

c3controls offers a full line of General Purpose Relays ("plug-in" relays), perfect for your control logic applications. Quick and economical to install, our relays allow for easy maintenance and assembly. c3's relays come in a variety of base configurations, and we even offer hermetically sealed relays for hazardous locations.

GENERAL PURPOSE RELAYS

Octal Base w/Pin	400
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NOTE: The scope (range, description, price, specifications, dimensions, etc.) of the product featured in this section is subject to change without notice. Refer to www.c3controls.com for product updates.

Conformity to Standards: Certifications:

SERIES GR - GENERAL PURPOSE RELAYS

UL 508

UL File #: E236197 (Guide NLDX2, NLDX8),
E224085 (Guide NRNT2)

CSA C22.2 No. 14

IEC 60947-1, 60947-4-1, 60947-5-1

SERIES HGR - HERMETICALLY SEALED RELAYS

UL 508, 1604

UL File #: E243998 (Guide NPKR, NPKR2,
NPKR7, NPKR8)

CSA C22.2 No. 14, 213

CSA File #: 227135

IEC 60947-1, 60947-4-1,
60947-5-1

SERIES GR - SOCKETS

UL 508

UL File #: E236196 (Guide SWIV2, SWIV8)

CSA C22.2 No. 14

IEC 60947-1



Visit www.c3controls.com to download product certifications.

OCTAL BASE RELAYS WITH PIN TERMINALS

- DPDT and 3PDT for control circuit application flexibility.
- 10A, DPDT and 10A, 3PDT.
- AC and DC coils.
- Pin terminals are interchangeable with other commonly available relays.
- Tape wound coils are marked with the coil voltage for easy identification.
- AgNi contacts, environmentally friendly - cadmium free.
- Mechanical indicator provided as standard to easily determine relay status.
- 100% tested to ensure performance to specification.
- Mechanical actuator provided as standard for checking the control circuit operation without energizing the relay.
- Optional indicating light (red for AC, green for DC) to easily determine the relay status.
- Schematic diagram and terminal markings on the relay for easy reference during installation.
- Low coil consumption to minimize transformer and power supply requirements.
- cURus and CE for acceptance in global applications.
- Transparent housing to visually monitor switching operations and contact condition.

IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 6 for more detailed directions.

Octal Base Relay w/Pin Terminals

GPRS-P I II III - IV

Example: To build one of our most popular Relays, the part number would be **GPRS-P + II + III + IV** or **GPRS-P2C10D-1**



I. RELAY TYPE

CODE	DESCRIPTION	PRICE
GPRS-P	General Purpose Relay w/Pin	\$7.00

II. POLES & CURRENT RATING

CODE	DESCRIPTION	PRICE
2C10	DPDT, 10A	—
3C10	3PDT, 10A	\$0.80

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
F	240V AC
ZC	24V DC
ZJ	48V DC
ZD	110V DC

IV. OPTIONS

CODE	DESCRIPTION	PRICE
1	Mechanical Actuator (included)	—
3	Light & Mechanical Actuator	\$1.00

Relays available in convenient multi-packs, consult factory for details.

COMPATIBLE SOCKETS

RELAY TYPE	COMPATIBLE SOCKETS
GPRS-P2C10**	GPRA-SP08G1 with IP20 Guarded Terminals or GPRA-SP08U1 with Open Style Terminals
GPRS-P3C10**	GPRA-SP11G1 with IP20 Guarded Terminals or GPRA-SP11U1 with Open Style Terminals
See page 420 for socket information	

ELECTRICAL RATINGS

POLE COMBINATION		DPDT	3PDT
ITEM SPECIFICATION:	UNITS		
Contact Resistance	mΩ	50	50
Dielectric Strength (Coil to Contact)	AC Volts (50/60 HZ - 1 Minute)	1000 V	1000 V
Dielectric Strength (Between Contacts)	AC Volts (50/60 HZ - 1 Minute)	1000 V	1000 V
Insulation Resistance (500 VDC)	MΩ [Min]	100	100
Max. Switching (ON/OFF) Mechanical	Oper./Min.	240	240
Max. Switching (ON/OFF) Electrical	Oper./Min.	30	30
Life Expectancy - Mechanical	Operations [Min]	10M	10M
Life Expectancy - Elect (@120 V Resistive)	Operations [Min]	100K	100K
Vibration: Endurance	1.5 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
Vibration: Error Operation	1.5 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
Shock: Endurance	G Min.	50 G Min	50 G Min
Shock: Error Operation	G Min.	10 G Min	10 G Min
Coil Operate Time (Pick-Up)	mSec (Max)	25	25
Coil Release Time (Drop Out)	mSec (Max)	25	25

CONTACT RATING

		DPDT	3PDT
Rated Carrying Current		10 A	10 A
Max. Allowable Voltage		240 VAC 120 VDC	240 VAC 120 VDC
Capacity: Resistive Load	P.F. = 1.0	240 VAC - 10 A 120 VAC - 10 A 28 VDC - 10 A	240 VAC - 10 A 120 VAC - 10 A 28 VDC - 10 A
Inductive Loads	P.F. = 0.4 [L/R = 7 mSec.]	240 VAC - 7 A 120 VAC - 10 A 28 VDC - 8 A	240 VAC - 7 A 120 VAC - 10 A 28 VDC - 8 A
Minimum Recommended Load		10 VDC - 10 mA	10 VDC - 10 mA

COIL SPECIFICATIONS (@ 20° C) — (DPDT)

Nominal Coil Voltage (Volts)	Nominal Current (mA)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	88	91	1.9 ~ 2.8 VA	80% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	21	1,620	1.9 ~ 2.8 VA			
240 VAC (@ 60 HZ)	11	7,100	1.9 ~ 2.8 VA			
24 VDC	56	430	1.5 W	80% Max. Rated	10% Min. Rated	110% Rated
48 VDC	29.5	1,630	1.5 W			
110 VDC	16.2	6,800	1.5 W			

COIL SPECIFICATIONS (@ 20 DEG. C) — (3PDT)

Nominal Coil Voltage (Volts)	Nominal Current (mA)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	88	91	1.9 ~ 2.8 VA	80% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	21	1,620	1.9 ~ 2.8 VA			
240 VAC (@ 60 HZ)	11	7,100	1.9 ~ 2.8 VA			
24 VDC	56	430	1.5 W	80% Max. Rated	10% Min. Rated	110% Rated
48 VDC	29.5	1,630	1.5 W			
110 VDC	16.2	6,800	1.5 W			

ENVIRONMENTAL & PHYSICAL PARAMETERS

Operating Ambient Temperature -10° C to +40° C (14° F to +104° F) Assumes a DRY environment — Enclosed
Operating Humidity (Recommended) 35% to 85% RH
Unit Weight (2 ~ 3 Pole Relay) 85 g (3 oz)
Relay & Socket Dimensions See Outline Drawings pages 423-428.

MATERIALS & CONSTRUCTION

Contacts: AgNi Alloy
Plated Brass Terminations: Cadmium Free
Solder Connections: Lead Free
Thermoplastic & Thermoset Moldings
RoHS Compliance: For RoHS compliance documentation by product, refer to www.c3controls.com .

SQUARE BASE RELAYS WITH BLADE TERMINALS

- DPDT and 3PDT for control circuit application flexibility.
- 13A, DPDT and 13A, 3PDT.
- 1/3HP @ 120V AC, 1/2HP @ 240V AC.
- AC and DC coils.
- Blade terminals (3/16") are interchangeable with other commonly available relays.
- Tape wound coils are marked with the coil voltage for easy identification.
- AgNi contacts, environmentally friendly - cadmium free.
- Optional indicating lights are color coded, red for AC and green for DC.
- cURus approved.
- Optional mechanical actuator and indicating light for checking the control circuit operation without energizing the relay and to easily determine the relay status.
- Schematic diagram and terminal markings on the relay for easy reference during installation.
- Low coil consumption to minimize transformer and power supply requirements.
- Transparent housing to visually monitor switching operations and contact condition.
- 100% tested to ensure performance to specification.

IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 6 for more detailed directions.

Square Base Relay w/Blade Terminals

GPRS-B -
I II III IV

Example: To build one of our most popular Relays, the part number would be **GPRS-B + II + III + IV** or **GPRS-B3C13C-3**



I. RELAY TYPE

CODE	DESCRIPTION	PRICE
GPRS-B	General Purpose Relay w/Blade	\$7.00

II. POLES & CURRENT RATING

CODE	DESCRIPTION	PRICE
2C13	DPDT, 13A	—
3C13	3PDT, 13A	\$0.80

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
F	240V AC
ZC	24V DC
ZJ	48V DC
ZD	110V DC

IV. OPTIONS

CODE	DESCRIPTION	PRICE
3	Light & Mechanical Actuator	\$1.00

Relays available in convenient multi-packs, consult factory for details.

COMPATIBLE SOCKETS

RELAY TYPE	COMPATIBLE SOCKETS
GPRS-B2C13**	GPRA-SB11G1 with IP20 Guarded Terminals or
GPRS-B3C13**	GPRA-SB11U1 with Open Style Terminals
See page 421 for socket information	

DISCOUNT
SCHEDULE

C

ELECTRICAL RATINGS

POLE COMBINATION		DPDT	3PDT
ITEM SPECIFICATION:	UNITS		
Contact Resistance	mΩ	50	50
Dielectric Strength (Coil to Contact)	AC Volts (50/60 HZ - 1 Minute)	1500 V	1500 V
Dielectric Strength (Between Contacts)	AC Volts (50/60 HZ - 1 Minute)	1000 V	1000 V
Insulation Resistance (500 VDC)	MΩ [Min]	100	100
Max. Switching (ON/OFF) Mechanical	Oper./Min.	300	300
Max. Switching (ON/OFF) Electrical	Oper./Min.	30	30
Life Expectancy - Mechanical	Operations [Min]	10M	10M
Life Expectancy - Elect (@120 V Resistive)	Operations [Min]	100K	100K
Vibration: Endurance	1.5 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
Vibration: Error Operation	1.5 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
Shock: Endurance	G Min.	50 G Min	50 G Min
Shock: Error Operation	G Min.	10 G Min	10 G Min
Coil Operate Time (Pick-Up)	mSec (Max)	15	15
Coil Release Time (Drop Out)	mSec (Max)	10	10

CONTACT RATING		DPDT	3PDT
Rated Carrying Current		13 A	13 A
Max. Allowable Voltage		300 VAC 120 VDC	300 VAC 120 VDC
Capacity: Resistive Load	P.F. = 1.0	240 VAC - 10 A 120 VAC - 13 A 28 VDC - 13 A	240 VAC - 10 A 120 VAC - 13 A 28 VDC - 13 A
Inductive Loads	P.F. = 0.4 [L/R = 7 mSec.]	240 VAC - 7 A 120 VAC - 10 A 28 VDC - 8 A	240 VAC - 7 A 120 VAC - 10 A 28 VDC - 8 A
Motor Loads	120 VAC 240 VAC	1/3 HP 1/2 HP	1/3 HP 1/2 HP
Minimum Recommended Load		10 VDC - 10 mA	10 VDC - 10 mA

COIL SPECIFICATIONS (@ 20° C) — (DPDT)

Nominal Coil Voltage (Volts)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	85	2.5 VA	85% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	2,250	2.5 VA			
240 VAC (@ 60 HZ)	9,110	2.5 VA			
24 VDC	472	1.5 W	80% Max. Rated	10% Min. Rated	110% Rated
48 VDC	1,800	1.5 W			
110 VDC	10,000	1.5 W			

COIL SPECIFICATIONS (@ 20° C) — (3PDT)

Nominal Coil Voltage (Volts)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	72	2.75 VA	85% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	1,700	2.75 VA			
240 VAC (@ 60 HZ)	7,200	2.75 VA			
24 VDC	472	1.5 W	80% Max. Rated	10% Min. Rated	110% Rated
48 VDC	1,800	1.5 W			
110 VDC	10,000	1.5 W			

ENVIRONMENTAL & PHYSICAL PARAMETERS

Operating Ambient Temperature
-45° C to +70° C (-49° F to +158° F)
Assumes a DRY environment — Enclosed

Operating Humidity (Recommended)
35% to 85% RH

Unit Weight (2 ~ 3 Pole Relay)
90 g (3.2 oz)

Relay & Socket Dimensions
See Outline Drawings pages 423-428.

MATERIALS & CONSTRUCTION

Contacts: AgNi Alloy

Plated Brass Terminations: Cadmium Free

Solder Connections: Lead Free

Thermoplastic & Thermoset Moldings

RoHS Compliance:
For RoHS compliance documentation by product, refer to www.c3controls.com.

SQUARE BASE RELAYS WITH BLADE TERMINALS

- DPDT and 3PDT for control circuit application flexibility.
- 25A, DPDT and 20A, 3PDT.
- Maximum 1/2HP @ 120V AC, 1/2HP @ 240V AC.
- AC and DC coils.
- Blade terminals (3/16") are interchangeable with other commonly available relays.
- Tape wound coils are marked with the coil voltage for easy identification.
- AgNi contacts, environmentally friendly - cadmium free.
- Optional indicating lights are color coded, red for AC and green for DC.
- cURus and CE for acceptance in global applications.
- Optional mechanical actuator and indicating light for checking the control circuit operation without energizing the relay and to easily determine the relay status.
- Low coil consumption to minimize transformer and power supply requirements.
- Transparent housing to visually monitor switching operations and contact condition.
- 100% tested to ensure performance to specification.

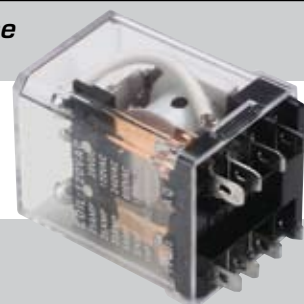
IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 6 for more detailed directions.

Square Base Relay w/Blade Terminals

GPRS-B -
I II III IV

Example: To build one of our most popular Relays, the part number would be **GPRS-B + II + III + IV** or **GPRS-B2C25D**



I. RELAY TYPE

CODE	DESCRIPTION	PRICE
GPRS-B	General Purpose Relay w/Blade	\$8.30

II. POLES & CURRENT RATING

CODE	DESCRIPTION	PRICE
2C25	DPDT, 25A	—
3C20	3PDT, 20A	\$0.60

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
F	240V AC
ZC	24V DC
ZJ	48V DC
ZD	110V DC

IV. OPTIONS

CODE	DESCRIPTION	PRICE
3	Light & Mechanical Actuator	\$1.00

Relays available in convenient multi-packs, consult factory for details.

COMPATIBLE SOCKETS

RELAY TYPE	COMPATIBLE SOCKETS
GPRS-B2C25**	GPRA-SB11G1 with IP20 Guarded Terminals or
GPRS-B3C20**	GPRA-SB11U1 with Open Style Terminals
See page 421 for socket information	

ELECTRICAL RATINGS

POLE COMBINATION		DPDT	3PDT
ITEM SPECIFICATION:	UNITS		
Contact Resistance	mΩ	50	50
Dielectric Strength (Coil to Contact)	AC Volts (50/60 HZ - 1 Minute)	1500 V	1500 V
Dielectric Strength (Between Contacts)	AC Volts (50/60 HZ - 1 Minute)	1000 V	1000 V
Insulation Resistance (500 VDC)	MegΩ [Min]	100	100
Max. Switching (ON/OFF) Mechanical	Oper./Min.	240	240
Max. Switching (ON/OFF) Electrical	Oper./Min.	30	30
Life Expectancy - Mechanical	Operations [Min]	10M	10M
Life Expectancy - Elect (@120 V Resistive)	Operations [Min]	100K	100K
Vibration: Endurance	1.5 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
Vibration: Error Operation	1.5 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
Shock: Endurance	G Min.	50 G Min	50 G Min
Shock: Error Operation	G Min.	10 G Min	10 G Min
Coil Operate Time (Pick-Up)	mSec (Max)	15	15
Coil Release Time (Drop Out)	mSec (Max)	10	10

CONTACT RATING		DPDT	3PDT
Rated Carrying Current		25 A	20 A
Max. Allowable Voltage		600 VAC 120 VDC	600 VAC 120 VDC
Capacity: Resistive Load	P.F. = 1.0	240 VAC - 25 A 120 VAC - 25 A 28 VDC - 25 A	240 VAC - 20 A 120 VAC - 20 A 28 VDC - 18 A
Inductive Loads	P.F. = 0.4 [L/R = 7 mSec.]	240 VAC - 15 A 120 VAC - 25 A 28 VDC - 18 A	240 VAC - 15 A 120 VAC - 20 A 28 VDC - 18 A
Motor Loads	120 VAC	3/4 HP	3/4 HP
	240 VAC	1 HP	1 HP
Minimum Recommended Load		100 mA	100 mA

COIL SPECIFICATIONS (@ 20° C) — (DPDT)

Nominal Coil Voltage (Volts)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	72	2.5 VA	85% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	1,700	2.5 VA			
240 VAC (@ 60 HZ)	7,200	2.5 VA			
24 VDC	472	1.5 W	75% Max. Rated	10% Min. Rated	110% Rated
48 VDC	1,800	1.5 W			
110 VDC	10,000	1.5 W			

COIL SPECIFICATIONS (@ 20° C) — (3PDT)

Nominal Coil Voltage (Volts)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	60	2.75 VA	85% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	1,300	2.75 VA			
240 VAC (@ 60 HZ)	4,300	2.75 VA			
24 VDC	340	1.5 W	75% Max. Rated	10% Min. Rated	110% Max. Rated
48 VDC	1,360	1.5 W			
110 VDC	8,500	1.5 W			

ENVIRONMENTAL & PHYSICAL PARAMETERS

Operating Ambient Temperature
-45° C to +70° C (-49° F to +158° F)
Assumes a DRY environment — Enclosed

Operating Humidity (Recommended)
35% to 85% RH

Unit Weight (2 ~ 3 Pole Relay)
90 g (3.2 oz)

Relay & Socket Dimensions
See Outline Drawings pages 423-428.

MATERIALS & CONSTRUCTION

Contacts: AgNi Alloy

Plated Brass Terminations: Cadmium Free

Solder Connections: Lead Free

Thermoplastic & Thermoset Moldings

RoHS Compliance:
For RoHS compliance documentation by
product, refer to www.c3controls.com.

FLANGE MOUNTED RELAYS WITH BLADE TERMINALS

- DPDT and 3PDT for control circuit application flexibility.
- 25A, DPDT and 20A, 3PDT.
- 3/4HP @ 120V AC, 1HP @ 240V AC.
- AC and DC coils.
- Flange mounting eliminates the need for a socket resulting in lower installed cost.
- Blade terminals (1/4") accept commonly available fast-on connectors.
- Tape wound coils are marked with the coil voltage for easy identification.
- AgNi contacts, environmentally friendly - cadmium free.
- Low coil consumption to minimize transformer and power supply requirements.
- cURus and CE for acceptance in global applications.
- Transparent housing to visually monitor switching operations and contact condition.
- 100% tested to ensure performance to specification.

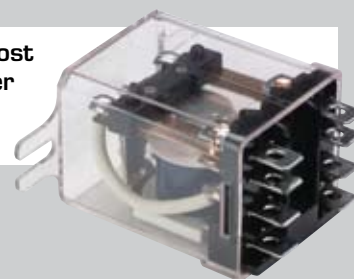
IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 6 for more detailed directions.

Flange Mounted Relay w/Blade Terminals

GPRF-T **II** **III**
/ // ///

Example: To build one of our most popular Relays, the part number would be **GPRF-T + II + III** or **GPRF-T2C25ZC**



I. RELAY TYPE

CODE	DESCRIPTION	PRICE
GPRF-T	General Purpose Relay w/Blade	\$8.30

II. POLES & CURRENT RATING

CODE	DESCRIPTION	PRICE
2C25	DPDT, 25A	—
3C20	3PDT, 20A	\$0.60

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
F	240V AC
ZC	24V DC
ZJ	48V DC
ZD	110V DC

Relays available in convenient multi-packs, consult factory for details.

DISCOUNT
SCHEDULE

C

ELECTRICAL RATINGS

POLE COMBINATION		DPDT	3PDT
ITEM SPECIFICATIONS:	UNITS		
Contact Resistance	mΩ	50	50
Dielectric Strength (Coil to Contact)	AC Volts (50/60 HZ - 1 Minute)	1500 V	1500 V
Dielectric Strength (Between Contacts)	AC Volts (50/60 HZ - 1 Minute)	1000 V	1000 V
Insulation Resistance (500 VDC)	MΩ [Min]	100	100
Max. Switching (ON/OFF) Mechanical	Oper./Min.	240	240
Max. Switching (ON/OFF) Electrical	Oper./Min.	30	30
Life Expectancy - Mechanical	Operations [Min]	10M	10M
Life Expectancy - Elect (@120 V Resistive)	Operations [Min]	100K	100K
Vibration: Endurance	1.5 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
Vibration: Error Operation	1.5 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
Shock: Endurance	G Min.	50 G Min	50 G Min
Shock: Error Operation	G Min.	10 G Min	10 G Min
Coil Operate Time (Pick-Up)	mSec (Max)	15	15
Coil Release Time (Drop Out)	mSec (Max)	10	10

CONTACT RATING		DPDT	3PDT
Rated Carrying Current		25 A	20 A
Max. Allowable Voltage		600 VAC 120 VDC	600 VAC 120 VDC
Capacity: Resistive Load	P.F. = 1.0	240 VAC - 25 A 120 VAC - 25 A 28 VDC - 25 A	240 VAC - 20 A 120 VAC - 20 A 28 VDC - 18 A
Inductive Loads	P.F. = 0.4 [L/R = 7 mSec.]	240 VAC - 15 A 120 VAC - 25 A 28 VDC - 18 A	240 VAC - 15 A 120 VAC - 20 A 28 VDC - 18 A
Motor Loads	120 VAC	3/4 HP	1/2 HP
	240 VAC	1 HP	1/2 HP
Minimum Recommended Load		100 mA	100 mA

COIL SPECIFICATIONS (@ 20° C) — (DPDT)

Nominal Coil Voltage (Volts)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	72	2.5 VA	85% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	1,700	2.5 VA			
240 VAC (@ 60 HZ)	7,200	2.5 VA			
24 VDC	472	1.5 W	75% Max. Rated	10% Min. Rated	110% Rated
48 VDC	1,800	1.5 W			
110 VDC	10,000	1.5 W			

COIL SPECIFICATIONS (@ 20° C) — (3PDT)

Nominal Coil Voltage (Volts)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	60	2.75 VA	85% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	1,300	2.75 VA			
240 VAC (@ 60 HZ)	4,300	2.75 VA			
24 VDC	340	1.5 W	75% Max. Rated	10% Min. Rated	110% Max. Rated
48 VDC	1,360	1.5 W			
110 VDC	8,500	1.5 W			

ENVIRONMENTAL & PHYSICAL PARAMETERS

Operating Ambient Temperature
-45° C to +70° C (-49° F to +158° F)
Assumes a DRY environment — Enclosed

Operating Humidity (Recommended)
35% to 85% RH

Unit Weight (2 ~ 3 Pole Relay)
90 g (3.2 oz)

Relay & Socket Dimensions
See Outline Drawings pages 423-428.

MATERIALS & CONSTRUCTION

Contacts: AgNi Alloy

Plated Brass Terminations: Cadmium Free

Solder Connections: Lead Free

Thermoplastic & Thermoset Moldings

RoHS Compliance:
For RoHS compliance documentation by
product, refer to www.c3controls.com.

MINIATURE SQUARE BASE RELAYS w/BLADE TERMINALS

- DPDT and 4PDT for control circuit application flexibility.
- 5A, DPDT and 5A, 4PDT.
- AC and DC coils.
- Blade terminals are interchangeable with other commonly available relays.
- Tape wound coils are marked with the coil voltage for easy identification.
- AgNi contacts, environmentally friendly - cadmium free.
- Small size requiring minimum panel space for lower installed cost.
- Optional indicating lights are color coded, red for AC and green for DC.
- cURus and CE for acceptance in global applications.
- Optional mechanical actuator and indicating light for checking the control circuit operation without energizing the relay and to easily determine the relay status.
- Terminal markings on the relay for easy reference during installation.
- Low coil consumption to minimize transformer and power supply requirements.
- Transparent housing to visually monitor switching operations and contact condition.
- 100% tested to ensure performance to specification.

IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 6 for more detailed directions.

Miniature Square Base Relay w/Blade Terminals

GPRM-B -
I II III IV

Example: To build one of our most popular Relays, the part number would be **GPRM-B + II + III + IV** or **GPRM-B2C05D**



I. RELAY TYPE

CODE	DESCRIPTION	PRICE
GPRM-B	General Purpose Relay w/Blade	\$3.30

II. POLES & CURRENT RATING

CODE	DESCRIPTION	PRICE
2C05	DPDT, 5A	—
4C05	4PDT, 5A	\$0.40

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
E	220-240V AC
ZC	24V DC
ZJ	48V DC
ZD	110V DC

IV. OPTIONS

CODE	DESCRIPTION	PRICE
3	Light & Mechanical Actuator	\$1.00

Relays available in convenient multi-packs, consult factory for details.

COMPATIBLE SOCKETS

RELAY TYPE	COMPATIBLE SOCKETS
GPRM-B2C05**	GPRA-SB14U1 with Open Style Terminals
GPRM-B4C05**	
See page 422 for socket information	

DISCOUNT
SCHEDULE

C

ELECTRICAL RATINGS

POLE COMBINATION		DPDT	4PDT
ITEM SPECIFICATIONS:	UNITS		
Contact Resistance	mΩ	100	100
Dielectric Strength (Coil to Contact)	AC Volts (50/60 HZ - 1 Minute)	1500 V	1500 V
Dielectric Strength (Between Contacts)	AC Volts (50/60 HZ - 1 Minute)	1000 V	1000 V
Insulation Resistance (500 VDC)	MΩ [Min]	100	100
Max. Switching (ON/OFF) Mechanical	Oper./Min.	240	240
Max. Switching (ON/OFF) Electrical	Oper./Min.	30	30
Life Expectancy - Mechanical	Operations [Min]	10M	10M
Life Expectancy - Elect (@120 V Resistive)	Operations [Min]	100K	100K
Vibration: Endurance	1.0 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
Vibration: Error Operation	1.0 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
Shock: Endurance	G Min.	100 G Min	100 G Min
Shock: Error Operation	G Min.	10 G Min	10 G Min
Coil Operate Time (Pick-Up)	mSec (Max)	25	25
Coil Release Time (Drop Out)	mSec (Max)	25	25
Coil Temperature Rise (at rated voltage)	Deg C (Max)	60 C	60 C

CONTACT RATING		DPDT	4PDT
Rated Carrying Current		5 A	5 A
Max. Allowable Voltage		240 VAC 110 VDC	240 VAC 110 VDC
Capacity: Resistive Load	P.F. = 1.0	240 VAC - 5 A 120 VAC - 5 A 28 VDC - 5 A	240 VAC - 5 A 120 VAC - 5 A 28 VDC - 5 A
Inductive Loads	P.F. = 0.4 [L/R = 7 mSec.]	120 VAC - 2 A 28 VDC - 2 A	120 VAC - 3 A 28 VDC - 3 A
Minimum Recommended Load		10 VDC - 10 mA	10 VDC - 10 mA

COIL SPECIFICATIONS (@ 20° C) — (DPDT & 4PDT)

Nominal Coil Voltage (Volts)	Nominal Current (mA)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	45	186	1.0 ~ 1.3 VA	85% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	10	4,550	1.0 ~ 1.3 VA			
220/240 VAC (@ 60 HZ)	8.5	19,400	1.0 ~ 1.3 VA			
24 VDC	36.9	650	0.9 W	80% Max. Rated	10% Min. Rated	110% Rated
48 VDC	18.5	2,600	0.9 W			
110 VDC	10	13,500	0.9 W			

ENVIRONMENTAL & PHYSICAL PARAMETERS

Operating Ambient Temperature
-25° C to +55° C (-13° F to +131° F)
Assumes a DRY environment — Enclosed

Operating Humidity (Recommended)
45% to 85% RH

Unit Weight (2, 4 Pole Relay)
35 g (1.2 oz)

Relay & Socket Dimensions
See Outline Drawings pages 423-428.

MATERIALS & CONSTRUCTION

Contacts: AgNi Alloy

Plated Brass Terminations: Cadmium Free

Solder Connections: Lead Free

Thermoplastic & Thermoset Moldings

RoHS Compliance:
For RoHS compliance documentation by product, refer to www.c3controls.com.

MINIATURE SQUARE BASE RELAYS w/BLADE TERMINALS

- SPDT and DPDT for control circuit application flexibility.
- 15A, SPDT and 10A, DPDT.
- 1/2HP @ 120V AC, 1/2HP @ 240V AC.
- AC and DC coils.
- Blade terminals (13/64") are interchangeable with other commonly available relays.
- Tape wound coils are marked with the coil voltage for easy identification.
- AgNi contacts, environmentally friendly - cadmium free.
- Small size requiring minimum panel space for lower installed cost.
- Optional indicating lights are color coded, red for AC and green for DC.
- Optional mechanical actuator and indicating light for checking the control circuit operation without energizing the relay and to easily determine the relay status.
- Terminal markings on the relay for easy reference during installation.
- Low coil consumption to minimize transformer and power supply requirements.
- cURus and CE for acceptance in global applications.
- Transparent housing to visually monitor switching operations and contact condition.
- 100% tested to ensure performance to specification.

IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 6 for more detailed directions.

Miniature Square Base Relay w/Blade Terminals

GPRM-B -
I II III IV

Example: To build one of our most popular Relays, the part number would be **GPRM-B + II + III + IV** or **GPRM-B2C10D-3**



I. RELAY TYPE

CODE	DESCRIPTION	PRICE
GPRM-B	General Purpose Relay w/Blade	\$5.50

II. POLES & CURRENT RATING

CODE	DESCRIPTION	PRICE
1C15	SPDT, 15A	—
2C10	DPDT, 10A	\$0.80

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
E	220-240V AC
ZC	24V DC
ZJ	48V DC
ZD	110V DC

IV. OPTIONS

CODE	DESCRIPTION	PRICE
3	Light & Mechanical Actuator	\$1.00

Relays available in convenient multi-packs, consult factory for details.

NOTE: See page 412 for 4-Pole Miniature Relay.

COMPATIBLE SOCKETS

RELAY TYPE	COMPATIBLE SOCKETS
GPRM-B1C15**	GPRA-SB08G1 with IP20 Guarded Terminals
GPRM-B2C10**	or GPRA-SB08U1 with Open Style Terminals
	See page 421 for socket information

DISCOUNT
SCHEDULE

C

ELECTRICAL RATINGS

POLE COMBINATION		SPDT	DPDT			
ITEM SPECIFICATIONS:		UNITS				
Contact Resistance	mΩ	100	100			
Dielectric Strength (Coil to Contact)	AC Volts (50/60 HZ - 1 Min.)	1500 V	1500 V			
Dielectric Strength (Between Contacts)	AC Volts (50/60 HZ - 1 Min.)	1000 V	1000 V			
Insulation Resistance (500 VDC)	MΩ [Min]	100	100			
Max. Switching (ON/OFF) Mechanical	Oper./Min.	240	240			
Max. Switching (ON/OFF) Electrical	Oper./Min.	30	30			
Life Expectancy - Mechanical	Operations [Min]	10M	10M			
Life Expectancy - Elect (@ Rating)	Operations [Min]	100K	100K			
Vibration: Endurance	1.0 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz			
Vibration: Error Operation	1.0 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz			
Shock: Endurance	G Min.	100 G Min	100 G Min			
Shock: Error Operation	G Min.	10 G Min	10 G Min			
Coil Operate Time (Pick-Up)	mSec (Max)	25	25			
Coil Release Time (Drop Out)	mSec (Max)	25	25			
Coil Temperature Rise (at rated voltage)	Deg C (Max)	60 C	60 C			
CONTACT RATING		SPDT	DPDT			
Rated Carrying Current		15 A	10 A			
Max. Allowable Voltage		240 VAC 110 VDC	240 VAC 110 VDC			
Capacity: Resistive Load	P.F.= 1.0	240 VAC - 15 A 120 VAC - 15 A 28 VDC - 15 A	240 VAC - 10 A 120 VAC - 10 A 28 VDC - 10 A			
Inductive Loads	P.F. = 0.4 [L/R = 7 mSec.]	28 VDC - 7 A	28 VDC - 5 A			
Motor Loads	240 VAC 120 VAC	1/2 HP 1/2 HP	1/2 HP 1/2 HP			
Min. Recommended Load		10 VDC - 10 mA	10 VDC - 10 mA			
COIL SPECIFICATIONS (@ 20° C) — (SPDT & DPDT POLE RELAYS)						
Nominal Coil Voltage (Volts)	Nominal Current (mA)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	45	160	1.0 ~ 1.3 VA	80% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	11.5	3,400	1.0 ~ 1.3 VA			
220/240 VAC (@ 60 HZ)	5	13,600	1.0 ~ 1.3 VA			
24 VDC	36.9	650	0.9 W	80% Max. Rated	10% Min. Rated	110% Rated
48 VDC	18.5	2,600	0.9 W			
110 VDC	10	11,000	0.9 W			

ENVIRONMENTAL & PHYSICAL PARAMETERS

Operating Ambient Temperature
-25° C to +55° C (-13° F to +131° F)
Assumes a DRY environment — Enclosed

Operating Humidity (Recommended)
45% to 85% RH

Unit Weight (1 ~ 2 Pole Relay)
35 g (1.2 oz)

Relay & Socket Dimensions
See Outline Drawings pages 423-428.

MATERIALS & CONSTRUCTION

Contacts: AgNi Alloy

Plated Brass Terminations: Cadmium Free

Solder Connections: Lead Free

Thermoplastic & Thermoset Moldings

RoHS Compliance:
For RoHS compliance documentation by product, refer to www.c3controls.com.

MINIATURE SQUARE BASE RELAYS w/BLADE TERMINALS

- 4PDT for control circuit application flexibility.
- 10A, 4PDT.
- 1/2HP @ 120V AC, 1/2HP @ 240V AC.
- AC and DC coils.
- Blade terminals (13/64") are interchangeable with other commonly available relays.
- Tape wound coils are marked with the coil voltage for easy identification.
- AgNi contacts, environmentally friendly - cadmium free.
- Small size requiring minimum panel space for lower installed cost.
- Optional indicating lights are color coded, red for AC and green for DC.
- Optional mechanical actuator and indicating light for checking the control circuit operation without energizing the relay and to easily determine the relay status.
- Terminal markings on the relay for easy reference during installation.
- Low coil consumption to minimize transformer and power supply requirements.
- cURus and CE for acceptance in global applications.
- Transparent housing to visually monitor switching operations and contact condition.
- Writable marking label allows for fast and easy circuit identification.
- 100% tested to ensure performance to specification.

IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 6 for more detailed directions.

Miniature Square Base Relay w/Blade Terminals

GPRM-B4C10

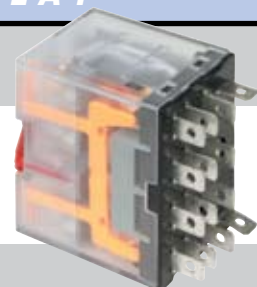
I

II

III

IV

Example: To build one of our most popular Relays, the part number would be **GPRM-B + 4C10 + III + IV** or **GPRM-B4C10ZC-3**



I. RELAY TYPE

CODE	DESCRIPTION	PRICE
GPRM-B	General Purpose Relay w/Blade	\$7.90

II. POLES & CURRENT RATING

CODE	DESCRIPTION
4C10	4PDT, 10A

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
E	220-240V AC
ZC	24V DC
ZJ	48V DC
ZD	110V DC

IV. ACTUATOR TYPE

CODE	DESCRIPTION	PRICE
3	Light & Mechanical Actuator (included)	\$1.00

Relays available in convenient multi-packs, consult factory for details.

NOTE: See page 410 for 1- and 2-Pole Miniature Relays.

COMPATIBLE SOCKETS

RELAY TYPE	COMPATIBLE SOCKETS
GPRM-B4C10**	GPRA-SB14U2 with Open Style Terminals
	See page 422 for socket information

DISCOUNT
SCHEDULE

C

ELECTRICAL RATINGS

POLE COMBINATION		4PDT
ITEM SPECIFICATIONS:	UNITS	
Contact Resistance	mΩ	100
Dielectric Strength (Coil to Contact)	AC Volts (50/60 HZ - 1 Min.)	1500 V
Dielectric Strength (Between Contacts)	AC Volts (50/60 HZ - 1 Min.)	1000 V
Insulation Resistance (500 VDC)	MΩ [Min]	100
Max. Switching (ON/OFF) Mechanical	Oper./Min.	240
Max. Switching (ON/OFF) Electrical	Oper./Min.	30
Life Expectancy - Mechanical	Operations [Min]	10M
Life Expectancy - Elect (@ Rating)	Operations [Min]	100K
Vibration: Endurance	1.0 mm (Double Amplitude)	10 ~ 55 Hz
Vibration: Error Operation	1.0 mm (Double Amplitude)	10 ~ 55 Hz
Shock: Endurance	G Min.	100 G Min
Shock: Error Operation	G Min.	10 G Min
Coil Operate Time (Pick-Up)	mSec (Max)	25
Coil Release Time (Drop Out)	mSec (Max)	25
Coil Temperature Rise (at rated voltage)	Deg C (Max)	60 C

CONTACT RATING		4PDT
Rated Carrying Current		10 A
Max. Allowable Voltage		240 VAC 110 VDC
Capacity: Resistive Load	P.F. = 1.0	240 VAC - 10 A 120 VAC - 10 A 28 VDC - 10 A
Inductive Loads	P.F. = 0.4 [L/R = 7 mSec.]	28 VDC - 5 A
Motor Loads	240 VAC 120 VAC	1/2 HP 1/3 HP
Min. Recommended Load		10 VDC - 10 mA

COIL SPECIFICATIONS (@ 20° C) — (4 POLE RELAYS)

Nominal Coil Voltage (Volts)	Nominal Current (mA)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	93.6 (50Hz) ~ 80 (60Hz)	78	1.9 ~ 2.5 VA	85%	30%	110% Rated
120 VAC (@ 60 HZ)	24.5 (50Hz) ~ 21 (60Hz)	1,600	1.9 ~ 2.5 VA	Max. Rated	Min. Rated	
220/240 VAC (@ 60 HZ)	13.1 (50Hz) ~ 11.2 (60Hz)	6,700	1.9 ~ 2.5 VA			
24 VDC	69	350	1.5 W	80%	10%	110% Rated
48 VDC	30	1,600	1.5 W	Max. Rated	Min. Rated	
110 VDC	15.9	6,900	1.5 W			

ENVIRONMENTAL & PHYSICAL PARAMETERS

Operating Ambient Temperature
-25° C to +55° C (-13° F to +131° F)
Assumes a DRY environment — Enclosed

Operating Humidity (Recommended)
45% to 85% RH

Unit Weight (4 Pole Relay)
35 g (1.2 oz)

Relay & Socket Dimensions
See Outline Drawings pages 423-428.

MATERIALS & CONSTRUCTION

Contacts: AgNi Alloy

Plated Brass Terminations: Cadmium Free

Solder Connections: Lead Free

Thermoplastic & Thermoset Moldings

RoHS Compliance:
For RoHS compliance documentation by product, refer to www.c3controls.com.

MINIATURE SLIM LINE SQUARE BASE RELAYS w/BLADE TERMINALS

- 12A, SPDT.
- 1/3 HP @ 120V AC, 1/2HP @ 240V AC.
- Small size requiring minimum panel space for lower installed costs. Relay is only 14mm (35/64") wide!
- AC and DC coils.
- Blade terminals (13/64") are interchangeable with other commonly available relays.
- Tape wound coils are marked with the coil voltage for easy identification.
- AgNi contacts, environmentally friendly – cadmium free.
- Optional indicating lights are color coded, red for AC and green for DC.
- Optional mechanical actuator and indicating light for checking the control circuit operation without energizing the relay and to easily determine the relay status.
- Terminal markings and schematic on the relay for easy reference during installation.
- Low coil consumption to minimize transformer and power supply requirements.
- cURus and CE for acceptance in global applications.
- Transparent housing to visually monitor switching operations and contact condition.
- 100% tested to ensure performance to specification.

IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 6 for more detailed directions.

Miniature Slim Line Square Base Relay w/Blade Terminals

GPRM-S 1C12 — **III** — **IV**

Example: To build one of our most popular Relays, the part number would be **GPRM-S + 1C12 + III + IV** or **GPRM-S1C12C-3**



I. RELAY TYPE

CODE	DESCRIPTION	PRICE
GPRM-S	General Purpose Relay w/Blade	\$5.50

II. POLES & CURRENT RATING

CODE	DESCRIPTION	PRICE
1C12	SPDT, 12A	—

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
F	240V AC
ZB	12V DC
ZC	24V DC

IV. OPTIONS

CODE	DESCRIPTION	PRICE
3	Light & Mechanical Actuator	\$1.00

Relays available in convenient multi-packs, consult factory for details.

COMPATIBLE SOCKETS

RELAY TYPE	COMPATIBLE SOCKETS
GPRM-S1C12**	GPRA-SB05G1 with IP20 Guarded Terminals
	See page 421 for socket information

DISCOUNT
SCHEDULE

C

ELECTRICAL RATINGS

POLE COMBINATION		SPDT				
ITEM SPECIFICATIONS:	UNITS					
Contact Resistance	mΩ	50				
Dielectric Strength (Coil to Contact)	AC Volts (50/60 HZ - 1 Min.)	2000 V				
Dielectric Strength (Between Contacts)	AC Volts (50/60 HZ - 1 Min.)	1000 V				
Insulation Resistance (500 VDC)	MΩ [Min]	100				
Max. Switching (ON/OFF) Mechanical	Oper./Min.	240				
Max. Switching (ON/OFF) Electrical	Oper./Min.	30				
Life Expectancy - Mechanical	Operations [Min]	50 Million				
Life Expectancy - Elect (@ 120V Rating)	Operations [Min]	500,000				
Vibration: Endurance	1.0 mm (Double Amplitude)	10 ~ 55 Hz				
Vibration: Error Operation	1.0 mm (Double Amplitude)	10 ~ 55 Hz				
Shock: Endurance	G Min.	100 G Min				
Shock: Error Operation	G Min.	10 G Min				
Coil Operate Time (Pick-Up)	mSec (Max)	20				
Coil Release Time (Drop Out)	mSec (Max)	20				
Coil Temperature Rise (at rated voltage)	Deg C (Max)	85 C				
CONTACT RATING		SPDT				
Rated Carrying Current		12 A				
Max. Allowable Voltage		240 VAC 110 VDC				
Capacity: Resistive Load	P.F. = 1.0	240 VAC - 12 A 24 VDC - 12 A				
Inductive Loads	P.F. = 0.4 [L/R = 7 mSec.]	240 VAC - 7 A 24 VDC - 7 A				
Min. Recommended Load		10 VDC - 10 mA				
COIL SPECIFICATIONS (@ 20° C) — (SPDT)						
Nominal Coil Voltage (Volts)	Nominal Current (mA)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	72	180	1.7 VA	85% Max. Rated	30% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	14	4,300	1.7 VA			
240 VAC (@ 60 HZ)	7	15,720	1.7 VA			
12 VDC	64	188	0.8 W	80% Max. Rated	10% Min. Rated	110% Rated
24 VDC	32	750	0.8 W			

ENVIRONMENTAL & PHYSICAL PARAMETERS

Operating Ambient Temperature
-30° C to +70° C (-22° F to +158° F)
Assumes a DRY environment — Enclosed

Operating Humidity (Recommended)
45% to 85% RH

Unit Weight
24 g (0.9 oz)

Relay & Socket Dimensions
See Outline Drawings pages 423-428.

MATERIALS & CONSTRUCTION

Contacts: AgNi Alloy

Plated Brass Terminations: Cadmium Free

Solder Connections: Lead Free

Thermoplastic & Thermoset Moldings

RoHS Compliance:
For RoHS compliance documentation by
product, refer to www.c3controls.com.

HERMETICALLY SEALED OCTAL BASE RELAYS w/PIN TERMINALS

- 12A, DPDT and 12A, 3PDT, for control circuit application flexibility.
- 1/3 HP @ 120V AC, 1/2 HP @ 240V AC.
- AC and DC coils.
- Temperature Code - T4A.
- Suitable for use in Class 1, Division 2 Group A, B, C and D, and Zone 2, Group IIA, IIB and IIC Hazardous Locations.
- Hermetically sealed metal enclosure.
- Vacuum baked and dry nitrogen filled - removes contaminants and provides a clean and dry atmosphere for contacts.
- Plug-in style, uses standard sockets (see page 420).
- Schematic diagram and terminal markings on the relay for easy reference during installation.
- Low coil consumption to minimize transformer and power supply requirements.
- 100% tested to ensure performance to specifications.
- cURus.

IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 6 for more detailed directions.

Hermetically Sealed Octal Base Relay w/Pin Terminals

HGPRS-P

/

II

III

Example: To build one of our most popular Relays, the part number would be **HGPRS-P + II + III** or **HGPRS-P3C10ZC**.



I. RELAY TYPE

CODE	DESCRIPTION	PRICE
HGPRS-P	Hermetically Sealed Relay w/Pin	\$54.00

II. POLES & CURRENT RATING

CODE	DESCRIPTION	PRICE
2C12	DPDT, 12A	—
3C10	3PDT, 12A	\$2.00

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
F	240V AC
ZB	12V DC
ZC	24V DC
ZD	110V DC

COMPATIBLE SOCKETS

RELAY TYPE	COMPATIBLE SOCKETS
HGPRS-P2C12*	GPRA-SP08G1 with IP20 Guarded Terminals GPRA-SP08U1 with Open Style Terminals
HGPRS-P3C10*	GPRA-SP11G1 with IP20 Guarded Terminals GPRA-SP11U1 with Open Style Terminals
See page 420 for socket information	

ELECTRICAL RATINGS

POLE COMBINATION		DPDT	3PDT
ITEM SPECIFICATIONS:			
Dielectric Strength (Coil to Contact)	AC Volts (50/60 HZ - 1 Minute)	1250 V	1250 V
Dielectric Strength (Between Contacts)	AC Volts (50/60 HZ - 1 Minute)	1250 V	1250 V
Insulation Resistance (500 VDC)	MΩ [Min]	100	100
Max Switching (ON/OFF) Electrical	Oper./Min.	6	6
Life Expectancy - Mechanical	Operations [Min]	5M	5M
Life Expectancy - Elect (@120 V Resistive)	Operations [Min]	100K	100K
Vibration: Endurance	1.0 mm (Double Amplitude)	10 ~ 55 Hz	10 ~ 55 Hz
	G Min.	3 G Min	3 G Min
Shock:	Mechanical	10 G	10 G
Coil Operate Time (Pick-Up)	mSec (Max)	15	15
Coil Release Time (Drop Out)	mSec (Max)	10	10

CONTACT RATING

		DPDT	3PDT
Rated Carrying Current		12 A	12 A
Max. Allowable Voltage		240 VAC 28 VDC	240 VAC 28 VDC
Capacity: Resistive Load	P.F. = 1.0	240 VAC - 8 A 120 VAC - 12 A 28 VDC - 10 A	240 VAC - 6 A 120 VAC - 10 A 28 VDC - 10 A
Inductive Loads	P.F. = 0.4 [L/R = 7 mSec.]	240 VAC - 6 A 120 VAC - 9 A 28 VDC - 7 A	240 VAC - 4 A 120 VAC - 7 A 28 VDC - 7 A
Motor Loads	120 VAC 240 VAC	1/3 HP 1/2 HP	1/3 HP 1/2 HP
Minimum Recommended Load	Switching [0.5 Watts]	100 mA @ 5 VDC	100 mA @ 5 VDC

COIL SPECIFICATIONS (@ 25° C (77° F)) — (DPDT)

Temperature Code:	T4A				
Nominal Coil Voltage (Volts)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	72	1.2 VA	85% Max. Rated	15% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	1,700	1.2 VA			
240 VAC (@ 60 HZ)	7,200	1.2 VA			
12 VDC	120	0.9 W	80% Max. Rated	10% Min. Rated	110% Rated
24 VDC	470	0.9 W			
110 VDC	10,000	0.9 W			

COIL SPECIFICATIONS (@ 25° C (77° F)) — (3PDT)

Temperature Code:	T4A				
Nominal Coil Voltage (Volts)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	72	2 VA	85% Max. Rated	15% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	1,700	2 VA			
240 VAC (@ 60 HZ)	7,200	2 VA			
12 VDC	120	1.2 W	80% Max. Rated	10% Min. Rated	110% Rated
24 VDC	470	1.2 W			
110 VDC	10,000	1.2 W			

ENVIRONMENTAL & PHYSICAL PARAMETERS

Operating Ambient Temperature Assumes a DRY environment — Enclosed
AC Operated: -40° C to +55° C (-49° F to +131° F) DC Operated: -45° C to +55° C (-49° F to +131° F)
Operating Humidity (Recommended) 35% to 85% RH
May mount in ANY position
Unit Weight (2, 3 Pole Relay) 130 g (4.6 oz)
Relay & Socket Dimensions See Outline Drawings pages 423-428.

MATERIALS & CONSTRUCTION

Contacts: Ag Alloy
Plated Terminations: Cadmium Free
Solder Connections: Lead Free
Thermoplastic & Thermoset Moldings Rated UL-94V0
Protective Covering: Steel with baked enamel finish
RoHS Compliance: For RoHS compliance documentation by product, refer to www.c3controls.com .

HERMETICALLY SEALED MINIATURE SQUARE BASE RELAYS W/BLADE TERMINALS

- 5A, 4PDT for control circuit application flexibility.
- AC and DC coils.
- Suitable for use in Class 1, Division 2 Group A, B, C and D, and Zone 2, Group IIA, IIB and IIC Hazardous Locations.
- Temperature Code - T4A.
- Hermetically sealed metal enclosure.
- Vacuum baked and dry nitrogen filled - removes contaminants and provides a clean and dry atmosphere for contacts.
- Plug-in style, uses standard sockets (see page 422).
- Schematic diagram and terminal markings on the relay for easy reference during installation.
- Low coil consumption to minimize transformer and power supply requirements.
- cURus, CSA and CE for acceptance in global applications.
- 100% tested to ensure performance to specifications.

IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 6 for more detailed directions.

Hermetically Sealed Miniature Square Base Relay w/Blade Terminals

HGPRM-B 4C05

/ // ///

Example: To build one of our most popular Relays, the part number would be
HGPRM-B + II + III or **HGPRM-B4C05ZC**



I. RELAY TYPE

CODE	DESCRIPTION	PRICE
HGPRM-B	Hermetically Sealed Relay w/Blade	\$36.00

II. POLES & CURRENT RATING

CODE	DESCRIPTION	PRICE
4C05	4PDT, 5A	—

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
F	240V AC
ZB	12V DC
ZC	24V DC
ZD	110V DC

We recommend that miniature square base hermetically sealed relays be used in conjunction with retainer clip GPRA-RC4 (see page 422).

COMPATIBLE SOCKETS

RELAY TYPE	COMPATIBLE SOCKETS
HGPRM-B4C05*	GPRA-SB14U1 with Open Style Terminals
See page 422 for socket information	

DISCOUNT
SCHEDULE

C

ELECTRICAL RATINGS					
POLE COMBINATION			4PDT		
ITEM SPECIFICATIONS:		UNITS			
Dielectric Strength (Coil to Contact)		AC Volts (50/60 HZ - 1 Minute)		1240 V	
Dielectric Strength (Between Contacts)		AC Volts (50/60 HZ - 1 Minute)		500 V	
Insulation Resistance (500 VDC)		MΩ [Min]		100	
Max Switching (ON/OFF) Mechanical		Oper./Min.		30	
Max Switching (ON/OFF) Electrical		Oper./Min.		6	
Life Expectancy - Mechanical		Operations [Min]		10M	
Life Expectancy - Elect (@120 V Resistive)		Operations [Min]		100K	
Vibration: Endurance		1.0 mm (Double Amplitude)		10 ~ 55 Hz	
		G Min.		3 G Min	
Shock:		Functional		10 G	
Coil Operate Time (Pick-Up)		mSec (Max)		13	
Coil Release Time (Drop Out)		mSec (Max)		6	
CONTACT RATING			4PDT		
Rated Carrying Current		5 A			
Max. Allowable Voltage		240 VAC 30 VDC			
Capacity: Resistive Load		P.F. = 1.0		240 VAC- 5 A 120 VAC- 5 A 30 VDC- 5 A	
Inductive Loads		P.F. = 0.4 [L/R = 7 mSec.]		240 VAC- 3 A 120 VAC- 3 A 30 VDC- 2 A	
Minimum Recommended Load		Switching [AC/DC]		100 mA @ 5 VDC	
COIL SPECIFICATIONS (@ 25° C (77° F)) — (4PDT)					
Temperature Code:		T4A			
Nominal Coil Voltage (Volts)	Coil Resistance (+/- 10% OHMS)	Power Consumption	Pick-Up Voltage	Drop-Out Voltage	Max. Allowed Voltage
24 VAC (@ 60 HZ)	180	1.2 VA	85% Max. Rated	15% Min. Rated	110% Rated
120 VAC (@ 60 HZ)	4,430	1.2 VA			
240 VAC (@ 60 HZ)	15,720	1.2 VA			
12 VDC	160	0.9 W	80% Max. Rated	10% Min. Rated	110% Rated
24 VDC	650	0.9 W			
110/125 VDC	13,800	0.9 W			

ENVIRONMENTAL & PHYSICAL PARAMETERS
Operating Ambient Temperature -40° C to +70° C (-49° F to +158° F) Assumes a DRY environment — Enclosed
Operating Humidity (Recommended) 35% to 85% RH
Unit Weight (4 Pole Relay) 45 g (1.6 oz)
Relay & Socket Dimensions See Outline Drawings pages 423-428.

MATERIALS & CONSTRUCTION
Contacts: Ag Alloy
Plated Terminations: Cadmium Free
Solder Connections: Lead Free
Thermoplastic & Thermoset Moldings Rated UL-94V0
Protective Covering: Steel with baked enamel finish
RoHS Compliance: For RoHS compliance documentation by product, refer to www.c3controls.com .

GENERAL PURPOSE PIN & BLADE RELAY SOCKETS

- DIN rail mounting for fast and easy installation.
- IP20 guarded terminals to prevent accidental contact with live parts.
- Combination head (+/-) terminal screws accept straight, phillips, or pozidrive screwdrivers.
- cURus and CE for acceptance in global applications.
- Open style terminals to accept ring tongue terminals.
- Panel mounting for secure installation in high vibration and shock installations.
- Break resistant polycarbonate or glass-filled nylon.

8 & 11 PIN GUARDED & UNGUARDED SOCKETS



8 PIN GUARDED, 10A

CODE	DESCRIPTION	PRICE
GPRA-SP08G1	8 Pin Guarded	\$3.20
SPECIFICATIONS:		
TYPE: Surface or DIN Rail Mount		
CURRENT CARRYING MEMBERS: Phosphor Bronze Nickel Plated Steel		
TERMINALS: IP20, Screw w/captive wire clamps		
RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]		
ELECTRICAL RATING: 10A, 600V AC		
ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com .		
FOR USE WITH:		
GENERAL PURPOSE RELAY: GPRS-P2C10** and HGPRS-P2C12*		
RETAINER CLIP: GPRA-RC3		



11 PIN GUARDED, 10A

CODE	DESCRIPTION	PRICE
GPRA-SP11G1	11 Pin Guarded	\$3.20
SPECIFICATIONS:		
TYPE: Surface or DIN Rail Mount		
CURRENT CARRYING MEMBERS: Phosphor Bronze Nickel Plated Steel		
TERMINALS: IP20, Screw w/captive wire clamps		
RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]		
ELECTRICAL RATING: 10A, 600V AC		
ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com .		
FOR USE WITH:		
GENERAL PURPOSE RELAY: GPRS-P3C10** and HGPRS-P3C10*		
RETAINER CLIP: GPRA-RC3		



8 PIN UNGUARDED, 10A

CODE	DESCRIPTION	PRICE
GPRA-SP08U1	8 Pin Unguarded	\$3.20
SPECIFICATIONS:		
TYPE: Surface or DIN Rail Mount		
CURRENT CARRYING MEMBERS: Phosphor Bronze Nickel Plated Steel		
TERMINALS: Open style, Screw w/captive wire clamps		
RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]		
ELECTRICAL RATING: 10A, 600V AC		
ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com .		
FOR USE WITH:		
GENERAL PURPOSE RELAY: GPRS-P2C10** and HGPRS-P2C12*		
RETAINER CLIP: GPRA-RC3		



11 PIN UNGUARDED, 10A

CODE	DESCRIPTION	PRICE
GPRA-SP11U1	11 Pin Unguarded	\$3.20
SPECIFICATIONS:		
TYPE: Surface or DIN Rail Mount		
CURRENT CARRYING MEMBERS: Phosphor Bronze Nickel Plated Steel		
TERMINALS: Open style, Screw w/captive wire clamps		
RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]		
ELECTRICAL RATING: 10A, 600V AC		
ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com .		
FOR USE WITH:		
GENERAL PURPOSE RELAY: GPRS-P3C10** and HGPRS-P3C10*		
RETAINER CLIP: GPRA-RC3		

DISCOUNT
SCHEDULE **C**

5, 8 & 11 BLADE GUARDED & UNGUARDED SOCKETS**MINIATURE 5 BLADE GUARDED, 15A**

CODE	DESCRIPTION	PRICE
GPRA-SB05G1	Mini 5 Blade Guarded	\$3.20

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount

CURRENT CARRYING MEMBERS:

Phosphor Bronze Nickel Plated Steel

TERMINALS: IP20, Screw w/captive wire clamps

RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]

ELECTRICAL RATING: 15A, 300V AC

ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com.**FOR USE WITH:**

GENERAL PURPOSE RELAY: GPRM-S1C12**

RETAINER CLIP: GPRA-RC4

**MINIATURE 8 BLADE GUARDED, 15A**

CODE	DESCRIPTION	PRICE
GPRA-SB08G1	Mini 8 Blade Guarded	\$3.20

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount

CURRENT CARRYING MEMBERS:

Phosphor Bronze Nickel Plated Steel

TERMINALS: IP20, Screw w/captive wire clamps

RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]

ELECTRICAL RATING: 15A, 300V AC

ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com.**FOR USE WITH:**

GENERAL PURPOSE RELAY: GPRM-B1C15** and GPRM-B2C10**

RETAINER CLIP: GPRA-RC2

**11 BLADE GUARDED, 20/25A**

CODE	DESCRIPTION	PRICE
GPRA-SB11G1	11 Blade Guarded	\$4.50

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount

CURRENT CARRYING MEMBERS:

Phosphor Bronze Nickel Plated Steel

TERMINALS: IP20, Screw w/captive wire clamps

RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]

ELECTRICAL RATING: DPDT: 25A, 300V AC and 3PDT: 20A, 300V AC

ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com.**FOR USE WITH:**

GENERAL PURPOSE RELAY: GPRS-B2C13**, GPRS-B2C25**, GPRS-B3C13** and GPRS-B3C20**

RETAINER CLIP: GPRA-RC1

DISCOUNT
SCHEDULE**C****MINIATURE 8 BLADE UNGUARDED, 15A**

CODE	DESCRIPTION	PRICE
GPRA-SB08U1	Mini 8 Blade Unguarded	\$3.20

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount

CURRENT CARRYING MEMBERS:

Phosphor Bronze Nickel Plated Steel

TERMINALS: Open style, Screw w/captive wire clamps

RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]

ELECTRICAL RATING: 15A, 300V AC

ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com.**FOR USE WITH:**

GENERAL PURPOSE RELAY: GPRM-B1C15** and GPRM-B2C10**

RETAINER CLIP: GPRA-RC2

**11 BLADE UNGUARDED, 20/25A**

CODE	DESCRIPTION	PRICE
GPRA-SB11U1	11 Blade Unguarded	\$4.50

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount

CURRENT CARRYING MEMBERS:

Phosphor Bronze Nickel Plated Steel

TERMINALS: Open style, Screw w/captive wire clamps

RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]

ELECTRICAL RATING: DPDT: 25A, 300V AC and 3PDT: 20A, 300V AC

ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com.**FOR USE WITH:**

GENERAL PURPOSE RELAY: GPRS-B2C13**, GPRS-B2C25**, GPRS-B3C13** and GPRS-B3C20**

RETAINER CLIP: GPRA-RC1

14 BLADE UNGUARDED SOCKETS



MINIATURE 14 BLADE UNGUARDED, 7A

CODE	DESCRIPTION	PRICE
GPRA-SB14U1	Mini 14 Blade Unguarded	\$4.30

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount
 CURRENT CARRYING MEMBERS:
 Phosphor Bronze Nickel Plated Steel
 TERMINALS: Open style, Screw w/captive wire clamps
 RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]
 ELECTRICAL RATING: 7A, 300V AC
 ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com.

FOR USE WITH:

GENERAL PURPOSE RELAY: GPRM-B2C05**,
 GPRM-B4C05** and HGPRM-B4C05*
 RETAINER CLIP: GPRA-RC4



DISCOUNT
SCHEDULE **C**

MINIATURE 14 BLADE UNGUARDED, 15A

CODE	DESCRIPTION	PRICE
GPRA-SB14U2	Mini 14 Blade Unguarded	\$4.30

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount
 CURRENT CARRYING MEMBERS:
 Phosphor Bronze Nickel Plated Steel
 TERMINALS: Open style, Screw w/captive wire clamps
 RECOMMENDED TORQUE: 7-10 lb-in. [.8-1.1 Nm]
 ELECTRICAL RATING: 15A, 300V AC
 ROHS COMPLIANCE: For documentation by product, refer to www.c3controls.com.

FOR USE WITH:

GENERAL PURPOSE RELAY: GPRM-B4C10**
 RETAINER CLIP: GPRA-RC4

RETAINER CLIPS FOR SOCKETS

Recommended for use in high vibration applications to further secure relay in socket.
 For RoHS compliance documentation by product, refer to www.c3controls.com.



For use with
 GPRA-SB11U1
 & GPRA-SB11G1
 Sockets.

CODE	DESCRIPTION	QTY./PKG.	PRICE/PC.
GPRA-RC1	Retainer Clip	10	\$1.00



For use with
 GPRA-SB08U1 &
 GPRA-SB08G1 Sockets.

CODE	DESCRIPTION	QTY./PKG.	PRICE/PC.
GPRA-RC2	Retainer Clip	10	\$1.00



For use with GPRA-SB14U1
 and GPRA-SB14U2 Sockets.

CODE	DESCRIPTION	QTY./PKG.	PRICE/PR.
GPRA-RC4	Retainer Clip	10 pair	\$1.00

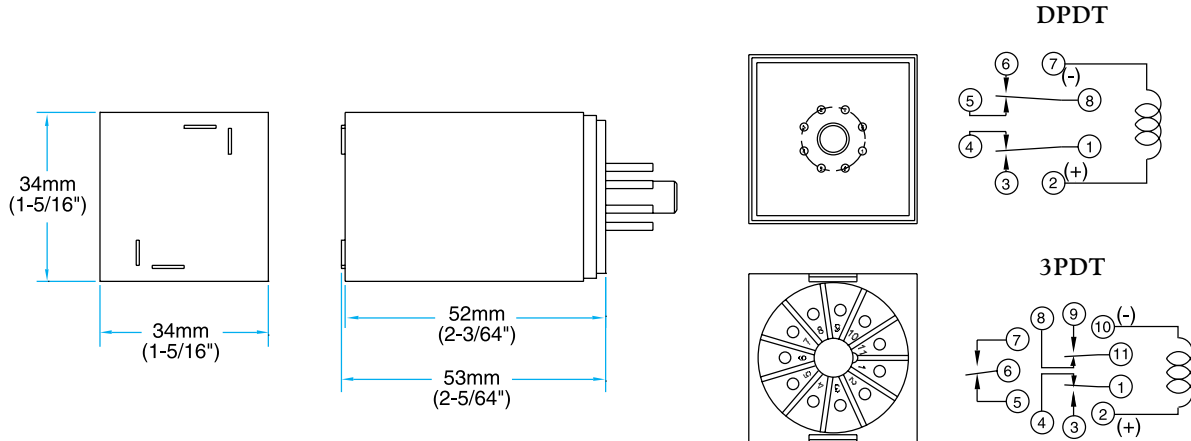
DISCOUNT
SCHEDULE **C**



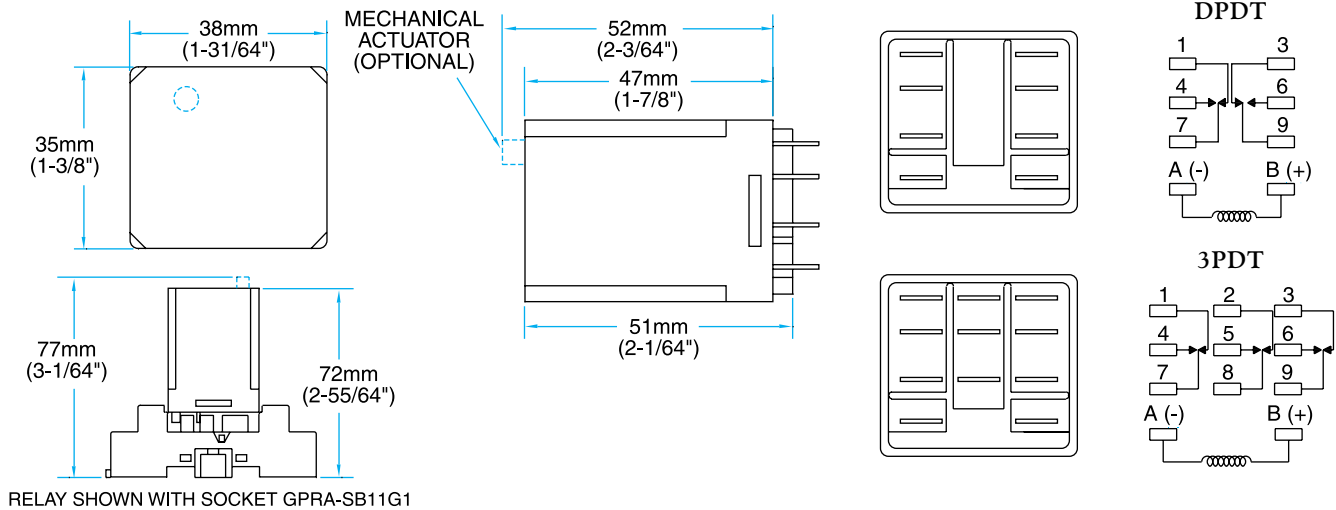
For use with
 GPRA-SP08U1, GPRA-
 SP08G1, GPRA-SP11U1
 & GPRA-SP11G1 Sockets.

CODE	DESCRIPTION	QTY./PKG.	PRICE/PR.
GPRA-RC3	Retainer Clip	10 pair	\$1.00

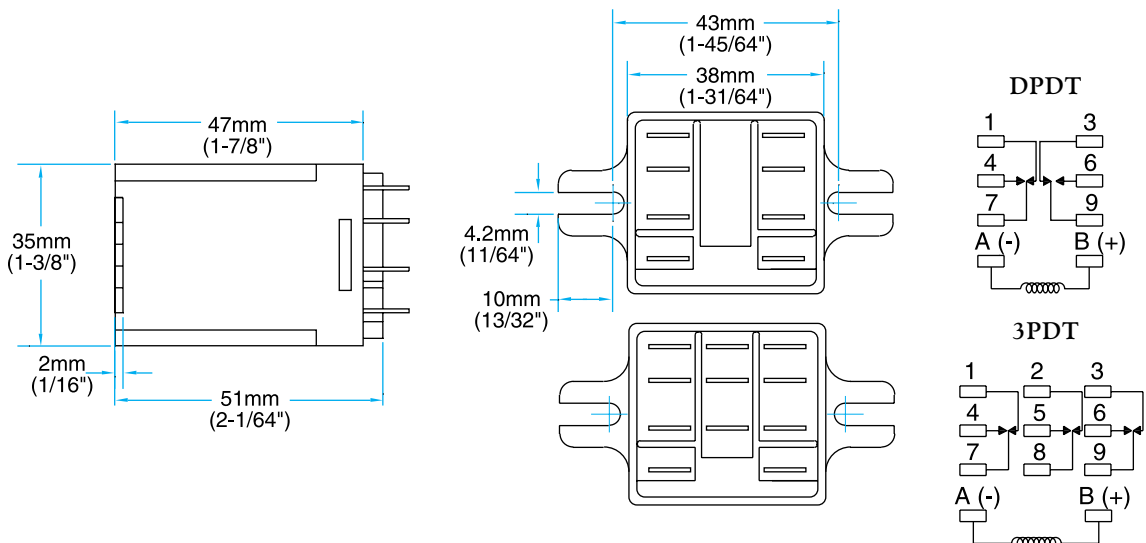
OCTAL BASE RELAYS W/PIN TERMINALS - 2 & 3 POLES (GPRS-P2C10 & P3C10)



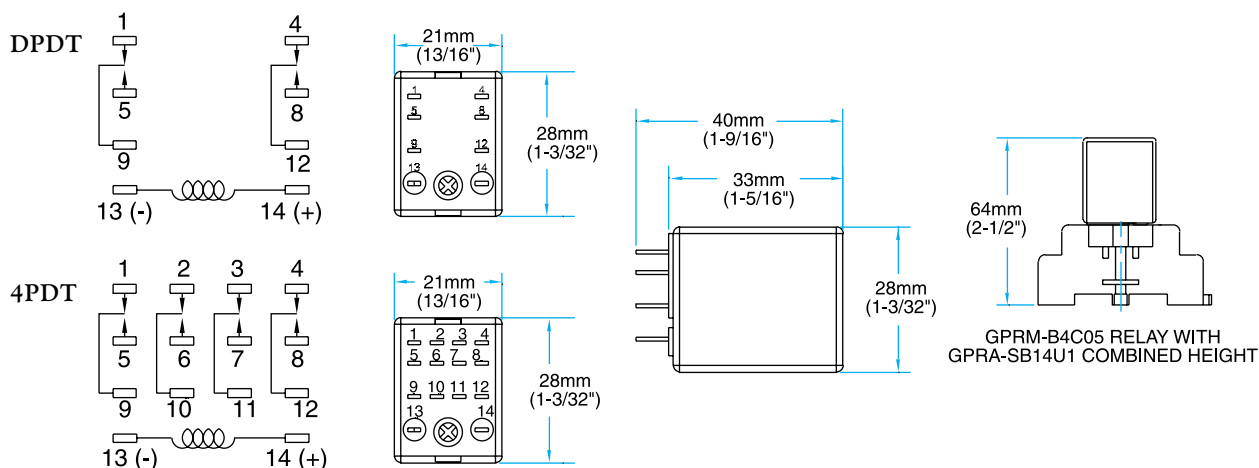
SQUARE BASE RELAYS W/BLADE TERMINALS - 2 & 3 POLES (GPRS-B2C13, B3C13, B2C25 & B3C20)



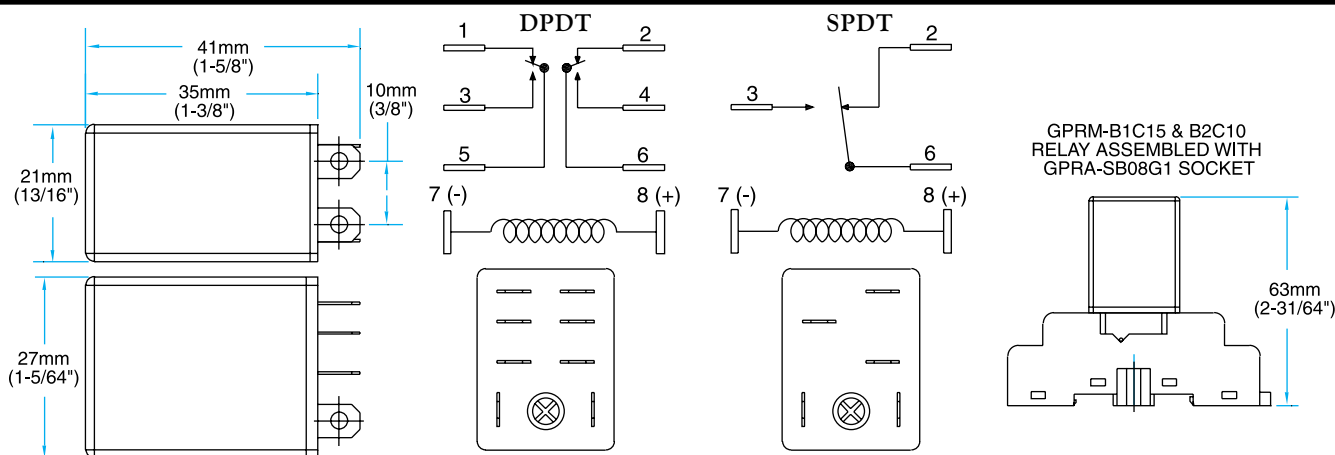
FLANGE MOUNTED RELAYS W/BLADE TERMINALS - 2 & 3 POLES (GPRF-TC25 & T3C20)



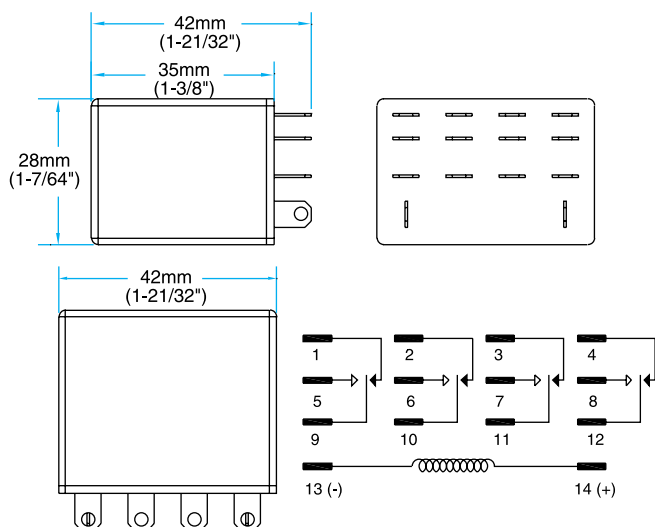
MINIATURE SQUARE BASE RELAYS W/BLADE TERMINALS, 2 & 4 POLES (GPRM-B2C05 & B4C05)



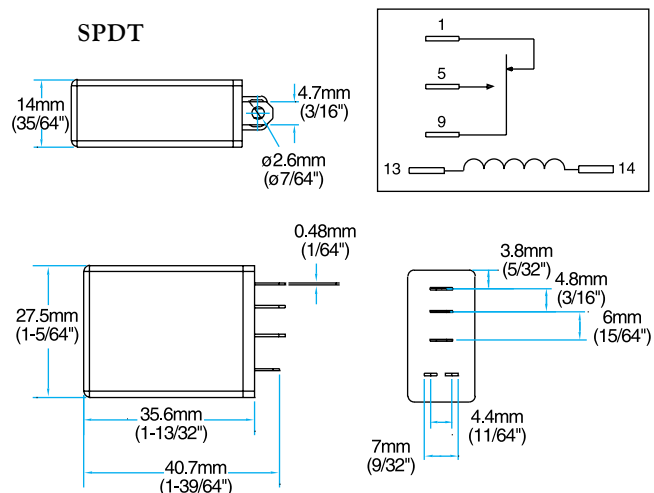
MINIATURE SQUARE BASE RELAYS W/BLADE TERMINALS, 1 & 2 POLES (GPRM-B1C15 & B2C10)



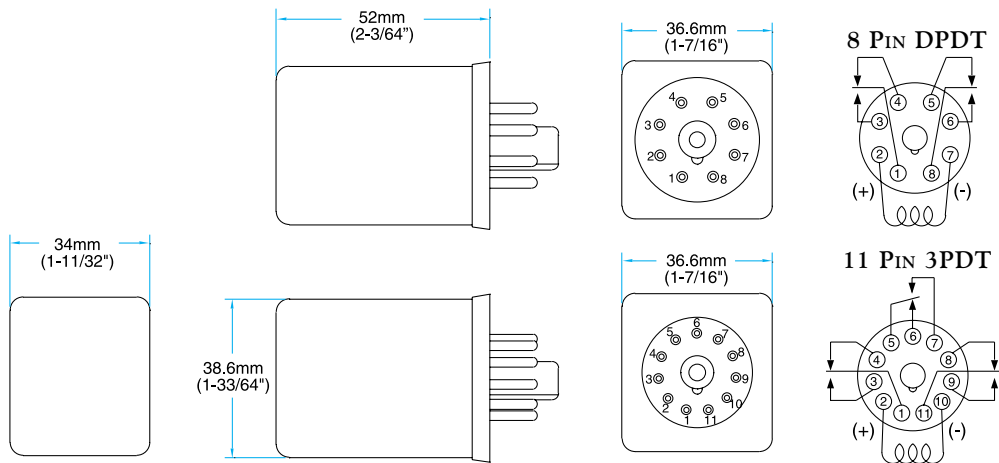
MINIATURE SQUARE BASE RELAYS W/BLADE TERMINALS - 4 POLES (GPRM-B4C10)



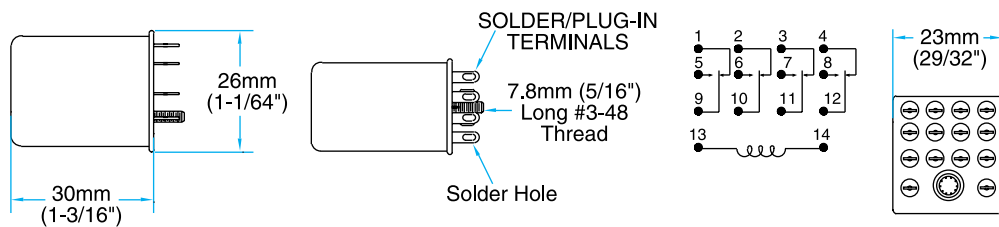
MINIATURE SQUARE BASE RELAYS W/BLADE TERMINALS - 1 POLE (GPRM-S1C12)



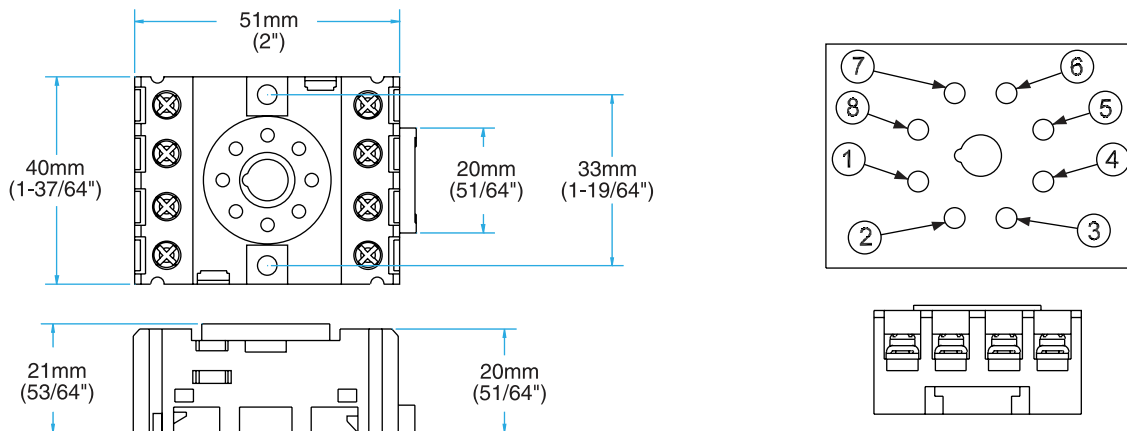
HERMETICALLY SEALED OCTAL BASE RELAYS W/PIN TERMINALS - 2 & 3 POLES (HGPRS-P2C12 & P3C10)



HERMETICALLY SEALED MINIATURE SQUARE BASE RELAYS W/BLADE TERMINALS - 4 POLES (HGPRM-B4C05)

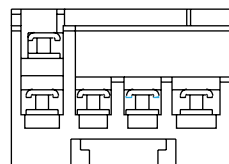
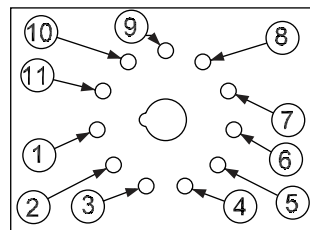
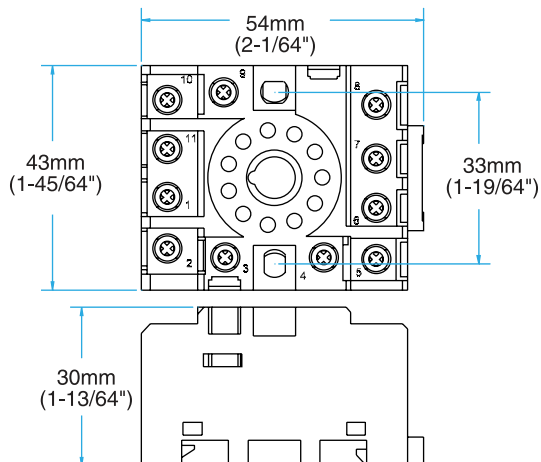


8 PIN GUARDED 10A SOCKET (GPRA-SP08G1)

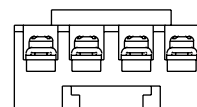
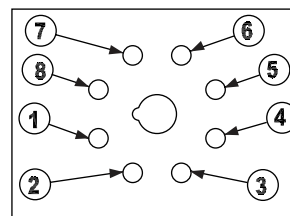
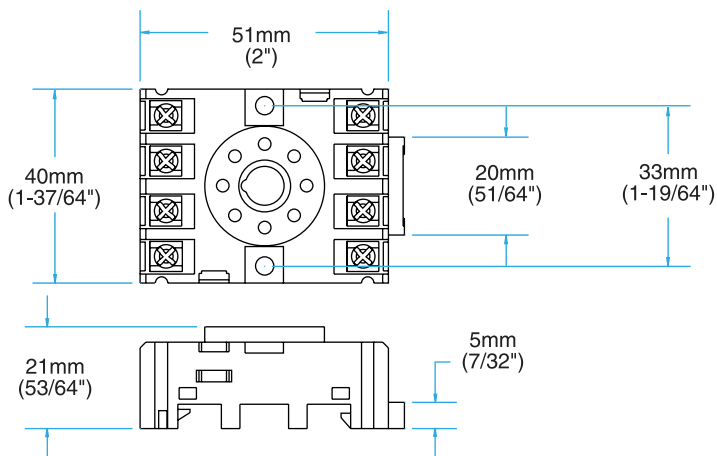


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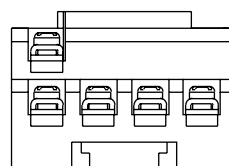
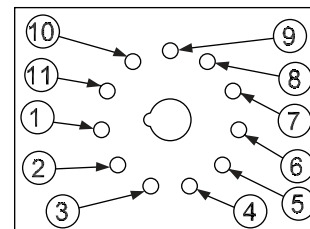
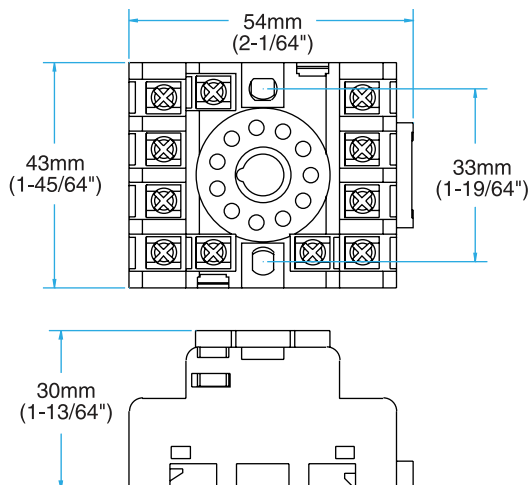
11 PIN GUARDED 10A SOCKET (GPRA-SP11G1)



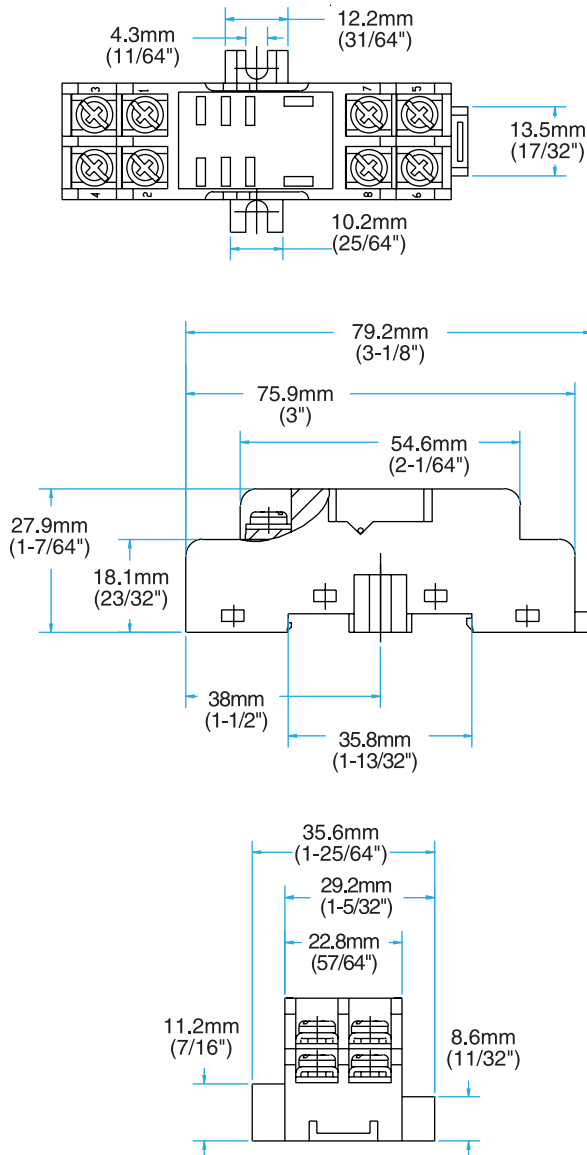
8 PIN UNGUARDED 10A SOCKET (GPRA-SP08U1)



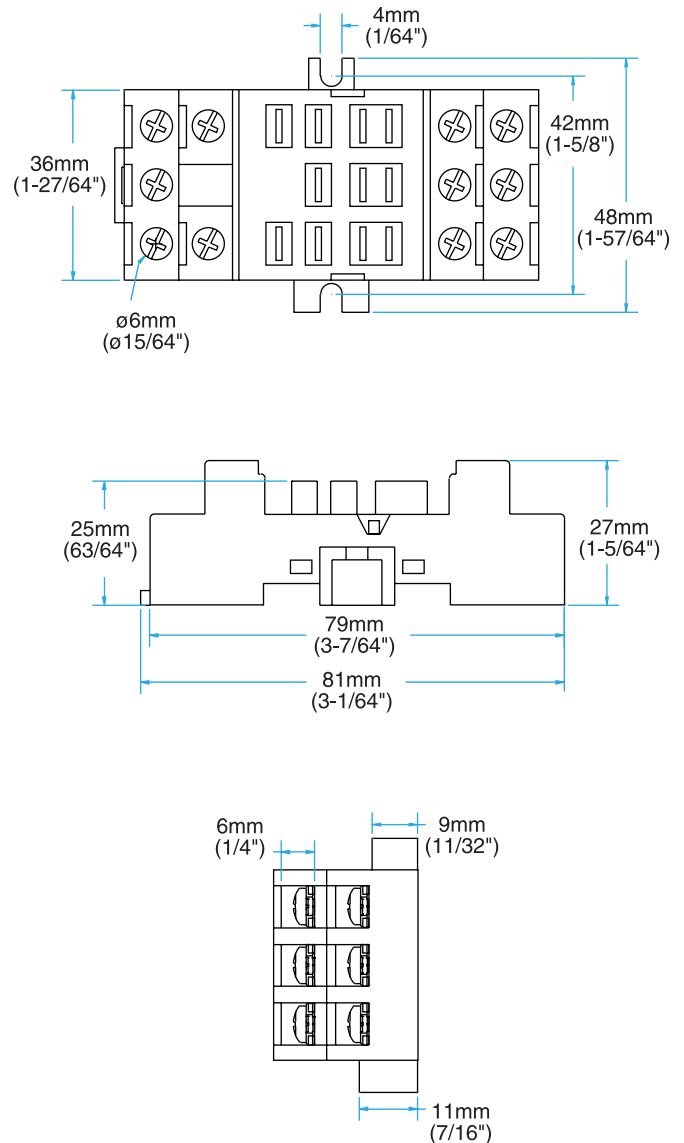
11 PIN UNGUARDED 10A SOCKET (GPRA-SP11U1)



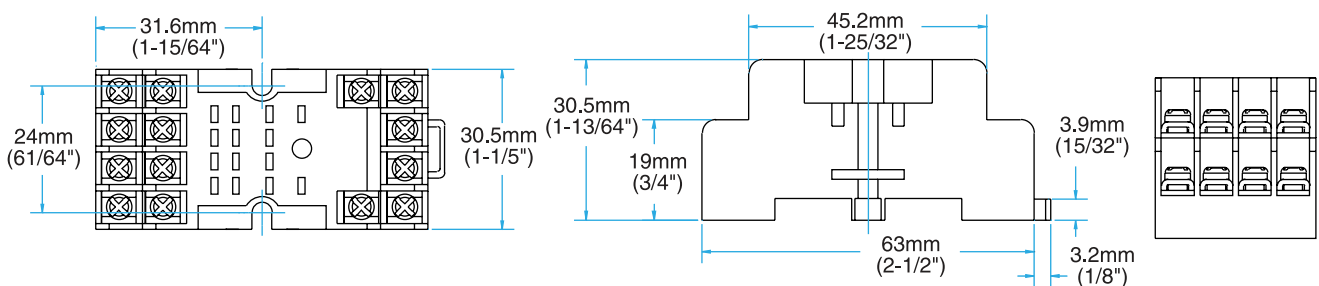
**MINIATURE 8 BLADE GUARDED
15A SOCKET (GPRA-SB08G1)**



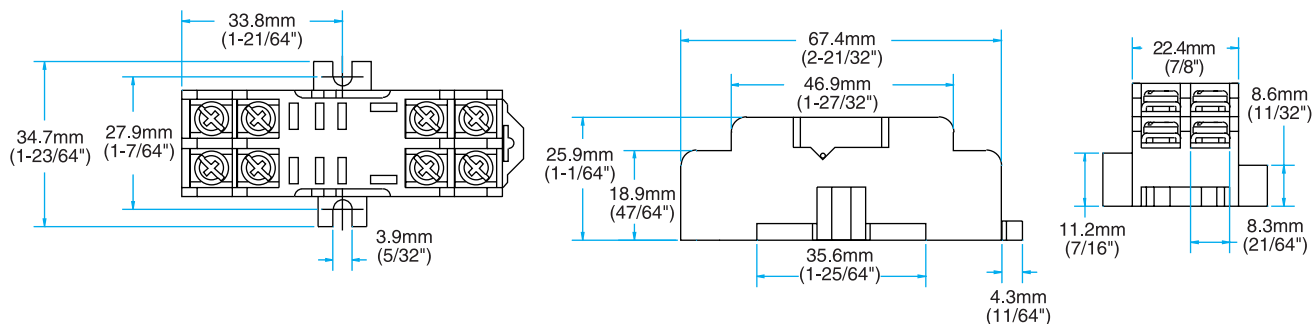
**11 BLADE GUARDED 20/25A
SOCKET (GPRA-SB11G1)**



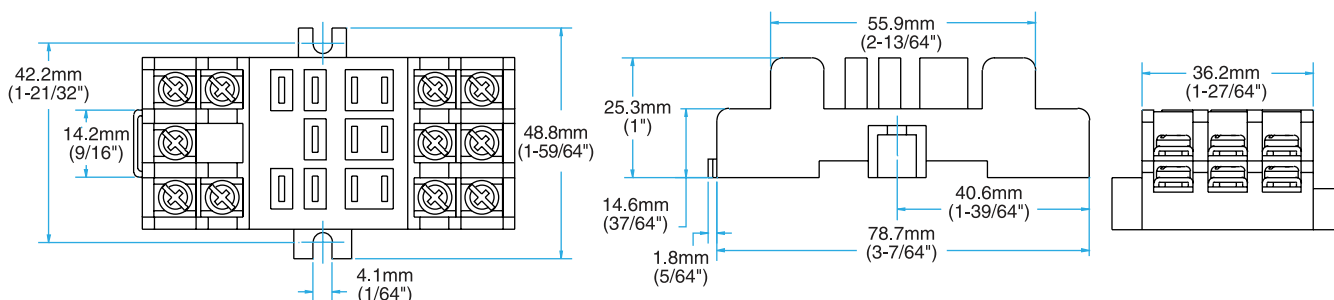
MINIATURE 14 BLADE UNGUARDED 7A SOCKET (GPRA-SB14U1)



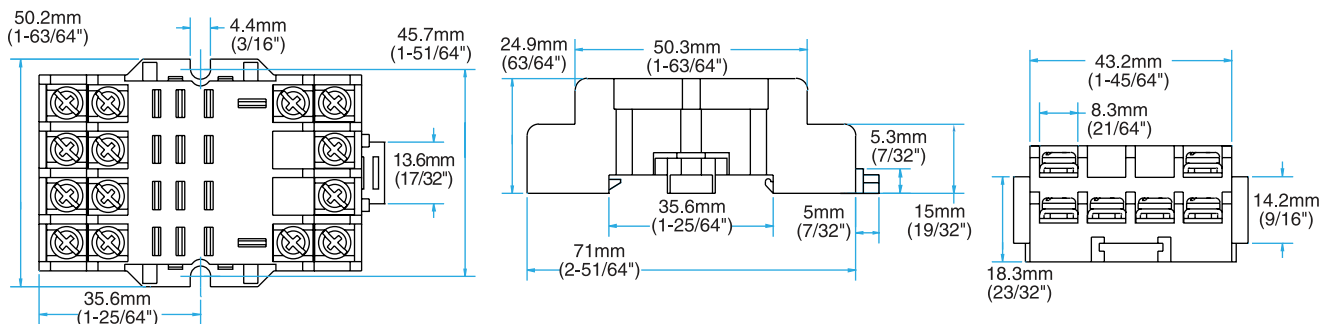
MINIATURE 8 BLADE UNGUARDED 15A SOCKET (GPRA-SB08U1)



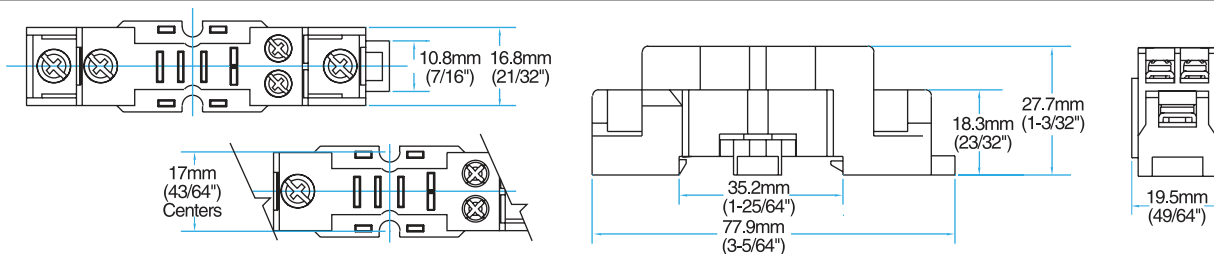
MINIATURE 11 BLADE UNGUARDED 20/25A SOCKET (GPRA-SB11U1)



MINIATURE 14 BLADE UNGUARDED 15A SOCKET (GPRA-SB14U2)



MINIATURE 5 BLADE GUARDED 15A SOCKET (GPRA-SB05G1)





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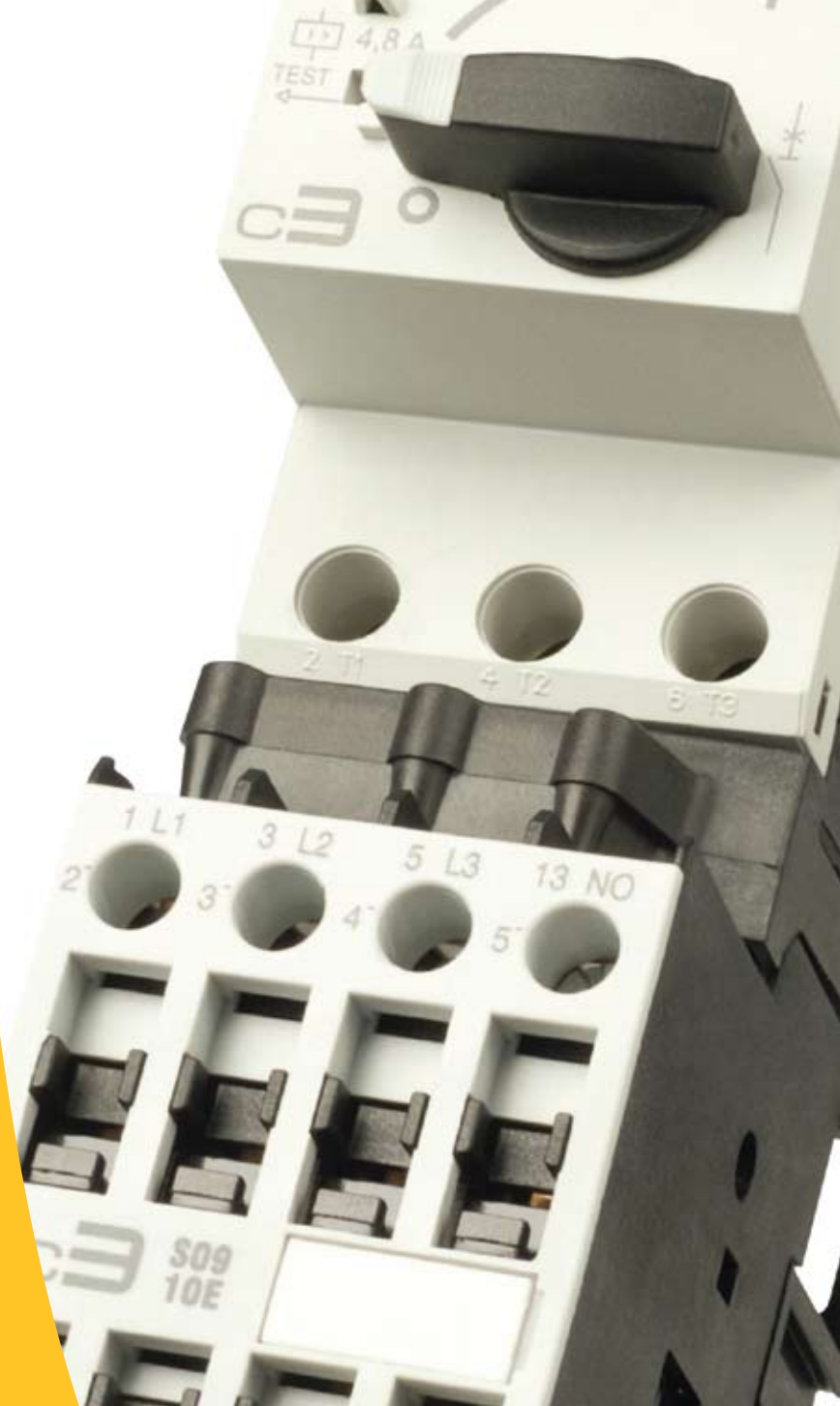
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