



Product designation Power contactor  
Product type designation B630

**Contact characteristics**

|   |                    |        |
|---|--------------------|--------|
| Number of poles   | Nr.                | 4      |
| Rated insulation voltage U <sub>i</sub> IEC/EN                              | V                  | 1000   |
| Rated impulse withstand voltage U <sub>imp</sub>                            | kV                 | 8      |
| Operational frequency   | min                | Hz 25  |
|   | max                | Hz 400 |
| IEC Conventional free air thermal current I <sub>th</sub>                   | A                  | 800    |
| Operational current I <sub>e</sub>  | AC-1 (≤40°C)       | A 800  |
|   | AC-1 (≤55°C)       | A 640  |
|   | AC-1 (≤70°C)       | A 540  |
|   | AC-3 (≤440V ≤55°C) | A 630  |
|   | AC-4 (400V)        | A 260  |
| Rated operational power AC-1 (T≤40°C)                                       | 230V               | kW 288 |
|   | 400V               | kW 500 |
|   | 500V               | kW 655 |
|   | 690V               | kW 860 |
| IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 1 poles in series | 75V                | A 800  |
|   | 110V               | A 460  |
|   | 220V               | A --   |
|   | 330V               | A --   |
|   | 460V               | A --   |
| IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 2 poles in series | 75V                | A 800  |
|   | 110V               | A 800  |
|   | 220V               | A 700  |
|   | 330V               | A --   |
|   | 460V               | A --   |
| IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series | 75V                | A 800  |
|   | 110V               | A 800  |
|   | 220V               | A 800  |
|   | 330V               | A 700  |
|   | 460V               | A --   |
| IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series | 75V                | A 800  |
|   | 110V               | A 800  |
|   | 220V               | A 800  |
|   | 330V               | A 750  |
|   | 460V               | A 700  |

IEC max current I<sub>e</sub> 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 I<sub>e</sub> 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 I<sub>e</sub> 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 I<sub>e</sub> 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)

|                 |   |    |
|-----------------|---|----|
| I <sub>th</sub> | W | 90 |
| AC-3            | W | 56 |

Tightening torque for terminals

|     |                  |      |
|-----|------------------|------|
| min | Nm               | 55   |
| max | Nm               | 55   |
| min | I <sub>bin</sub> | 40.6 |
| max | I <sub>bin</sub> | 40.6 |

Tightening torque for coil terminal

|     |                  |      |
|-----|------------------|------|
| min | Nm               | 1    |
| max | Nm               | 1    |
| min | I <sub>bin</sub> | 0.74 |
| max | I <sub>bin</sub> | 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 allowable            | Vertical plan ±30° |
| Fixing            |                             | Screw              |
| Weight            | g                           | 2203               |
| Conductor section | AWG/kcmil conductor section |                    |
|                   | max                         | 2x 600 kcmil       |

**Operations**

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

**Safety related data**

Performance level B10d according to EN/ISO 13489-1

|  |                            |        |         |
|--|----------------------------|--------|---------|
|  | rated load mechanical load | cycles | 700000  |
|  |                            | cycles | 5000000 |

Mirror contacts according to IEC/EN 60947-4-1

EMC compatibility

**AC coil operating**

Rated AC voltage at 50/60Hz, 60Hz

|  |     |   |     |
|--|-----|---|-----|
|  | min | V | 440 |
|  | max | V | 480 |

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   | 440 |
|                      |          | max | V   | 480 |
| 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 $U_s$ 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**

|                                     |                |                       |    |      |
|-------------------------------------|----------------|-----------------------|----|------|
| 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**

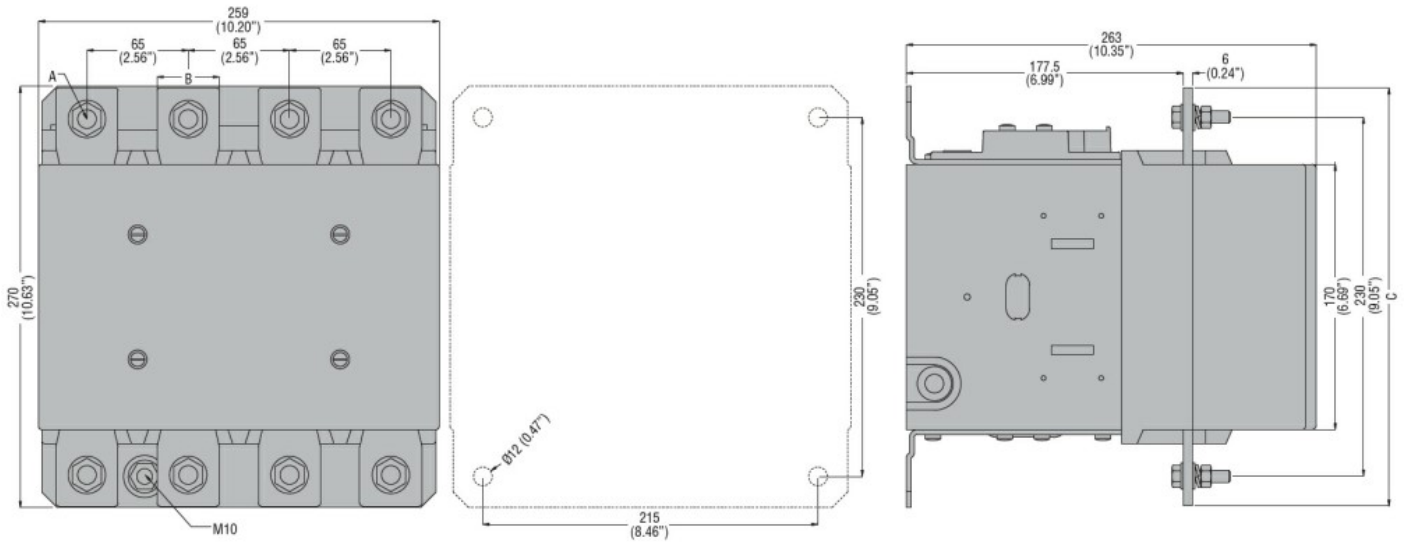
|             |                       |     |                    |     |
|-------------|-----------------------|-----|--------------------|-----|
| Temperature |                       |     |                    |     |
|             | Operating temperature |     |                    |     |
|             |                       | 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**

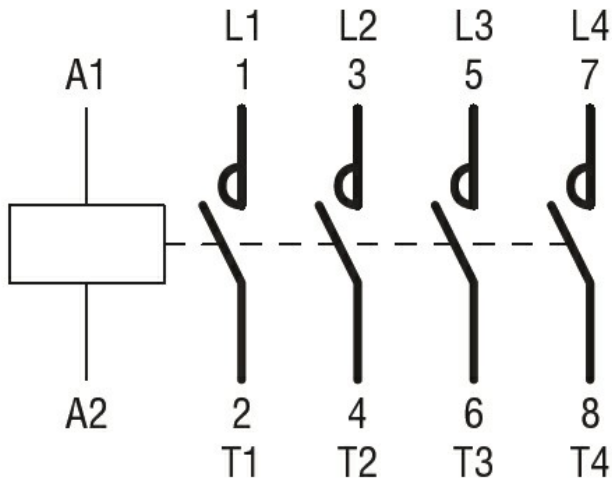
|                  |  |   |
|------------------|--|---|
| Pollution degree |  | 3 |
|------------------|--|---|

**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

CCC  
 cULus  
 EAC

### ETIM classification

ETIM 8.0

EC000066 -  
 Power contactor,  
 AC switching