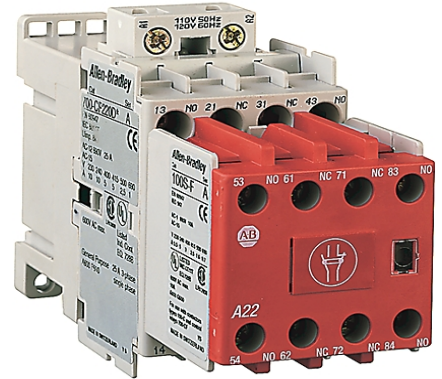


Product Details and Certifications

Cross Reference RA Part Number: PN-35744

➔ Product: **700S-CF620EJC**

Description: 700s-CF Safety Control Relay, 8 Poles, 3 N.O. / 1 N.C. Base,
3 N.O. / 1 N.C. Auxiliary, 24V DC (with Electronic Coil)



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 DC Electronic Coil

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

Table of Contents

Product Selection this page
 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			5	3	700S-CF530⊗BC	700S-CFB530⊗C
												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	—	—	—



Type CF and CFB Safety Control Relays — 8-Pole DC 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				No. of N.O. Contacts	No. of N.C. Contacts
	40 °C	60 °C	24/48V	120 V	240 V	400 V	500 V	600 V	690 V	No. of N.O. Contacts		No. of N.C. Contacts					
Main Contacts	20	20	10	10	10	6	2.5	1	1			4	4	700S-CF440BC	700S-CFB440BC		
Adder Deck Contacts	10	6	6	6	5	3	1.6	1	1			5	3	700S-CF530BC	700S-CFB530BC		
												6	2	700S-CF620BC	700S-CFB620BC		

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

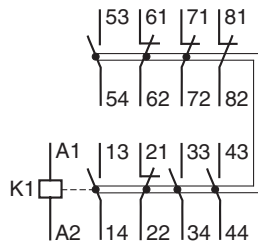
⊗ DC Coil Voltage Code

The cat. no. as listed is incomplete. Select a coil voltage code from the table below to complete the cat. no. Example: **700S-CFB440BC** becomes **Cat. No. 700S-CFB440ZJC** for 24V DC.

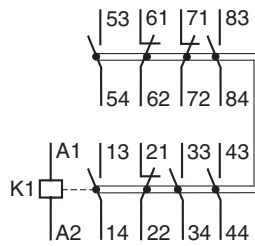
[V]	9	12	24	36	48	48...72	60	64	72	80	110	110...125	115	125	125	220	220...250	230	250
Standard	ZR	ZQ	ZJ	ZW	ZY	—	ZZ	ZB	ZG	ZE	ZD	—	ZP	ZS	ZA	—	ZF	ZT	—
Standard with diode	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Electronic with diode	—	EQ	EJ	—	—	EY	—	—	—	—	—	ED	—	—	—	EA	—	—	—

Assignment of Contacts

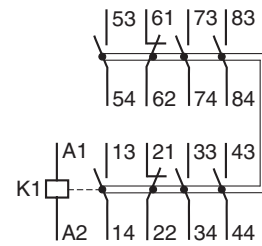
Safety Control Relays with Front-mount Auxiliary Contacts, 8-Pole AC or DC Coil Voltage



700S-CF440BC...
700S-CFB440BC...



700S-CF530BC...
700S-CFB530BC...



700S-CF620BC...
700S-CFB620BC...

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				
690V		24 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.).

9

		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.

