



### 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 ≤ 40°C | A                  | 115       |
| Operational current Ie                               |                    |           |
|                                                      | AC-1 (≤40°C)       | A 115     |
|                                                      | AC-1 (≤55°C)       | A 95      |
|                                                      | AC-1 (≤70°C)       | A 80      |
|                                                      | AC-3 (≤440V ≤55°C) | A 80      |
|                                                      | AC-4 (400V)        | A 38      |
| Rated operational current AC-3 (T≤55°C)              |                    |           |
|                                                      | 230V               | A 80      |
|                                                      | 400V               | A 80      |
|                                                      | 415V               | A 80      |
|                                                      | 440V               | A 80      |
|                                                      | 500V               | A 78      |
|                                                      | 690V               | A 57      |
|                                                      | 1000V              | A 28      |
| Rated operational power AC-1 (T≤40°C)                |                    |           |
|                                                      | 230V               | kW 43     |
|                                                      | 400V               | kW 76     |
|                                                      | 500V               | kW 95     |
|                                                      | 690V               | kW 120    |
| Short-time allowable current for 10s (IEC/EN60947-1) | A                  | 640       |
| Protection fuse                                      |                    |           |
|                                                      | gG (IEC)           | A 125     |
|                                                      | aM (IEC)           | A 80      |
| Making capacity (RMS value)                          | A                  | 800       |
| Breaking capacity at voltage                         |                    |           |
|                                                      | 440V               | A 640     |
|                                                      | 500V               | A 625     |
|                                                      | 690V               | A 456     |
| Resistance per pole (average value)                  | mΩ                 | 0.6       |
| Power dissipation per pole (average value)           |                    |           |
|                                                      | Ith                | W 7.9     |
|                                                      | AC-3               | W 3.8     |
| Tightening torque for terminals                      |                    |           |
|                                                      | min                | Nm 4      |
|                                                      | max                | Nm 5      |
|                                                      | min                | Ibin 2.95 |
|                                                      | max                | Ibin 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 <sup>2</sup> | 1.5 |
| max | mm <sup>2</sup> | 35  |

Flexible c/w lug conductor section

|     |                 |     |
|-----|-----------------|-----|
| min | mm <sup>2</sup> | 1.5 |
| max | mm <sup>2</sup> | 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 1360

### Operations

Mechanical life

cycles 15000000

Electrical life

cycles 1300000

### Safety related data

Performance level B10d according to EN/ISO 13489-1

|                 |        |          |
|-----------------|--------|----------|
| rated load      | cycles | 1300000  |
| mechanical load | cycles | 15000000 |

EMC compatibility

yes

### AC coil operating

Rated AC voltage at 50/60Hz

V 48

AC operating voltage

of 50/60Hz coil powered at 50Hz  
pick-up

|     |     |     |
|-----|-----|-----|
| min | %Us | 80  |
| max | %Us | 110 |

drop-out

|     |     |    |
|-----|-----|----|
| min | %Us | 20 |
| max | %Us | 55 |

of 50/60Hz coil powered at 60Hz  
pick-up

|     |     |     |
|-----|-----|-----|
| min | %Us | 85  |
| max | %Us | 110 |

drop-out

|     |     |    |
|-----|-----|----|
| min | %Us | 40 |
| max | %Us | 55 |

AC average coil consumption at 20°C

of 50/60Hz coil powered at 50Hz

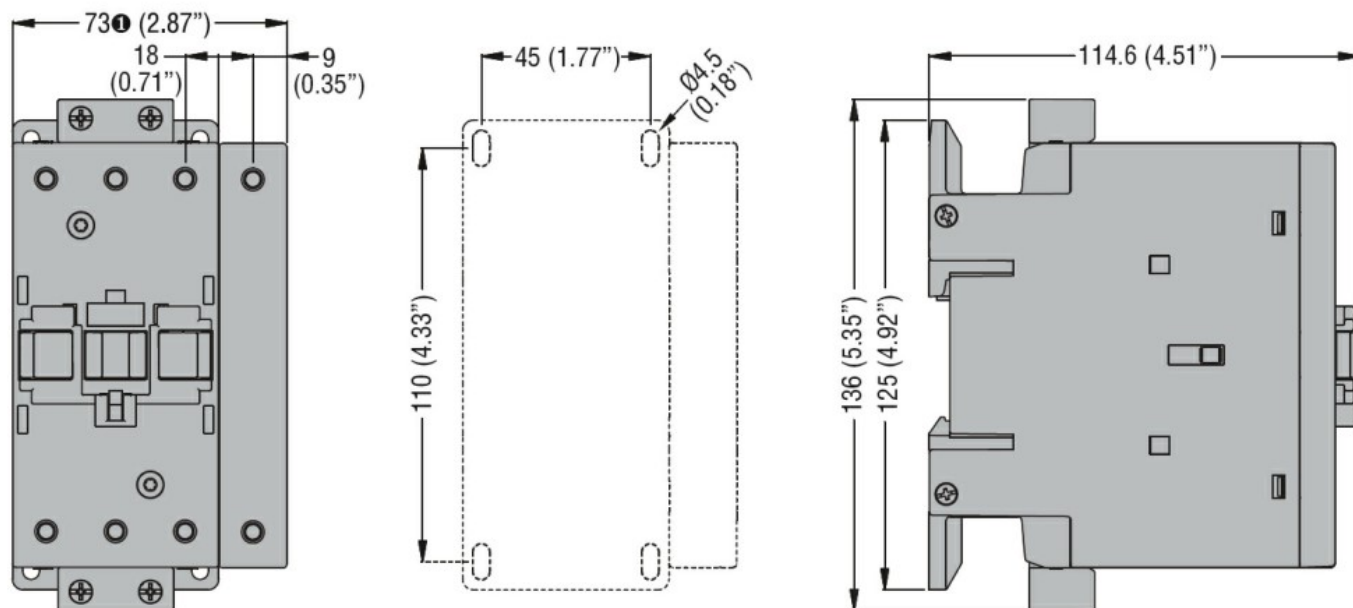
|         |    |     |
|---------|----|-----|
| in-rush | VA | 210 |
| holding | VA | 15  |

of 50/60Hz coil powered at 60Hz

|         |    |     |
|---------|----|-----|
| in-rush | VA | 195 |
|---------|----|-----|

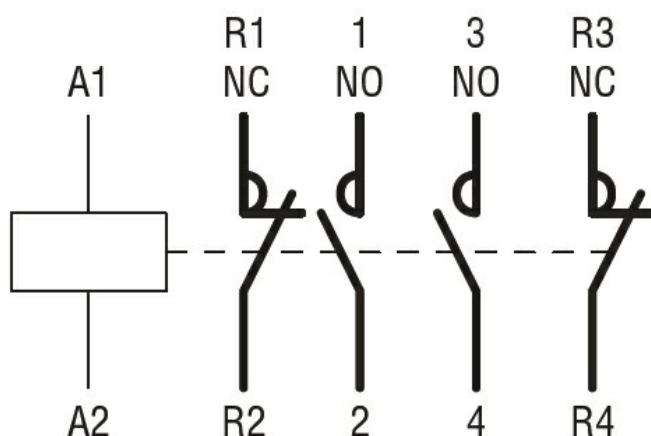
|                                                  |  |            |          |      |
|--------------------------------------------------|--|------------|----------|------|
|                                                  |  | holding    | VA       | 13   |
| of 60Hz coil powered at 60Hz                     |  |            |          |      |
|                                                  |  | 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   |
| Closing NC                                       |  | min        | ms       | 11   |
|                                                  |  | max        | ms       | 29   |
| Opening NC                                       |  | min        | ms       | 6    |
|                                                  |  | max        | ms       | 14   |
| 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  |
| Full-load current (FLA) for three-phase AC motor |  |            |          |      |
|                                                  |  | at 480V    | A        | 77   |
|                                                  |  | at 600V    | A        | 77   |
| Yielded mechanical performance                   |  |            |          |      |
| for three-phase AC motor                         |  |            |          |      |
|                                                  |  | 200/208V   | HP       | 25   |
|                                                  |  | 220/240V   | HP       | 30   |
|                                                  |  | 460/480V   | HP       | 60   |
|                                                  |  | 575/600V   | HP       | 75   |
| General USE                                      |  |            |          |      |
| Contactor                                        |  |            |          |      |
|                                                  |  | AC current | A        | 115  |
| 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



① BF80T2 82mm/3.23"

## Wiring diagrams



## Certifications and compliance

### Compliance

CSA C22.2 n° 60947-1  
CSA C22.2 n° 60947-4-1  
IEC/EN 60335-2-89  
IEC/EN/BS 60947-1  
IEC/EN/BS 60947-4-1  
UL 60947-1  
UL 60947-4-1

### Certificates

CCC  
CSA C22.2 n. 60335-2-40:22 LZGH A2L  
CSA C22.2 No. 60335-2-89:21 LZGH A2L  
cULus  
UL 60335-2-40 LZGH A2L  
UL 60335-2-89 LZGH A2L

## ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching