
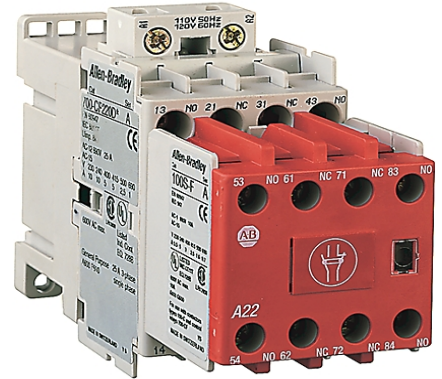


Product Details and Certifications

Cross Reference RA Part Number: 700S-CF620DJC A

 Product: **700S-CF620DJC**

Description: 700s-CF Safety Control Relay, 8 Poles, 3 N.O. / 1 N.C. Auxiliary.



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

CONTROL RELAY DATA

| | |
|-----------------------------|---------------------------|
| Bulletin Number | 700S Safety Relay |
| Base Contact Configuration | 3 N.O. / 1 N.C. |
| Base Contact Type | Standard Contact |
| Front Contact Configuration | 3 N.O. / 1 N.C. |
| Front Contact Type | Standard Contact |
| Coil Voltage | 24V with diode suppressor |

OPTIONS

| | |
|----------------------|--|
| Additional DJ option | When Ordering DJ coil with built-in surge suppression, remove Z from the Cat. No. Example: Cat. No. 700S-CF620Z*C becomes Cat. No. 700S-CF620DJC |
|----------------------|--|

CERTIFICATIONS AND APPROVALS

UL
CSA
IEC
CE
For UL Certifications Directory:

<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>



| Bulletin No. | 700-CF and 700-S-CF | 700-K | 700-P and 700S-P | 700-PK | 700-R |
|---------------------------------------|---|--|---|---|--|
| Type | Control Relay | Miniature Control Relay | Heavy-duty control relay | Heavy-duty control relay | Sealed Switch |
| Features | <ul style="list-style-type: none"> Mechanically linked contacts Timer and latch operations Switch up to 690V AC and DC Bulletin 700S-CF for safety circuits | <ul style="list-style-type: none"> Smallest size Long life Low power consumption Switch up to 690V AC and DC | <ul style="list-style-type: none"> Convertible contacts Up to 600V AC & DC Very long life Timer & latch options Mechanically linked Bulletin 700S-P for safety circuits | <ul style="list-style-type: none"> Five contact styles Mechanically linked contacts Timer and latch options Switch up to 600V AC and DC | <ul style="list-style-type: none"> Hazardous location ratings Long life in dirty environment Timer and latch options Switch 600V AC, 300V DC |
| Contact Form | 4...12 Poles, double break | 4...8 Poles Double Break | 2...12 poles, double break | 2...12 poles | 2...8 Poles |
| Contact Type | Cross stamp or bifurcated | Bifurcated | Bifurcated double break | Double break | Sealed Switch |
| Contact Material | Silver, gold | Silver | Bifurcated silver nickel | Single silver CAD | Sealed Switch |
| Electrical | | | | | |
| Max. Current AC Resistive | 20 A (relay) 10 A (adder deck) | 10 A | 10 A | 20 A | 5 A |
| Min. load | 17V, 10 mA (Silver) 5V, 3 mA (Gold) | 15V, 2 mA (700-K) | 10V, 50 mA 1 mA, 5V with Bulletin 700-CPR | 10V, 100 mA | 1 mA, 5V |
| Coil Voltage | 12...600V AC 9...250V DC | 12...600V AC 9...250V DC | 24...600V AC 6...600V DC | 24...600V AC 6...600V DC | 24...240V AC 24...250V DC |
| Coil Voltage Pickup | 85...110% AC coils, 80...110% DC coils | 85...110% AC Coils, 80...110% DC Coils | 85...110% AC coils, 80...110% DC coils | 85...110% AC coils, 80...110% DC coils | 85...110% AC Coils, 80...110% DC Coils |
| Dielectric Withstand | 2640V | 2640V | 2640V | 2640V | 2640V |
| Reference | | | | | |
| Electric Service Life (cycles) | 1.2 million at 10 A | 800K at 10 A, 120V AC | 10 million at 10 A, 120V AC | 1.5 million at 10 A, 120V AC | 1.5 million at 5 A, 120V AC |
| Certifications | CE, cULus, CCC | CE, cULus, CCC | cULus, CE | cULus, CE | UL, CSA, CE |
| Sockets | DIN Rail or panel mount | DIN Rail or panel mount | DIN Rail, relay rail, or panel mount | DIN Rail, relay rail, or panel mount | Panel or rail mount |
| Page Number | page 9-147 | page 9-162 | page 9-115 and page 9-128 | page 9-115 | page 9-136 |



Bulletin 700S-CF — Safety Control Relay

The Bulletin 700S-CF Safety Control Relay provides mechanically or mirror contact performance, which are required in feedback circuits for safety applications. Bifurcated contacts are ideal for low energy feedback safety circuits where high contact reliability is required.

Features

- IEC industrial safety relay
- Mechanically linked contacts as per IEC 60947-5-1
- Third party certification SUVA
- Red cover and mechanically linked contact symbol on front face
- Gold plated, bifurcated version for low level switching applications
- Permanently fixed front mounted auxiliary contact block

Certifications

cULus Listed (File No. E14840, Guide NKCR/NKCR7)
 CE Marked
 CCC Certified

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 Specifications..... 9-158
 Approximate Dimensions..... 9-160

Standards Compliance

EN/IEC 60947-1, -5-1
 UL 508
 CSA C22.2 No. 14
 Meets the material restrictions for European Directive 2002/95/EC - EU-RoHS

Product Selection

Type CF and CFB Safety Control Relays — 8-Pole AC Coil Voltage (Ratings for 700S-CF Only)

| | AC-12 | | AC-15 | | | | | | | Connection Diagrams | | Contacts | | Standard Contacts (Main) Gold-Plated Bifurcated (Front) Cat. No. | Gold-Plated Bifurcated, All Contacts Cat. No.* |
|---------------------|--------------|-------|-----------|-------|-------|-------|-------|-------|-------|---------------------|--------------------|----------|------|--|--|
| | I_{th} [A] | | I_e [A] | | | | | | | Main Contacts | Auxiliary Contacts | N.O. | N.C. | | |
| | 40 °C | 60 °C | 24/48V | 120 V | 240 V | 400 V | 500 V | 600 V | 690 V | | | | | | |
| Main Contacts | 20 | 20 | 10 | 10 | 10 | 6 | 2.5 | 1 | 1 | | | 4 | 4 | 700S-CF440⊗BC | 700S-CFB440⊗C |
| Adder Deck Contacts | 10 | 6 | 6 | 6 | 5 | 3 | 1.6 | 1 | 1 | | | 6 | 2 | 700S-CF620⊗BC | 700S-CFB620⊗C |

* Ratings for Bulletin 700S-CFB are on page 9-159

⊗ AC Coil Voltage Code

The cat. no. as listed is incomplete. Select a coil voltage code from the table below to complete the cat. no. Example: **Cat. No. 700S-CF440⊗BC** becomes **Cat. No. 700S-CF440DBC** for 120V, 60 Hz.

| | | | | | | | | | | | | | | | | |
|----------|----|----|----|----|----|----|-----|------------|-----|-----|-----|-----|------------|-----|------------|------------|
| [V] | 12 | 24 | 32 | 36 | 42 | 48 | 100 | 100... 110 | 110 | 120 | 127 | 200 | 200... 220 | 208 | 208... 240 | 220... 230 |
| 50 Hz | R | K | V | W | X | Y | KP | — | D | P | S | KG | L | — | — | F |
| 60 Hz | Q | J | — | V | — | X | — | KP | — | D | — | — | KG | H | L | — |
| 50/60 Hz | — | KJ | — | — | — | KY | KP | — | KD | — | — | KG | KL | — | — | KL |

| | | | | | | | | | | | | | | |
|----------|-----|------------|-----|-----|-----|-----|------------|-----|------------|-----|-----|-----|-----|-----|
| [V] | 230 | 230... 240 | 240 | 277 | 347 | 380 | 380... 400 | 400 | 400... 415 | 440 | 480 | 500 | 550 | 600 |
| 50 Hz | — | VA | T | — | — | — | N | — | G | B | — | M | C | — |
| 60 Hz | — | — | A | T | I | E | — | — | — | N | B | — | — | C |
| 50/60 Hz | KF | — | KA | — | — | — | — | — | KN | — | KB | — | — | — |



Bulletin 700S-CF
Safety Control Relays
Product Selection

Type S-CF Safety Control Relays — 8-Pole AC and DC Coil Voltages



| Connection Diagrams | | Contacts | | 700S-CF | |
|---------------------|--------------------|----------|------|--------------|--------------------------------|
| | | | | AC Coils | DC Coils |
| Main Contacts | Auxiliary Contacts | | | Cat. No. | Cat. No. ① |
| | | N.O. | N.C. | | |
| | | 6 | 2 | 700S-CF620⊗C | 700S-CF620Z⊗C 700S-CF620DJC |
| | | 5 | 3 | 700S-CF530⊗C | 700S-CF530Z⊗C |
| | | 4 | 4 | 700S-CF440⊗C | 700S-CF440Z⊗C |
| | | 3 | 5 | 700S-CF350⊗C | 700S-CF350Z⊗C |

⊗ AC Coil Voltage Suffix Code

| Voltage | 12 | 24 | 32 | 36 | 42 | 48 | 100 | 100-110 | 110 | 120 | 127 | 200 | 200-220 | 208 | 208-240 | 220-230 |
|----------|----|----|----|----|----|----|-----|---------|-----|-----|-----|-----|---------|-----|---------|---------|
| 50 Hz | R | K | V | W | X | Y | KP | - | D | P | S | KG | - | - | - | F |
| 60 Hz | Q | J | - | V | - | X | - | KP | - | D | - | - | KG | H | L | - |
| 50/60 Hz | - | KJ | - | - | - | KY | KP | - | KD | - | - | KG | - | - | - | - |

| Voltage | 230 | 230-240 | 240 | 277 | 347 | 380 | 380-400 | 400 | 400-415 | 440 | 480 | 500 | 550 | 600 |
|----------|-----|---------|-----|-----|-----|-----|---------|-----|---------|-----|-----|-----|-----|-----|
| 50 Hz | - | VA | T | - | - | - | N | - | G | B | - | M | C | - |
| 60 Hz | - | - | A | T | I | E | - | - | - | N | B | - | - | C |
| 50/60 Hz | KF | - | KA | - | - | - | - | KN | - | KB | - | - | - | - |

⊗ DC Coil Voltage Suffix Code ①

| Voltage | 9 | 12 | 24 | 36 | 48 | 60 | 64 | 72 | 80 | 110 | 115 | 125 | 220 | 230 | 250 |
|-----------------------|---|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
| Standard | R | Q | J | W | Y | Z | B | G | E | D | P | S | A | F | T |
| With diode suppressor | - | - | DJ | - | - | - | - | - | - | - | - | - | - | - | - |

① When ordering DJ coil with built-in surge suppression, remove Z from the Cat. No.
 Example: Cat. No. 700S-CF440Z⊗C becomes Cat. No. 700S-CF440DJC.

Specifications

General



| | | Main Relay Cat. Nos. 700-CF, 700S- CF | Front Mounted Standard Auxiliary Contacts | Main Relay Cat. No. 700-CFB, 700S- CFB | Master Relay Cat. No. 700-CFM | Front Mounted Bifurcated Auxiliary Contacts | Side-mounted Auxiliary Contacts |
|---|-----------|--|--|---|-------------------------------------|--|---------------------------------------|
| Contact Ratings — NEMA | | A600, P600 | A600, Q600 | A600, Q600 | 2 x A600, P600 | A600, Q600 | A600, Q600 |
| Min. Contact Rating | | 17V, 10 mA | 17V, 5 mA | 8V, 5 mA | — | 5V, 3 mA | 17V, 10 mA |
| Contact Ratings — IEC AC-15 (solenoids, contactors) at rated voltage IEC 60947-5-1 | 24V | 10 A | 6 A | 3 A | 15 A | 3 A | 6 A |
| | 48V | 10 A | 6 A | 3 A | 15 A | 3 A | 6 A |
| | 120V | 10 A | 6 A | 3 A | 15 A | 3 A | 6 A |
| | 240V | 10 A | 5 A | 3 A | 15 A | 3 A | 5 A |
| | 400V | 6 A | 3 A | 2 A | 7.5 A | 2 A | 3 A |
| | 480V/500V | 2.5 A | 1.6 A | 1.2 A | 5 A | 1.2 A | 1.6 A |
| | 600V | 1 A | 1 A | 0.7 A | 2 A | 0.7 A | 1 A |
| AC-12 (Control of resistive loads) IEC 60947-5-1 | 40 °C | I_{th} | 20 A | 10 A | 10 A | 20 A | 10 A |
| | | 230V | 8 kW | | | | |
| | | 400V | 14 kW | | | | |
| | | 690V | 24 kW | | | | |
| | 60 °C | I_{th} | 20 A | 6 A | 6 A | 20 A | 6 A |
| | | 230V | 8 kW | | | | |
| | | 400V | 14 kW | | | | |
| DC-12 Switching DC Loads L/R < 1ms, Resistive Loads IEC 60947-5-1 | 24V | 15 A | 10 A | 6 A | 20 A | 6 A | 6 A |
| | 48V | 10 A | 9 A | 3.2 A | 20 A | 3.2 A | 3.2 A |
| | 110V | 6 A | 3.5 A | 1 A | 8 A | 1 A | 1 A |
| | 220V | 1 A | 0.7 A | 0.5 A | 1.5 A | 0.5 A | 0.5 A |
| | 440V | 0.4 A | 0.2 A | 0.2 A | 0.4 A | 0.2 A | 0.2 A |
| DC-13 IEC 60947-5-1, Solenoids and contactors | 24V | 5 A | 5 A | 2.5 A | 5 A | 2.5 A | 5 A |
| | 48V | 3 A | 3 A | 1.5 A | 3 A | 1.5 A | 2.5 A |
| | 110V | 1.2 A | 1.2 A | 0.6 A | 1.2 A | 0.6 A | 0.68 A |
| | 220V | 0.6 A | 0.6 A | 0.3 A | 0.6 A | 0.3 A | 0.32 A |
| | 440V | 0.3 A | 0.15 A | 0.15 A | 0.3 A | 0.15 A | 0.15 A |



| Location of welded N.O. contacts | State of N.C. Contacts if N.O. contact welds | | |
|----------------------------------|--|------------|-----------|
| | Main | Front aux. | Side aux. |
| Main | Open | Open | Open* |
| Front aux. | Open | Open | — |

Mechanically Linked Contacts*

* Side mounted auxiliary contacts provide “mirror contact” performance with main poles only.

* Defined in IEC 60947-5-1 annex L. Mechanically linked is a relationship between contacts of opposite types (i.e., N.O. and N.C.).

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| | | Cat. No. 700-CF | Aux./Pneumatic Timer Contact (Front-mounted) |
|-------------------------------|-------------------------------|--------------------|---|
| Mechanical Life | [Mil] | 15 | 5 |
| Electrical Life | AC-15 (240V, 3 A) [Mil] | 1.5 | 1.5 |
| Weight | AC Coil [g] | 390 | — |
| Terminal Cross-Sections | | | |
| Terminal Type | | | |
| Terminal Size per IEC60 947-1 | | 2 x A4 | 2 x A4 |
| | Solid/ Stranded | 1 Conductor | [mm²] |
| | § | 2 Conductor | [mm²] |
| Max. Wire Size per UL/CSA | | [AWG] | 16...10 |
| Tightening Torque | | [lb-in] | 13.3...22 |
| Tightening Torque | | [N-m] | 1.5...2.5 |

| DC Switching Ratings for 700-CF Main Poles in Series (Resistive Load at 60 °C) | | | |
|--|---------|---------|---------|
| | 1 pole | 2 poles | 3 poles |
| 24/48V | 25/20 A | 25 A | 25 A |
| 125V | 6 A | 25 A | 25 A |
| 220V | 1.5 A | 8 A | 25 A |
| 440V | 0.4 A | 1 A | 3 A |

§ For 16 or more strands, end ferrule is required.

www.ab.com/catalogs Preferred availability cat. nos. are bold.

