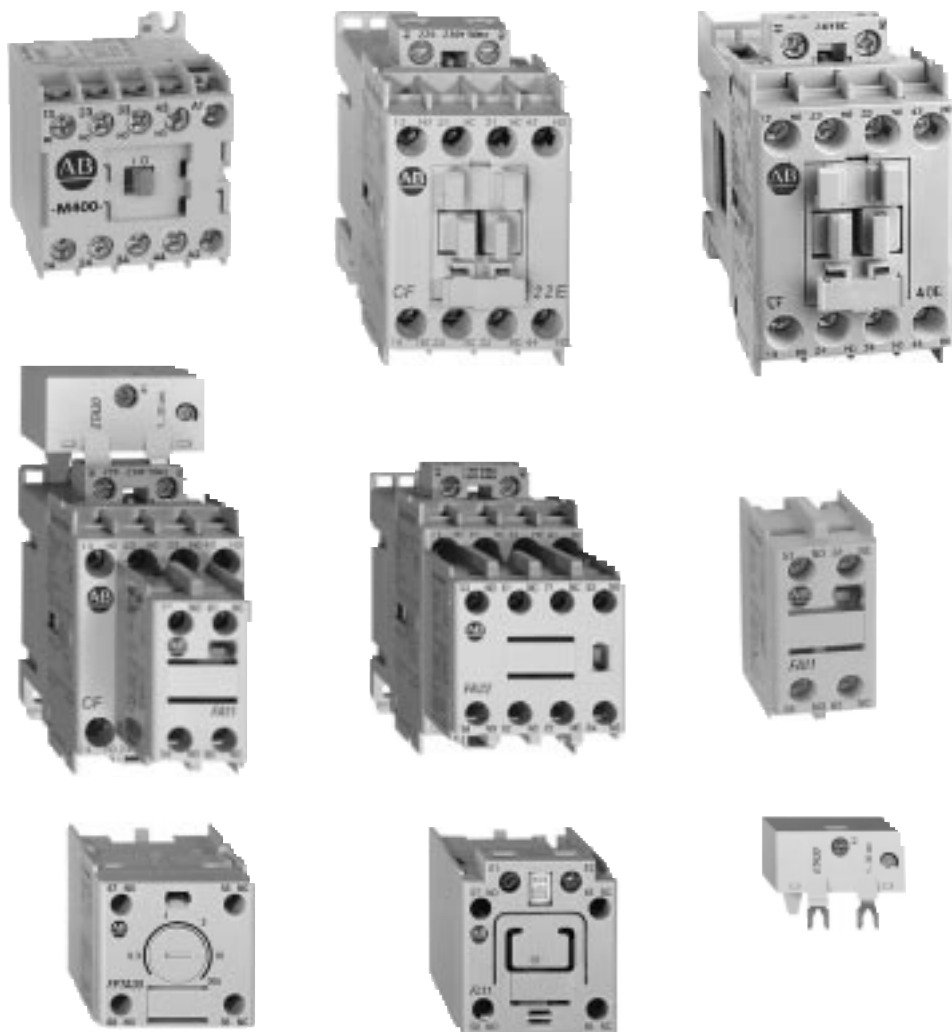


Control Relays Bulletin 700-M / CS 4, Bulletin 700-CF



Ordering Advice

For Allen-Bradley branded products choose the Allen-Bradley Cat. No.
 For Sprecher+Schuh branded products choose the Sprecher+Schuh Ref. or Art. No.

Bulletin 700-M / CS 4

- Up to 8 N/O or up to 4 N/C
- Switching Capacity AC-1 12 A

Bulletin 700-CF

- High Contact Reliability
- Electronic and Pneumatic Timing Modules
- Environmentally friendly Materials
- Space-saving Coil Modules
- The same Accessories as for the Contactor Range Bulletin 100-C

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Control Relays

- AC / DC Control



700-M / CS 4



700-CF220



700-CF310



700-CF400

AC Control

AC-1 I _e [A] 40°C	AC-15 I _e [A]								Connection diagrams	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	Index	
	24/48 V	120 V	230 V	240 V	400 V	500 V	600 V	690 V					
	16	-	-	6	-	2.5	1.25	-					-
										700-M310	⊗	CS 4-31Z-1V	168
										700-M400	⊗	CS 4-40E-1V	169
										700-MZ220	⊗	CS 4-L22Z-1V	170
25	16	14	-	10	5	2.5	1.8	1		700-CF220	⊗ ☆	-	171
										700-CF310	⊗ ☆	-	172
										700-CF400	⊗ ☆	-	173
											⊗ ☆		

DC Control

AC-1 I _e [A] 40°C	AC-15 I _e [A]								Connection diagrams	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	Index	
	24/48 V	120 V	230 V	240 V	400 V	500 V	600 V	690 V					
	16	-	-	6	-	2.5	1.25	-					-
										700DC-M310	⊗	CS 4C-31Z-1V	175
										700DC-M400	⊗	CS 4C-40E-1V	176
										700DC-MZ220	⊗	CS 4C-L22Z-1V	177
25	16	14	-	10	5	2.5	1.8	1		700-CF220	⊗ ☆	-	178
										700-CF310	⊗ ☆	-	179
										700-CF400	⊗ ☆	-	180
											⊗ ☆		

Control Relays

Product Selection

Standard Control Voltages for AC and DC Control

⊗ Control Voltage Identification

700-M / CS 4	^① ⊗ [V]	24	48	110	110-120	220-230	230-240	240	380-400	400-415								
	50 Hz	⊗	—	—	A1	—	A2	—	—	A3								
	60 Hz	⊗	—	—	—	A1	—	A2	—	—	A3							
	50/60 Hz	⊗	A24	A48	—	—	—	—	A23	—	—							
700-CF	^① ⊗ [V]	12	24	32	36	42	48	100	100-110	110	120	127	200	200-220	200-230	208	208-240	
	50 Hz	⊗	(R)	K	V	(W)	X	Y	KP	—	D	(P)	S	KG	—	—	—	—
	60 Hz	⊗	(Q)	J	—	V	—	X	—	KP	—	D	—	—	KG	—	H	L
	50/60 Hz	⊗	—	KJ	—	—	—	KY	KP	—	KD	—	—	KG	—	(KL)	—	—
	^① ⊗ [V]	220-230	230	230-240	240	277	347	380	380-400	400	400-415	440	480	500	550	600		
	50 Hz	⊗	F	—	VA	T	—	—	—	N	—	G	B	—	M	(C)	—	—
	60 Hz	⊗	—	—	—	A	T	I	(E)	—	—	—	N	B	—	—	(C)	—
	50/60 Hz	⊗	—	KF	—	KA	—	—	—	—	KN	—	KB	—	—	—	—	—
700DC-M..Z / CS 4C..C with surge suppressor diode	^① ⊗ [V]	24	48	110	220													
	DC	⊗	Z24	Z48	Z11	Z2												
	DC	⊗	D24	—	—	—												
700-CF ... Z, 700-CF ... D with surge suppressor diode	^① ⊗ [V]	6-12	12	24	17-30	36	48	60	64	72	80	110	115	125	220	230	250	
	DC	⊗	ZR	ZQ	ZJ	ZV	(ZW)	ZY	ZZ	ZB	(ZG)	ZE	ZD	ZP	ZS	ZA	ZF	ZT
	DC	⊗	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—	—
Surcharge	Type	Available control voltages						No surcharge			Index							
Special control voltages	700-M / CS 4, 700DC-M / CS 4C	12...500 V50Hz / 12...600 V60Hz / 12...250 VDC						greater than 25 pcs.			181							
	700-CF	12...600 V50Hz / 12...600 V60Hz / 12...250 VDC						greater than 20 pcs.			182							
with surge suppressor diode	700DC-M / CS 4C	24 VDC						—			183							
	700-CF	24 VDC						—			184							

() Control voltage identifications in parentheses: Please allow for a delivery time of approximately 4 weeks.

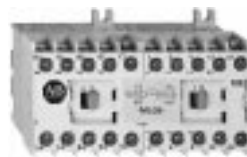
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Options	Cat. No. suffix	Description	Ordering example
⊗ Control voltage	For example A2	Enter the standard control voltage code from the tables above	700-M220A2
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard delivery) △ Multipacks (20 each)	700-CF220⊗ 700-C/220⊗M



Special Versions

- 700-ML / CSV 4 Reversing Control Relays
- 700-MB / CS 4-B Control Relays with Bifurcated Contacts (H-Contacts)
- AC / DC Control



700-ML / CSV 4



700-MB / CS 4B

Bulletin 700-ML / CSV 4 Reversing Control Relays

AC-1	AC-15						Connection diagrams	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	Index
I_e [A]	I_e [A]									
40°C	24/48 V	120 V	230 V	240 V	400 V	500 V				
16	-	-	6	-	2.5	1.25		700-ML220	⊗ CSV 4-22Z- 0V0	185
								700-ML310	⊗ CSV 4-31Z- 0V0	186
								700-ML400	⊗ CSV 4-40E- 0V0	187

Bulletin 700-MB / CS 4-B Control Relays with Bifurcated Contacts (H-Contacts)

AC-1	AC-15								Connection diagrams	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	Index
I_e [A]	I_e [A]											
40°C	24/48 V	120 V	230 V	240 V	400 V	500 V	600 V	690 V				
16	-	-	6	-	2.5	1.25	-	-		700-MB220	⊗ CS 4C-B22E- 0V0	188
										700-MB310	⊗ CS 4C-B31E- 0V0	189
										700-MB400	⊗ CS 4C-B40E- 0V0	190
10	-	-	6	-	2.5	1.25	-	-		700DC-MB220	⊗ CS 4C-B22E- 0VDC	191
										700DC-MB310	⊗ CS 4C-B31E- 0VDC	192
										700DC-MB400	⊗ CS 4C-B40E- 0VDC	193

10

Options	Cat. No. suffix	Description	Ordering example
⊗ Control voltage	For example KF	Enter the standard control voltage code from tables below	700-MB220KF

Standard Control Voltages for AC and DC Control

700-ML / CSV 4 700-MB / CS 4-B	I_e / I_e	[V]	24	48	110	110-120	220-230	230-240	240	380-400	400-415						
	50 Hz	⊗	—	—	A1	—	A2	—	—	A3							
	60 Hz	⊗	—	—	—	A1	—	A2	—	—	A3						
	50/60 Hz	⊗	A24	A48	—	—	—	—	A23	—	—						

700DC-MB / CS 4C-B with surge suppressor module	I_e / I_e	[V]	24	48	110	220												
	DC	⊗	Z24	Z48	Z11	Z2												
	DC	⊗	D24	—	—	—												





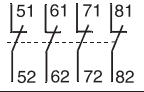
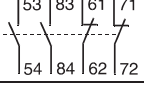
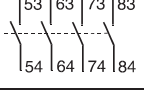




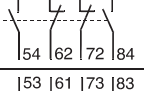
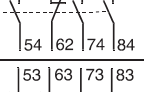
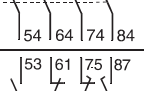
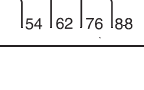
Surcharge	Type	Available control voltages	No surcharge	Index
Special control voltages	700 (DC)-ML / CSV 4 (C), 700 (DC)-MB / CS 4 (C)-B	12...500 V50Hz / 12...600 V60Hz / 12...250 VDC	greater than 25 pcs.	194
with surge suppressor module	700DC-ML / CSV 4C, 700DC-MB / CS 4C-B	24 VDC	—	195

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 Technical Information – Page 10-51
 Dimensions – Page 10-54

Control Relays

Accessories

Add-on Accessories





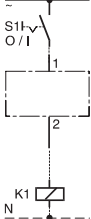

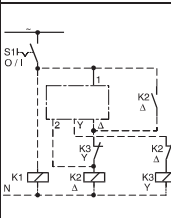
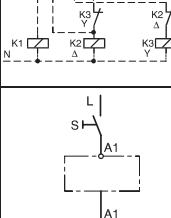

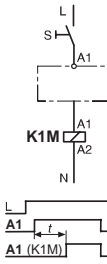

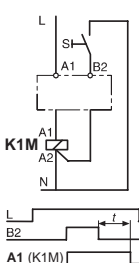
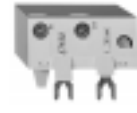
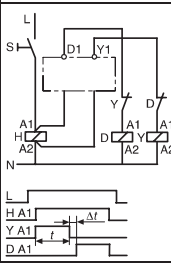
	Description	Connection diagrams	For type	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	Index	
	Auxiliary contact block <ul style="list-style-type: none"> Terminal marking according to EN 50011 Suitable for electronic circuits, fail-safe linkage Fitted to to contactor without tools 		700-M400 CS 4-40E	195-MA02	CS 4-P-02	196	
			700-M400 CS 4-40E	195-MA11	CS 4-P-11	197	
			700-M400, -M310, -M220, -MZ220 CS 4-40E, -31Z, -22Z, -L22Z	195-MA20	CS 4-P-20	198	
			700-M400 CS 4-40E	195-MA04	CS 4-P-04	199	
			700-M400 CS 4-40E	195-MA22	CS 4-P-22	200	
			700-M400, -M310, -M220, -MZ220 CS 4-40E, -31Z, -22Z, -L22Z	195-MA40	CS 4-P-40	201	
	Auxiliary contact block for front mounting ① <ul style="list-style-type: none"> 2- and 4 poles Quick and easy mounting without tools Contacts compatible with electronics Mutual positive guidance with the control relay contacts (except for Type L) Models with equal function with several terminal numbering choices L = Late break / early make		700-CF all	100-FA02	—	202	
			700-CF all	100-FA11	☆	—	203
			700-CF all	100-FA20	—	—	204
			700-CF all	100-FA22	☆	—	205
			700-CF all	100-FA31	—	—	206
			700-CF all	100-FA40	—	—	207
			700-CF all	100-FAL22	—	—	208

☆

Options	Cat. No. suffix	Description	Ordering example
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard delivery) △ Multipacks (10 each)	100-FA11 100-FA11M

① Control relay and auxiliary contact block AC / DC max. 4 N/C contacts.







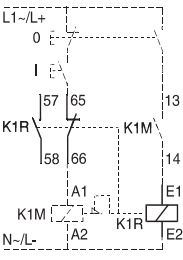
Add-on Accessories

	Description	Connection diagrams		For type	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	Index
	Pneumatic timing modules Pneumatic timing element contacts operate after the set time; the contacts on the control relay continue to operate without delay. <ul style="list-style-type: none"> Continuous adjustment range 		On delay 0.3 ... 30 s 1.8 ... 180 s	700-CF with AC control	100-FPTA30 100-FPTA180	— —	209 210
			Off delay 0.3 ... 30 s 1.8 ... 180 s	700-CF with AC control	100-FPTB30 100-FPTB180	— —	211 212
	Solid-state timing element, On-delay CRZE 4 After the set time has elapsed, the timer operates and the contactor in series is energised.		On delay 1 ... 3 s 1 ... 30 s 110 ... 250 V 50/60 Hz / DC	700-M / CS 4	196-MT3S 196-MT30S	CRZE 4-3s CRZE 4-30s	213 214
	Star-Delta Timer CRZY 4 After the set time has elapsed, the contactor K 3 (Y) is de-energised and then after a time of 90 ± 30 ms, the K 2 (D) is energised.		Make-time Y contactor 1 ... 30 s 110 ... 120 V 50/60 Hz	700-M / CS 4	196-MTSDA1	CRZY 4-30s-120V	215
			1 ... 30 s 220 ... 250 V 50/60 Hz	700-M / CS 4	196-MTSDA2	CRZY 4-30s-250V	216
	Electronic timing modules Delay of the contactor coil <ul style="list-style-type: none"> Continuous adjustment range High repeat accuracy 100-ETA The contactor is switched on after the end of the time delay.		On delay 0.1 ... 3 s 1 ... 30 s 10 ... 180 s 110 ... 240 V 50/60 Hz 110 ... 250 VDC	700-CF all	100-ETA3 100-ETA30 100-ETA180	— — —	217 218 219
	100-ETB After interruption of the control signal, the contactor is switched off after the end of the set delay time.		Off-delay 0.3 ... 3 s 1 ... 30 s 10 ... 180 s 110 ... 240 V 50/60 Hz	700-CF with AC control	100-ETB3 100-ETB30 100-ETB180	— — —	220 221 222
	100-ETY Contactor K 3 (Y) is switched off and K 2 (D) is switched on after the end of the set Y time. (Switching delay Δt 90 ms)		Make-time Y contactor 1 ... 30 s 110 ... 240 V 50/60 Hz	700-CF with AC control	100-ETY30	—	223

Control Relays

Accessories

Add-on Accessories

	Description	Connection diagrams		For type	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	Index
	Mechanical Interlock for Bulletin 700-M / CS 4 For the mutual interlocking of two adjacent contactors. <ul style="list-style-type: none"> Clips onto rear of contactor, no additional space requirement. 			AC control	199-MXM1	CM 4	224
	Mechanical Interlock for Bulletin 700-CF Control Relays For interlocking of two control relays <ul style="list-style-type: none"> Common interlock for all 700-CF control relay sizes Interlocking of different sizes possible Mechanical and electrical interlocking possible in one module by means of integrated auxiliary contacts 9 mm dovetail connector included 		<ul style="list-style-type: none"> without auxiliary contacts 	700-CF all	100-MCA00	—	225
			<ul style="list-style-type: none"> with auxiliary contacts 2 N.C. 	700-CF all	100-MCA02	☆	—
	Mechanical Latch In contactors and relays with latching, the coil is immediately switched off after closing by the contact on the latch (65-66). Consequently, no holding current flows, and it can be used with all contactor and relay models with AC control (with AC coil), also for DC control. <ul style="list-style-type: none"> 1 N.O. + 1 N.C. auxiliary switch 			700-CF with AC control	100-FL11	⊗	227

⊗ ☆

10

Options	Cat. No. suffix	Description	Ordering example
⊗ Control voltage	For example KJ	Enter standard control voltage code from the tables below	100-FL11KJ
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard delivery) △ Multipacks (10 each)	100-MCA02 100-MCA02M


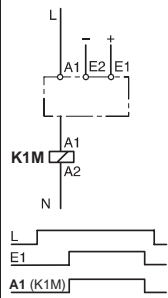

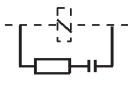
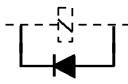
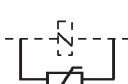

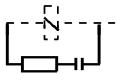
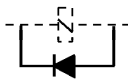
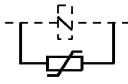
⊗ **Standard control voltages**

100-FL11	[V]	12	24	32	36	42	48	100	100-110	110	120	127	200	200-220	200-230	208	208-240	
		50 Hz	⊗ (R)	K	V	(W)	X	Y	KP	—	D	(P)	S	KG	—	—	—	—
60 Hz	⊗ (Q)	J	—	V	—	X	—	KP	—	D	—	—	KG	—	H	L	—	
50/60 Hz	⊗	—	KJ	—	—	—	KY	KP	—	KD	—	—	KG	—	(KL)	—	—	
100-FL11	[V]	220-230	230	230-240	240	277	347	380	380-400	400	400-415	440	480	500	550	600	—	
		50 Hz	⊗ F	—	VA	T	—	—	—	N	—	G	B	—	M	(C)	—	—
		60 Hz	⊗	—	—	A	T	I	(E)	—	—	—	N	B	—	—	(C)	—
		50/60 Hz	⊗	—	KF	—	KA	—	—	—	—	KN	—	KB	—	—	—	—

Surcharge	Type	Available control voltages	No surcharge	Index
Special control voltages	100-FL11	12...500 V 50 Hz / 12...600 V 60 Hz	greater than 25 pcs.	228

() Control voltage indications in parentheses: Please allow for a delivery time of approximately 4 weeks.

Add-on Accessories



	Description	Connection diagrams		For type	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	Index	
	Interface (electronic) Interface between the DC control Signal (PLC) and the AC operating control of the relay. <ul style="list-style-type: none"> Control circuit 18 ... 30 VDC (10...15 mA) For coil voltage 110 ... 240 VAC Suitable for all 700-CF relays with AC control Switch capacity 200 VA Requires no overvoltage protection for the coils Quantity per package; 10 each 			700-CF with AC control	100-JE	☆ —	229	
	700-M05/09/CS 4 Surge Suppressor For limiting surge voltages for coils and contacts.		RC surge suppressor AC control 24...48 VAC 110...280 VAC 380...480 VAC		199-MSMN48 199-MSMN280 199-MSMN480	CRC 4-N48 CRC 4-N280 CRC 4-N480	230 231 232	
			Diode circuit DC control 12...250 VDC	2-wire version	199-MSMD1	CRD 4	233	
				700-M / CS 4	199-MSMD2	CRD 4-N250	234	
			Varistor circuit AC/DC control 12...55 VAC / 12...77 VDC 56...136 VAC / 78...178 VDC 137...277 VAC / 181...350 VDC	700-M / CS 4	199-MSMV4 199-MSMV5 199-MSMV6	CRV 4 -N55 CRV 4 -N136 CRV 4 -N277	235 236 237	
	Protection modules for 700-CF For limitation of switching overvoltage of the solenoids <ul style="list-style-type: none"> Can be plugged into all terminals of the 700-CF control relays Quantity per package; 10 each 		RC module AC control 24 ... 48 V 50/60 Hz	700-CF all	100-FSC48	☆ —	238	
			110 ... 280 V 50/60 Hz		100-FSC280	☆ —	239	
			380 ... 480 V 50/60 Hz		100-FSC480	☆ —	240	
			Diode module DC control 12...250 VDC	700-CF with DC control	100-FSD250	—	241	
			Varistor module AC/DC operation 12 ... 55 VAC / 12 ... 77 VDC	700-CF all	100-FSV55	☆ —	242	
			56 ... 136 VAC / 78 ... 180 VDC		100-FSV136	☆ —	243	
			137 ... 277 VAC / 181 ... 350 VDC		100-FSV277	☆ —	244	
			278 ... 575 VAC		100-FSV575	☆ —	245	

Options	Cat. No. suffix	Description	Ordering example
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard delivery) △ Multipacks (10 each)	100-FSC48 100-FSC48M


Control Relays

Accessories

Mounting Material

	Description		For type	Allen-Bradley Cat. No.	Sprecher-Schuh Type Ref.	Index
	Mounting Adapter 196-MTM / CR 4-P <ul style="list-style-type: none"> For a simple mounting of the timers on tops-hat rails EN 50 022-35 and G-rails without using tools. 		196-MT... / CRZ...	196-MTM	CR 4-P	246
	Neutral Link <ul style="list-style-type: none"> For sliding onto Control Relays CS 4 or 700-M or separate screw fixture onto grounding bracket. 	10 mm ² 16 mm ² (blue)	700-M / CS 4 all	— —	CA-P-10 CA-P-N16	247 248

Labeling Material

	<ul style="list-style-type: none"> Uniform labeling materials for contactors, motor protection devices, timing relays and circuit-breakers <p>Product Information and Ordering Information see Chapter 3</p>
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Spare Parts



Standard control voltages 700-CF

AC control			DC control			AC control				DC control	
50 Hz	60 Hz	50/60 Hz	Kat.-Nr.	VDC	Kat.-Nr.	50 Hz	60 Hz	50/60 Hz	Kat.-Nr.	VDC	Kat.-Nr.
	12 V		TA006	6 ... 12 V	TA766	Fortsetzung				Fortsetzung	
12 V			TA404	12 V	TA708		208...240 V		TA296		
	24 V		TA013	24 V Diode	TA714M	220 V	240 V		TA474		
24 V			TA407	17 ... 30 V	TA769	220...230 V			TA441		
		24 V	TA855	24 V	TA714			230 V	TA851		
32 V	36 V		TA481	36 V	TA719	230...240 V			TA440		
36 V			TA410	48 V	TA724	240 V	277 V		TA480		
42 V	48 V		TA482	60 V	TA774			240 V	TA858		
48 V			TA414	64 V	TA727			347 V	TA065		
		48 V	TA860	72 V	TA728			380 V	TA067		
100 V	100...110 V		TA861	80 V	TA729	380...400 V	440 V		TA071		
110 V	120 V		TA473	110 V	TA733			400 V	TA863		
		110 V	TA856	115 V	TA734	400...415 V			TA457		
120 V			TA425	125 V	TA737	440 V	480 V		TA475		
127 V			TA428	220 V	TA747			440 V	TA859		
200 V	200...220 V		TA862	230 V	TA749	500 V			TA479		
		200...230 V	TA864	250 V	TA751	550 V	600 V		TA476		
	208 V		TA049								
						Index	249	Index	250		

Surcharge	Type	Available control voltage	No surcharge	Index
Special control voltage	700-CF Please inquire about special voltages	12...500 V 50 Hz / 12...600 V 60 Hz	greater than 20 pcs.	251
with diode protection circuit	700-CF	24 VDC	—	252

Specifications according to IEC

Control Relays Contactors, Control Relay Accessories

			700-M / CS 4			700-CF	
			700-M / CS 4	700-MB / CS 4-B	Accessories	700-CF	Accessories
AC-1 real power, switching 3 phases							
Ambient temperature 40 °C							
I_e	24...240 V	[A]	–	10	–	–	–
	230...500 V	[A]	16	–	16	–	–
	230...690 V	[A]	–	–	–	25	10
	24 V	[kW]	–	0.41	–	–	–
	48 V	[kW]	–	0.83	–	–	–
	110 V	[kW]	–	1.9	–	–	–
	230 V	[kW]	6.4	4	6.4	10	–
	400 V	[kW]	11	–	11	17	–
	500 V	[kW]	14	–	14	–	–
	690 V	[kW]	–	–	–	30	–
Ambient temperature 60 °C							
I_e	24...240 V	[A]	–	6	–	–	–
	230...500 V	[A]	12	–	12	–	–
	230...690 V	[A]	–	–	–	20	6
	24 V	[kW]	–	0.25	–	–	–
	48 V	[kW]	–	0.5	–	–	–
	110 V	[kW]	–	1.1	–	–	–
	230 V	[kW]	4.8	2.4	4.8	8	–
	400 V	[kW]	8.3	–	8.3	14	–
	500 V	[kW]	10.4	–	10.4	–	–
	690 V	[kW]	–	–	–	24	–
Switching, three phase motors							
AC-2, AC-3, AC-4							
	230 V	[A]	5	–	–	11.5	–
	400 V	[A]	3.7	–	–	9	–
	500 V	[A]	2.8	–	–	–	–
	690 V	[A]	–	–	–	5	–
	230 V	[kW]	1.3	–	–	3	–
	400 V	[kW]	1.7	–	–	4	–
	500 V	[kW]	1.6	–	–	–	–
	690 V	[kW]	–	–	–	4	–
Switching, solenoids							
AC-15							
	24 V	[A]	–	–	–	16	6
	48 V	[A]	–	–	–	16	6
	120 V	[A]	–	–	–	14	6
	230 V	[A]	6	2.5	–	–	–
	240 V	[A]	–	–	–	10	3
	400 V	[A]	2.5	2	–	5	2
	500 V	[A]	1.25	2	–	2.5	1.5
	600 V	[A]	–	–	–	1.8	1.2
	690 V	[A]	–	–	–	1	0.7
Short-circuit prot. afforded by cont.							
Coordination Type 2 acc. IEC 947-4-1							
(IEC 158-1)	Fuse gG	[A]	16	–	16	10	10
	Fuse aM	[A]	16	–	16	–	–
Min. switching capacity 17 V							
DIN 19240 for H-contacts (Double contacts and auxiliary contact blocks)							
		[mA]	5	5	5	5	5
Switching, DC							
Non-inductive or slightly inductive loads, resistance furnaces DC-1 at 60 °C							
1 pole	24/48 V	[A]	6/4	–	–	•	–
	110 V	[A]	0.6	–	–	•	–
	220 V	[A]	0.2	–	–	•	–
	440 V	[A]	0.08	–	–	•	–
2 poles in series	24/48 V	[A]	6	–	–	•	–
	110 V	[A]	4	–	–	•	–
	220 V	[A]	0.8	–	–	•	–
	440 V	[A]	0.2	–	–	•	–
3 poles in series	24/48 V	[A]	6	–	–	•	–
	110 V	[A]	6	–	–	•	–
	220 V	[A]	3	–	–	•	–
	440 V	[A]	0.4	–	–	•	–





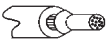

• in preparation

Control Relays

Technical Information

Specifications according to IEC

Control Relays Contactors, Control Relay Accessories

	700-M / CS 4			700-CF	
	700-M / CS 4	700-MB / CS 4-B	Accessories	700-CF	Accessories
Ratings according to UL/CSA Lloyd's Register of Shipping					
Operating voltage	AC [V]	115	-	-	-
	AC [V]	200	-	-	-
	AC [V]	230	-	-	-
	AC [V]	460	-	-	-
	AC [V]	575	-	-	-
Cont. rating (General Purpose)	300 V [A]	10	10	25	10
	600 V [A]	10	-	25	10
Life in millions of operation					
Mechanical	[Mil.]	10	10	15	15
AC-15 (240 V / 3 A)	[Mil.]	-	-	1.5	1.5
AC-1 (230 V / 6 A)	[Mil.]	0.7	0.7	-	-
Wire gauges					
Terminal type					
 1. conductor	[mm ²]	0.75 ... 2.5	0.75 ... 2.5	0.75 ... 2.5	1 ... 4
2. conductor	[mm ²]	0.75 ... 2.5	0.75 ... 2.5	0.75 ... 2.5	1 ... 4
 1. conductor	[mm ²]	0.75 ... 2.5	0.75 ... 2.5	0.75 ... 2.5	1.5 ... 6
2. conductor	[mm ²]	0.75 ... 2.5	0.75 ... 2.5	0.75 ... 2.5	1.5 ... 6
Tightening torque	[Nm]	1 ... 1.5	1 ... 1.5	1 ... 1.5	1 ... 2.5
Cross sections per UL/CSA	[AWG]	18 ... 14	18 ... 14	18 ... 14	16 ... 10
Tightening torque	[lb-in]	7 ... 15	7 ... 15	7 ... 15	8.9 ... 22

* Pozidriv / slotted screw

Control Circuit

	700-M / CS 4			700-CF	
	700-M / CS 4	700-MB / CS 4-B	Accessories	700-CF	Accessories
Operating limits					
AC-	50 Hz, 60 Hz, 50/60 Hz				
	pick-up	[x U _s]	0.85 ... 1.1	-	0.85 ... 1.1
	reset	[x U _s]	0.35 ... 0.65	-	0.3 ... 0.6
DC control	pick-up	[x U _s]	0.8 ... 1.1	-	-
	reset	[x U _s]	0.1 ... 0.25	-	-
with protection circuit	reset	[U _{max} / U _{min}]	1 ... 1.2	-	-
Control voltage					
AC-	50 Hz, 60 Hz, 50/60 Hz				
	pick-up	[VA/W]	22/20	-	70/50
	reset	[VA/W]	4/14	-	8/2.6
DC control	pick-up	[W]	2.5	-	-
	reset	[W]	2.5	-	-
Operating times					
AC	make	[ms]	15 ... 40	-	15 ... 30
	break	[ms]	15 ... 25	-	10 ... 60
with RC module	break	break	-	-	-
DC control	make	[ms]	18 ... 40	-	-
	break	[ms]	6 ... 12	-	-
with protection circuit	break	[ms]	8 ... 12	-	-

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Specifications according to IEC

Control Relays Contactors, Control Relay Accessories

General Specifications

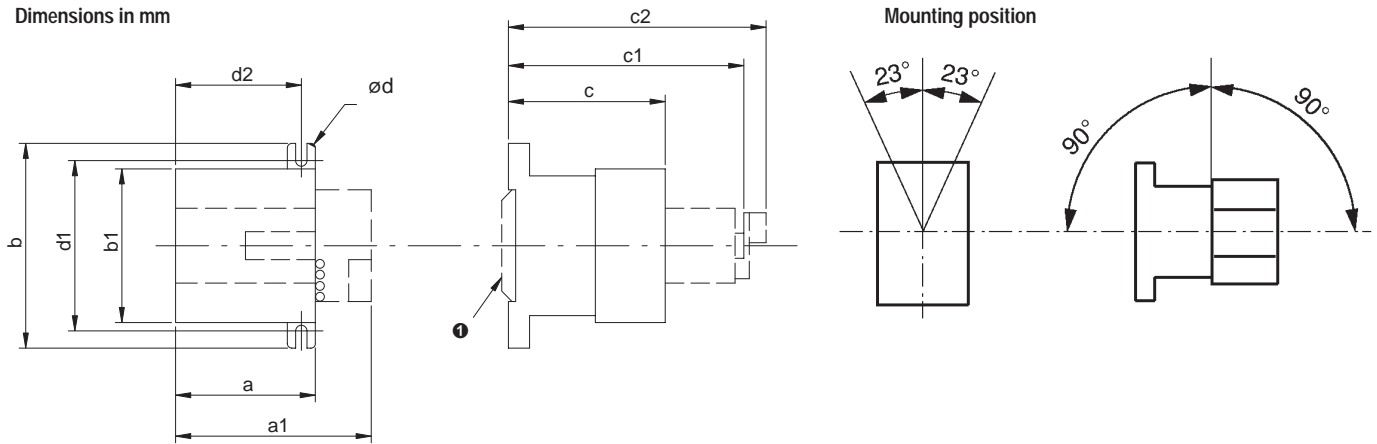
	700-M / CS 4			700-CF	
	700-M / CS 4	700-MB / CS 4-B	Accessories	700-CF	Accessories
Rated voltage withstand U					
IEC, AS, BS, SEV, VDE 0660	500 V			690 V	
acc. to UL, NEMA, CSA, EEMAC	600 V			690 V	
1 Minute acc. to IEC 947-4 (IEC 158-1)	2 500 V			2 500 V	
Rated impulse withstand voltage U_{imp}					
Pollution degree, Resistance to shock	8 kV			8 kV	
Rated Voltage U_e					
AC	230, 240, 400, 415, 500 V		-	115, 230, 400, 500, 690 V	
DC	24, 48, 110, 220, 440 V		-	24, 48, 110, 220, 440 V	
Rated frequency of the coil	50/60 Hz, DC			50/60 Hz, DC	
Ambient temperature					
Storage	-55 ...+80 °C (-67 ...+176 °F)			-55 ...+80 °C (-67 ...+176 °F)	
Operation at rated current	-50 ...+60 °C (-67 ...+140 °F)			-25 ...+60 °C (-13 ...+140 °F)	
at >70 °C	15% current reduction against 60 °C values			15% current reduction against 60 °C values	
Climatic withstand	IEC 68-2			IEC 68-2	
Site altitude	2000 m NN, according to IEC 947-4			2000 m NN, according to IEC 947-4	
Protection class	IP2LX			IP2LX in connect state	
Protection against accidental contact	Finger and back-of-hand-proof according to VDE 0106, Teil 100			Finger and back-of-hand-proof according to VDE 0106, Teil 100	
Weight					
AC control [g]	153		-	390	-
DC control [g]	153		-	600	-
Standards	IEC 947; BS 5424, 4794; VDE 06060; CEE 24; CEI 17-3, 17-7; UL 508; CSA C22.2 No. 14; SEV 1025; UTE NF C63-110, EN 60947.			IEC 947-1/4; VDE 06060, Part 100/104; UL 508; CSA C22.2 Part 14;	
Approvals	CE, KEMA, SEV, SUVA, CSA, UL-listed, Elektrizitäts-Inspektorat Finnland, CEBEC, DEMKO, NEMKO, SEMKO, RINA, Germanischer Lloyd, Lloyd's Reg. of Shipping, Bureau Veritas, Maritime Reg. of Shipping.			CE; UL; CSA	

Control Relays

Dimensions

Bulletin 700-M / CS 4

Dimensions in mm



Type	a	a1	b	b1	c	c1	c2	ød	d1	d2	
700-M / CS 4	45	67	56	47	48	74	77	4	50	40	❶

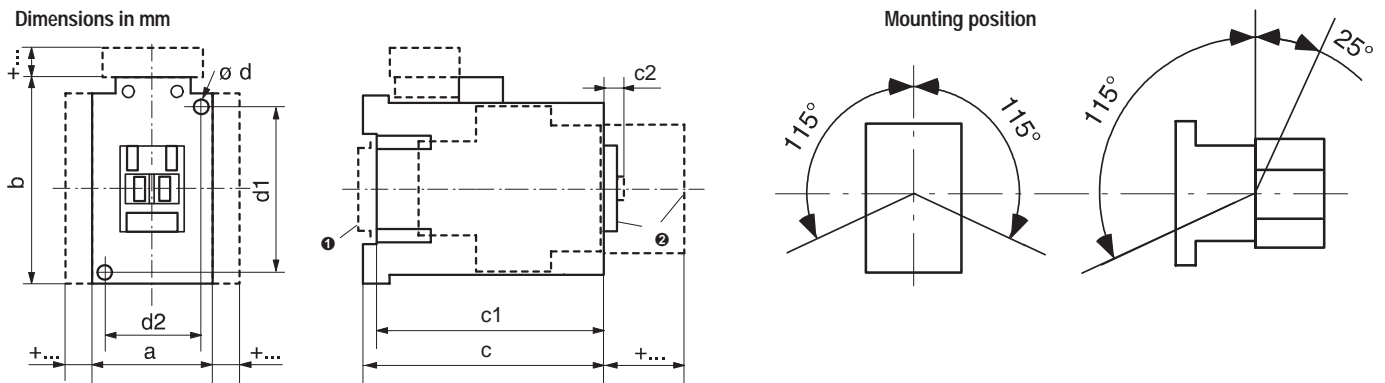
Control Relays with	[mm]
Mechanical Latch	a+a
Auxiliary contact block	c1
Timing element	on front of control Relays on side of control Relays
	c2 a1

Control Relays with	[mm]
Neutral link	on side of control relays a+20
Surge suppressor	c2
Marking tag carrier	c..+5

❶ May be mounted on 35 mm EN 50 022 top-hat rail
(Combined top-hat/C rail fitting is not available in conjunction with a mechanical latch or mechanical interlock).

Bulletin 700-CF

Dimensions in mm



Type	a	b	c	c1	c2	ød	d1	d2	
700-CF	45	81	80.5	75.5	6	2 St. à 4.5	60	35	❶

Control relays with	[mm]
Auxiliary contact block for front mounting	2 or 4-pole c/c1 + 39
Auxiliary contact block for side mounting	1 or 2-pole a + 9
Pneumatic timing modules	c/c1 + 58
Electronic timing modules	on coil terminal side b + 24
Mechanical interlock	on side of contactor a + 9
Mechanical latch	c/c1 + 61

Control relays with	[mm]
Interface	on coil terminal side b + 9
Protective element	b + 3
❷ Labeling with	Label sheet marking tag sheet with cover marking tag carrier for System V4 / V5 marking tag carrier for System Bul. 1492W
	+ 0 + 0 + 5.5 + 5.5

❶ May be mounted to 35 mm EN 50 022 top-hat rail