

Assignment of Contacts

Device Combinations in Accordance with IEC 60947-1 / -4-1

Table valid for : AC / DC = 0.85...1.1 x U_s , $T_{amb.} = -25\text{ }^{\circ}\text{C} \dots +60\text{ }^{\circ}\text{C}$, normal position (horizontal rail mounting). Also valid for Bulletin 700-KR relays and Bulletin 100-KR auxiliary contacts. ★

Auxiliary Contact Blocks		Control Relays 700-K (AC and DC Control)				
	Circuit Diagram	Control	700-K22Z-⊗	700-K31Z-⊗	700-K40E-⊗	700-KL22Z-⊗
Front Mounting						
100-KFA02E		AC/DC	—	31Z + 02E = 33Y ‡	40E + 02E = 42Y	—
100-KFA11E		AC/DC	22Z + 11E = 33Y	31Z + 11E = 42Y	40E + 11E = 51Y	L22Z + 11E = L33Y
100-KFA20E		AC/DC	22Z + 20E = 42Y	31Z + 20E = 51Y	40E + 20E = 60Y	L22Z + 20E = L42Y
100-KFA04E		AC/DC	—	—	40E + 04E = 44Y ‡	—
100-KFA13E		AC/DC	—	31Z + 13E = 44Y ‡	40E + 13E = 53Y	—
100-KFA22Z		AC/DC	—	31Z + 22Z = 53Y ‡	40E + 22Z = 62Y	—
100-KFA31Z		AC/DC	—	—	40E + 31Z = 71Y §	—
100-KFA40E		AC/DC	22Z + 40E = 62Y	31Z + 40E = 71Y	40E + 40E = 80Y	L22Z + 40E = L62Y

★ For other operating limits, please contact our technical consultant.

‡ $T_{amb.}$ max. +40 °C

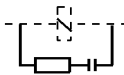
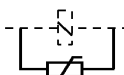
§ $T_{amb.}$ max. +40 °C and only allowed for coil voltage 24V DC or 230V AC

Auxiliary Contact Blocks

	Description	Connection Diagrams	N.O.	N.C.	For Use With	Pkg. Qty. ★	Screw Type Terminals	Spring Clamp Terminals
							Cat. No.	Cat. No.
			0	2	100/104-K, 700-K	1	100-KFA02E	100-KRFA02E
			1	1	100/104-K, 700-K	1	100-KFA11E	100-KRFA11E
			2	0	100/104-K, 700-K	1	100-KFA20E	100-KRFA20E
	Front-mounted auxiliary contacts - Auxiliary Contact Blocks 2- and 4-pole versions - Choice of contact configurations - Snap on, no tools required - Electronic-compatible bifurcated contacts for signals down to 15V/2 mA		0	4	100/104-K, 700-K	1	100-KFA04E	100-KRFA04E
			1	3	100/104-K, 700-K	1	100-KFA13E	100-KRFA13E
			2	2	100/104-K, 700-K	1	100-KFA22Z	100-KRFA22Z
			3	1	100/104-K, 700-K	1	100-KFA31Z	100-KRFA31Z
			4	0	100/104-K, 700-K	1	100-KFA40E	100-KRFA40E

★ May be ordered in package quantities of 10. Add letter **M** to the end of the cat. no. Example: **100-KFA02EM**.

Control Modules

	Description			Connection Diagrams	For Use With	Pkg. Qty.	Cat. No.
	Mechanical Interlock - For interlocking of two adjacent contactors - No added width to contactor assembly - Front mount plug-in type - Optional auxiliary contact blocks and suppressor modules mount onto the interlock				100/104-K/-KR, 700-K/-KR	1	100-KMCH
	Surge Suppressor - Plug-in type - Limits surge voltage on coil drop-off	RC Suppressor	24...48V AC		100/104-K/-KR, 700-K/-KR	1 ★	100-KFSC50
			110...280V AC			1 ★	100-KFSC280
			380...480V AC			1 ★	100-KFSC480
		MOV Suppressor	12...55V AC, 12...77V DC		100/104-K/-KR, 700-K/-KR	1 ★	100-KFSV55
			56...136V AC, 78...180V DC			1 ★	100-KFSV136
			137...277V AC, 181...250V DC			1 ★	100-KFSV277
		Diode Suppressor	12...250V DC		100/104-K/-KR, 700-K/-KR	1 ★	100-KFSD250

★ May be ordered in package quantities of 10. Add letter **M** to the end of the cat. no. Example: **100-KFSC50M**.

IEC Specifications

			700-K	700-KR
AC-12 Rated Thermal Current				
Ambient temperature 40°C				
I_{th}	24...240V	[A]	10	
	230...500V	[A]	10	
	230...690V	[A]	10	
Ambient temperature 60°C				
I_{th}	24...240V	[A]	6	
	230...500V	[A]	6	
	230...690V	[A]	6	
AC-15/B600				
Switching of Solenoids and contactors				
I_e	24V	[A]	3	
	48V	[A]	3	
	120V	[A]	3	
	230V	[A]	2	
	240V	[A]	2	
	400V	[A]	1.2	
	480V	[A]	1	
	500V	[A]	1	
	600V	[A]	0.6	
	690V	[A]	0.6	
Short-circuit Protection				
"gG" Fuse acc. to IEC 60947-5-1, no welding of contacts				
	Fuse gG	[A]	10	
Min. Switching Capacity 15V				
For bifurcated contacts (control relays and auxiliary contact blocks)				
		[mA]	2	
Resistance and Power Dissipation				
Main current circuit resistance, 1 pole		[mΩ]	6.5	
Power dissipation, 4 poles		[W]	2.6	
Total power dissipation				
	AC control, warm	[W]	4.4	
	DC control, warm	[W]	5.2	
Lifespan				
Mechanical		[Mio. op.]	15	
Electrical AC-15 (240V / 2 A)		[Mio. op.]	0.7	
Weight				
	AC control	kg (lbs.)	0.16 (0.35)	
	DC control	kg (lbs.)	0.2 (0.44)	
Load Carrying Capacity per UL/CSA				
Rated voltage	AC	[V]	max. 600	
Continuous rating	40 °C	[A]	10	6
Switching capacity	AC	[A]	B 600	
Rated voltage	DC	[V]	max. 600	
Switching capacity	DC	[A]	Q 600	

			700-K
DC-13/Q600			
1 pole	24V	[A]	2.3
	48V	[A]	1
	110V	[A]	0.55
	125V	[A]	0.55
	220V	[A]	0.27
	250V	[A]	0.27
	400V	[A]	0.15
	440V	[A]	0.15
	600V	[A]	0.1

Cross Sections

Conductor Cross Sections - Main Contacts, Auxiliary Contacts, and Coil Terminals				700-K	700-KR
Terminal type				★ 	
	Fine stranded with ferrule	(1) Conductor (2) Conductors	[mm ²] [mm ²]	0.75...2.5 0.75...2.5	0.50...2.5 0.50...2.5
	Solid or coarse stranded	(1) Conductor (2) Conductors	[mm ²] [mm ²]	1...4 1...2.5 + 1...4	0.75...2.5 ★ 0.75...2.5 ★
Recommended torque				[Nm]	—
Cross section per UL/CSA				[AWG]	18...14 ★
Recommended torque				[lb-in]	—

★ Pozidriv No. 2 / Blade No. 3 screw

‡ Use same cross sections

★ Stranded wire only

Coil Data

			700-K
Operating Limits			
AC control 50 Hz, 60 Hz, 50/60 Hz	pick-up	$[x U_s]$	0.85...1.1
	dropout	$[x U_s]$	0.2...0.75
DC control	pick-up	$[x U_s]$	0.8...1.1 9, 12, 24, 110V DC: 0.7...1.25
	dropout	$[x U_s]$	0.1...0.75
Coil Consumption			
AC control 50 Hz, 60 Hz, 50/60 Hz	pick-up	[VA/W]	35/32
	hold-in	[VA/W]	5/1.8
DC control	pick-up	[W]	cold 3.0, warm 2.6
	hold-in	[W]	cold 3.0, warm 2.6
Operating Times			
AC	closing delay	[ms]	15...40
	opening delay	[ms]	15...33
With RC module	opening delay	[ms]	15...28
DC	closing delay	[ms]	18...40
	opening delay	[ms]	6...12
With integrated diode	opening delay	[ms]	8...12
With external diode	opening delay	[ms]	35...50

Approximate Dimensions

Approximate Dimensions are shown in millimeters. Approximate Dimensions are not intended for manufacturing purposes.

