# THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 520A, AC/DC COIL, 60VAC/DC



| Product designation Product type designation                    |     | Power contactor<br>B500 |
|---|-----|-------------------------|
| Contact characteristics   |     | В300                    |
| Number of poles   | Nr. | 3                       |
| 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                   | Α   | 700                     |
| Operational current le  |     |                         |
| AC-1 (≤40°C)  | Α   | 700                     |
| AC-1 (≤55°C)  | Α   | 550                     |
| AC-1 (≤70°C)  | Α   | 500                     |
| AC-3 (≤440V ≤55°C)  | Α   | 520                     |
| AC-4 (400V)   | Α   | 240                     |
| Rated operational power AC-3 (T≤55°C)                           |     |                         |
| 230V  | kW  | 156                     |
| 400V  |     | 290                     |
| 415V  |     | 306                     |
| 440V  |     | 328                     |
| 500V  |     | 367                     |
| 690V  |     | 416                     |
| 1000V   | kW  | 312                     |
| Rated operational power AC-1 (T≤40°C)                           |     |                         |
| 230V  |     | 252                     |
| 400V  |     | 438                     |
| 500V  |     | 575                     |
| 690V  | kW  | 755                     |
| IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series |     |                         |
| 75V   |     | 650                     |
| 110V  |     | 320                     |
| 220\  |     |                         |
| 330V  |     |                         |
| 460V  | Α   | <del></del>             |
| IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series | ٨   | GEO                     |
| 75V<br>110V   |     | 650<br>550              |
| 220V  |     | 550<br>450              |
| 330V  |     | 450<br>                 |
| 460V  |     | <br>                    |
| IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series | ^   | _ <del>-</del>          |
| 75V   | Α   | 650                     |
| 110V  |     | 600                     |
| 220V  |     | 600                     |
| 220 V   | ^   | 300                     |



## THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 520A, AC/DC COIL,

|   | 330V     | Α     | 450      |
|---|----------|-------|----------|
|   | 460V     | Α     |          |
| IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series       |          |       |          |
|   | 75V      | Α     | 650      |
|   | 110V     | Α     | 600      |
|   | 220V     | Α     | 600      |
|   | 330V     | Α     | 600      |
|   | 460V     | Α     | 450      |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series  | 1001     | - / \ | 100      |
| 120 max out on 10 m 200 200 with 2/11 = 10 mo with 1 poles in series  | 75V      | Α     | 550      |
|   | 110V     | A     | 320      |
|   | 220V     | A     |          |
|   |          | A     |          |
|   | 330V     |       |          |
| 150 DOS DOS WILLIAM WILLIAM IN CO. 1. 1. 1.                           | 460V     | Α     |          |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series  |          | _     |          |
|   | 75V      | Α     | 550      |
|   | 110V     | Α     | 550      |
|   | 220V     | Α     | 450      |
|   | 330V     | Α     |          |
|   | 460V     | Α     |          |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series  |          |       |          |
|   | 75V      | Α     | 550      |
|   | 110V     | Α     | 550      |
|   | 220V     | Α     | 550      |
|   | 330V     | Α     | 450      |
|   | 460V     | A     |          |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series  | 1001     | ,,    |          |
| 120 max current to in 200-200 with 2/1 2 forms with 4 poics in series | 75V      | Α     | 550      |
|   | 110V     |       | 550      |
|   |          | A     |          |
|   | 220V     | A     | 550      |
|   | 330V     | Α     | 450      |
|   | 460V     | Α .   | 450      |
| Short-time allowable current for 10s (IEC/EN60947-1)                  |          | Α     | 4050     |
| Protection fuse   |          |       |          |
|   | gG (IEC) | Α     | 800      |
|   | aM (IEC) | Α     | 500      |
| Making capacity (RMS value)   |          | Α     | 5000     |
| Breaking capacity at voltage  |          |       |          |
|   | 440V     | Α     | 5000     |
|   | 500V     | Α     | 4500     |
|   | 690V     | Α     | 4000     |
| Resistance per pole (average value)                                   |          | mΩ    | 0.14     |
| Power dissipation per pole (average value)                            |          |       |          |
| 1 1 1 ( 3)  | Ith      | W     | 68.6     |
|   | AC-3     | W     | 35       |
| Tightening torque for terminals                                       | , 10 0   | ••    |          |
| ng.no.mg torquo for torrimitato                                       | min      | Nm    | 35       |
|   |          | Nm    | 35<br>35 |
|   | max      |       | 25.8     |
|   | min      | lbin  |          |
| Tightening towns for call to resist                                   | max      | Ibin  | 25.8     |
| Tightening torque for coil terminal                                   |          |       | 4        |
|   | min      | Nm    | 1        |
|   | max      | Nm    | 1        |
|   |          |       |          |



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|  |   | min                             | lbin                            | 0.74                              |
|--|---|---------------------------------|---------------------------------|-----------------------------------|
|  |   | max                             | Ibin                            | 0.74                              |
|  | simultaneously connectable                          |                                 | Nr.                             | 2                                 |
| Conductor section                          |   |                                 |                                 |                                   |
|  | AWG/Kcmil   |                                 |                                 |                                   |
|  |   | max                             |                                 | 2x 500 kcmil                      |
|  | tion according to IEC/EN 60529                      |                                 |                                 | IP00                              |
| Mechanical features                        |   |                                 |                                 |                                   |
| Operating position                         |   | normal                          |                                 | Vertical plan                     |
|  |   | allowable                       |                                 | Vertical plan<br>±30°             |
| Fixing                                     |   | allowable                       |                                 | Screw                             |
| Weight                                     |   |                                 | g                               | 1798                              |
| Conductor section                          |   |                                 | 9                               | 1730                              |
| Conductor Scotlon                          | AWG/kcmil conductor section                         |                                 |                                 |                                   |
|  | /W G/Remiii demadeler dedelem                       | max                             |                                 | 2x 500 kcmil                      |
| Operations                                 |   |                                 |                                 | 2 2 2 1 2 1 1 2 1 1 1             |
| Mechanical life                            |   |                                 | cycles                          | 5000000                           |
| Electrical life                            |   |                                 | cycles                          | 700000                            |
| Safety related data                        |   |                                 |                                 |                                   |
| Performance level B1                       | 0d according to EN/ISO 13489-1                      |                                 |                                 |                                   |
|  |   | rated load                      | cycles                          | 700000                            |
|  |   | mechanical load                 | cycles                          | 5000000                           |
|  | ng to IEC/EN 609474-4-1                             |                                 |                                 | yes                               |
| EMC compatibility                          |   |                                 |                                 | yes                               |
| AC coil operating                          | 0/001  -  |                                 | \ /                             | 00                                |
| Rated AC voltage at 5 AC operating voltage | J/6UHZ  |                                 | V                               | 60                                |
| AC operating voitage                       | of 50/60Hz coil powered at 50Hz                     |                                 |                                 |                                   |
|  | pick-up   |                                 |                                 |                                   |
|  | ριοκ αρ   | 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                                |
|  |   | min                             |                                 |                                   |
|  |   | max                             | %Us                             | 110                               |
|  | drop-out  | max                             | %Us                             |                                   |
|  | drop-out  | max<br>min                      | %Us<br>%Us                      | 20                                |
|  |   | max                             | %Us                             |                                   |
|  | of 60Hz coil powered at 60Hz                        | max<br>min                      | %Us<br>%Us                      | 20                                |
|  |   | max<br>min<br>max               | %Us<br>%Us<br>%Us               | 20<br>60                          |
|  | of 60Hz coil powered at 60Hz                        | max<br>min<br>max<br>min        | %Us<br>%Us<br>%Us               | 20<br>60<br>80                    |
|  | of 60Hz coil powered at 60Hz<br>pick-up             | max<br>min<br>max               | %Us<br>%Us<br>%Us               | 20<br>60                          |
|  | of 60Hz coil powered at 60Hz                        | max<br>min<br>max<br>min        | %Us<br>%Us<br>%Us               | 20<br>60<br>80                    |
|  | of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out | max<br>min<br>max<br>min<br>max | %Us<br>%Us<br>%Us<br>%Us<br>%Us | 20<br>60<br>80<br>110             |
| AC average coil consu                      | of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out | max min max min max min max min | %Us %Us %Us %Us %Us %Us %Us     | 20<br>60<br>80<br>110<br>20       |
| AC average coil consu                      | of 60Hz coil powered at 60Hz<br>pick-up<br>drop-out | max min max min max min max min | %Us %Us %Us %Us %Us %Us %Us %Us | 20<br>60<br>80<br>110<br>20<br>60 |
| AC average coil consu                      | of 60Hz coil powered at 60Hz pick-up drop-out       | max min max min max min max min | %Us %Us %Us %Us %Us %Us %Us     | 20<br>60<br>80<br>110<br>20       |



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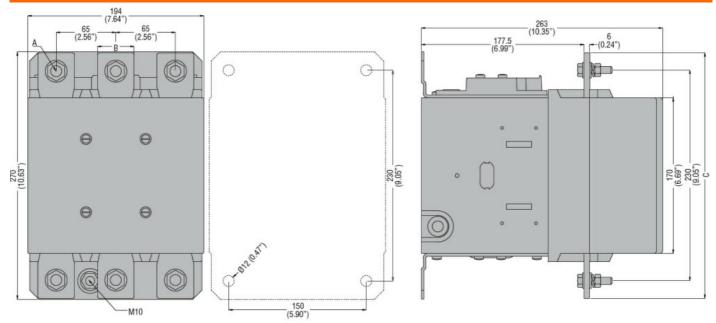
|                            | of 50/60Hz coil powere | d at 60Hz  |                       |          |      |
|----------------------------|------------------------|------------|-----------------------|----------|------|
|                            | •                      |            | in-rush               | VA       | 400  |
|                            |                        |            | holding               | VA       | 18   |
| Dissipation at holding ≤   | :20°C 50H <del>z</del> |            | 9                     | W        | 18   |
| DC coil operating          | 20 0 30112             |            |                       | VV       | 10   |
|                            | <u>.</u>               |            |                       | \ /      | 00   |
| DC rated control voltag    | e                      |            |                       | V        | 60   |
| DC operating voltage       |                        |            |                       |          |      |
|                            | pick-up                |            |                       |          |      |
|                            |                        |            | min                   | %Us      | 80   |
|                            |                        |            | max                   | %Us      | 110  |
|                            | drop-out               |            |                       |          | _    |
|                            | ·                      |            | min                   | %Us      | 20   |
|                            |                        |            | max                   | %Us      | 60   |
| Average coil consumpt      | ion <20°C              |            |                       | 7000     |      |
| Average con consumpt       | 1011 =20 C             |            | in much               | 14/      | 400  |
|                            |                        |            | in-rush               | W        | 400  |
|                            |                        |            | holding               | W        | 18   |
| Max cycles frequency       |                        |            |                       |          |      |
| Mechanical operation       |                        |            |                       | cycles/h | 1200 |
| Operating times            |                        |            |                       |          |      |
| Average time for Us co     | ntrol                  |            |                       |          |      |
|                            | in AC                  |            |                       |          |      |
|                            |                        | Closing NO |                       |          |      |
|                            |                        | 3          | min                   | ms       | 110  |
|                            |                        |            | max                   | ms       | 180  |
|                            |                        | Opening NO | max                   | 1113     | 100  |
|                            |                        | Opening NO |                       |          | 00   |
|                            |                        |            | 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          |                        |            | 20                    |          |      |
| General USE                |                        |            |                       |          |      |
| Conordi COL                | Contactor              |            |                       |          |      |
|                            | Contactor              |            | AC ourrent            | ٨        | 700  |
| Chart singuit and a street | f COOV                 |            | AC current            | Α        | 700  |
| Short-circuit protection   |                        |            |                       |          |      |
|                            | Standard fault         |            |                       |          |      |
|                            |                        |            | Short circuit current | kA       | 18   |
|                            |                        |            | Fuse rating           | Α        | 1200 |
|                            |                        |            | Fuse class            |          | L    |
| Ambient conditions         |                        |            |                       |          |      |
| Temperature                |                        |            |                       |          |      |
|                            | Operating temperature  |            |                       |          |      |
|                            | , 5 , 3 , 3 , 3 , 3    |            | min                   | °C       | -50  |
|                            |                        |            | max                   | °C       | 70   |
|                            | Storage temperature    |            | max                   |          |      |
|                            | Glorago temperature    |            | min                   | °C       | -60  |
|                            |                        |            | min                   |          |      |
| NA DOLLAR                  |                        |            | max                   | °C       | 80   |
| Max altitude               |                        |            |                       | m        | 3000 |
| Resistance & Protectio     | n                      |            |                       |          |      |
| Pollution degree           |                        |            |                       |          | 3    |
|                            |                        |            |                       |          |      |



**ENERGY AND AUTOMATION** 

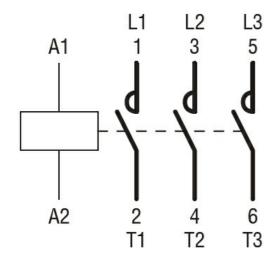
#### THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 520A, AC/DC COIL, 60VAC/DC

#### **Dimensions**



| CONTACTOR TYPE | A   | В          | С            |
|----------------|-----|------------|--------------|
| 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



#### 11B5000060

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 520A, AC/DC COIL, 60VAC/DC

ETIM 8.0

EC000066 -Power contactor, AC switching