



Product designation

Power contactor

Product type designation

BFD80

Contact characteristics

| | | |
|--|------------------------------------|------------|
| Number of poles | Nr. | 3 |
| Rated insulation voltage U_i IEC/EN | V | 1000 |
| Rated impulse withstand voltage U_{imp} | kV | 8 |
| Operational frequency | min Hz | 25 |
| | max Hz | 400 |
| IEC Conventional free air thermal current I_{th} | A | 115 |
| Operational current I_e | AC-1 ($\leq 55^\circ\text{C}$) A | 130 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | 400V A | 100 |
| | 600V A | 80 |
| | 800V A | 65 |
| | 1000V A | 60 |
| Short-time allowable current for 10s (IEC/EN60947-1) | A | 640 |
| Protection fuse | gG (IEC) A | 125 |
| | aM (IEC) A | 80 |
| Resistance per pole (average value) | m Ω | 0.6 |
| Power dissipation per pole (average value) | I_{th} W | 7.9 |
| Tightening torque for terminals | min Nm | 4 |
| | max Nm | 5 |
| | min lbin | 2.95 |
| | max lbin | 3.69 |
| Tightening torque for coil terminal | min Nm | 0.8 |
| | max Nm | 1 |
| | min lbin | 0.8 |
| | max lbin | 0.74 |
| Max number of wires simultaneously connectable | Nr. | 2 |
| Conductor section | AWG/Kcmil | |
| | max | 2 |
| Flexible w/o lug conductor section | min mm ² | 1.5 |
| | max mm ² | 35 |
| Flexible c/w lug conductor section | min mm ² | 1.5 |
| | max mm ² | 35 |
| Power terminal protection according to IEC/EN 60529 | | IP20 front |

Mechanical features

Operating position

| | | |
|--------|---------------------|--------------------------|
| | normal allowable | Vertical plan ±30° |
| Fixing | | Screw / DIN rail 35mm |

| | | |
|--------|---|------|
| Weight | g | 1240 |
|--------|---|------|

Operations

| | | |
|-----------------|--------|----------|
| Mechanical life | cycles | 15000000 |
|-----------------|--------|----------|

Safety related data

Performance level B10d according to EN/ISO 13489-1

| | | | |
|--|-----------------|--------|----------|
| | mechanical load | cycles | 15000000 |
|--|-----------------|--------|----------|

| | | |
|-------------------|--|-----|
| EMC compatibility | | yes |
|-------------------|--|-----|

AC coil operating

| | | |
|--------------------------|---|-----|
| Rated AC voltage at 60Hz | V | 575 |
|--------------------------|---|-----|

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 60Hz coil powered at 60Hz

| | | |
|---------|----|-----|
| in-rush | VA | 210 |
| holding | VA | 15 |

Dissipation at holding ≤20°C 50Hz

| | |
|---|---|
| W | 5 |
|---|---|

Max cycles frequency

| | | |
|----------------------|----------|------|
| Mechanical operation | cycles/h | 3600 |
|----------------------|----------|------|

Operating times

Average time for Us control

in AC

Closing NO

| | | |
|-----|----|----|
| min | ms | 12 |
| max | ms | 28 |

Opening NO

| | | |
|-----|----|----|
| min | ms | 8 |
| max | ms | 22 |

in DC

Closing NO

| | | |
|-----|----|----|
| min | ms | 40 |
| max | ms | 85 |

Opening NO

| | | |
|-----|----|----|
| min | ms | 20 |
| max | ms | 55 |

UL technical data

| | | |
|-----------------------------------|---|-----|
| Rated operational voltage AC (UL) | V | 600 |
|-----------------------------------|---|-----|

General USE

Contactor

| | | |
|------------|---|-----|
| AC current | A | 115 |
|------------|---|-----|

4 poles in series DC1

| | | |
|------|---|-----|
| 600V | A | 100 |
|------|---|-----|

Ambient conditions

Temperature

Operating temperature

| | | |
|-----|----|-----|
| min | °C | -50 |
| max | °C | 70 |

Storage temperature

| | | |
|-----|----|-----|
| min | °C | -60 |
| max | °C | 80 |

Max altitude

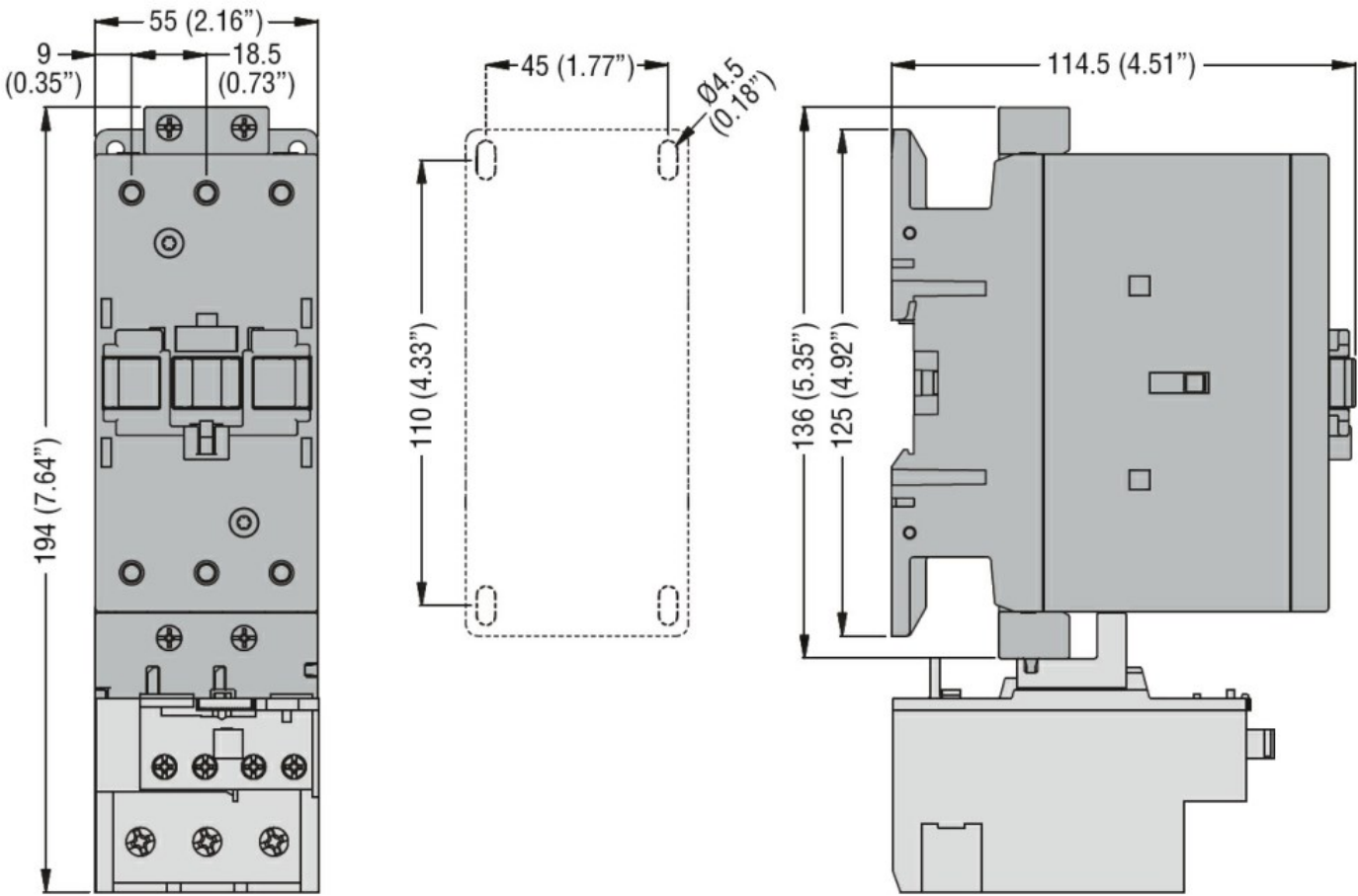
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

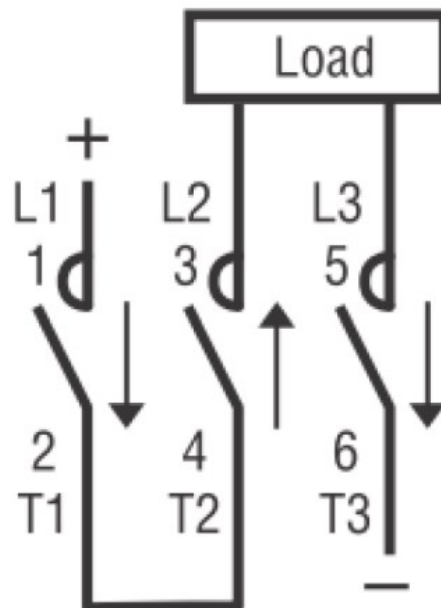
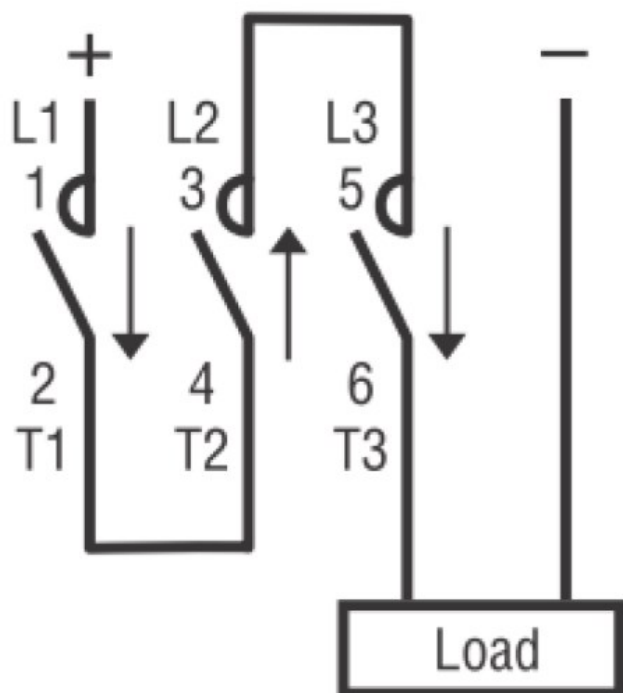
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

ETIM classification

ETIM 8.0

EC002552 -
Power contactor,
DC switching