

# Product Details and Certifications

Cross Reference RA Part Number: PN-135277

 Product: **100S-D860EB22C**

Description: 100S-D Safety Contactor, IEC 860A, 440-480V 50/60Hz  
Electronic Coil with Electronic Interface, 2 N.O. - 2 N.C.



Representative Photo Only (actual product may vary based on configuration sections)

## **CONTACTOR DATA**

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|                                 |   |
|---------------------------------|---|
| Bulletin Number                 | 100S-D IEC Safety Contactor               |
| Current Rating                  | 860A                                      |
| Coil Voltage                    | 440-480V 50Hz/60Hz                        |
| Number of Poles                 | 3 Poles                                   |
| Coil Type                       | Electronic Coil with Electronic Interface |
| Auxiliary Contact Configuration | 2 N.O. - 2 N.C.                           |

## **CERTIFICATIONS AND APPROVALS**

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UL  
CSA  
IEC  
CE  
For UL Certifications Directory: <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

Safety Contactors



|                      |   |  |
|----------------------|---|--|
| Bulletin             | 100S-C/104S-C   | <b>100S-D</b>  |
| Screw Terminals      | ✓   | Thru-hole Threaded (630...860 A)   |
| Max. Current $I_e$   | 97 A  | 860 A  |
| Current Rating       | 9...97 A  | 115...860 A  |
| Features             | <ul style="list-style-type: none"> <li>Positively guided/mechanically linked auxiliary contacts</li> <li>Front-mounted auxiliary contacts:                             <ul style="list-style-type: none"> <li>Permanently fixed</li> <li>Protective cover to prevent manual operation</li> <li>Red contact housing for easy identification</li> <li>Incorporates IEC 947-5-1 "Mechanically Linked" symbol</li> <li>Optional gold-plated bifurcated versions</li> </ul> </li> <li>AC and DC operating coils</li> <li>SUVA third-party certification</li> </ul> | <ul style="list-style-type: none"> <li>Mirror contact performance on auxiliary contacts, which are required in feedback circuit for modern safety applications.</li> <li>The N.C. auxiliary contacts will not change state when a power contact welds.</li> <li>SUVA third-party certification</li> <li>AC and DC operating coils</li> <li>"Mirror Contact" symbol</li> </ul>  |
| Contacts             | 3 main poles with N.C. mechanically linked feedback contacts  | 3 main poles with N.C. mechanically linked feedback contacts   |
| Coil Voltages        | AC = 12...600V, 50/60Hz<br>DC = 12...250V   | <p><b>Conventional Coils</b><br/> <b>Cat. Nos. 100S-D115...D180</b><br/>                     AC: 24...550V, 50 Hz; 24...600V, 60Hz; 100...277V, 50/60Hz<br/>                     DC: 24...250V</p> <p><b>Electronic Coils</b><br/> <b>Cat. Nos. 100S-D115...D300</b><br/>                     AC: 24...500V, 50/60 Hz<br/>                     DC: 24...255V</p> <p><b>Cat. Nos. 100S-D420</b><br/>                     AC: 42...500V 50/60 Hz<br/>                     DC: 48...255V</p> <p><b>Cat. Nos. 100S-D630...D860</b><br/>                     AC: 100...600V, 50/60 Hz<br/>                     DC: 110...255V</p> |
| Optional Accessories | <ul style="list-style-type: none"> <li>Side-mount auxiliary contacts</li> <li>Surge suppressors</li> <li>Electronic timers</li> <li>Mechanical interlocks</li> </ul>  | <ul style="list-style-type: none"> <li>Side-mount auxiliary contacts</li> <li>Surge suppressors</li> <li>IP20 terminal blocks</li> <li>Terminal shields</li> <li>Terminal covers</li> <li>Connecting components</li> <li>Terminal lugs</li> <li>Mechanical/electrical interlocks</li> </ul>  |
| Standards Compliance | EN/IEC 60947-4<br>IEC 60947-5-1 Annex L — Mechanically Linked Contacts<br>IEC 60947-4-1 Annex H — Mirror Contacts<br>UL 508<br>CSA C22.2 No. 14<br>EN50205  | EN/IEC 60947-4<br>IEC 60947-4-1, Annex H — Mirror Contacts<br>IEC 60947-4-1/A1: 2002-09, Annex F<br>UL 508<br>CSA C22.2, No. 14  |
| Certifications       | <ul style="list-style-type: none"> <li>cULus Listed (File No. E3125; Guide NLDX, NLDX7)</li> <li>SUVA Third-Party Certified</li> <li>CE Marked</li> </ul>   | <ul style="list-style-type: none"> <li>cULus Listed (File No. E3125; Guide No. NLDX, NLDX7)</li> <li>SUVA Third-Party Certified</li> <li>CE Marked</li> <li>CCC (115...180 A - conventional coil; 140...420 A - electronic coil)</li> </ul>  |
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**Bulletin 100S-D — Safety Contactors**

- 63...500 kW @ 400V
- 75...600 Hp @ 460V
- 100...700 Hp @ 575V
- Electronic and conventional coils
  - AC & DC
  - Integrated PLC interface
  - Low power pick-up & hold-in
  - Wide voltage ranges
- Complete range of accessories
- Environmentally friendly
- Compact dimensions

Bulletin 100S-D safety contactors were designed to address the needs of modern safety applications requiring feedback and monitoring of the energy isolating switchgear used in hazardous motion loads. The

100S-D meets these needs through its "mirror contact" design. If a power contact welds, the N.C. auxiliary contacts will not change state. This feature provides reliable indication about the open/closed status of the main power poles. In addition, the gold-plated bifurcated auxiliary contacts are ideally suited for low-energy applications or feedback control circuits with multiple series-connected N.C. auxiliary contacts.

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**Standards Compliance**



- IEC 60947-4-1
- IEC 60947-4 Annex F
- IEC 60947 Type "2"
- Coordination
- CSA C22.2 No. 14
- UL 508

**Certifications**

- CE Marked
- cULus Listed (File No. E 41850, Guide NLDX, NLDX7)
- SUVA Certified
- CCC (115...180 conventional coil; 140...420 electronic coil)

Your order must include: cat. no. of the contactor specified with coil voltage code and, if required, cat. no. of any accessories and/or replacement coils.

**Product Selection**  
**3-Pole AC-Operated Contactors**

| $I_e$ [A]  |             | Switching of 3-phase motors AC-2, AC-3 |            |            |            |            |          |            |            |            |            |   | Auxiliary contacts  |                       | Cat. No. ➤ |
|------------|-------------|--|------------|------------|------------|------------|----------|------------|------------|------------|------------|---|---|-----------------------|------------|
| 60 °C      | 40 °C       | kW (50 Hz)*                            |            |            |            |            |          | Hp (60 Hz) |            |            |            |   | N.O.  | N.C.⊗                 |            |
| AC-3       | AC-1        | 230V                                   | 400V       | 415V       | 500V       | 690V       | 1000V    | 200V       | 230V       | 460V       | 575V       |  |  |                       |            |
| 115        | 250         | 37                                     | 63         | 66/75      | 80         | 111        | 63       | 40         | 40         | 75         | 100        | 2   | 2   | 100S-D115⊗22BC        |            |
| 140        | 250         | 45                                     | 78         | 82/90      | 80/100‡    | 110/132‡   | 75       | 40         | 50         | 100        | 125        | 2   | 2   | 100S-D140⊗22BC        |            |
| 180        | 250         | 55                                     | 101        | 100        | 90/125‡    | 132/160‡   | 90       | 50         | 60         | 150        | 150        | 2   | 2   | 100S-D180⊗22BC        |            |
| 210        | 350         | 63                                     | 118        | 110        | 205        | 200        | 110      | 60         | 75         | 150        | 200        | 2   | 2   | 100S-D210⊗22BC        |            |
| 250        | 350         | 80                                     | 140        | 150        | 250        | 250        | 133      | 75         | 100        | 200        | 250        | 2   | 2   | 100S-D250⊗22BC        |            |
| 300        | 450         | 90                                     | 170        | 160        | 290        | 300        | 160      | 100        | 125        | 250        | 300        | 2   | 2   | 100S-D300⊗22BC        |            |
| 420        | 540         | 132                                    | 238        | 250        | 420        | 425        | 220      | 150        | 175        | 350        | 400        | 2   | 2   | 100S-D420⊗22BC        |            |
| 630        | 800         | 200                                    | 355        | 355        | 500        | 500        | —        | 200        | 250        | 500        | 600        | 2   | 2   | 100S-D630⊗22BC        |            |
| <b>860</b> | <b>1000</b> | <b>250</b>                             | <b>500</b> | <b>500</b> | <b>500</b> | <b>600</b> | <b>—</b> | <b>250</b> | <b>300</b> | <b>600</b> | <b>700</b> | <b>2</b>  | <b>2</b>  | <b>100S-D860⊗22BC</b> |            |

\* Preferred values according to IEC 60072-1.

⊗ The N.C. contacts meet IEC 60947-4 Annex F requirements for mirror contact performance. The N.C. mirror contacts are wired in series or parallel and must be used as monitoring contacts with feedback to the safety circuit.

‡ Higher kW rating only applies to contactors with electronic coil.

➤ If standard cross-stamped auxiliary contacts are required, remove the letter "B" before the letter "C" in the cat. no. Example: Cat. No. **100S-D115⊗22BC** becomes Cat. No. **100S-D115⊗22C**.

⊗Coil voltage code—see page 2-152



Bulletin 100S-D  
**IEC Contactors**  
 Product Selection



⊗ **Coil Voltage Codes for AC Control**

| Conventional Coil     | [V]             | 24 | 48 | 100 | 110 | 120 | 200 | 208 | 220<br>...230 | 230 | 240 | 277 | 380<br>...400 | 415 | 440 | 480 | 500 | 550 | 600 |
|-----------------------|-----------------|----|----|-----|-----|-----|-----|-----|---------------|-----|-----|-----|---------------|-----|-----|-----|-----|-----|-----|
| 100S-D115...100S-D180 | AC, 50 Hz       | K  | Y  | —   | D   | —   | —   | —   | A             | —   | T   | —   | N             | B   | G   | —   | M   | C   | —   |
|                       | AC, 60 Hz       | J  | X  | —   | —   | D   | —   | H   | —             | —   | A   | T   | —             | —   | N   | B   | —   | —   | C   |
| 100S-D115             | AC,<br>50/60 Hz | —  | —  | KP  | KN  | —   | KG  | —   | KL            | KF  | KA  | KT  | —             | —   | —   | —   | —   | —   | —   |

| Electronic Coil<br>w/ PLC Interface§ | [V]                | 24  | 42...64 | 100 | 110...<br>130 | 200 | 208...<br>277 | 200...<br>220 | 230...<br>250 | 277 | 380...<br>415 | 380...<br>440 | 440...<br>480 | 380...<br>500 | 500 |
|--------------------------------------|--------------------|-----|---------|-----|---------------|-----|---------------|---------------|---------------|-----|---------------|---------------|---------------|---------------|-----|
| 100S-D95...100S-D300                 | AC,<br>50/60<br>Hz | EJ♣ | EY      | EP  | ED            | EG  | EA            | —             | —             | —   | —             | VN            | —             | EN            | —   |
| 100S-D420                            | AC,<br>50/60<br>Hz | —   | —       | EP  | ED            | EG  | EA            | —             | —             | —   | —             | —             | —             | EN            | —   |
| 100S-D630...100S-D860                | AC,<br>50/60<br>Hz | —   | —       | EP  | ED            | EG  | —             | EG            | EA            | ET  | EN            | —             | EB            | —             | EM  |



§ Signal voltage of the Cat. No. 100S-D... electronic interface  $U_g$ : 24V DC/ $I_g$ : 15 mA

Pick-up voltage: 13.0V DC...30.2V DC  
 Drop-out voltage: -3.0V DC...+5.0V DC

♣ Not available with 100S-D300.

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**3-Pole DC-Operated Contactors**

| $I_e$ [A] |       | Switching of 3-phase motors AC-2, AC-3 |      |       |         |          |            |      |      |      |      | Auxiliary contacts |             | Conventional Coil<br>Cat. No. | Electronic Coil<br>Cat. No. > |
|-----------|-------|--|------|-------|---------|----------|------------|------|------|------|------|--------------------|-------------|-------------------------------|-------------------------------|
| 60 °C     | 40 °C | kW (50 Hz) *                           |      |       |         |          | Hp (60 Hz) |      |      |      |      | N.O.               | N.C.<br>* * |                               |                               |
| AC-3      | AC-1  | 230V                                   | 400V | 415V  | 500V    | 690V     | 1000V      | 200V | 230V | 460V | 575V |                    |             |                               |                               |
| 115       | 250   | 37                                     | 63   | 66/75 | 80      | 111      | 63         | 40   | 40   | 75   | 100  | 2                  | 2           | 100S-D115⊗33LC‡               | 100S-D115⊗22BC                |
| 140       | 250   | 45                                     | 78   | 75    | 80/100§ | 110/132§ | 75         | 40   | 50   | 100  | 125  | 3                  | 2/1L        | 100S-D140⊗33LC‡               | 100S-D140⊗22BC                |
| 180       | 250   | 55                                     | 101  | 100   | 90/125§ | 132/160§ | 90         | 50   | 60   | 150  | 150  | 3                  | 2/1L        | 100S-D180⊗33LC‡               | 100S-D180⊗22BC                |
| 210       | 350   | 63                                     | 118  | 110   | 205     | 200      | 110        | 60   | 75   | 150  | 200  | 2                  | 2           | —                             | 100S-D210⊗22BC                |
| 250       | 350   | 80                                     | 140  | 150   | 250     | 250      | 133        | 75   | 100  | 200  | 250  | 2                  | 2           | —                             | 100S-D250⊗22BC                |
| 300       | 450   | 90                                     | 170  | 160   | 290     | 300      | 160        | 100  | 125  | 250  | 300  | 2                  | 2           | —                             | 100S-D300⊗22BC                |
| 420       | 540   | 132                                    | 238  | 250   | 420     | 425      | 220        | 150  | 175  | 350  | 400  | 2                  | 2           | —                             | 100S-D420⊗22BC                |
| 630       | 800   | 200                                    | 355  | 355   | 500     | 500      | —          | 200  | 250  | 500  | 600  | 2                  | 2           | —                             | 100S-D630⊗22BC                |
| 860       | 1000  | 250                                    | 500  | 500   | 500     | 600      | —          | 250  | 300  | 600  | 700  | 2                  | 2           | —                             | 100S-D860⊗22BC                |

\* Preferred values according to IEC 60072-1.

⊗ The N.C. contacts meet IEC 60947-4 Annex F requirements for mirror contact performance. The N.C. mirror contacts are wired in series or parallel and must be used as monitoring contacts with feedback to the safety circuit.

‡ For conventional DC coil only. The pickup winding must be interconnected with the N.C. late-breaking auxiliary contacts.

§ Higher kW rating only applies to contactors with electronic coil.

> If standard cross-stamped front-mount auxiliary contacts are required, remove the letter "B" before the letter "C" in the Cat. No. Example: Cat. No. **100S-D115⊗22BC** becomes Cat. No. **100S-D115⊗22C**.

⊗ **Coil Voltage Codes for DC Control**

| Conventional Coil     | [V] | 24 | 48 | 110 | 125 | 220 | 250 |
|-----------------------|-----|----|----|-----|-----|-----|-----|
| 100S-D115...100S-D180 | DC  | ZJ | ZY | ZD  | ZS  | ZA  | ZT  |

| Electronic Coil<br>w/ EI Interface ♣ | [V] | 24  | 48...72 | 110...130 | 200...255 |
|--------------------------------------|-----|-----|---------|-----------|-----------|
| 100S-D115...100S-D300                | DC  | EZJ | EZY     | EZD       | EZA       |
| 100S-D420                            | DC  | —   | —       | EZD       | EZA       |
| 100S-D630...860                      | DC  | —   | —       | ED        | EA        |

♣ Signal voltage of the cat. no. 100S-S... electronic interface  $U_g$ : 24V DC/ $I_g$ : 15 mA

Pick-up voltage: 13.0V DC...30.2V DC  
 Drop-out voltage: -3.0V DC...+5.0V DC

