

Technical Information

Rated Insulation Voltage U_i		Corrosion Resistance	
IEC	690V	humid-alternating climate, cyclic, per IEC 68-2-30 and DIN 50 016, 56 cycles	
UL; CSA	600V		
Rated Impulse Strength U_{imp}		Altitude	
	6 kV	2000m above main sea level, per IEC 947-4	
High Test Voltage		Type of Protection	
1 minute (per IEC 947-4)	2500V	IP 2X (IEC 60529 and DIN 40050)	
Rated Voltage U_e		Finger Protection	
AC	115, 230, 400, 500, 690V	safe from touch by fingers and back of hand per VDE 0106, Part 100	
DC	24, 48, 110, 220, 440V		
Rated Frequency		Shock Protection	
	50/60 Hz, DC	IEC 68-2: Half Sinusoidal shock 11ms	
Ambient Temperature		30G (in 3 directions)	
Storage	-55...+80°C (-67...176°F)	Vibration Resistance	
Operation at nominal current	-25...+60°C (-13...140°F)	IEC 68-2: static >2G in normal position	
Conditioned 15% current reduction after AC-1 at > 60°C	-25...+70°C (-13...158°F)	no malfunction <5G	

Coil Data - AC Control Circuit

Operating Voltage Range	Pickup	[x U_s]	0.85...1.1
	Dropout	[x U_s]	0.3...0.6
Coil Consumption	Inrush	[VA]	75
	Seal	[VA/W]	9.5/2.7
Operating Times	Pickup Time	[ms]	15...30
	Dropout Time	[ms]	10...60

Latch Attachment Release, CV7-11

Coil Consumption	AC	[VA/W]	45 /40
	DC	[W]	25

Contact Signal Duration	[min/max]	0.03...15s
--------------------------------	-----------	------------

Timing Attachment, CRZE7, CRZA7

Reset Time	at min. time setting	[ms]	10
	at max. time setting	[ms]	70
	Repeat Accuracy		± 10%

Coil Data - Electronic DC

Voltage Range			Coil Consumption & Operating Times ③				
Voltage Code	Nominal Voltage US [V DC]	Ratings [x U_s]	Average/Peak Pickup [W]	Hold-in [W]	Dropout Voltage [x U_s]	Pickup [ms]	Dropout [ms]
12E	12	0.7...1.25	10/17	1.7	0.3...0.4	20...50	20...50
24E	24	0.7...1.25	10/17	1.7			
36E	36...48	0.7...1.25	10/17	1.7...1.9			
48E	48...72	0.8...1.25	10/17	1.7...1.9	0.3...0.4	20...50	23...33
110E	110...125	0.7...1.12④	12/19	2.0...2.1			
220E	220...250	0.8...1.1	14/22	2.7...3.0			

Control Relays Maximum Auxiliary Contacts

CS7 (AC and DC electronic coils, vertical mounting, 60° C)	CS7(E)-40E	CS7(E)-31E	CS7(E)-22E	CS7(E)-04E
Maximum N.O. Side Auxiliaries	2	2	4	2
Maximum N.C. Side Auxiliaries	4	4 ①	4 ①	2
Maximum N.O. Front Auxiliaries	4	4	4	4
Maximum N.C. Front Auxiliaries	4	4 ②	2	0
Maximum N.O. Front + Side Auxiliaries	6	6	8	6
Maximum N.C. Front + Side Auxiliaries	7	5	5	2
Maximum N.O. + N.C. Front + Side Auxiliaries	8	8	8	6

- ① With no front auxiliary contacts installed. Otherwise 3 N.C. maximum.
- ② With no side mount auxiliary contacts installed. Otherwise 3 N.C. maximum.
- ③ The hold-in demand of the CS7E is very low but the pick-up demand is approximately 1 ampere at 24 VDC. When sizing (dimensioning) a power supply for applications involving parallel switched contactors then multiply the peak demand by the number of contactors to be simultaneously switched and add to the hold-in demand of all other control circuit burdens, including other contactors, pilot devices, solenoids, etc.
- ④ At 110VDC, coil code 110E has an operating range of 0.7...1.25 x U_s