



Product designation

Power contactor

Product type designation

B115

**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                                                  | 160    |
| Operational current $I_e$                                                      | AC-1 ( $\leq 40^\circ\text{C}$ )                   | A 160  |
|                                                                                | AC-1 ( $\leq 55^\circ\text{C}$ )                   | A 150  |
|                                                                                | AC-1 ( $\leq 70^\circ\text{C}$ )                   | A 110  |
|                                                                                | AC-3 ( $\leq 440\text{V } \leq 55^\circ\text{C}$ ) | A 110  |
|                                                                                | AC-4 (400V)                                        | A 47   |
| Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )                     | 400V                                               | kW 61  |
| Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )                     | 230V                                               | kW 57  |
|                                                                                | 400V                                               | kW 98  |
|                                                                                | 500V                                               | kW 129 |
|                                                                                | 690V                                               | kW 173 |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | 75V                                                | A 160  |
|                                                                                | 110V                                               | A 100  |
|                                                                                | 220V                                               | A –    |
|                                                                                | 330V                                               | A –    |
|                                                                                | 460V                                               | A –    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series | 75V                                                | A 160  |
|                                                                                | 110V                                               | A 130  |
|                                                                                | 220V                                               | A 100  |
|                                                                                | 330V                                               | A –    |
|                                                                                | 460V                                               | A –    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | 75V                                                | A 160  |
|                                                                                | 110V                                               | A 130  |
|                                                                                | 220V                                               | A 130  |
|                                                                                | 330V                                               | A 100  |
|                                                                                | 460V                                               | A –    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | 75V                                                | A 160  |
|                                                                                | 110V                                               | A 130  |
|                                                                                | 220V                                               | A 130  |

|                                                                      |           |      |               |
|----------------------------------------------------------------------|-----------|------|---------------|
|                                                                      | 330V      | A    | 130           |
|                                                                      | 460V      | A    | 100           |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |           |      |               |
|                                                                      | 75V       | A    | 140           |
|                                                                      | 110V      | A    | 70            |
|                                                                      | 220V      | A    | –             |
|                                                                      | 330V      | A    | –             |
|                                                                      | 460V      | A    | –             |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |           |      |               |
|                                                                      | 75V       | A    | 140           |
|                                                                      | 110V      | A    | 100           |
|                                                                      | 220V      | A    | 80            |
|                                                                      | 330V      | A    | –             |
|                                                                      | 460V      | A    | –             |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |           |      |               |
|                                                                      | 75V       | A    | 140           |
|                                                                      | 110V      | A    | 120           |
|                                                                      | 220V      | A    | 100           |
|                                                                      | 330V      | A    | 80            |
|                                                                      | 460V      | A    | –             |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |           |      |               |
|                                                                      | 75V       | A    | 140           |
|                                                                      | 110V      | A    | 120           |
|                                                                      | 220V      | A    | 120           |
|                                                                      | 330V      | A    | 120           |
|                                                                      | 460V      | A    | 80            |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |           | A    | 1100          |
| Protection fuse                                                      |           |      |               |
|                                                                      | gG (IEC)  | A    | 200           |
|                                                                      | aM (IEC)  | A    | 125           |
| Making capacity (RMS value)                                          |           | A    | 1300          |
| Breaking capacity at voltage                                         |           |      |               |
|                                                                      | 440V      | A    | 1300          |
|                                                                      | 500V      | A    | 1100          |
|                                                                      | 690V      | A    | 880           |
| Resistance per pole (average value)                                  |           | mΩ   | 0.3           |
| Power dissipation per pole (average value)                           |           |      |               |
|                                                                      | Ith       | W    | 7.7           |
|                                                                      | AC-3      | W    | 4             |
| Tightening torque for terminals                                      |           |      |               |
|                                                                      | min       | Nm   | 10            |
|                                                                      | max       | Nm   | 10            |
|                                                                      | min       | Ibin | 7.4           |
|                                                                      | max       | Ibin | 7.4           |
| Max number of wires simultaneously connectable                       |           | Nr.  | 2             |
| Conductor section                                                    |           |      |               |
|                                                                      | AWG/Kcmil |      |               |
|                                                                      | max       |      | 2/0           |
| Power terminal protection according to IEC/EN 60529                  |           |      | IP00          |
| <b>Mechanical features</b>                                           |           |      |               |
| Operating position                                                   |           |      |               |
|                                                                      | normal    |      | Vertical plan |
|                                                                      | allowable |      | ±30°          |

|                                                    |                 |          |          |
|----------------------------------------------------|-----------------|----------|----------|
| Fixing                                             | Screw           |          |          |
| Weight                                             | g               | 6        |          |
| Operations                                         |                 |          |          |
| Mechanical life                                    | cycles          | 10000000 |          |
| Electrical life                                    | cycles          | 1100000  |          |
| Safety related data                                |                 |          |          |
| Performance level B10d according to EN/ISO 13489-1 |                 |          |          |
|                                                    | rated load      | cycles   | 1100000  |
|                                                    | mechanical load | cycles   | 10000000 |
| Mirror contats according to IEC/EN 609474-4-1      | Yes             |          |          |
| EMC compatibility                                  | yes             |          |          |
| AC coil operating                                  |                 |          |          |
| Rated AC voltage at 50/60Hz, 60Hz                  |                 |          |          |
|                                                    | min             | V        | 380      |
|                                                    | max             | V        | 415      |
| 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      | 60       |
| of 50/60Hz coil powered at 60Hz                    |                 |          |          |
|                                                    | pick-up         |          |          |
|                                                    | min             | %Us      | 80       |
|                                                    | max             | %Us      | 110      |
| drop-out                                           |                 |          |          |
|                                                    | min             | %Us      | 20       |
|                                                    | max             | %Us      | 60       |
| of 60Hz coil powered at 60Hz                       |                 |          |          |
|                                                    | pick-up         |          |          |
|                                                    | min             | %Us      | 80       |
|                                                    | max             | %Us      | 110      |
| drop-out                                           |                 |          |          |
|                                                    | min             | %Us      | 20       |
|                                                    | max             | %Us      | 60       |
| AC average coil consumption at 20°C                |                 |          |          |
| of 50/60Hz coil powered at 50Hz                    |                 |          |          |
|                                                    | in-rush         | VA       | 300      |
|                                                    | holding         | VA       | 10       |
| of 50/60Hz coil powered at 60Hz                    |                 |          |          |
|                                                    | in-rush         | VA       | 300      |
|                                                    | holding         | VA       | 10       |
| Dissipation at holding ≤20°C 50Hz                  | W               | 10       |          |
| DC coil operating                                  |                 |          |          |
| DC rated control voltage                           |                 |          |          |
|                                                    | min             | V        | 380      |
|                                                    | max             | V        | 415      |
| DC operating voltage                               |                 |          |          |
| pick-up                                            |                 |          |          |
|                                                    | min             | %Us      | 80       |
|                                                    | max             | %Us      | 110      |

drop-out

|     |     |    |
|-----|-----|----|
| min | %Us | 20 |
| max | %Us | 60 |

Average coil consumption  $\leq 20^{\circ}\text{C}$

|         |   |     |
|---------|---|-----|
| in-rush | W | 300 |
| holding | W | 10  |

Max cycles frequency

Mechanical operation cycles/h 2400

Operating times

Average time for Us control

in AC

Closing NO

|     |    |     |
|-----|----|-----|
| min | ms | 60  |
| max | ms | 100 |

Opening NO

|     |    |    |
|-----|----|----|
| min | ms | 25 |
| max | ms | 60 |

in DC

Closing NO

|     |    |     |
|-----|----|-----|
| min | ms | 60  |
| max | ms | 100 |

Opening NO

|     |    |    |
|-----|----|----|
| min | ms | 25 |
| max | ms | 60 |

UL technical data

Rated operational voltage AC (UL) V 600

Full-load current (FLA) for three-phase AC motor

|         |   |    |
|---------|---|----|
| at 480V | A | 96 |
| at 600V | A | 99 |

Yielded mechanical performance

for three-phase AC motor

|          |    |     |
|----------|----|-----|
| 200/208V | HP | 30  |
| 220/230V | HP | 40  |
| 575/600V | HP | 100 |

General USE

Contactor

AC current A 160

Short-circuit protection fuse, 600V

Standard fault

|                       |    |     |
|-----------------------|----|-----|
| Short circuit current | kA | 5   |
| Fuse rating           | A  | 500 |
| Fuse class            |    | RK5 |

Ambient conditions

Temperature

Operating temperature

|     |                    |     |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -50 |
| max | $^{\circ}\text{C}$ | 70  |

Storage temperature

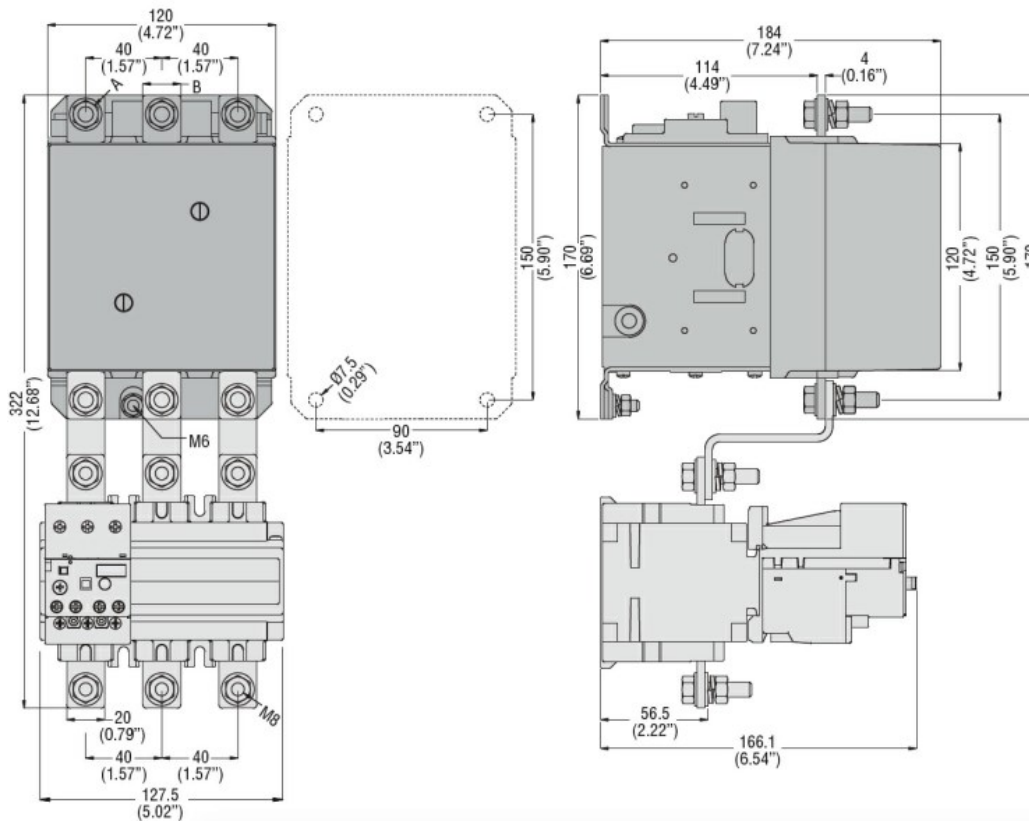
|     |                    |     |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -60 |
| max | $^{\circ}\text{C}$ | 80  |

Max altitude m 3000

Resistance & Protection

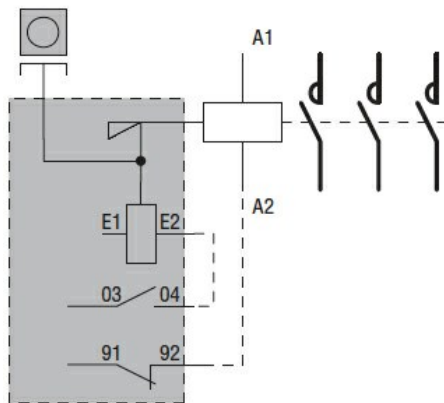
Pollution degree 3

Dimensions



| CONTACTOR TYPE | A  | B          |
|----------------|----|------------|
| B115           | M6 | 15 (0.59") |
| B145           | M8 | 20 (0.79") |
| B180           | M8 | 20 (0.79") |

## 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