

TeSys® D IEC Style Relays

These 600 volt relays are approved for use around the world. TeSys D relays are usually mounted on 35 mm DIN 3 track, but can also be mounted directly to a panel. The fixed contacts in these relays have a NEMA A600 and Q600 ratings, in addition to the standard IEC ratings, making them suitable for use in most any control circuit. Low consumption versions of this relay are available for use with low level DC signals from a computer or a PLC. Adder decks can be added to a basic five pole relay to make it up to an 11 pole relay. The serrated silver-nickel contacts with wiping action provide excellent reliability in 12 or 24 volt control circuits. Special auxiliary contacts are available for switching low power down to 5 volts at 10 mA. Timer and mechanical latch attachments are available.



CAD32



CAD503



CAD323

Table 23.66: Instantaneous Control Relays

Terminal Type	Number of Contacts	Contact Composition		Catalog Number	\$ Price	
		Normally Open	Normally Closed		AC Coil	DC or Low Consumption Coil
Screw Clamp	5	5	0	CAD50▲	62.00	110.00
		3	2	CAD32▲	62.00	110.00
Spring Terminal	5	5	0	CAD503▲	62.00	110.00
		3	2	CAD323▲	62.00	110.00
Ring Tongue	5	5	0	CAD506▲	62.00	110.00
		3	2	CAD326▲	62.00	110.00

▲ Add the proper voltage code from Table 23.69 to the end of catalog number (for example, CAD50B7).

Table 23.67: Instantaneous Auxiliary Contact Blocks (for use in normal operation environments)

Number of Contacts	Maximum Number per Device Clip-on Mounting		Termination Type	Contact Composition		Catalog Number	\$ Price
	Front	Left Side Only		Normally Open	Normally Closed		
2	1	—	Screw Clamp	2	0	LADN20	20.70
				1	1	LADN11	20.70
				0	2	LADN02	20.70
	—	1 Not for DC devices	Screw Clamp	2	0	LADN203	20.70
				1	1	LADN113	20.70
				0	2	LADN023	20.70
4	1	—	Screw Clamp	2	0	LAD8N20	20.70
				1	1	LAD8N11	20.70
				0	2	LAD8N02	20.70
			Spring Terminal	4	0	LADN40	41.50
				3	1	LADN31	41.50
				2	2	LADN22	41.50
	—	—	Spring Terminal	1	3	LADN13	41.50
				0	4	LADN04	41.50
				4	0	LADN403	41.50
			3	1	LADN313	41.50	
			2	2	LADN223	41.50	
			1	3	LADN133	41.50	
4	1	—	Screw Clamp	2 ♦	2 ♦	LADC22	41.50
			Spring Terminal	2 ♦	2 ♦	LADC223	41.50

■ Auxiliary contact blocks with four contacts cannot be used on relays with low consumption coils.

♦ Includes 1 N.O. and 1 N.C. overlapping contact.

Table 23.68: Instantaneous Auxiliary Contacts with Dust and Damp Protected Contacts (for use in particularly harsh industrial environments)

Number of Contacts	Maximum Number per Device	Contact Composition					Catalog Number	\$ Price
		Sealed	★	Normal	Sealed	Normal		
2	1	2	—	—	—	—	LA1DX20	65.00
		—	2	—	—	—	LA1DX02	65.00
		2	—	2	—	—	LA1DY20	77.00
4	1	2	—	—	2	—	LA1DZ40	82.00
		2	—	—	1	1	LA1DZ31	82.00

★ Grounding terminal points (2 terminals jumpered together; see diagram on page 8 of Catalog 8501CT0101).

▼ Auxiliary contact blocks with four contacts cannot be used on relays with low consumption coils.

Table 23.69: Coil Voltage Codes Δ

AC 50/60 Hz Coil (for additional voltage code options see page 7 of Catalog 8501CT0101).											
Volts	12	24	48	120	208	240	277	480	600		
Code	J7	B7	E7	G7	LE7	U7	W7	T7	X7		
DC Coil (coils have built in suppression as standard)											
Volts	12	24	36	48	60	72	110	125	220	250	440
Code	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD
DC Low Consumption Coil (coils have built in suppression as standard)											
Volts	5	12	24	48	72						
Code	AL	JL	BL	EL	SL						

Δ Add the proper voltage code to the end of catalog number.

For replacement AC coils, see page 18-16. DC coils are not replaceable.

Approvals:



File E164353
CCN NKCR

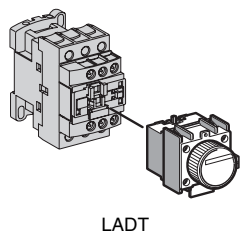


File LR43364
Class 3211 03



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Table 23.70: Time Delay Auxiliary Contact Blocks



Number and Type of Contacts	Maximum Number per Device	Time Delay Type	Termination Type	Range	Catalog Number	\$ Price
	Front Mounting					
1 N.C. and 1 N.O.	1	On-Delay	Screw Clamp	0.1–3 s ▲	LADT0	131.00
				0.1–30 s	LADT2	131.00
				10–180 s	LADT4	131.00
				1–30 s ■	LADS2	131.00
		Off-Delay	Spring Terminal	0.1–3 s ▲	LADT03	131.00
				0.1–30 s	LADT23	131.00
				10–180 s	LADT43	131.00
				1–30 s ■	LADS23	131.00
Off-Delay	Screw Clamp	0.1–3 s ▲	LADR0	131.00		
		0.1–30 s	LADR2	131.00		
		10–180 s	LADR4	131.00		
		0.1–3 s ▲	LADR03	131.00		
(Lockout Cover, See page 7 of Catalog 8501CT0101.)				0.1–30 s	LADR23	131.00
				10–180 s	LADR43	131.00

- ▲ With extended scale from 0.1 to 0.6 s.
- With switching time of 40 ms ± 15 ms between opening of the N.C. contact and closing of the N.O. contact.

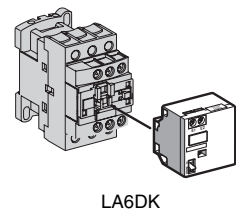


Table 23.71: Mechanical Latch Blocks ♦

Unlatching Control	Maximum Number per Device	Catalog Number	\$ Price
	Front mounting		
Manual or electrical	1	LA6DK10 ▼★ LAD6K10 ▼	77.00 77.00

- ♦ Power should not be simultaneously applied or maintained to the mechanical latching block and the CAD relay. The duration of the control signal to the mechanical latching block and the CAD relay should be ≤ 100 ms.
- ★ Repair part for the preceding version (non-TeSys) of this product. Not for use on CAD devices.
- ▼ Complete the catalog number by adding coil voltage code from Table 23.73. (for example, LA6DK10B)

Table 23.72: Coil Suppressor Modules

These modules clip onto the right hand side of the control relay and the electrical connection is instantly made. Adding an input module is still possible.

RC Circuits (Resistor-Capacitor)

- Effective protection for circuits highly sensitive to “high frequency” interference.
- Voltage limited to 3 Uc maximum and oscillating frequency limited to 400 Hz maximum.
- Slight increase in drop-out time (1.2 to 2 times the normal time).

For Mounting On:	Operational Voltage	Catalog Number	\$ Price
CAD (Vac)	24 to 48 Vac	LAD4RCE	26.20
	110 to 240 Vac	LAD4RCU	26.20

Varistors (Peak Limiting)

- Protection provided by limiting the transient voltage value to 2 Uc maximum.
- Maximum reduction of transient voltage peaks.
- Slight increase in drop-out time (1.1 to 1.5 times the normal time).

CAD (Vac)	Operational Voltage	Catalog Number	\$ Price
CAD (Vac)	24 to 48 Vac	LAD4VE	26.20
	50 to 127 Vac	LAD4VG	26.20
	110 to 250 Vac	LAD4VU	26.20

Bidirectional Peak Limiting Diode

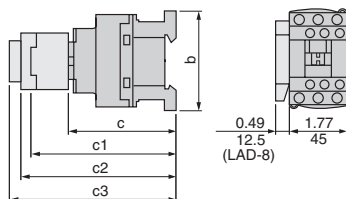
- Protection provided by limiting the transient voltage value to 2 Uc maximum.
- Maximum reduction of transient voltage peaks.

CAD (Vac)	Operational Voltage	Catalog Number	\$ Price
CAD (Vac)	24 Vac	LAD4TB	26.20
	72 Vac	LAD4TS	26.20

Table 23.73: Coil Voltage Codes

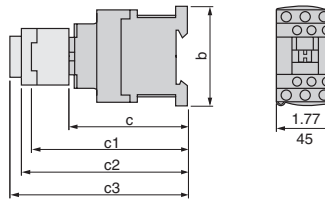
Voltage	24 Vac/Vdc	32/36 Vac/Vdc	42/48 Vac/Vdc	60/72 Vac/Vdc	100 Vac/Vdc	110/127 Vac/Vdc	220/240 Vac/Vdc	256/277 Vac/Vdc	380/415 Vac/Vdc
Voltage Code	B	C	E	EN	K	F	M	U	Q

CAD (Vac Coil)



	in. (mm)	
CAD	32 50	323 503
b	3.03 (77)	3.90 (99)
c	Without cover or add-on blocks	3.31 (84)
	With cover, without add-on blocks	3.39 (86)

CAD (Vdc Coil) or (Low Consumption Vdc Coil)



	in. (mm)	
CAD	32 50	323 503
b	3.03 (77)	3.90 (99)
c	Without cover or add-on blocks	3.66 (93)
	With cover, without add-on blocks	3.74 (95)

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Table 23.74: Cabling Accessory

Description		Catalog Number	\$ Price	
Mounting Adapter For adapting existing wiring to a new product	Without coil suppression	LAD4BB	23.00	
	With coil suppression	24 to 48 Vac	LAD4BBVE	23.00
		50 to 127 Vac	LAD4BBVG	23.00
		110 to 250 Vac	LAD4BBVU	23.00

Table 23.75: Electronic Serial Timer Modules ▲

- Mounted using adaptor LAD4BB, to be ordered separately, see listing above.

On-delay Type			
Operational Voltage	Time Delay	Catalog Number	\$ Price
24 to 250 Vac	0.1 to 2 s	LA4DT0U	82.00
	1.5 to 30 s	LA4DT2U	82.00
	25 to 500 s	LA4DT4U	82.00

- ▲ For 24 V operation, the relay must be fitted with a 21 V coil (code Z7).

Table 23.76: Auto-Man-Stop Control Modules

For local override operation tests with two-position "Auto-Man" switch and "O-I" switch

- Mounted using adaptor LAD4BB, to be ordered separately, see listing above.

Operational Voltage	Catalog Number	\$ Price
24 to 100 Vac	LA4DMK	35.00

Table 23.77: Accessories (ordered separately)

For Connection				
Description	For Mounting On:	Must be Ordered in Multiples of:	Catalog Number	\$ Price ea.
For Marking				
Sheet of 64 self-adhesive blank labels 8 x 33	CAD, LAD (4 contacts), LA6DK	10	LAD21	5.20
Sheet of 112 self-adhesive blank labels 8 x 12	LAD (2 contacts), LADT	10	LAD22	5.20
For Protection				
Lockout cover	LADT, LADR	1	LA9D901	5.50
Relay cover preventing access to the moving contact carrier	CAD	1	LAD9ET1	5.20

Table 23.78: Application Data

Type	CAD (Vac)	CAD (Vdc)	CAD (Vdc) Low Consumption
Rated Insulation Voltage (Ui)	Conforming to IEC 60947-1-1 Overvoltage category III and degree of pollution 3	690 V	690 V
	Conforming to UL, CSA	600 V	600 V
Rated Impulse Withstand Voltage (Uimp)	Conforming to IEC 60947-1-1	6 kV	6 kV
Separation of Electrical Circuits	To IEC 536 and VDE 0106	Reinforced insulation up to 400 V	
Conforming to Standards		IEC 60947-1-1, N-F C 63-140, VDE 0660, BS 4794. EN 60947-5-15	
Approvals		UL: File: E164353 CSA: File: LR43364 CE	CCN: NKCR Class: 3211 03
Protective Treatment	Conforming to IEC 68	"TH" (Tropical Finish). See page 23 of Catalog 8501CT0101 for details.	
Degree of Protection	Conforming to VDE 0106	Front face protected against direct finger contact IP 2X	Protection against direct finger contact

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Table 23.89: IEC Style Industrial Control Relays

- Miniature size saves space.
- Mounts on 35 mm DIN 3 track
- Up to 4 poles.

Control Circuit Supply	Consumption	Type of Termination	Contact Configuration		Catalog Number	\$ Price
			N.O.	N.C.		
AC	4.2 VA	Screw clamp	1	1	CA2SK11**▲	43.70
			2	0	CA2SK20**▲	
DC	2.2 W		1	1	CA3SK11**▲	51.00
			2	0	CA3SK20**▲	

▲ Use the appropriate voltage code to complete the catalog number (for example: CA2SK11G7)



CA2SK11G7

Table 23.90: Contact Adder Decks (for CA2SK20 only)

Type of Termination	Contact Configuration		Catalog Number	\$ Price
	N.O.	N.C.		
Screw clamp	2	0	LA1SK20	16.90
	1	1	LA1SK11	
	0	2	LA1SK02	



LA1SK11

Transient Suppressor Module

Dampens the voltage spike that may occur when the relay coil is de-energized. The spike may adversely affect solid state equipment near the relay. The transient suppressor module snaps into a cavity located in the side of the relay. These modules can be used with CA2SK and CA3SK relays.

Table 23.91: Transient Suppressor Module

Control Circuit Voltage	Catalog Number	\$ Price
24–48 Vac 50/60 Hz, 24–48 Vdc	LA4SKEIE	21.80
110–250 Vac 50/60 Hz, 110–250 Vdc	LA4SKEIU	

Table 23.92: Coil Voltage Codes for Control Relays

Voltage	12	24	36	48	72	110	120	220	230	240	380	400	480
50/60 Hz	—	B7 ■	—	E7 ■	—	F7	G7 ■	M7 ■	P7	U7 ■	Q7	V7	T7 ■
DC	JD	BD	CD	ED	SD	—	—	—	—	—	—	—	—

■ Alternating relays CA2SKE available in these voltages only. No other voltages are available.

Alternating Relays, CA2SKE

Refer to Catalog 8501CT9701

These alternating relays are used to alternate the use of 2 motor circuits. When the coil is energized the first time, one contact closes and will open when the coil is de-energized. When the coil is energized again, the other contact will close and will open when the coil is de-energized. The contacts from these alternators are to be used in the control circuit of the starters that are controlling pump or compressor motors.

Approvals: UL File: E164353 CCN: NKCR; CSA File: LR43364 Class: 3211 03.

Table 23.93: Alternating Relays

Coil Voltage (Voltage-Hz)	Type	\$ Price
24–50/60	CA2SKE20**▲	120.00

▲ Use the appropriate voltage code to complete the catalog number (for example, CAZSK11G7). Only available with voltages indicated above.

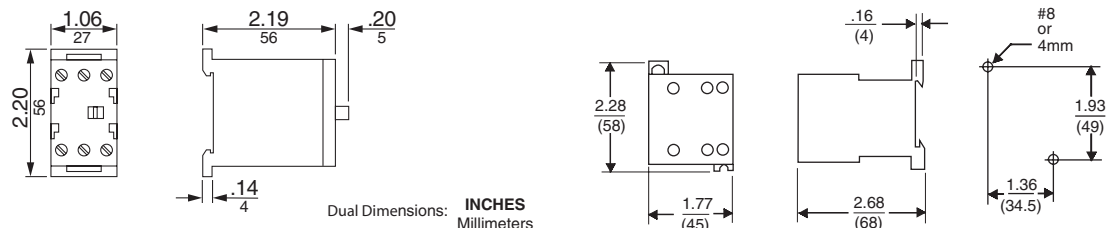


CA2SKE20

Table 23.94: Contact Ratings for CA2SK, CA3SK, AND CA2SKE20 Relays

Volts	AC						DC		
	NEMA Rating	Inductive 35% PF				Continuous Amperes	Resistive 75% PF		
		Make		Break			Make, Break and Continuous Amperes	Volts	Continuous Amperes
120	A600	60	7200	6	720	10		10	24
240		30		3			60		2
480		15		1.5			110		0.8
600		12		1.2			240		0.2

Approximate Dimensions for CA2SKE Relay



Approvals:



File E164353
CCN NKCR



File LR43364
Class 3211 03

