18 |
| Contact characteristics | | | | |
| Number of poles | Nr. | | | 4 |
| Rated insulation voltage U_i IEC/EN | V | | | 690 |
| Rated impulse withstand voltage U_{imp} | kV | | | 6 |
| Operational frequency | min | Hz | 25 | |
| | max | Hz | 400 | |
| IEC Conventional free air thermal current I_{th} | A | | | 32 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A | 32 | |
| | AC-1 ($\leq 55^\circ\text{C}$) | A | 26 | |
| | AC-1 ($\leq 70^\circ\text{C}$) | A | 23 | |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A | 18 | |
| | AC-4 (400V) | A | 8.5 | |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW | 12 | |
| | 400V | kW | 21 | |
| | 500V | kW | 26 | |
| | 690V | kW | 36 | |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A | 17 | |
| | 48V | A | 15 | |
| | 75V | A | 15 | |
| | 110V | A | 6 | |
| | 220V | A | – | |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series | $\leq 24\text{V}$ | A | 20 | |
| | 48V | A | 20 | |
| | 75V | A | 20 | |
| | 110V | A | 13 | |
| | 220V | A | 1 | |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A | 22 | |
| | 48V | A | 22 | |
| | 75V | A | 20 | |
| | 110V | A | 16 | |
| | 220V | A | 11 | |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | $\leq 24\text{V}$ | A | 22 | |
| | 48V | A | 22 | |
| | 75V | A | 20 | |
| | 110V | A | 18 | |
| | 220V | A | 13 | |
| IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A | 12 | |
| | 48V | A | 11 | |
| | 75V | A | 11 | |
| | 110V | A | 2 | |
| | 220V | A | – | |
| IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series | $\leq 24\text{V}$ | A | 15 | |

| | | | |
|----------------------------------------------------------------------------------|-----------------|-----------------|-----------------|
| | 48V | A | 13 |
| | 75V | A | 13 |
| | 110V | A | 8 |
| | 220V | A | 2 |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 18 |
| | 48V | A | 18 |
| | 75V | A | 16 |
| | 110V | A | 12 |
| | 220V | A | 6 |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 18 |
| | 48V | A | 18 |
| | 75V | A | 16 |
| | 110V | A | 13 |
| | 220V | A | 8 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 200 |
| Protection fuse | | | |
| | gG (IEC) | A | 32 |
| | aM (IEC) | A | 20 |
| Making capacity (RMS value) | | A | 180 |
| Breaking capacity at voltage | | | |
| | 440V | A | 144 |
| | 500V | A | 120 |
| | 690V | A | 94 |
| Resistance per pole (average value) | | mΩ | 2.5 |
| Power dissipation per pole (average value) | | | |
| | I _{th} | W | 2.6 |
| | AC3 | W | 0.8 |
| Tightening torque for terminals | | | |
| | min | Nm | 1.5 |
| | max | Nm | 1.8 |
| | min | lbin | 1.1 |
| | max | lbin | 1.5 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |
| | min | lbin | Prodotti finiti |
| | max | lbin | Prodotti finiti |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| Flexible w/o lug conductor section | | | |
| | min | mm ² | 1 |
| | max | mm ² | 6 |
| Flexible c/w lug conductor section | | | |
| | min | mm ² | 1 |
| | max | mm ² | 4 |
| Flexible with insulated spade lug conductor section | | | |
| | min | mm ² | 1 |
| | max | mm ² | 4 |
| Power terminal protection according to IEC/EN 60529 | | | IP20 when wired |

Mechanical features

Operating position

| | normal allowable | Vertical plan ±30° |
|----------------------------------------------------|-------------------------------|--------------------------|
| Fixing | | Screw / DIN rail 35mm |
| Weight | g | 360 |
| Operations | | |
| Mechanical life | cycles | 20000000 |
| Electrical life | cycles | 1600000 |
| Safety related data | | |
| Performance level B10d according to EN/ISO 13489-1 | | |
| | rated load mechanical load | cycles cycles |
| | | 1600000 20000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | Yes |
| EMC compatibility | | Yes |
| Rated AC voltage at 60Hz | V | 220 |
| AC coil operating | | |
| AC operating voltage | | |
| of 60Hz coil powered at 60Hz | | |
| pick-up | | |
| | min | %Us 80 |
| | max | %Us 110 |
| drop-out | | |
| | min | %Us 20 |
| | max | %Us 55 |
| AC average coil consumption at 20°C | | |
| of 50/60Hz coil powered at 50Hz | | |
| | in-rush | VA 75 |
| | holding | VA 9 |
| of 50/60Hz coil powered at 60Hz | | |
| | in-rush | VA 70 |
| | holding | VA 6.5 |
| of 60Hz coil powered at 60Hz | | |
| | in-rush | VA 75 |
| | holding | VA 9 |
| Dissipation at holding ≤20°C 50Hz | W | 2.5 |
| 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 10 |
| | max | ms 20 |
| 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 | A | 14 |
| | | at 600V | A | 17 |
| Yielded mechanical performance | | | | |
| for single-phase AC motor | | | | |
| | | 110/120V | HP | 1 |
| | | 230V | HP | 3 |
| for three-phase AC motor | | | | |
| | | 200/208V | HP | 5 |
| | | 220/230V | HP | 5 |
| | | 460/480V | HP | 10 |
| | | 575/600V | HP | 15 |
| General USE | | | | |
| Contactor | | | | |
| | | AC current | A | 32 |
| Short-circuit protection fuse, 600V | | | | |
| High fault | | | | |
| | | Short circuit current | kA | 100 |
| | | Fuse rating | A | 60 |
| | | Fuse class | | J |
| Standard fault | | | | |
| | | Short circuit current | kA | 5 |
| | | Fuse rating | A | 80 |
| Ambient conditions | | | | |
| Temperature | | | | |
| Operating temperature | | | | |
| | | min | °C | -50 |
| | | max | °C | 70 |
| Storage temperature | | | | |
| | | min | °C | -60 |
| | | max | °C | 80 |
| Max altitude | | | | |
| | | | m | 3000 |
| Resistance & Protection | | | | |
| Pollution degree | | | | |
| | | | | 3 |
| Dimensions | | | | |
| Wiring diagrams | | | | |
| Certifications and compliance | | | | |
| Compliance | | | | |
| | | CSA C22.2 n° 60947-1 | | |
| | | CSA C22.2 n° 60947-4-1 | | |
| | | IEC/EN 60947-1 | | |
| | | IEC/EN 60947-4-1 | | |
| | | UL 60947-1 | | |
| | | UL 60947-4-1 | | |
| Certificates | | | | |
| | | CCC | | |
| | | cULus | | |
| | | EAC | | |
| ETIM classification | | | | |
| ETIM 8.0 | | | | EC000066 - Power contactor, AC switching |