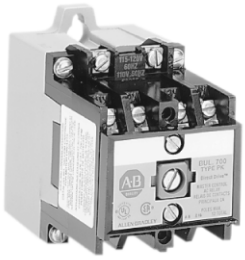
Cat. No. 700-P400A1

Cat. No. 700DC-P200



Cat. No. 700-PK400A1

Cat. No. 700-PH200

Bulletin 700

Direct Drive™ Convertible Contact Cartridge Relays

- NEMA and IEC Ratings
- 600V Maximum AC/DC
- Contact Ratings:
  - 10 A 700-CP1-and 700-CPS
  - 20 A 700-CPM
  - 35 A 700-CPH
  - Low Power 700-CPR
- Easy Accessory Additions:
  - Adder Decks
  - Time Delay
  - Latching
  - Surge Suppressors
  - Mounting Strip
- For Machine Tool and Other Heavy Duty Applications
- Can Accommodate Ring Tongue Terminals
- Expands Safety Relay Outputs

TABLE OF CONTENTS

Description

The Bulletin 700-P family of relays has 4 types of contact cartridges to meet your specific switching requirements. Different cartridges can be combined into one relay to yield a custom-tailored application solution. Time delay, latching attachments, overlapping and logic reed contacts are available.

Bulletin 700-P relays use standard 10 A contact cartridges with a double-break and bifurcated design. Bifurcation provides excellent contact reliability and low contact bounce, while the double-break contact design reduced the possibility of contacts welding and enhances the relay's ability to break DC circuits. These relays are supplied with a max. of 12 contacts (max. 8 N.C.).

Bulletin 700-PK master control relays contain 20 A master contact cartridges with large single-contact pads on each side of the spanner for twice the current rating to control heavy loads and for master control of a system. The Bulletin 700-PK relay also has the same double-break design as the -P relay.These relays are supplied with a max. of 12 contacts (max. 8 N.C.). Time delay and latching attachments are available.

Bulletin 700-P and **-PK** relays combine the advantages of convertible contacts with **Direct Drive**, a construction designed to maintain non-overlap operation between N.O. and N.C. contacts (within published ratings).

Bulletin 700-PH tandem contact relays include 35 A jumper kits (**Cat. No. 700-CPH**) to parallel two 20 A master contact cartridges. A maximum of six poles are supplied, up to four of which can be normally closed. Time delay and latch attachments are available.

Conformity to Standards:

IEC 947-5-1
IEC 337-1 CENELEC
BS 4794
VDE 0660
Listed: U.S. Coast Guard and American Bureau of Shipping

Approvals:

CSA Certified
CSA File #LR1234
UL Listed
UL File #E14840, Guide NKCR
CE Certified

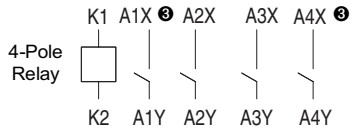
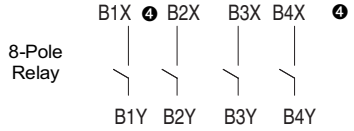
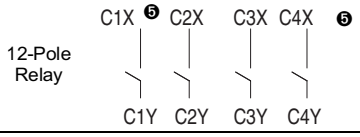
Your order must include:

- Cat. No. of the relay selected.
- Coil voltage suffix code.
- If required, Cat. No. of any accessories.

Electrically Held Relays

Bulletin 700-P Standard Contact Cartridge ❶ ❷

AC-Operated Relays

Contacts		Contact Arrangement and Markings	Open Type – Without Enclosure	Type 1 General Purpose Enclosure
N.O.	N.C.		Cat. No. ❶ ❻	Cat. No. ❻
2	—		700-P200⊗	700-P201⊗
4	—		700-P400⊗	700-P401⊗
6	—		700-P600⊗	700-P601⊗
8	—		700-P800⊗	700-P801⊗
10	—		700-P1000⊗	700-P1001⊗
12	—		700-P1200⊗	700-P1201⊗

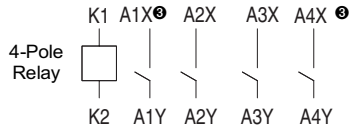
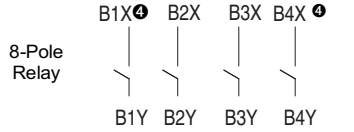
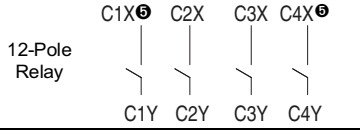
⊗ AC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700-P200**⊗ becomes **Cat. No. 700-P200A48**. For other coil voltages, consult your local Allen-Bradley Sales Office.

Hz	24	48	110	110-115	115-120	120	127	200-208	220-230	230-240	277	347	380	415	440-480	460-480	500	575-600
50	B24	B48	A1*	B11†	—	—	B27	—	B22	B2	—	—	B3	B41	B44	—	B50	—
60	A24	A48	—	—	A1*	B11†	—	A20	A22	A2	A27	A35	—	—	—	A4	—	A6

* Optimized for 115…120V, 60 Hz. Operates satisfactorily at 110V, 50 Hz.
† Optimized for 110…115V, 50 Hz. Operates satisfactorily at 120V, 60 Hz.

DC-Operated Relays

Contacts		Contact Arrangement and Markings	Open Type – Without Enclosure	Type 1 General Purpose Enclosure
N.O.	N.C.		Cat. No. ❻	Cat. No. ❻
2	—		700DC-P200⊗	700DC-P201⊗
4	—		700DC-P400⊗	700DC-P401⊗
6	—		700DC-P600⊗	700DC-P601⊗
8	—		700DC-P800⊗	700DC-P801⊗
10	—		700DC-P1000⊗	—
12	—		700DC-P1200⊗	—

⊗ DC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700DC-P200**⊗ becomes **Cat. No. 700DC-P200Z48**. For other coil voltages, consult your local Allen-Bradley Sales Office.

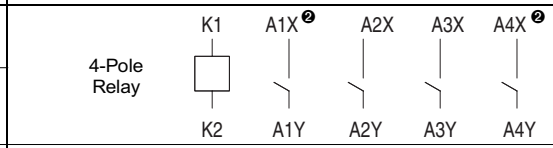
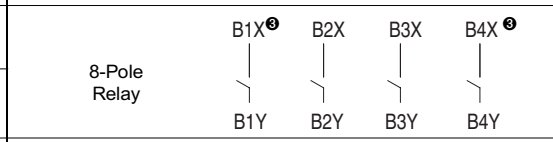
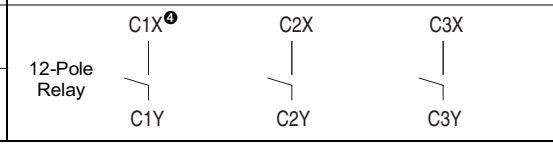
6	12	18	24	32	48	64	72	90	115-125	230-250	500-550	575-600
Z06	Z12	Z18	Z24	Z32	Z48	Z64	Z72	Z90	Z1	Z2	Z5	Z6

❶ **Normally closed contacts:** The normally open contacts can easily be changed to normally closed in the field. Relays can be supplied with N.C. contacts.
❷ **Overlap contacts:** To order a relay containing one pair: Use **Cat. No. 700-PZ110**. To order a relay containing two pairs: Use **Cat. No. 700-PZ2220**. N.O. contact closes before N.C. contact opens. AC Ratings: NEMA A600, DC Ratings: P150.
❸ Location of contacts in 2-pole relays.
❹ Location of contacts in 6-pole relays: 4-pole relay plus the 2 contacts indicated.
❺ Location of contacts in 10-pole relays: 8-pole relay plus the 2 contacts indicated.
❻ All Cat. Nos. are factory stocked.

Electrically Held Relays

Bulletin 700-PK Master Contact Cartridges ❶

AC-Operated Relays

Contacts N.O.	Contacts N.C.	Contact Arrangement and Markings	Open Type – Without Enclosure Cat. No. ❺	Type 1 General Purpose Enclosure Cat. No. ❺
2	—		700-PK200⊗	700-PK201⊗
4	—		700-PK400⊗	700-PK401⊗
6	—		700-PK600⊗	700-PK601⊗
8	—		700-PK800⊗	700-PK801⊗
10	—		700-PK1000⊗	700-PK1001⊗
12	—		700-PK1200⊗	700-PK1201⊗

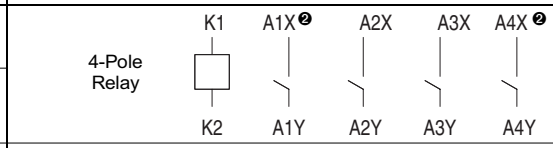
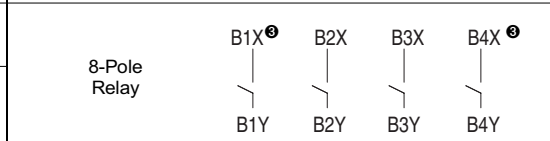
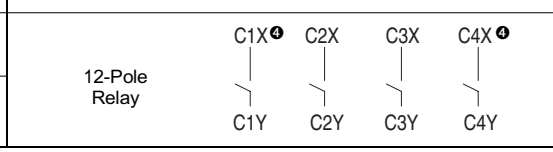
⊗ AC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No.700-PK200⊗** becomes **Cat. No. 700-PK200A48**. For other coil voltages, consult your local Allen-Bradley Sales Office.

Hz	24	48	110	110-115	115-120	120	127	200-208	220-230	230-240	277	347	380	415	440-480	460-480	500	575-600
50	B24	B48	A1*	B11†	—	—	B27	—	B22	B2	—	—	B3	B41	B44	—	B50	—
60	A24	A48	—	—	A1*	B11†	—	A20	A22	A2	A27	A35	—	—	—	A4	—	A6

* Optimized for 115…120V, 60 Hz. Operates satisfactorily at 110V, 50 Hz.
† Optimized for 110…115V, 50 Hz. Operates satisfactorily at 120V, 60 Hz.

DC-Operated Relays

Contacts N.O.	Contacts N.C.	Contact Arrangement and Markings	Open Type – Without Enclosure Cat. No. ❺	Type 1 General Purpose Enclosure Cat. No. ❺
2	—		700DC-PK200⊗	700DC-PK201⊗
4	—		700DC-PK400⊗	700DC-PK401⊗
6	—		700DC-PK600⊗	700DC-PK601⊗
8	—		700DC-PK800⊗	700DC-PK801⊗
10	—		700DC-PK1000⊗	—
12	—		700DC-PK1200⊗	—

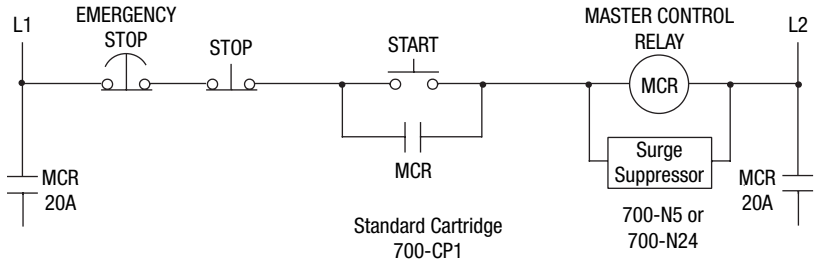
⊗ DC Voltage Suffix Code

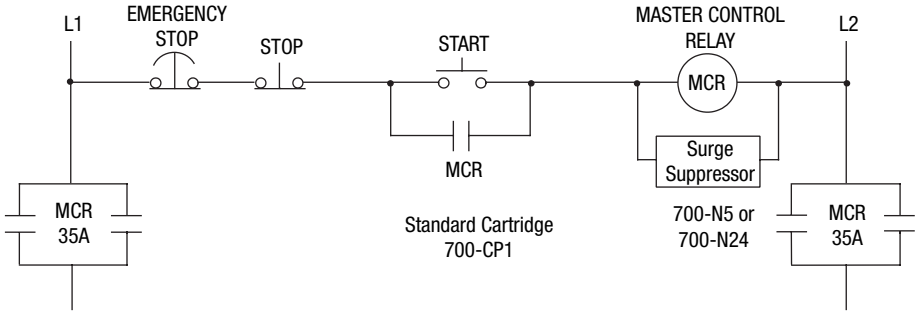
The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700DC-PK200⊗** becomes **Cat. No. 700DC-PK200Z12**. For other coil voltages, consult your local Allen-Bradley Sales Office

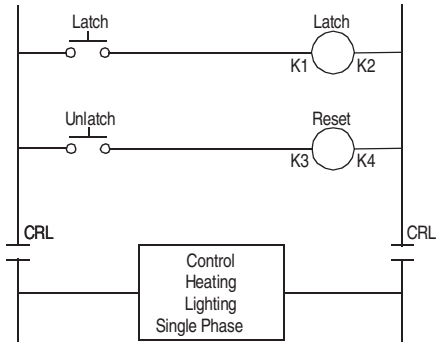
6	12	18	24	32	48	64	72	90	115-125	230-250	500-550	575-600
Z06	Z12	Z18	Z24	Z32	Z48	Z64	Z72	Z90	Z1	Z2	Z5	Z6

❶ **Normally closed contacts:** The normally open contacts can easily be changed to normally closed in the field. Relays can be supplied with N.C. contacts.
❷ Location of contacts in 2-pole relays.
❸ Location of contacts in 6-pole relays: 4-pole relay plus the 2 contacts indicated.
❹ Location of contacts in 10-pole relays: 8-pole relay plus the 2 contacts indicated.
❺ All Cat. Nos. are factory stocked.

Electrically Held Relays — Typical Wiring Diagrams







Electrically Held Relays

Bulletin 700-PH 35A Tandem Contact Cartridges ❶ ❸

AC-Operated Relays

Cat. No. 700-PH200

Contacts N.O.	Contacts N.C.	Contact Arrangement and Markings	Open Type – Without Enclosure Cat. No. ❺	Type 1 General Purpose Enclosure Cat. No. ❺
1	—	K1 A1X❷ A2X A3X A4X / K2 A1Y A2Y A3Y A4Y	700-PH100⊗	700-PH101⊗
2	—		700-PH200⊗	700-PH201⊗
3	—	B1X❸ B2X B3X B4X / 4-Pole Relay / B1Y B2Y B3Y B4Y	700-PH300⊗	700-PH301⊗
4	—		700-PH400⊗	700-PH401⊗
6	—	C1X❹ C2X C3X C4X / 6-Pole Relay / C1Y C2Y C3Y C4Y	700-PH600⊗	700-PH601⊗

⊗ AC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700-PH100**⊗ becomes **Cat. No. 700-PH100A48**. For other coil voltages, consult your local Allen-Bradley Sales Office.

Hz	24	48	110	110-115	115-120	120	127	200-208	220-230	230-240	277	347	380	415	440-480	460-480	500	575-600
50	B24	B48	A1*	B11†	—	—	B27	—	B22	B2	—	—	B3	B41	B44	—	B50	—
60	A24	A48	—	—	A1*	B11†	—	A20	A22	A2	A27	A35	—	—	—	A4	—	A6

* Optimized for 115…120V, 60 Hz. Operates satisfactorily at 110V, 50 Hz.
† Optimized for 110…115V, 50 Hz. Operates satisfactorily at 120V, 60 Hz.

DC-Operated Relays

Cat. No. 700DC-PH200

Contacts N.O.	Contacts N.C.	Contact Arrangement and Markings	Open Type – Without Enclosure Cat. No. ❺	Type 1 General Purpose Enclosure Cat. No. ❺
1	—	K1 A1X❷ A2X A3X A4X / K2 A3Y A4Y	700DC-PH100⊗	700DC-PH101⊗
2	—		700DC-PH200⊗	700DC-PH201⊗
3	—	B1X❸ B2X B3X B4X / 4-Pole Relay / B1Y B2Y B3Y B4Y	700DC-PH300⊗	700DC-PH301⊗
4	—		700DC-PH400⊗	700DC-PH401⊗
6	—	C1X❹ C2X C3X C4X / 6-Pole Relay / C1Y C2Y C3Y C4Y	700DC-PH600⊗	—

⊗ DC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700DC-PH200**⊗ becomes **Cat. No. 700DC-PH200Z12**. For other coil voltages, consult your local Allen-Bradley Sales Office.

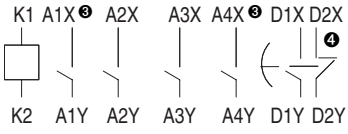
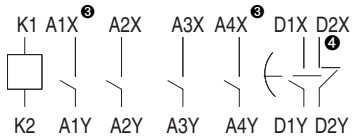
6	12	18	24	32	48	64	72	90	115-125	230-250	500-550	575-600
Z06	Z12	Z18	Z24	Z32	Z48	Z64	Z72	Z90	Z1	Z2	Z5	Z6

❶ **Normally closed contacts:** The normally open contacts can easily be changed to normally closed in the field. Relays can be supplied with N.C. contacts.
❷ Location of contacts in 1-pole relays.
❸ Location of contacts in 3-pole relays: 2-pole relay plus the contact indicated.
❹ Location of contacts in 6-pole relays: 4-pole relay plus the 2 contacts indicated.
❺ All Cat. Nos. are factory stocked.

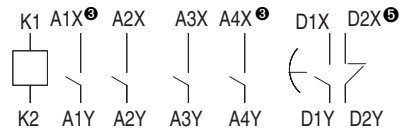
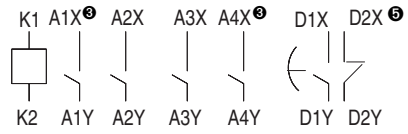
Time Delay Relays — Open Type With Pneumatic Time-Delay Attachment

- Timing Options: (see pages 237 and 253)
  - Pneumatic Timers — Factory- or Field-Installed
  - Solid-State Timers — Field-Installed
- Factory-Assembled Bulletin 700-PT and PKT Timing Relays
  - 0, 2, or 4 instantaneous contacts
  - 2 timed contacts — both ON Delay or both OFF Delay
  - Convertible from ON Delay to OFF Delay and vice versa
  - Standard contact cartridges rated NEMA A600 (AC) and P600 (DC)
  - Master contact cartridges rated 2X NEMA A600 (AC) and 2X P600 (DC)

Bulletin 700-P Standard Contact Cartridge ❶ ❷

AC-Operated Relays				DC-Operated Relays	
Contacts		Contact Arrangement and Markings	Cat. No. ❻	Contact Arrangement and Markings	Cat. No. ❻
N.O.	N.C.				
0	—	Relay with only time delay contacts	700-PPT⊗	Relay with only time delay contacts	700DC-PPT⊗
2	—		700-PT200⊗		700DC-PT200⊗
4	—		700-PT400⊗		700DC-PT400⊗

Bulletin 700-PK Master Contact Cartridges ❶

AC-Operated Relays				DC-Operated Relays	
Contacts		Contact Arrangement	Open Type Without Enclosure	Contact Arrangement	Open Type Without Enclosure
N.O.	N.C.		Cat. No. ❻		Cat. No. ❻
0	—	Relay with only time delay contacts	700-PPKT⊗	Relay with only time delay contacts	700DC-PPKT⊗
2	—		700-PKT200⊗		700DC-PKT200⊗
4	—		700-PKT400⊗		700DC-PKT400⊗

⊗ AC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No.700-PKT200⊗** becomes **Cat. No. 700-PKT200A48**. For other coil voltages, consult your local Allen-Bradley Sales Office.

Hz	24	48	110	110-115	115-120	120	127	200-208	220-230	230-240	277	347	380	415	440-480	460-480	500	575-600
50	B24	B48	A1*	B11†	—	—	B27	—	B22	B2	—	—	B3	B41	B44	—	B50	—
60	A24	A48	—	—	A1*	B11†	—	A20	A22	A2	A27	A35	—	—	—	A4	—	A6

* Optimized for 115…120V, 60 Hz. Operates satisfactorily at 110V, 50 Hz.
† Optimized for 110…115V, 50 Hz. Operates satisfactorily at 120V, 60 Hz.

⊗ DC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700DC-PKT200⊗** becomes **Cat. No. 700DC-PKT200Z12**. For other coil voltages, consult your local Allen-Bradley Sales Office.

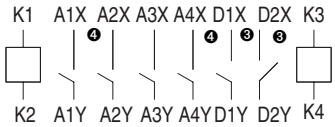
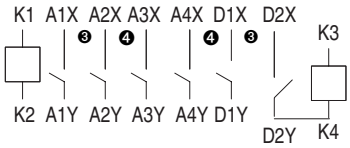
6	12	18	24	32	48	64	72	90	115-125	230-250	500-550	575-600
Z06	Z12	Z18	Z24	Z32	Z48	Z64	Z72	Z90	Z1	Z2	Z5	Z6

❶ **Normally closed contacts:** The normally open contacts can easily be changed to normally closed in the field. Relays can be supplied with N.C. contacts.
❷ **Overlap contacts:** N.O. contact closes before N.C. contact opens. To order a relay containing one pair: Use **Cat. No. 700-PTZ110**. To order a relay containing two pairs: Use **Cat. No. 700-PTZ2220**. AC Ratings: NEMA A600, DC Ratings: P150.
❸ Location of contacts in 2-pole relays.
❹ Timer has 1 N.O. and 1 N.C. convertible cartridge in addition to the instantaneous cartridges on the relay. Timer is supplied as On-Delay. Convertible to Off-Delay in the field.
❺ The timer has 1 N.O. and 1 N.C convertible master cartridge in addition to the instantaneous master cartridges on the relay. Timer is supplied as On-Delay. It is convertible to Off-Delay in the field.
❻ All Cat. Nos. are factory stocked.

Mechanical Latching Relays

- Mechanical latch options — factory- or field-installed
- Converts all poles to latching
- AC latch coil — max. 6 poles latching
- DC latch coil — max. 5 poles latching
- Latching relays have 2 coils — latch coil is the relay coil, reset coil is on the latch attachment
- Latch/reset coils can have 2 AC coils, 2 DC coils, or 1 AC and 1 DC coil (e.g., latch with AC power, unlatch with DC battery)

Bulletin 700-P Standard Contact Cartridge ❶ ❷

AC-Operated Relays				DC-Operated Relays	
Contacts		Contact Arrangement and Markings	Open Type with Mechanical Latch Attachment (Read ATTENTION Below)	Contact Arrangement and Markings	Open Type with Mechanical Latch Attachment (Read ATTENTION Below)
N.O.	N.C.		Cat. No. ❻		Cat. No. ❻
0	—	—	—	—	—
2	—		700-PL200⊗		700DC-PL200⊗
4	—		700-PL400⊗		700DC-PL400⊗
6	—	6-pole Relay	700-PL600⊗	5-pole Relay	700DC-PL500⊗

⊗ AC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700-PT200**⊗ becomes **Cat. No. 700-PT200A48**. For other coil voltages, consult your local Allen-Bradley Sales Office.
Relays with latch attachments: if the latch attachment coil is to be a different voltage other than the relay coil, add a second coil code suffix. Example: **Cat. No. 700-PL400A1A24**. Only one suffix is required if both coils are the same voltage.

Hz	24	48	110	110-115	115-120	120	127	200-208	220-230	230-240	277	347	380	415	440-480	460-480	500	575-600
50	B24	B48	A1*	B11†	—	—	B27	—	B22	B2	—	—	B3	B41	B44	—	B50	—
60	A24	A48	—	—	A1*	B11†	—	A20	A22	A2	A27	A35	—	—	—	A4	—	A6

* Optimized for 115…120V, 60 Hz. Operates satisfactorily at 110V, 50 Hz.
† Optimized for 110…115V, 50 Hz. Operates satisfactorily at 120V, 60 Hz.

⊗ DC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700DC-PT200**⊗ becomes **Cat. No. 700DC-PT200Z12**. For other coil voltages, consult your local Allen-Bradley Sales Office.

6	12	18	24	32	48	64	72	90	115-125	230-250	500-550	575-600
Z06	Z12	Z18	Z24	Z32	Z48	Z64	Z72	Z90	Z1	Z2	Z5	Z6

❶ **Normally closed contacts:** The normally open contacts can easily be changed to normally closed in the field. Relays can be supplied with N.C. contacts.
❷ **Overlap contacts:** To order a relay containing one pair: Use **Cat. No. 700-PTZ110**. To order a relay containing two pairs: Use **Cat. No. 700-PTZ2220**. N.O. contact closes before N.C. contact opens. AC Ratings: NEMA A600, DC Ratings: P150.
❸ Location of contacts in 2-pole relays.
❹ Location of contacts in 4-pole relays: 2-pole relay plus the 2 contacts indicated.
❻ All Cat. Nos. are factory stocked.

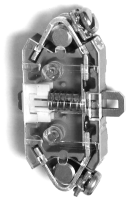
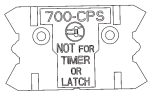
ATTENTION – An open or failed unlatch control circuit will fail to unlatch the relay. For this reason, a mechanical latch unit should not be used where protection is needed against automatic restart after a power failure or where reliability to a control function is critical to safety.

700S-P Safety Control Relays

Contacts		Relays with 120V AC Coils
N.O.	N.C.	Cat. No.
3	1	700S-P310A1
2	2	700S-P220A1
6	2	700S-P620A1
5	3	700S-P530A1

Contacts		Relays with 24V DC Coils
N.O.	N.C.	Cat. No.
3	1	700S-DCP310Z24
2	2	700S-DCP220Z24
6	2	700S-DCP620Z24
5	3	700S-DCP530Z24

Accessories

	Description	Continuous Carrying Current (A)	Product Label	Pkg. Qty.	Cat. No. ❹
	10 A cartridge meeting IEC 947-5 ❶ **Note: Use this cartridge when full compliance to IEC 947-5 is required.** **700-P relays equipped with CPS cartridges fully meet the IEC 947-5 spec for mechanically linked contacts. ❷ ❸**	10		1	700-CPS

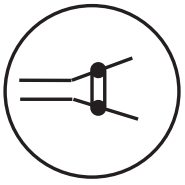
❶ IEC 947-5 Annex L has 2 requirements for a relay to meet for mechanically linked contacts:
1.) If a N.O. contact welds, all the N.C. contacts will remain open and meet a 2500V impulse test.
2.) If a N.C. contact welds, all the N.O. contacts will remain open and meet a 2500V impulse test.
700-P relays equipped with the 700-CPS cartridge meet these requirements including the 2500V impulse test.

❷ The relays shown on this page are shipped from the factory with the 700-CPS cartridge installed. Relays with factory-installed 700-CPS cartridges have the international symbol (shown below) for mechanically linked contacts prominently displayed on the face plate.

❸ These cartridges must not be used in timers and latches.

❹ All Cat. Nos. are factory stocked.

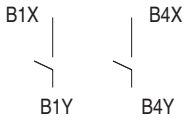
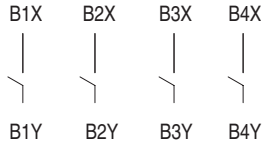
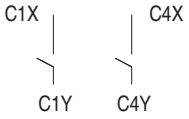
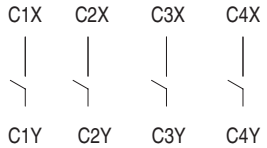
International Symbol for Mechanically Linked Contacts



Adder Decks

Second Deck
Cat. No. 700-PB40

Third Deck
Cat. No. 700-PC40

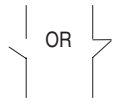
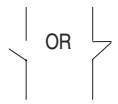
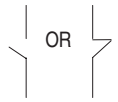
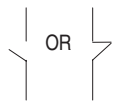
Description	Contacts			Arrangement	Cat. No. ❷
	N.O.	N.C.	Continuous Carrying Current (A)		
Second Deck (2-pole)	2	—	10		700-PB20
	2	—	20		700-PKB20
Second Deck (4-pole)	4	—	10		700-PB40
	4	—	20		700-PKB40
Third Deck (2-pole)	2	—	10		700-PC20
	2	—	20		700-PKC20
Third Deck (4-pole)	4	—	10		700-PC40
	4	—	20		700-PKC40

Contact Cartridges (Convertible from N.O. to N.C. and N.C. to N.O.)

Standard Contact Cartridge
Cat. No. 700-CP1, -CP11Z

Master Contact Cartridge
Cat. No. 700-CPM

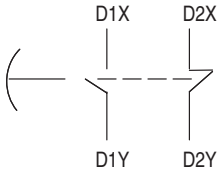
Logic Reed Cartridge
Cat. No. 700-CPR

Description		Continuous Carrying Current (A)	Arrangement	Pkg. Qty.	Cat. No. ❷
Standard Contact Cartridge AC Rating NEMA A600 DC Rating NEMA P600		10		1	700-CP1
Overlap Contact Cartridges ❶ Overlapping Used in pairs. N.O. contact closes before N.C. contact opens on pick-up and vice versa on drop-out.	AC Rating NEMA A600	10		2	700-CP11Z
	DC Rating NEMA P150 125V DC, 138 VA Make and Break	5			
Master Contact Cartridge AC Rating Twice NEMA A600 DC Rating Twice NEMA P600		20		1	700-CPM
Logic Reed Cartridge for Low Energy Circuits ❶ 150V AC 500 mA 25 VA Max. 30V DC 200 mA 6 W Max.	Maximum 150V AC	500 mA		1	700-CPR
	Maximum 30V DC	200 mA			

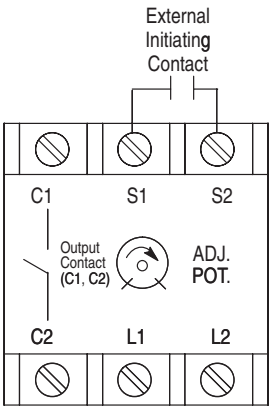
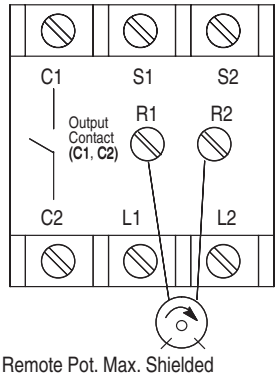
❶ Not Direct Drive.
❷ All Cat. Nos. are factory stocked.

Pneumatic Time-Delay Unit – 1 N.O. and 1 N.C. Convertible Contact Cartridge ❶

Pneumatic Time-Delay

Description			Continuous Carrying Current (A)	Arrangement	Timing Range	Open Type Without Enclosure
Mode	Contacts N.O.	Contacts N.C.				Cat. No. ❸
On-Delay/ Off-Delay	1	1	10		0.1…60 s.	700-PT
			20			700-PKT

Bulletin 700-PS and -PSR Solid-State Timers

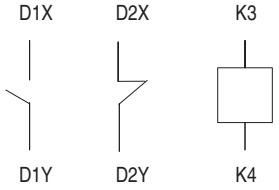
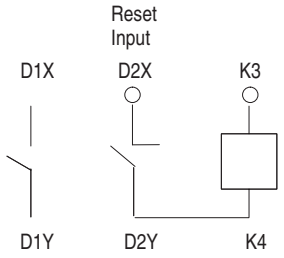
Description	Continuous Carrying Current (A)	Arrangement	Timing Range ❷	Cat. No. ❸
Self-Contained Potentiometer On-Delay	5	 110/120V, 50/60 Hz Power	0.1…2 s	700-PSAA1
			0.4…8 s	700-PSBA1
			1.5…30 s	700-PSCA1
			6…120 s	700-PSDA1
Off-Delay			0.1…2 s	700-PSPA1
			0.4…8 s	700-PSRA1
			1.5…30 s	700-PSTA1
			6…120 s	700-PSUA1
External Potentiometer On-Delay	5	 Remote Pot. Max. Shielded Cable Length 50 FT UL Style #2517 or Equivalent	0.1…2 s	700-PSRAA1
			0.4…8 s	700-PSRBA1
			1.5…30 s	700-PSRCA1
			6…120 s	700-PSRDA1
Off-Delay			0.1…2 s	700-PSRPA1
			0.4…8 s	700-PSRRA1
			1.5…30 s	700-PSRTA1
			6…120 s	700-PSRUA1

❶ Mounts on 4-pole Bulletin 700-P or -PK relay or 2-pole Bulletin 700-PH relay.
❷ Maximum time may be 50% greater and the minimum time may be 50% less than the value specified.
❸ All Cat. Nos. are factory stocked.

Remote Potentiometers for Cat. No. 700-PSR…

Timing Range (s)	Resistance (MΩ)	Cat. No.
0.1…2	0.75	700-N35
0.4…8	0.75	700-N35
1.5…30	2.0	700-N36
6…120	3.5	700-N37

Mechanical Latch Units

Description	Arrangement	Continuous Carrying Current (A)	Open Type Without Enclosure Cat. No. ❶
AC-Operated Latch Units		Without	700-PLL⊗
		10	700-PLL11⊗
		20	700-PKLL11⊗
DC-Operated Latch Units		Without	700DC-PLL⊗
		10	700DC-PLL10⊗
		20	700DC-PKLL10⊗

⊗ AC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700-PLL⊗** becomes **Cat. No. 700-PLLA1**. For other coil voltages, consult your local Allen-Bradley Sales Office.

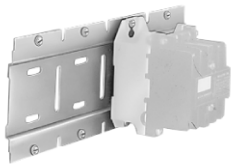
Hz	24	48	110	110-115	115-120	120	127	200-208	220-230	230-240	277	347	380	415	440-480	460-480	500	575-600
50	B24	B48	A1*	B11†	—	—	B27	—	B22	B2	—	—	B3	B41	B44	—	B50	—
60	A24	A48	—	—	A1*	B11†	—	A20	A22	A2	A27	A35	—	—	—	A4	—	A6

* Optimized for 115…120V, 60 Hz. Operates satisfactorily at 110V, 50 Hz.
† Optimized for 110…115V, 50 Hz. Operates satisfactorily at 120V, 60 Hz.

⊗ DC Voltage Suffix Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700DC-PLL⊗** becomes **Cat. No. 700DC-PLLZ12**. For DC Coils, see page 232. For other coil voltages, consult your local Allen-Bradley Sales Office.

6	12	18	24	32	48	64	72	90	115-125	230-250	500-550	575-600
Z06	Z12	Z18	Z24	Z32	Z48	Z64	Z72	Z90	Z1	Z2	Z5	Z6

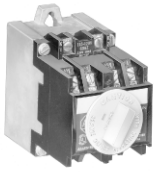


Mounting Strip
Cat. No. 700-MP4

Cat. No. 700-N31

Description	Relays Per Strip	Pkg Qty.	Cat. No. ❶
Universal Mounting Strips – Accepts Bulletin 700-P, -PH, -PK, -R, -RM, and -N control relays, as well as Bulletin 700-RTC timing relays. These strips are easily cut to the required length and bolted, riveted, or spot-welded in place. Relays are installed adjacent to one another on the mounting strip with the captive mounting screws provided. 5 strips/package.	4	5	700-MP4
	8	5	700-MP8
	12	5	700-MP12
	16	5	700-MP16
Type 1 Enclosure – Use for all Bulletin 700-P, -PH and -PK relays except 10- and 12-pole DC relays or 5- and 6-pole DC Bulletin 700-PH relays. Order electrically held relays (Bulletin 700-P, -PH, or -PK) in a NEMA Type 1 enclosure directly from the tables on pages 229…232. This enclosure is also suitable for Bulletin 700-RTC timing relays.		1	700-N31
Type 4/4X Enclosure – For 2- and 4-pole Bulletin 700-P, -PH, -N and -R relays and 2-pole Bulletin 700-PH relays.		1	700-N39
Type 7 & 9 Enclosure – For 2- and 4-pole Bulletin 700-P, -PK, -N and -R relays and 2-pole Bulletin 700-PH relays. 1 conduit hub; top and bottom.		1	700-N33

❶ All Cat. Nos. are factory stocked.

	Description		Pkg. Qty.	Cat. No. ❶
 *Surge Suppressor* ***Cat. No. 700-N5***	**Surge Suppressors (RC Circuit) –** Surge suppressors reduce the high transient voltages generated when the coil circuit is opened. These suppressors can be used with Bulletin 700-P, -PH, -PK and -N relays, and other electromechanical devices. They contain a resistor and capacitor. Maximum ratings: 150V, AC or DC, 35 VA. Cat. No. 700-N5 requires 1 in. additional depth of enclosure.	Mounting behind relay	1	700-N5
 *Surge Suppressor* ***Cat. No. 700-N24***		Mounting on coil terminal	1	700-N24
 *Surge Suppressor* ***Cat. No. 199-FSMA1***	**MOV Surge Suppressors** Used on Bulletin 700-P, -PH, -PK, -N, -F, -R (DC Only) and -RM (DC Only) relays. Mounting on coil terminal. *1 J = 1 V x 1 A x 1 s*	24…48V AC/DC 15 J	1	199-FSMA9
		50…120V AC/DC 15 J	1	199-FSMA10
		130…250V AC/DC 23 J	1	199-FSMA11
	Diode Surge Suppressor – for 6…300V DC voltage coils. Used on Bulletin 700-P, -PH, -PK, -N, -F, and -R relays.		1	199-FSMZ-1
 *35A Jumper Kit* ***Cat. No. 700-CPH***	**35 A Jumper Kit –** CSA Approved, UL Listed This 35 A Jumper Kit can be used with any Bulletin 700-P and -PK AC or DC relay, Time-Delay relay or Latch Unit equipped with 20 A Master Cartridges. It does not require any additional panel space. Jumper Kit terminals are designed for one #8 AWG wire or two #10 AWG wires. When connecting the two 20 A Master Cartridges in parallel, it is important that they be the same configuration (Normally Open or Normally Closed). Jumpers can be added to any contact cartridge location on a relay except the two center poles because of the wide spacing. An adhesive label is included with each kit listing the contact ratings.		1	700-CPH
 *Jumper* ***Cat. No. 700-N3***  *Jumper* ***Cat. No. 700-N4***	**Jumpers** (Not applicable for Bulletin 700-PH or -PK relays) – For connection between a middle pole and an outer pole on the left or right side of the relay.	**Jumper –** For outer poles	50	700-N3
	Jumpers (Not applicable for Bulletin 700-PH or -PK relays) – For connection between two middle poles.	**Jumper –** For middle poles		700-N4
 *Check Out Tool* ***Cat. No. 700-N23***	**Check Out Tool –** Mechanically holds the Bulletin 700-P, -PH or -PK relay in the operated position for troubleshooting purposes.		1	700-N23
	Adapter Plate – Simplified relay conversion. Allows you to use the existing mounting holes when you replace a Bulletin 700-B, -BR, -BX or -D relay with a Bulletin 700-P, -PH, or -PK relay.			700-N34
	**Protective Cover –** For 700-PT Timing Adjustment Knob. Helps prevent tampering with time setting.		5	700-N38

❶ All Cat. Nos. are factory stocked.

Specifications

Type		700-P, PLL, PT						700-PK, PKLL, PKT						700-PH					
Electrical																			
Contact Rating Continuous		10 A @ 600V AC 5 A @ 600V DC						20 A @ 600V AC 10 A @ 600V DC						35 A @ 600V AC 20 A @ 600V DC					
Ratings Make/Break	AC	NEMA A600						2 x NEMA A600						2 x NEMA A600					
	DC	NEMA P600						2 x NEMA P600						2 x NEMA P600					
Additional Contact Ratings for AC single-phase loads		—						3 Hp @ 240V AC - N.O. 2 Hp @ 240V AC - N.O./N.C. 1 Hp @ 120V AC - N.O./N.C. 20 A Resistive Heating to 600V AC 20 A Tungsten Lighting Load to 480V AC						5 Hp @ 240V AC - N.O. 3 Hp @ 240V AC - N.O./N.C. 2 Hp @ 120V AC - N.O./N.C. 35 A General Use At 0.75 PF to 600V AC 35 A Tungsten Lighting Load to 480V AC					
DC Current Ratings Make/Break		Cartridge Cat. No. 700-CP1						Cartridge Cat. No. 700-CPM						Cartridge Cat. No. 700-CPH					
		Volts DC																	
	Contacts in Series	**24**	**64**	**125**	**250**	**500**	**600**	**24**	**64**	**125**	**250**	**500**	**600**	**24 480W**	**64 480W**	**125 275W**	**250 138W**	**500 135W**	**600 120W**
DC Switching	1	5 A	2.2 A	1.1 A	.55 A	.24 A	.2 A	10 A	5 A	2.2 A	.55 A	.24 A	.2 A	10 A	5 A	2.2 A	.55 A	.24 A	.2 A
	2	10 A	10 A	5 A	2 A	.7 A	.5 A	20 A	10 A	5 A	2 A	.7 A	.5 A	20 A	10 A	5 A	2 A	.7 A	.5 A
	3	—	—	7 A	3 A	1.5 A	1.0 A	—	15 A	7 A	3 A	1.5 A	1.0 A	—	15 A	7 A	3 A	1.5 A	1.0 A
	4	—	—	10 A	5 A	2.5 A	1.5 A	—	20 A	10 A	5 A	2.5 A	1.5 A	—	20 A	10 A	5 A	2.5 A	1.5 A
Coil Voltage Range	AC	85…110%						85…110%						85…110%					
	DC	80…110%						80…110%						80…110%					
	Battery Charging	85…115%						85…115%						85…115%					
		50 Hz			**60 Hz**			**50 Hz**			**60 Hz**			**50 Hz**			**60 Hz**		
Coil Consumption P-PH-PK	AC Inrush	132 VA			138 VA			132 VA			138 VA			132 VA			138 VA		
	AC Sealed	19.3 VA			19 VA			19.3 VA			19 VA			19.3 VA			19 VA		
	DC Inrush	12.7 VA						12.7 VA						12.7 VA					
	DC Sealed	12.7 VA						12.7 VA						12.7 VA					
PLL - PKLL AC Latch Unit	Inrush	15 VA			15.6 VA			5 VA			15.6 VA			15 VA			15.6 VA		
	Sealed	5.4 VA			5.5 VA			5.4 VA			5.5 VA			5.4 VA			5.5 VA		
PLL - PKLL DL Latch Unit	Unlatch	35 VA						35 VA						35 VA					
	Intermittent	35 W						35 W						—					
Reset Time	PT – PKT	75 ms						75 ms						—					
Minimum Pulse	PLL–PKLL	75 ms						75 ms						—					
Mechanical																			
Operating Time	Pickup	AC – 10…20 ms DC – 30…50 ms						AC – 10…20 ms DC – 30…50 ms						AC – 10…20 ms DC – 30…50 ms					
	Dropout	AC – 10…20 ms DC – 20…33 ms						AC – 10…20 ms DC – 20…33 ms						AC – 10…20 ms DC – 20…33 ms					
Mechanical Life		10 million operations																	
Construction																			
Contact Arrangement		Up to 12 Poles, Convertible to N.O. or N.C. (8 N.C. Maximum)						Up to 12 Poles, Convertible to N.O. or N.C. (8 N.C. Maximum)						Up to 6 Poles, Convertible to N.O. or N.C. (4 N.C. Maximum)					
Contact Material		Nickel Silver						Silver Cadmium Oxide						Silver Cadmium Oxide					
Mounting		Panel or Strip Mount Horizontal Mounting Recommended						Panel or Strip Mount Horizontal Mounting Recommended						Panel or Strip Mount Horizontal Mounting Recommended					
Environmental																			
Temperature	Operating ❶	–20…+65°C (–4…149°F)						–20…+65°C (–4…149°F)						–20…+65°C (–4…149°F)					
	Storage	–40…+65°C (–40…149°F)						–40…+65°C (–40…149°F)						–40…+65°C (–40…149°F)					

❶ Temperature inside the panel.

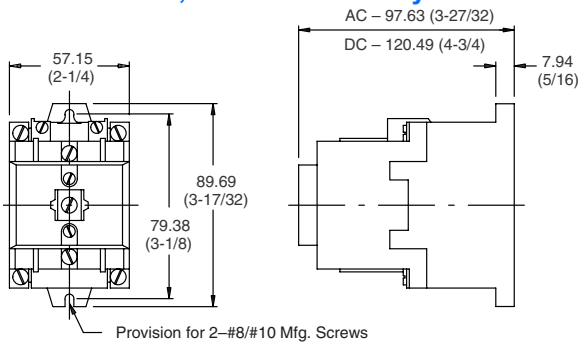
Operating Coils

Bulletin 700 Bulletin 700-P-PH-PK Relays — Bulletin 700-PLL-PKLL Mechanical Latch Attachments ❶						
	Coil Volts	Bulletin 700-P, -PK 2-…12-pole, Bulletin 700-PH 1-…6-pole AC		Bulletin 700-PLL–PKLL AC Mechanical Latch Attachment		Bulletin 700-P-PK 2-…12-pole, Bulletin 700-PH 1-…6-pole DC
		60 Hz	50 Hz	60 Hz	50 Hz	—
 *Bulletin 700-P Operating Coil*	24	PA013	PA407	PL013	PL407	PD714
	32	—	—	—	—	PD718
	48	PA222	PA314	PL222	PL314	PD724
	110 ❷	—	PA236	—	PL236	PD733 ❹ (100…110)
	115…120 ❷	PA236	—	PL236	—	—
	110…115 ❸	—	PA322	—	PL322	—
	115…125	—	—	—	—	PD735
	120 ❸	PA322	—	PL322	—	—
	130…140	—	—	—	—	PD738
	200…208	PA249	—	PL249	—	—
 *Bulletin 700-PL Unlatch Coil and Magnet Assembly*	220…230	PA251	PA339	—	PL339	—
	230…240	PA254	PA342	PL254	PL342	—
	230…250	—	—	PD748	—	PD748
	277	PA260	—	—	—	—
	380	—	PA354	—	PL354	—
	415	—	PA357	—	PL357	—
	440…460	—	PA360	—	PL360	—
	460…480	PA273	—	PL273	—	—
	500	—	PA364	—	PL364	PD759
	575…600	PA273	—	PL278	—	PD758

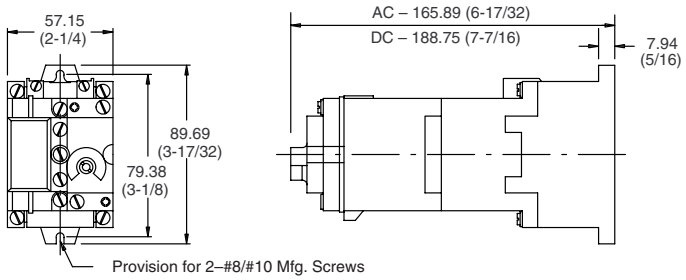
❶ Coils for AC relays cannot be used in DC relays and vice versa.
❷ This coil is optimized for 115…120V, 60 Hz applications and will operate satisfactorily at 110V, 50 Hz.
❸ This coil is optimized for 110…115V, 50 Hz applications and will operate satisfactorily at 120V, 60 Hz.
❹ This coil is designed and marked for use at 100…110V DC.

Dimensions in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.

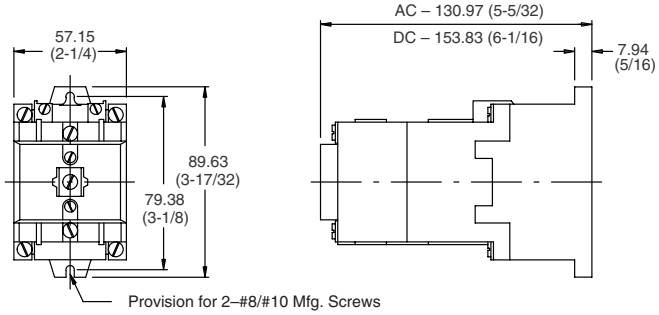
Bulletin 700-P, -PH and -PK Relays



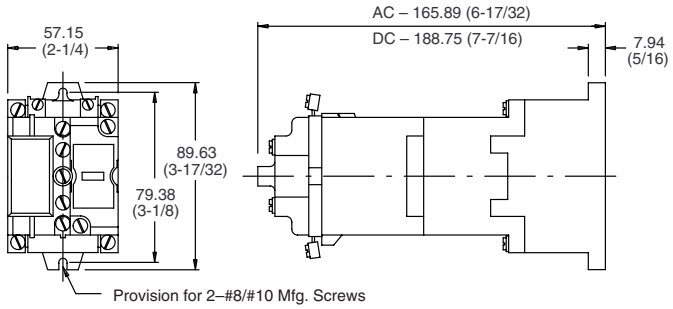
2- and 4-pole Bulletin 700-P or -PK Relay — 2-pole Bulletin 700-PH Relay
Approximate Shipping Weight AC – 0.68 kg (1.5 lbs.),
DC – 1.34 kg (2.95 lbs.)



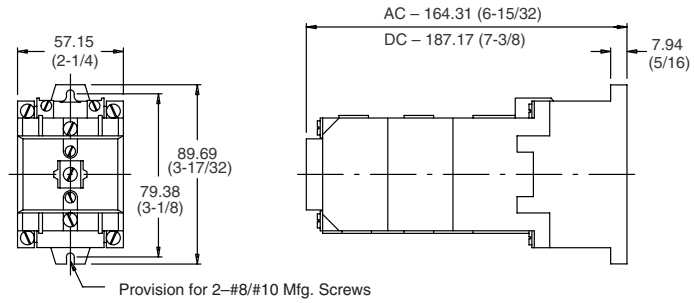
2- and 4-pole Bulletin 700-P or -PK Relay or 2-pole Bulletin 700-PH Relay
with Pneumatic Time Delay Attachment
Approximate Shipping Weight AC – 0.85 kg (1.88 lbs.),
DC – 1.5 kg (3.33 lbs.)



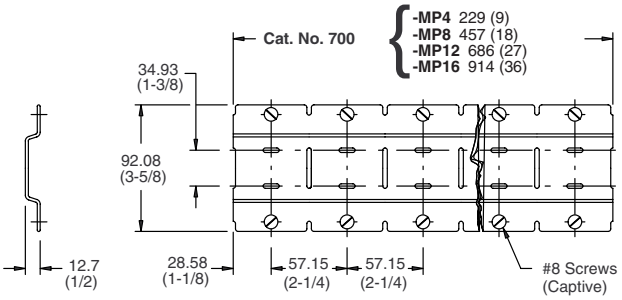
6- and 8-pole Bulletin 700-P or -PK Relay — 4-pole Bulletin 700-PH Relay
Approximate Shipping Weight AC – 0.79 kg (1.75 lbs.),
DC – 1.45 kg (3.20 lbs.)



2- and 4-pole Bulletin 700-P or -PK Relay or 2-pole Bulletin 700-PH Relay
with Mechanical Latch Attachment
Approximate Shipping Weight AC – 0.97 kg (2.13 lbs.),
DC – 1.62 kg (3.58 lbs.)

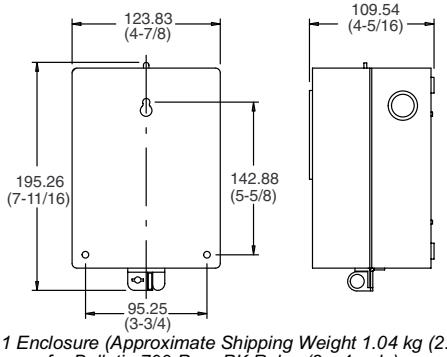


10- and 12-pole Bulletin 700-PPK Relay — 6-pole Bulletin 700-PH Relay
Approximate Shipping Weight AC – 1.02 kg (2.25 lbs.),
DC – 1.68 kg (3.7 lbs.)

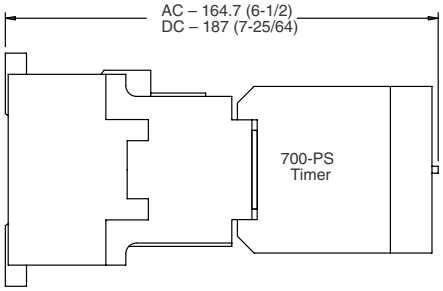


Universal Mounting Strip for Bulletin 700-P, -PH, -PK, -N, -NM, -R, -RM, -RT, -RTA Relays

Secure the mounting strip with 2 screws at each end relay position. Use a minimum of one screw at the 3rd, 5th, 7th, etc., relay positions. Alternate between upper and lower horizontal slots.



Type 1 Enclosure (Approximate Shipping Weight 1.04 kg (2.3 lb.)
for Bulletin 700-P or -PK Relay (2…4-pole);
Bulletin 700-PH Relay (1…2-pole only);
Cat. No. 700-N31 NEMA Type 1 Enclosure for other Bulletin 700-P, -PH, -PK, -RTC Relays has same dimensions except the depth is 178 mm (7").
Approximate Shipping Weight 1.26 kg (2.8 lb.)



Bulletin 700-PS Timer Mounted on a 4-pole Bulletin 700 Bulletin 700-P or -PK Relay or 2-pole Bulletin 700-PH Relay.
Approximate Shipping Weight AC – 0.68 kg (1.5 lbs.) without 700-PS,
eDC – 1.34 kg (2.9 lbs.) without 700-PS