



Product designation Power contactor  
Product type designation B630

**Contact characteristics**

|                                                                                |                                                   |       |
|--------------------------------------------------------------------------------|---------------------------------------------------|-------|
| Number of poles                                                                | Nr.                                               | 4     |
| 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                                                 | 800   |
| Operational current $I_e$                                                      |                                                   |       |
|                                                                                | AC-1 ( $\leq 40^\circ\text{C}$ )                  | A 800 |
|                                                                                | AC-1 ( $\leq 55^\circ\text{C}$ )                  | A 640 |
|                                                                                | AC-1 ( $\leq 70^\circ\text{C}$ )                  | A 540 |
|                                                                                | AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ ) | A 630 |
|                                                                                | AC-4 (400V)                                       | A 260 |
| Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )                     |                                                   |       |
|                                                                                | 230V kW                                           | 288   |
|                                                                                | 400V kW                                           | 500   |
|                                                                                | 500V kW                                           | 655   |
|                                                                                | 690V kW                                           | 860   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series |                                                   |       |
|                                                                                | 75V A                                             | 800   |
|                                                                                | 110V A                                            | 460   |
|                                                                                | 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                                             | 800   |
|                                                                                | 110V A                                            | 800   |
|                                                                                | 220V A                                            | 700   |
|                                                                                | 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                                             | 800   |
|                                                                                | 110V A                                            | 800   |
|                                                                                | 220V A                                            | 800   |
|                                                                                | 330V A                                            | 700   |
|                                                                                | 460V A                                            | --    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series |                                                   |       |
|                                                                                | 75V A                                             | 800   |
|                                                                                | 110V A                                            | 800   |
|                                                                                | 220V A                                            | 800   |
|                                                                                | 330V A                                            | 750   |
|                                                                                | 460V A                                            | 700   |

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series

|      |   |     |
|------|---|-----|
| 75V  | A | 800 |
| 110V | A | 460 |
| 220V | A | --  |
| 330V | A | --  |
| 460V | A | --  |

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series

|      |   |     |
|------|---|-----|
| 75V  | A | 800 |
| 110V | A | 800 |
| 220V | A | 700 |
| 330V | A | --  |
| 460V | A | --  |

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series

|      |   |     |
|------|---|-----|
| 75V  | A | 800 |
| 110V | A | 800 |
| 220V | A | 800 |
| 330V | A | 650 |
| 460V | A | --  |

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series

|      |   |     |
|------|---|-----|
| 75V  | A | 800 |
| 110V | A | 800 |
| 220V | A | 800 |
| 330V | A | 650 |
| 460V | A | 700 |

Short-time allowable current for 10s (IEC/EN60947-1)

|   |      |
|---|------|
| A | 5040 |
|---|------|

Protection fuse

|          |   |      |
|----------|---|------|
| gG (IEC) | A | 1000 |
| aM (IEC) | A | 630  |

Making capacity (RMS value)

|   |      |
|---|------|
| A | 6300 |
|---|------|

Breaking capacity at voltage

|      |   |      |
|------|---|------|
| 440V | A | 6300 |
| 500V | A | 5600 |
| 690V | A | 5000 |

Resistance per pole (average value)

|    |      |
|----|------|
| mΩ | 0.14 |
|----|------|

Power dissipation per pole (average value)

|      |   |    |
|------|---|----|
| Ith  | W | 90 |
| AC-3 | W | 56 |

Tightening torque for terminals

|     |      |      |
|-----|------|------|
| min | Nm   | 55   |
| max | Nm   | 55   |
| min | Ibin | 40.6 |
| max | Ibin | 40.6 |

Tightening torque for coil terminal

|     |      |      |
|-----|------|------|
| min | Nm   | 1    |
| max | Nm   | 1    |
| min | Ibin | 0.74 |
| max | Ibin | 0.74 |

Max number of wires simultaneously connectable

|     |   |
|-----|---|
| Nr. | 2 |
|-----|---|

Conductor section

AWG/Kcmil

|     |              |
|-----|--------------|
| max | 2x 600 kcmil |
|-----|--------------|

Power terminal protection according to IEC/EN 60529

IP00

**Mechanical features**

## Operating position

|        | normal<br>allowable | Vertical plan<br>±30° |
|--------|---------------------|-----------------------|
| Fixing |                     | Screw                 |
| Weight | g                   | 2220                  |

## Operations

|                 |        |         |
|-----------------|--------|---------|
| Mechanical life | cycles | 5000000 |
| Electrical life | cycles | 700000  |

## Safety related data

Performance level B10d according to EN/ISO 13489-1

|                                               |                               |        |         |
|-----------------------------------------------|-------------------------------|--------|---------|
|                                               | rated load<br>mechanical load | cycles | 700000  |
|                                               |                               | cycles | 5000000 |
| Mirror contacts according to IEC/EN 60947-4-1 |                               |        | Yes     |
| EMC compatibility                             |                               |        | yes     |

## AC coil operating

Rated AC voltage at 50/60Hz, 60Hz

|  |     |   |     |
|--|-----|---|-----|
|  | min | V | 220 |
|  | max | V | 240 |

## 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 | 400 |
| holding | VA | 18  |

of 50/60Hz coil powered at 60Hz

|         |    |     |
|---------|----|-----|
| in-rush | VA | 400 |
| holding | VA | 18  |

Dissipation at holding ≤20°C 50Hz

|   |    |
|---|----|
| W | 18 |
|---|----|

## DC coil operating

DC rated control voltage

|     |   |     |
|-----|---|-----|
| min | V | 220 |
| max | V | 240 |

## 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 | 400 |
| holding | W | 18  |

### Max cycles frequency

Mechanical operation

cycles/h 1200

### Operating times

Average time for Us control

in AC

Closing NO

|     |    |     |
|-----|----|-----|
| min | ms | 110 |
| max | ms | 180 |

Opening NO

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

in DC

Closing NO

|     |    |     |
|-----|----|-----|
| min | ms | 110 |
| max | ms | 180 |

Opening NO

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

### UL technical data

Rated operational voltage AC (UL)

V 600

General USE

Contactor

AC current A 800

Short-circuit protection fuse, 600V

Standard fault

|                       |    |      |
|-----------------------|----|------|
| Short circuit current | kA | 18   |
| Fuse rating           | A  | 1500 |
| Fuse class            |    | L    |

### 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

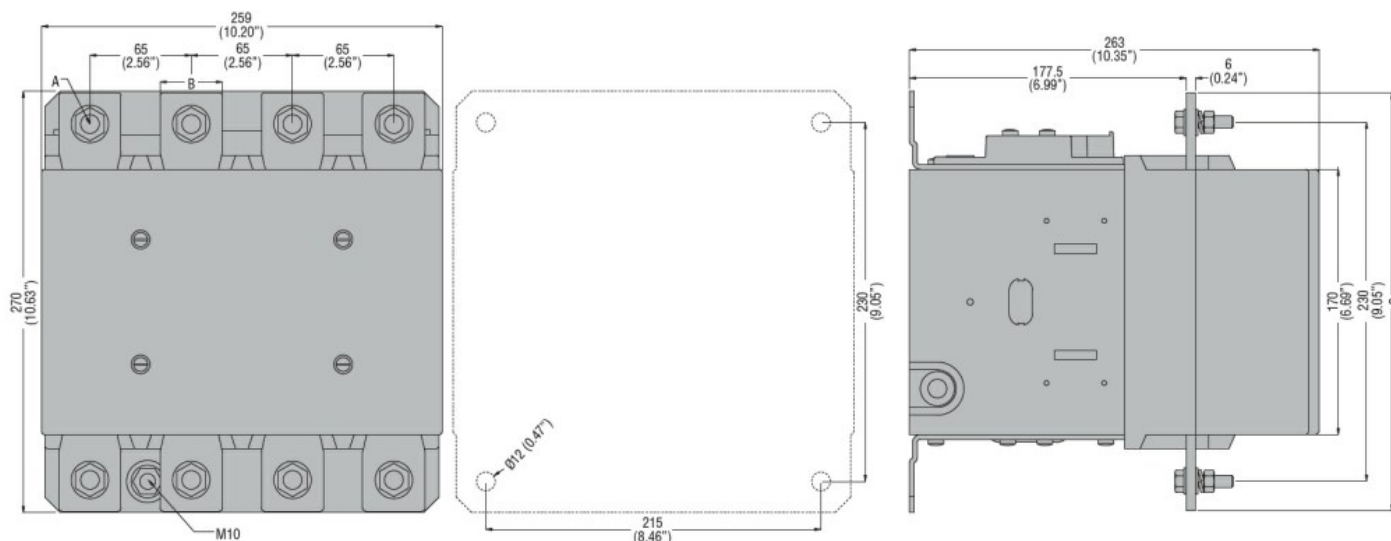
m 3000

### Resistance & Protection

Pollution degree

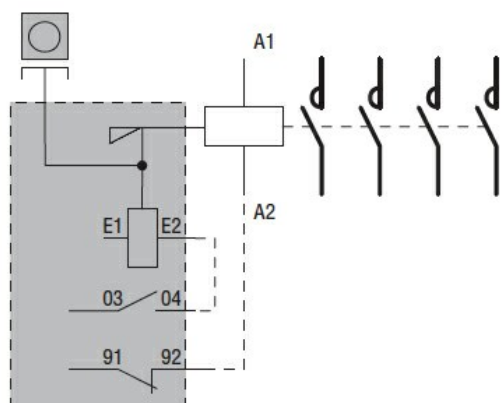
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### Dimensions



| CONTACTOR TYPE | A   | B          | C            |
|----------------|-----|------------|--------------|
| B500           | M10 | 35 (1.38") | 265 (10.43") |
| B630           | M12 | 40 (1.57") | 270 (10.63") |

## 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

cULus

## ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching