

700S-EF Control Relays

The 700S-EF Safety Control Relay provides mechanically or mirror contact performance, which are required in feedback circuits for safety applications.

- IEC industrial safety relay
- Electronic coils
- Mechanically linked contacts as per IEC 60947-5-1
- Red cover and mechanically linked contact symbol on front face
- Permanently fixed front mounted auxiliary contact block



AC-12		AC-15						Connection Diagrams		Contacts		Standard Contacts Cat. No.
I_{th} [A]		I_e [A]										
								Main Contacts		Auxiliary Contacts		
	40 °C	24/48V	120V	240V	400V	500V	690V					
Main Contacts	16	6	6	4	3	2	2			4	4	700S-EF440⊗C
										5	3	700S-EF530⊗C
Adder Deck Contacts	16	6	6	4	3	2	2			6	2	700S-EF620⊗C

⊗ Voltage Codes

The catalog number listed is incomplete. Select a coil voltage from the table below to complete the catalog number. Example 700-EF220KJ.

Voltage ⁽¹⁾	12...20V DC	24V DC	24...60V AC 20...60V DC	48...130V AC/DC	100...250V AC/DC	250...500V AC/DC
Standard AC/DC	—	—	KJ	KY	KD	KN
Low Consumption AC/DC	EQ	—	EJ	—	—	—
Low Consumption/Faster Drop-out DC	—	QJ	—	—	—	—

(1) AC Voltages are a 50/60 Hz.

Accessories

Additional Coil Terminal Block

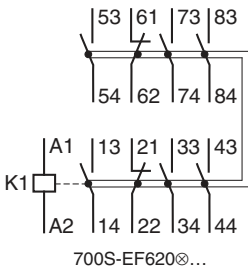
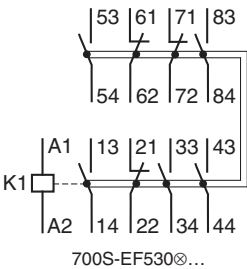
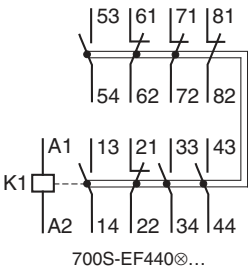
	Description	For Use With	Pkg. Qty.	Cat. No.
	Additional Coil Terminal Block • Allows bottom access to the coil terminals in addition to top access	700-EF	10	100-ECT

Functional Markers

	Description	For Use With	Pkg. Qty.	Cat. No.
	Functional Markers • 256 markers (16 per card) printable on HTP500 thermal transfer printer and AMS 500 marking table • 7 x 20 mm (0.276 x 0.787 in)	700-EF	16	100-EFMS

Assignment of Contacts

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



Specifications - 700S-EF Relays

See [General Specifications - 700-EF Relays on page 223](#) for additional specifications.

			Cat. No. 700S-EF	Aux. Contact (Front-mounted)
Mechanical Life		[Mil]	20	20
Electrical Life	AC-15 (240V, 3 A)	[Mil]	1.5	1.5
Standards Compliance			UL 508, CSA C22.2 No. 14, EN/IEC 60947-1, -5-1, Meets the material restrictions for European Directive 2002/95/EC - EU-RoHS	
Certifications			cULus Listed , CE Marked, CCC Certified	

Conductors

Cross Sections, Screw Type Terminals

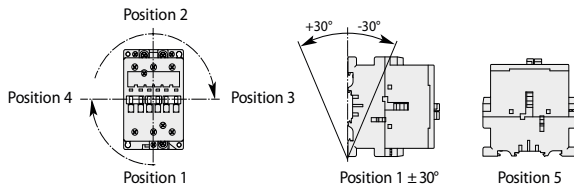
700-EF/ 700S-EF			
Conductor Cross Sections—Main Contacts Terminal Type			(1)
	1 conductor	[mm ²]	0.75...6
	2 conductors	[mm ²]	0.75...6
	1 conductor	[mm ²]	1...6
	2 conductors	[mm ²]	1...6
Recommended torque		[N•m]	1.5
Cross Section per UL/CSA		[AWG]	16...10
Recommended torque		[lb•in]	13
Conductor Cross Sections- Coil and Auxiliary Contact Terminal Type			(1)
	1 conductor	[mm ²]	0.75...2.5
	2 conductors	[mm ²]	0.75...2.5
	1 conductor	[mm ²]	1...2.5
	2 conductors	[mm ²]	1...2.5
Recommended torque		[N•m]	1.2
Cross Section per UL/CSA		[AWG]	18...14
Recommended torque		[lb•in]	11

(1) Pozidriv No. 2 / Blade No. 3 screw.

Approximate Dimensions

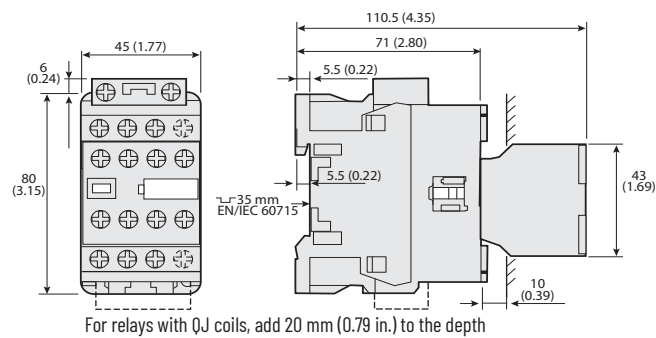
Dimensions are shown in millimeters (inches). Dimensions are not intended for manufacturing purposes.

Mounting Position for 700S-EF Relays

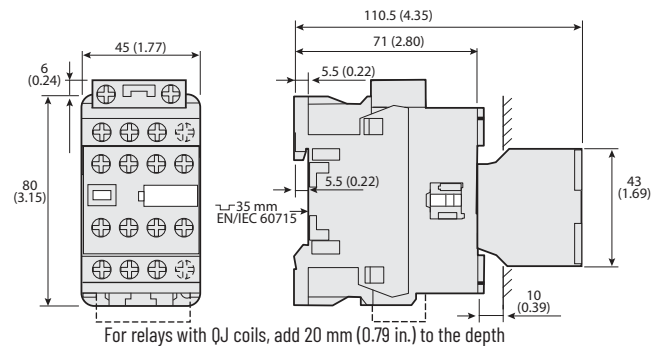


700S-EF Relays

700S-EF Relays with Standard Coils and Front-mounted Auxiliary Contact

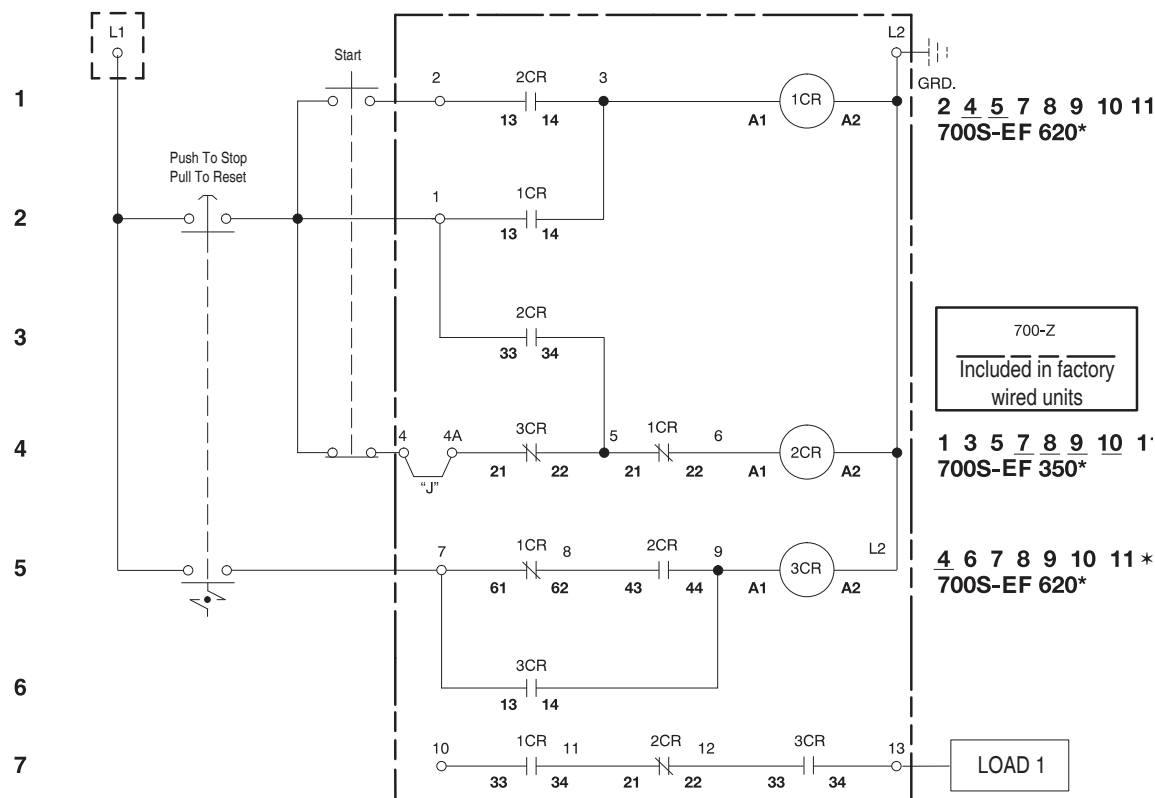


700S-EF Relays with Low-consumption Coils and Front-mounted Auxiliary Contact



Safety Relay Circuit With 5 Safety Outputs

- Use for E-stop control. E-stop will work properly if any one fault occurs (a fault could be one welded contact or one undesired open connection such as a loose wire).
- High output switching capability and long contact life.
- Circuit complies with EN 954 categories 1, 2, 3, 4.
- Helps prevent restart of the 5 safety outputs if there is a single fault anywhere in the system.
- Use (3) 700S-EF relays and this diagram to construct the circuit



(5) Output Circuit (3 Relays, 17 Terminal Blocks)

