- LCSO APPROVED
- HIGH RELIABILITY
- LOW COST
- ASSURED DELIVERIES







TYPE MCC
ENCLOSED VERSION
SOLDER CONNECTION



TYPE MPC ENCLOSED VERSION PLUG-IN-CONNECTION

MINIATURE RELAYS 6 AMPS RESISTIVE AT 24 V DC/250 V AC

SPECIFICATIONS		
Contact Material	Silver Alloy	
Initial Contact Resistance	0.050 Ohms (max.)	
Ambient Temp.	-25°C to +55°C	
Di-electric Strength	2KV between contacts or coil to ground	
Insulation Resistance	100 Meg-Ohms min. at 500 VDC at 27°C & 65% R.H.	
Operate Time	0.020 Sec. max. at nominal Voltage	
Release Time	0.010 Sec. max at nominal Voltage	
Life Expectancy	10 ⁶ operations at rated load	
Max. Weight	MCO 60 gms. MCC 80 gms. MPC 90 gms.	
Impulse	5 KV	

COIL-DATA (All Values at 27°C±2°C ambient)			
Nominal	Resistance in Ohms ±10%		Must Operate
Voltage	DC Relays	AC Relays	Voltage
6	30	7	5
12	200	30	10
18	390		15
24	500	110	20
48	2250	440	40
110	10,000	2400	90
220	30,000		180
240		9500	180



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CAT No.: - M Series/06-11

ORDERING CODE

NO. OF CONTACTS 1, 2 OR 3

CONTACT FORM

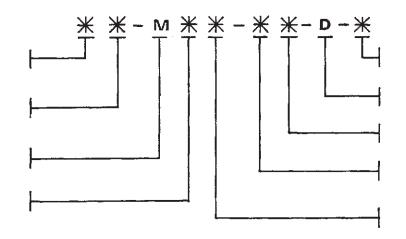
C/O = change over N/O = normally open

N/C = normally close

SERIES **M**MINIATURE RELAYS

MOUNTING

C = chasis mounting P = plug-in mounting



SPECIAL FEATURES

Please ask for details

QUALITY

D = defence quality

Omit D for commercial quality

A = AC RELAY

D = DC RELAY

COIL VOLTAGE

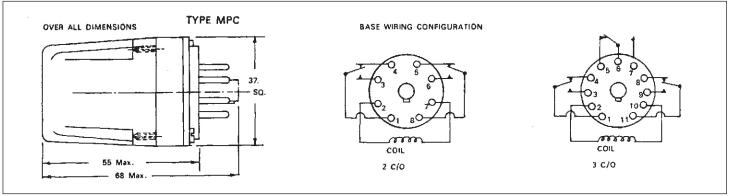
specify coil volts

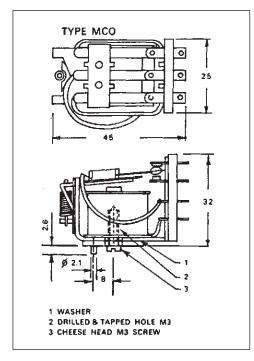
6, 12, 18, 24, 48, 110, 240

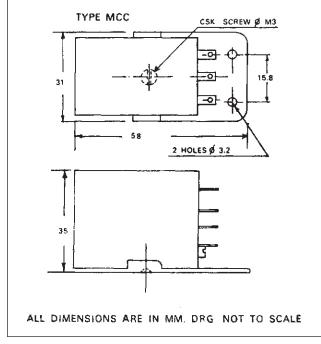
ENCLOSURE

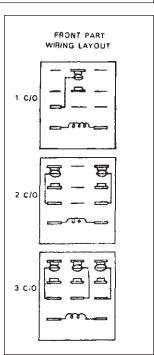
O = open

C = cover









APPLICATIONS:

- Machine Tools Control Panels
- Instrumentation Telecommunication
- Textile Machineries
- Industrial & Consumer Electronics
- Electrical Equipments & Appliances
- Automation & Remote Control Systems
- Bio-medical Instuments & Appliances



Contact Rating At 24 VDC/250 VAC	Typical Life Expectancy
5 Amps Resistive	10 ⁵ operations

Contact Material	Alloy Silver
Initial Contact Resistance	0.050 ohms (max.)
Temp. Severity	T 40 / 70
Di-electric Strength	2 KV between contacts or coil to ground
Insulation Resistance	100 Meg. Ohms min at 500 VDC At 25°C & 65% RH
Operate Time	0.020 sec max at nominal Voltage
Release Time	0.010 sec max. at nominal Voltage
Max. Weight	80 gms.

COIL-DATA (All Values at 27°C±2°C Ambient, cold start)			
Nominal Voltage	Resistance in ohm's ± 10% D.C. Relays	Must Operative Voltage	
6	30	5	
12	150	9.5	
18	390	14.5	
24	500	18	
48	2250	40	
110	10000	90	

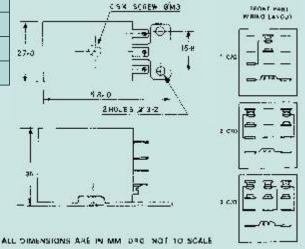


SALIENT FEATURES:

- High Reliability
- Low Cost
- Assured Deliveries

APPLICATIONS:

- Machine Tools
- Control Panels
- Instrumentation
- Stabilizers
- Textile Machineries
- Industrial & Consumer Electronics
- Electrical Equipment & Appliances
- Automation & Remote Control Systems
- Bio-medical Instruments & Appliances





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CAT No.: - FCC/05-11

Contact Rating	6 Amps at 24 VDC / 250 VAC
Contact Material	Silver Alloy
Initial Contact Resistance	0.050 ohms (max.)
Ambient Temperature	-25°C to + 55°C
Di-electric Strength	Between open contacts = 1500 VAC Coil to Contacts & Ground = 2000 VAC
Insulation Resistance	100 Meg. ohms min at 500 VDC 27°C & 65% RH
Operate Time	0.020 sec. max at nominal voltage
Release Time	0.010 sec. max at nominal voltage
Max. Weight	75gms (approx.)

COIL-DATA (All Values at 27°C±2° Ambient)			
Nominal Voltage	ì	ohm's ± 10% A.C. Relay	Must Operate Voltage
6	30	7	5
12	200	30	10
18	390	-	15
24	500	110	20
48	2250	440	40
110	10,000	2400	90
240	-	9500	180

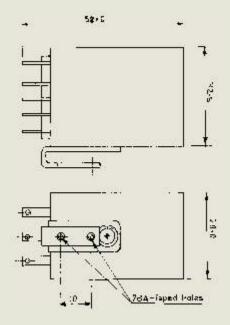


SALIENT FEATURES:

- High Reliability
- Low Cost
- Assured Deliveries
- Long Pins
- Solder / Socket Mounted

APPLICATIONS:

- Machine Tools
- Control Panels
- **Instrumentation**
- Stabilizers
- Textile Machineries
- Industrial & Consumer Electronics
- Electrical Equipments & Appliances
- Automation & Remote Control Systems
- Bio-Medical Instruments & Appliances





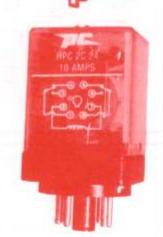
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Web. www.plarelays.com CAT No.: - OLC/05-11

Contact Rating At 24 VDC/250VAC	Typical Life Expectancy	
10Amps Resistive	2 x 10 ⁵ operations	
12 Amps Resistive	1.5 x 10 ⁵ operations	

Contact Material	Silver Alloy
Initial Contact Resistance	0.050 Ohms (max.)
Ambient Temp.	-40°C to + 70°C
Di-electric Strength	2KV between contacts or coil to ground
Insulation Resistance	100 Meg. Ohms min at 500 VDC at 27°C & 65 % R.H.
Operate Time	0.025 sec at nominal Voltage
Release Time	0.015 sec at nominal Voltage
Max. Weight	HCC 80 gms. HPC 90 gms.

TYPE HCC ENCLOSED VERSION SOLDER CONNECTION



TYPE HPC ENCLOSED VERSION PLUG-IN-CONNECTION

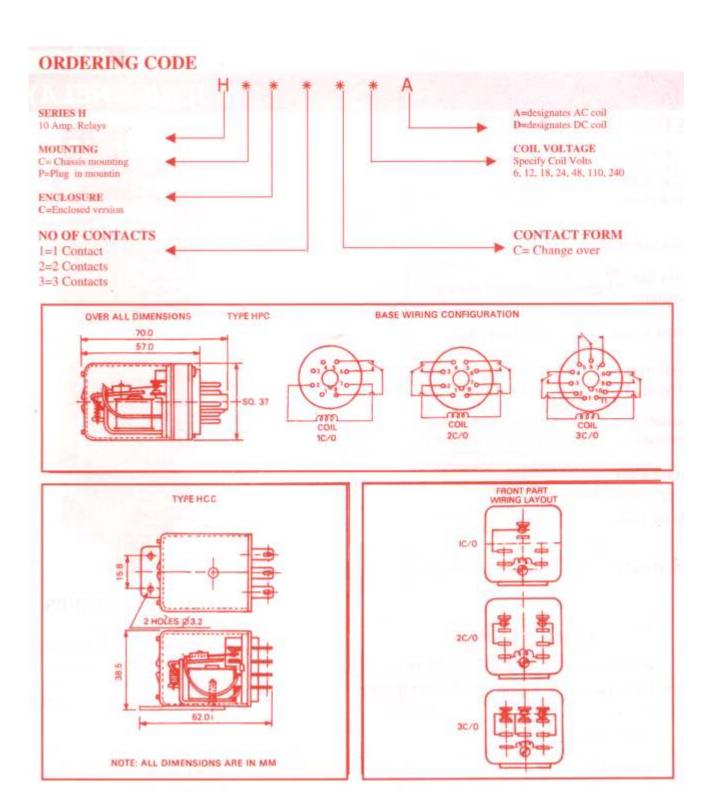
SALIENT FEATURES

- 10 Amps/12Amps
- Versatile Relays satisfying low to medium Power Sources
- · High Reliability
- · Elegant, Sturdy and Light Weight

APPLICATIONS:-

- Voltage Stabilizer
- Uninterrupted Power Supply
- Process Control System
- Control Panels
- Inverters
- Industrial Controls

COIL-DATA (All Values at 27°C±2°C Ambient) Nominal Resistance in Ohms ± Must Operate Voltage 10% Voltage DC relays AC relays 6 30 4 5 12 120 10 16 18 270 15 -24 480 70 20 48 1900 40 110 10k 90 2k 240 10k 190





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CAT No.: - 'H' Series/07-11

PMC SERIES RELAYS

- SALIENT FEATURES:
- SUB MINIATURE
- PCB MOUNTABLE
- HIGH CAPACITY
- LOW PROFILE
- SUITABLE FOR RELAY MODULE





30X13X27 mm

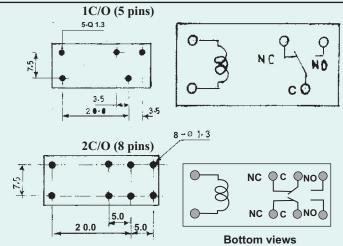
Specifications		PMC 1C	PMC 2C	
No. Of Poles		1	2	
Contact Configuration		SPDT	DPDT	
Contact Rating		10A at 250 VAC / 10A at 30VDC *16A at 250 VAC / 16A at 30 VDC	5A at 250 VAC / 5A at 30VDC	
Contact Material		Silver Alloy		
Contact Resistance		0.050 Ohms (max)	0.050 Ohms (max)	
Operate Time		0.015 Sec. Max. at nominal Volta	0.015 Sec. Max. at nominal Voltage	
Release Time		0.005 Sec. Max. at nominal voltage		
Dielectric Strength Between contact and Coil Between Pole to pole Between Contacts		5000 VAC 3000 VAC 1000 VAC		
Mechanical Life	•	10 ⁷ Operations at rated load	10 ⁷ Operations at rated load	
Electrical Life		10 ⁵ Operations at rated load		
Ambient Temperature		-20° C to +70° C		
Insulation Resistance		1000 Meg. Ohms min. at 50	1000 Meg. Ohms min. at 500 VDC	
Max. Weight		20 grams.	20 grams.	

Coil - Data (All Values at 27c° ± 2c° Ambient)				
Nominal Voltage	Resistance in ohms ± 10%	Must Operate Voltage	Must Release Voltage	
	D.C.			
6	67	4.5	0.6	
12	275	09	1.2	
24	1100	18	2.4	
48	4267	36	4.8	

^{*} Mounting Layout for 16 AMP 1 C/O & 2 C/O relay is same

Note:- For Non-Standard Coil

Voltage or Resistance Pl. Contact us





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CAT No.: - PMC/07-11

PMC SERIES RELAYS

- SALIENT FEATURES:
- SUB MINIATURE
- PCB MOUNTABLE
- HIGH CAPACITY
- LOW PROFILE
- SUITABLE FOR RELAY MODULE





30X13X27 mm

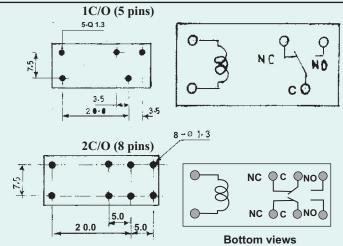
Specifications		PMC 1C	PMC 2C	
No. Of Poles		1	2	
Contact Configuration		SPDT	DPDT	
Contact Rating		10A at 250 VAC / 10A at 30VDC *16A at 250 VAC / 16A at 30 VDC	5A at 250 VAC / 5A at 30VDC	
Contact Material		Silver Alloy		
Contact Resistance		0.050 Ohms (max)	0.050 Ohms (max)	
Operate Time		0.015 Sec. Max. at nominal Volta	0.015 Sec. Max. at nominal Voltage	
Release Time		0.005 Sec. Max. at nominal voltage		
Dielectric Strength Between contact and Coil Between Pole to pole Between Contacts		5000 VAC 3000 VAC 1000 VAC		
Mechanical Life	•	10 ⁷ Operations at rated load	10 ⁷ Operations at rated load	
Electrical Life		10 ⁵ Operations at rated load		
Ambient Temperature		-20° C to +70° C		
Insulation Resistance		1000 Meg. Ohms min. at 50	1000 Meg. Ohms min. at 500 VDC	
Max. Weight		20 grams.	20 grams.	

(1	Coil - I All Values at 27c°		:)
Nominal Voltage	Resistance in ohms ± 10%	Must Operate Voltage	Must Release Voltage
	D.C.		
6	67	4.5	0.6
12	275	09	1.2
24	1100	18	2.4
48	4267	36	4.8

^{*} Mounting Layout for 16 AMP 1 C/O & 2 C/O relay is same

Note:- For Non-Standard Coil

Voltage or Resistance Pl. Contact us





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CAT No.: - PMC/07-11

Contact Silver Alloy Material		
Contacts	SPDT (1 C/O), SPST (1N/O)	
Contact Rating	1N/O: 30 A	
@ 230 VAC/24VDC	1C/O: 30A/20A	
Initial Contact	0.050 Ohms (max.)	
Resistance		
Insulation 1000 M Ω at 500 VDC		
Resistance 25°C, RH 50		
Di-electric	2.5 KV between contacts & Co.	
Strength	1.5 KV between contacts	
Operate Time	10m. sec (Type)	
Release Time	8m. sec (Type)	
Ambient Temperature	-40°C to +85°C	
Life expectancy	10 ⁵ operations at rated load	
Weight	35gms (approx.)	

(Al	COIL-DA I Values at 27°C±		nt)
Nominal Voltage	Resistance in Ohms±10%	Must Operate Voltage	Must Release Voltage
12VDC	160	9	1.2
24VDC	640	18	2.4



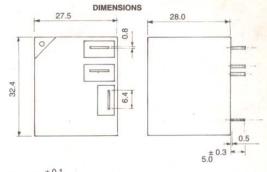
PLC 20 / 30 A (1C)

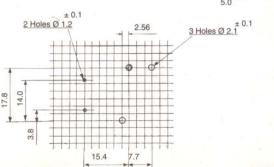
SALIENT FEATURES

- MINIATURE
- PCB MOUNTABLE
- HIGH RELIABILITY

APPLICATIONS:-

- Air conditioning Equipments
- Heater
- Domestic appliances
- Automobile
- Battery charger
- Inverter
- Controllers





Note: For Non-standard coil voltage or resistance,

Please contact factory:



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Tel: 25106104/05 Fax: 022-25093811 Email: sales@plarelays.com

Web. www.plarelays.com

CAT No.: - PLC/0104

Contact Silver Alloy Material		
Contacts	SPDT (1 C/O), SPST (1N/O)	
Contact Rating	1N/O: 30 A	
@ 230 VAC/24VDC	1C/O: 30A/20A	
Initial Contact	0.050 Ohms (max.)	
Resistance		
Insulation 1000 M Ω at 500 VDC		
Resistance 25°C, RH 50		
Di-electric	2.5 KV between contacts & Co.	
Strength	1.5 KV between contacts	
Operate Time	10m. sec (Type)	
Release Time	8m. sec (Type)	
Ambient Temperature	-40°C to +85°C	
Life expectancy	10 ⁵ operations at rated load	
Weight	35gms (approx.)	

(Al	COIL-DA I Values at 27°C±		nt)
Nominal Voltage	Resistance in Ohms±10%	Must Operate Voltage	Must Release Voltage
12VDC	160	9	1.2
24VDC	640	18	2.4



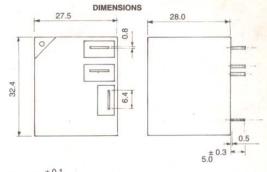
PLC 20 / 30 A (1C)

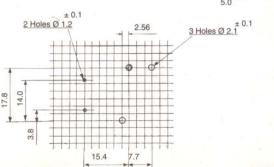
SALIENT FEATURES

- MINIATURE
- PCB MOUNTABLE
- HIGH RELIABILITY

APPLICATIONS:-

- Air conditioning Equipments
- Heater
- Domestic appliances
- Automobile
- Battery charger
- Inverter
- Controllers





Note: For Non-standard coil voltage or resistance,

Please contact factory:



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CAT No.: - PLC/0104



Contact Rating	16 Amps Resistive At 24 VDC / 250 VAC	
Typical Life Expectancy	10 ⁵ operations	
Contact Material	Silver Alloy	
Initial Contact Resistance	0.050 Ohms (max.)	
Ambient Temperature	-40°C to + 70°C	
Di-electric Strength	2 KV between contacts or coil to ground	
Insulation Resistance	100 Meg. ohms min at 500 VDC at 27°C & 65% RH	
Operate Time	0.025 sec. at nominal Voltage	
Release Time	0.015 sec. at nominal Voltage	
Max. Weight	80 gms	



COIL-DATA (All Values at 27°C±2° Ambient)			
Nominal Voltage	Resistance in ohm's ± 10% D.C. Relays A.C. Relays		Must Operate Voltage
6	30	4	5
12	120	16	10
18	270	-	15
24	480	70	20
48	1900	-	40
110	10k	2k	90
240	-	10k	190

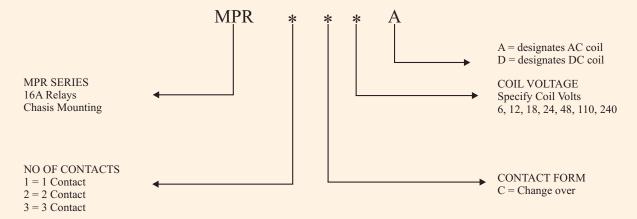
SALIENT FEATURES:

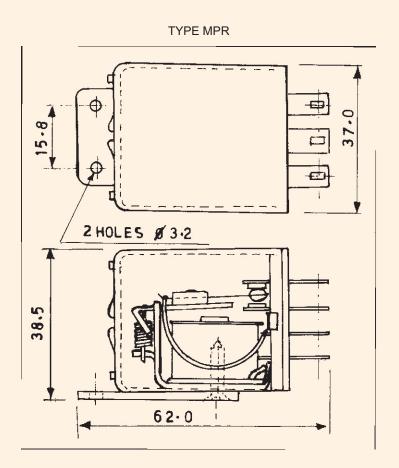
- 16 Amps
- Versatile Relays satisfying low to medium Power Sources
- High Reliability
- Elegant, Sturdy and Light Weight

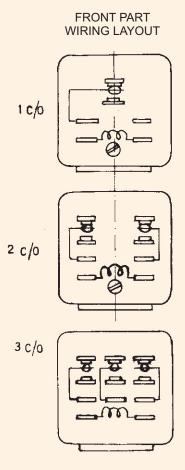
APPLICATIONS:

- Voltage Stabilizer
- Uninterrupted Power supply
- Process Control System
- Control Panels
- Inverters
- Industrial Controls

ORDERING CODE









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- COMPACT DESIGN
- HIGH POWER CAPABILITY
- COST EFFECTIVE
- ASSURED DELIVERIES



SERIES P



POWER RELAYS 20 AMPS RESISTIVE AT 24V DC/250V AC

Contact	Silver Alley	
Material	Silver Alloy	
Initial Contact Resistance	100M ohms (Max.)	
Ambient Temp.	-40°C to +70°C	
Die-electric	2KV between contacts	
Strength	or coil to ground	
Insulation Resistance	100 Meg ohms Min. at 500 VDC at 27°C & 65% R.H.	
Operate Time	0.030 sec. Max. at nominal voltage	
Release Time	0.010 sec. Max. at nominal voltage	
Life Expectancy	10 ⁶ operations at rated load	
Max. Weight	200 gms.	

Nominal	Resistance in Ohms ±10%		
Voltage	DC Relays		AC Relays
	1 C/O 2 C/O	3 C/O	1 C/O 2 C/O 3 C/O
12	60	50	32
18	135		-
24	250	200	148
48	1000	800	60
110	4800	4000	298
240	25000	16000	1600

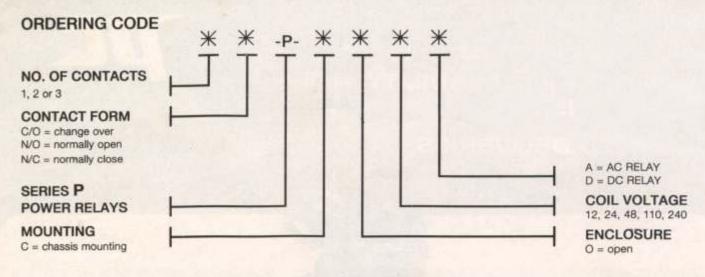


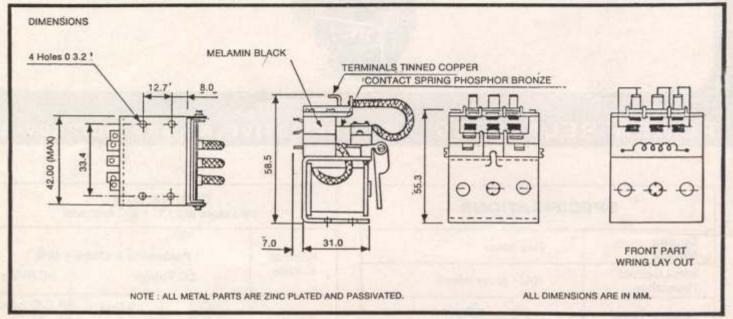
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CAT No.: - PCO Series/07-11





APPLICATION NOTES:

- Basic construction being open, user is advised to provide dust proof covering as settling of dust/metal particles in the gap between core and armature or in between the contacts would affect the relay performance. In wors case, coil burning cases have also been reported.
- 2. Though rated for 20 amps. breaking capacity for general applications, these relays are not recommended for use in voltage stabilizers beyond 2.5 KVA ratings as it has been seen that at the time of tap-changing through contact transfer, contact gap is momentarily shorted, through heavy spark which results into full short circuit current passing through the contact and buck/boost winding. This short circuit current depends upon buck/boost winding impedance and in best stabilizer, this impedance is too low to cause short circuit current of the order of 500 to 700 amperes to flow resulting into contact welding in few thousand operations. Therefore it is recommended to use these power relays in higher KVA stabilizers only after assessing their performance for contact welding in actual sets.

APPLICATIONS AREAS:

- Control Panel
- Defence Appliances
- Machine Tools
- Power Instrumentation
- Inverters
- Welding Machines



Contact Material	Silver Alloy	
Contacts	1 Form C (1 C/O) 2 Form C (2C/O)	
Contact Rating@ 230 VAC/24VDC	22 A	
Initial Contact Resistance	0.050 ohms (max.)	
Insulation Resistance	100 Meg. ohms at 500 VDC 25°C, RH 50	
Di-electric Strength	2 KV Between Coil to Contacts & Coil to ground	
Operate Time	25 milli sec. (max.)	
Release Time	15 milli sec. (max.)	
Max. Weight	80gms (approx.)	

(All Va	COIL - DATA (All Values at 27°C±2°C Ambient)			
Nominal Voltage				
12 DC	120	10		
24 DC	480	20		
240 VAC	9.5K	190		

Note: For Non-standard coil voltage or resistance,

Please contact:



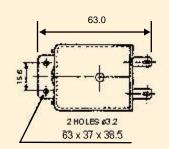
SALIENT FEATURES:

- 22 Amps
- High Reliability
- Elegant, Sturdy and Light weight

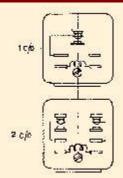
APPLICATIONS:

- Voltage Stabilizer
- Uninterrupted Power Supply
- Process Control System
- Control Panels
- Inverters
- Industrial Controls
- Textil Machine

DIMENSIONS



CIRCUIT DIAGRAM





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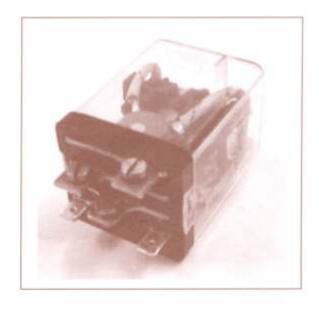
CAT No.: - HP 22/05-11

Contact Material	Silver Alloy	
Contacts	HP 40: 1C/O * HP 60: 1C/O	
Contact Rating	HP40:40A @ 250Vac/24Vdc resistive HP60:60A @ 250Vac/24Vdc resistive	
Ambient Temperature	-10°C to 55°C	
Di-electric Strength	2.0 KV between contacts to contacts, body to coil & coil to contact	
Insulation Resistant	100 Meg-Ohms min at 500VDC at 65% RH	
Operate Time	< 20ms	
Release Time	< 10ms	
Electrical Life Expectancy	50000 operations (typical) at full load	
Mechanical Life	10 ⁶ operations	
Max. Weight	135gm.	
Mounting Metalic Base plate		

COIL DATA

Nominal Voltage	Resistance ±10% (Ω)	Nominal Voltage	Resistance ±10% (Ω)
12VDC	74	110VDC	5500
18VDC	150	240 VAC	4700
24VDC	300		
48VDC	1200		

Note:-1N/O or 1N/C versions also available on request.



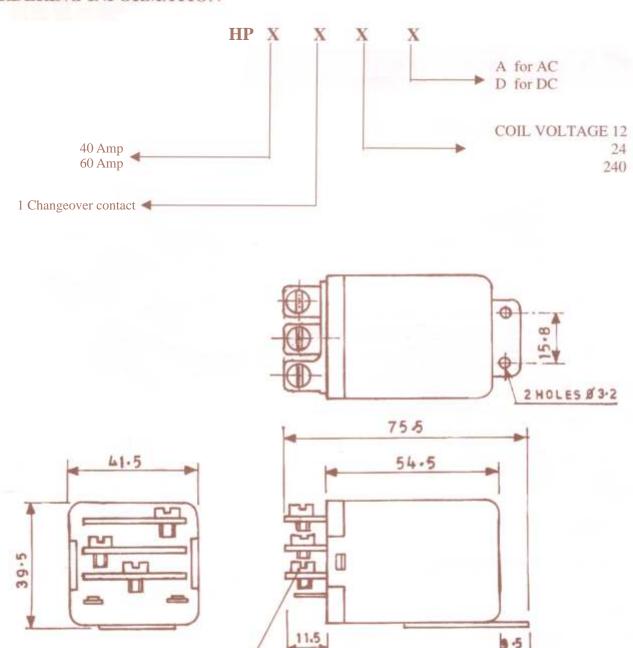
SALIENT FEATURES

- 40 Amp &60 AMP RATING
- COMPACT SIZE
- SCREW TERMINALS
- ELEGANT
 - RELIABLE
- TRANSPARENT COVER
- Also Available HP 25(25Amps), HP 30(30Amps), HP80 (80 Amps), PCC(30Amps) Etc.

APPLICATIONS

- Voltage Stabilizer
- Furnace controls
- Process Controls
- Inverter
- Motor Starter
- Vending machines
- Domestic Appliances
- Airconditioners

ORDERING INFORMATION



Tips for using 1: -Electrical contact life is affected by various parameters such as switching voltage, switching current, type of load inductive/ capacitive frequency of switching, duty cycle etc.

2: -Application design should take care of rise in Pickup Voltage at full load condition.

SCREW

M4



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CAT No.: - HP 40 Series/07-11

- LCSO APPROVED
- EXCELLENT ISOLATION
- EPOXY ENCAPSULATION
- DIL SOCKET / PCB MOUNTING



SERIES DIP



CONTACTS 2N/0 OR 2C/0



• DUAL-IN-LINE PACKAGE REED RELAYS 10W/VA, 0.5A, 100V.

SPECIFICATIONS				
	N/O	C/O		
Max. Switched Power	10W/VA	3W/VA		
Max. Switched Current	0.5 A	0.25 A		
Max. Switched Voltage	100 V	28 V		
Reed Insulation Resistance	10 ¹⁰ Ω at 100 VDC	10° Ω at 100 VDC		
Initial Contact Resistance	150 m Ω	200 m Ω		
Typical Capacitance	0.2 P Across Contact. 3.5 P Contact to Coil	2.5 P Across Contact. 3.5 P Contact to Coil		
Reed Break-Down Voltage	250 VDC	200 VDC		

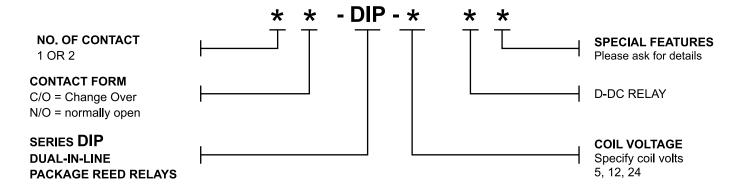
SPECIFICATIONS				
	N/O	C/O		
Vibration	20 G 10-2000 HZ	20G 10-1000 HZ		
Release Time Including Bounce	< 0.5 ms	< 1 ms		
Operate Time Including Bounce	< 1 ms			
Di-Electric Strength	500V Between Contact to Contact & Contact to Coil			
Temperature Range	-40°C to +85°C			
Shock	50 G, 11 MS			
Life Expectancy	10 ⁷ Operations at Optimum load conditions. PL. Consult Factory			



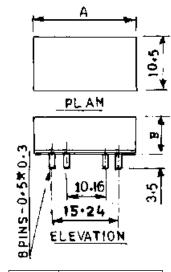
Thakor Estate, Vidyavihar (W), Mumbai 86. Tel: 25106104/05 Fax: 022-25093811 Email: sales@plarelays.com Web. www.plarelays.com

CAT No.: - DIP / 08-11

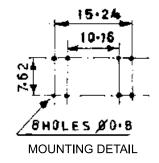
ORDERING CODE



COIL - DATA (All Values at 27°C <u>+</u> 2°C ambient)				
Contact Form	Nominal Voltage	Resistance in Ohms <u>+</u> 10%	Schematics (Top View)	
1 N/O	5 12 24 48 ★	200 500 2100 5000	14 13 9 8 1 6 10 200 6 1 7	
2 N/O	5 12 24 48	100 275 1100 5000	14 13 9 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1 C/O	5 12 24 48 ★★	200 500 2100 5000	14 13 2 8 1 2 10 10 10 6 7	
2 C/O	5 12 24 48	100 275 1100 5000	4 13 9 8	
Must Release NOTE : Term ★ Overall siz	e Voltage: 75% of No e Voltage: 10% of No inal Numbers are not e as that of 2N/O cor size as that of 2C/O c	minal coil voltage t marked on relay ntact reed relay		



Contact	Dimensions in mm.		
Form	Α	В	
1 N/O	20.3	7.5	
2 N/O	20.3	11.5	
1 C/O	22.9	7.5	
2 C/O	22.9	11.5	



APPLICATION NOTES:

These reed relays are not recommended for low level switching applications where load is in the range of micro amperes or a few milliamperes, with open circuit voltage less than 10 milli volts. Special reed relays for such Low level switching applications can be available on specific demand.

APPLICATION AREAS:

• Programming • RF Switching

ComputersScanners

• Communications • Encoders & Decoders

TelemetryCircuit IsolationMemmoryLogic