



| Product type designation Contact characteristics Number of poles | | | BFK38 |
|--|----------|-----------|-------|
| | | | DENSO |
| Number of poles | | | |
| | | Nr. | 3 |
| 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 | 56 |
| Rated operational power AC-6b (T≤40°C) | | | |
| | 230V | kvar | 17 |
| | 400V | kvar | 30 |
| | 440480V | kvar | 33 |
| | 690V | kvar | 36 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | Α | 320 |
| Protection fuse | | | |
| | gG (IEC) | Α | 63 |
| Making capacity (RMS value) | | Α | 380 |
| Breaking capacity at voltage | | | |
| | 440V | Α | 304 |
| | 500V | Α | 240 |
| | 690V | Α | 192 |
| Resistance per pole (average value) | | $m\Omega$ | 2 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 6 |
| Tightening torque for terminals | | | |
| | min | Nm | 2.5 |
| | max | Nm | 3 |
| | min | Ibin | 1.8 |
| | max | Ibin | 2.2 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |
| | min | Ibin | 0.59 |
| | max | lbin | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | _ | |
| AWG/Kcmil | | | |
| | max | | 6 |
| Flexible w/o lug conductor section | | | |
| | min | mm² | 2.5 |
| | max | mm² | 16 |
| Flexible c/w lug conductor section | | _ | |
| | min | mm² | 1 |





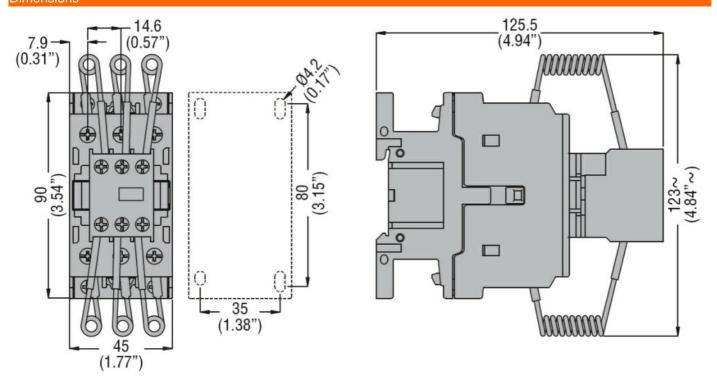
| Flexible with insulated spade lug conductor section | | max | mm² | 10 |
|---|-----------------------------------|--------------------------------|-----------|----------|
| Minit | | | 111111 | 10 |
| Page | | | mm² | 1 |
| Province for from all protection according to IEL/EN 60529 Property wired Mechanical features Vertical plan allowable 130° Vertical plan allowable Vertical plan a | | max | mm² | 10 |
| Mechanical features | Power terminal protect | tion according to IEC/EN 60529 | | |
| Prictical plan Pri | Mechanical features | | | , , , |
| Existing Screw / DIN rail | Operating position | | | |
| FixIng Weight Conductor section AWG/kcmil conductor section AWG/kcmil conductor section AWG/kcmil conductor section Mechanical life Cycles 20000000 Electrical life Cycles 1400000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 200000000 EMC compatibility AC coll operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up min | | | | ±30° |
| Conductor section AWG/kcmil conductor section Max 6 Operations Mechanical life cycles 20000000 Safety related data Performance level B10d according to EN/ISO 13489-1 Interpretation of the properating of EMC compatibility Trated load cycles 400000 cycles 20000000 EMC coll operating Rated AC voltage at 60Hz V 24 AC operating voltage of 60Hz coil powered at 60Hz pick-up min wull will will will will will will will | Fixing | | | |
| AWG/kcmil conductor section Max | Weight | | g | 400 |
| Operations Mechanical life cycles 20000000 Electrical life cycles 1400000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load mechanical load cycles 400000 cycles 20000000 EMC compatibility yes Accoll operating Rated AC voltage at 60Hz V 24 Accoll operating voltage AC operating voltage min %Us 80 max %Us 110 with colspan="2">with col | Conductor section | | | |
| Operations Cycles 20000000 Bechanical life cycles 1400000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 400000 mechanical load cycles 200000000 EMC compatibility yes AC operating National Mechanical load cycles 400000 cycles 200000000 EMC compatibility yes AC operating National Coll operating voltage of 60Hz coil powered at 60Hz min %Us 80 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz in-rush wull wull wull wull wull wull wull wul | | AWG/kcmil conductor section | | |
| Mechanical life | | max | | 6 |
| Electrical life | - | | | 00000000 |
| Safety related data Performance level B10d according to EN/ISO 13489-1 rated load mechanical load cycles 400000 cycles 200000000 EMC compatibility yes AC coll operating yes Rated AC voltage at 60Hz V 24 AC operating voltage of 60Hz coil powered at 60Hz pick-up min wx %Us 80 max Max yells 110 drop-out min wx %Us 55 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz in-rush holding VA 75 holding VA 9 Dissipation at holding ≤20°C 50Hz w 2.5 Max cycles frequency V 2.5 Mechanical operation cycles/h 3600 Operating times Average time for Us control xm 24 Opening NO min ms 8 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 min ms 9 min ms 9 | | | | |
| Performance level B10d according to EN/ISO 13489-1 rated load mechanical load occurs. cycles 200000000 cycles 200000000 EMC compatibility yes AC coil operating V 24 Rated AC voltage at 60Hz V 24 AC operating voltage min %Us 80 pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 AC average coil consumption at 20°C min rush VA 75 AC average coil consumption at 20°C in-rush VA 75 holding VA 9 9 Dissipation at holding ≤20°C 50Hz W 2.5 Max cycles frequency w 2.5 Mechanical operation cycles/h 3600 Operating times max ms 24 Average time for Us control min ms 8 max max ms 24 Opening NO< | | | cycles | 1400000 |
| EMC compatibility rated load mechanical load cycles by 20000000 AC coil operating V 24 Rated AC voltage at 60Hz V 24 AC operating voltage min %Us 80 pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 AC average coil consumption at 20°C max %Us 55 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz in-rush holding VA 75 plossipation at holding ≤20°C 50Hz W 2.5 Max cycles frequency W 2.5 Mechanical operation cycles/h 3600 Operating times Closing NO min ms 8 Average time for Us control min ms 8 Closing NO min ms 5 max ms 15 Closing NC min ms 5 max | • | 2d apparding to EN/ISO 12490 4 | | |
| EMC compatibility AC coil operating Rated AC voltage at 60Hz AC operating voltage of 60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max 9 Ws 55 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz in-rush No 9 Dissipation at holding ≤20°C 50Hz Max cycles frequency Mechanical operation Operating times Average time for Us control in AC Closing NO min ms 8 max ms 15 Closing NC min ms 9 max 9 max ms 15 Closing NC min ms 9 max ms 15 Closing NC min ms 9 max ms 15 Closing NC min ms 9 max ms 15 | Performance level B10 | | ovoloo | 400000 |
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| 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 60Hz coil powered at 60Hz AC average coil consumption at 20°C 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 5 max ms 15 Closing NC min ms 9 max ms 20 | | | <u> </u> | |
| Pick-up min %Us 80 max %Us 110 Min min %Us 20 max %Us 55 Max max %Us 55 Max max %Us 55 Max max min max ma | The operating remage | of 60Hz coil powered at 60Hz | | |
| min MUs 80 max MUs 110 MIn MUs 20 MIn MUs 55 MIn MIn MIn MIn MUs 55 MIn | | | | |
| AC average coil consumption at 20°C Of 60Hz coil powered at 60Hz In-rush VA 75 Nolding VA 9 | | · | %Us | 80 |
| Minimax %Us but with the part of the | | max | %Us | 110 |
| max %Us 55 AC average coil consumption at 20°C of 60Hz coil powered at 60Hz in-rush holding VA 75 holding VA 9 Dissipation at holding ≤20°C 50Hz W 2.5 Max cycles frequency W 2.5 Mechanical operation cycles/h 3600 Operating times Average time for Us control in AC min ms 8 Max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 9 max ms 20 | | drop-out | | |
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| 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 5 max ms 15 Closing NC min ms 9 max ms 20 | AC average coil consu | • | | |
| 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 5 max ms 15 Closing NC min ms 9 max ms 20 | | · | | |
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| Mechanical operation cycles/h 3600 Operating times Average time for Us control In AC Imax | | S20 C 50H2 | VV | 2.5 |
| Operating times Average time for Us control in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20 | | | cyclos/h | 3600 |
| Average time for Us control in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20 | | | Cycles/11 | 3000 |
| in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20 | | ontrol | | |
| Closing NO min ms 8 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20 | 2.2.52 101 00 00 | | | |
| min ms 8 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20 | | | | |
| Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20 | | | ms | 8 |
| min ms 5 max ms 15 Closing NC min ms 9 max ms 20 | | max | ms | |
| max ms 15 Closing NC min ms 9 max ms 20 | | Opening NO | | |
| Closing NC min ms 9 max ms 20 | | min | ms | 5 |
| min ms 9 max ms 20 | | | ms | 15 |
| max ms 20 | | - | | |
| | | | | |
| | UL technical data | max | ms | 20 |



General USE

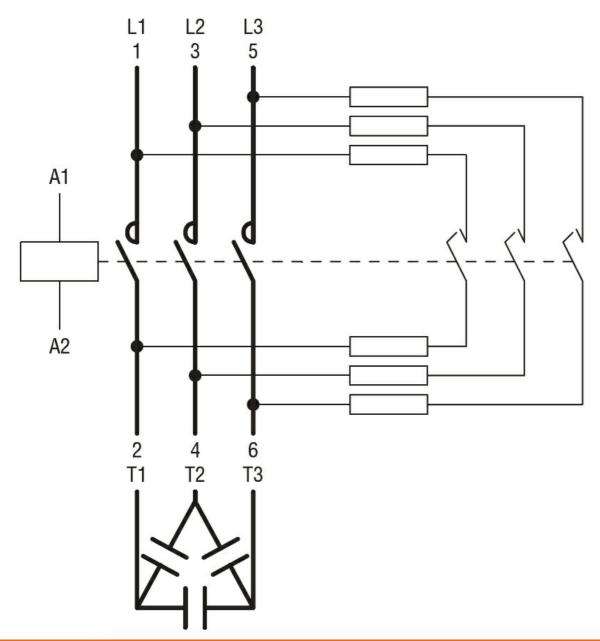
Contactor

| | | AC current | Α | 56 |
|----------------------|-----------------------|------------|----|------|
| Ambient conditions | | | | |
| Temperature | | | | |
| | Operating temperature | | | |
| | | min | °C | -50 |
| | | max | °C | 70 |
| | Storage temperature | | | |
| | | min | °C | -60 |
| | | max | °C | 80 |
| Max altitude | | | m | 3000 |
| Resistance & Protect | on | | | |
| 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/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

EC001079 -Capacitor contactor