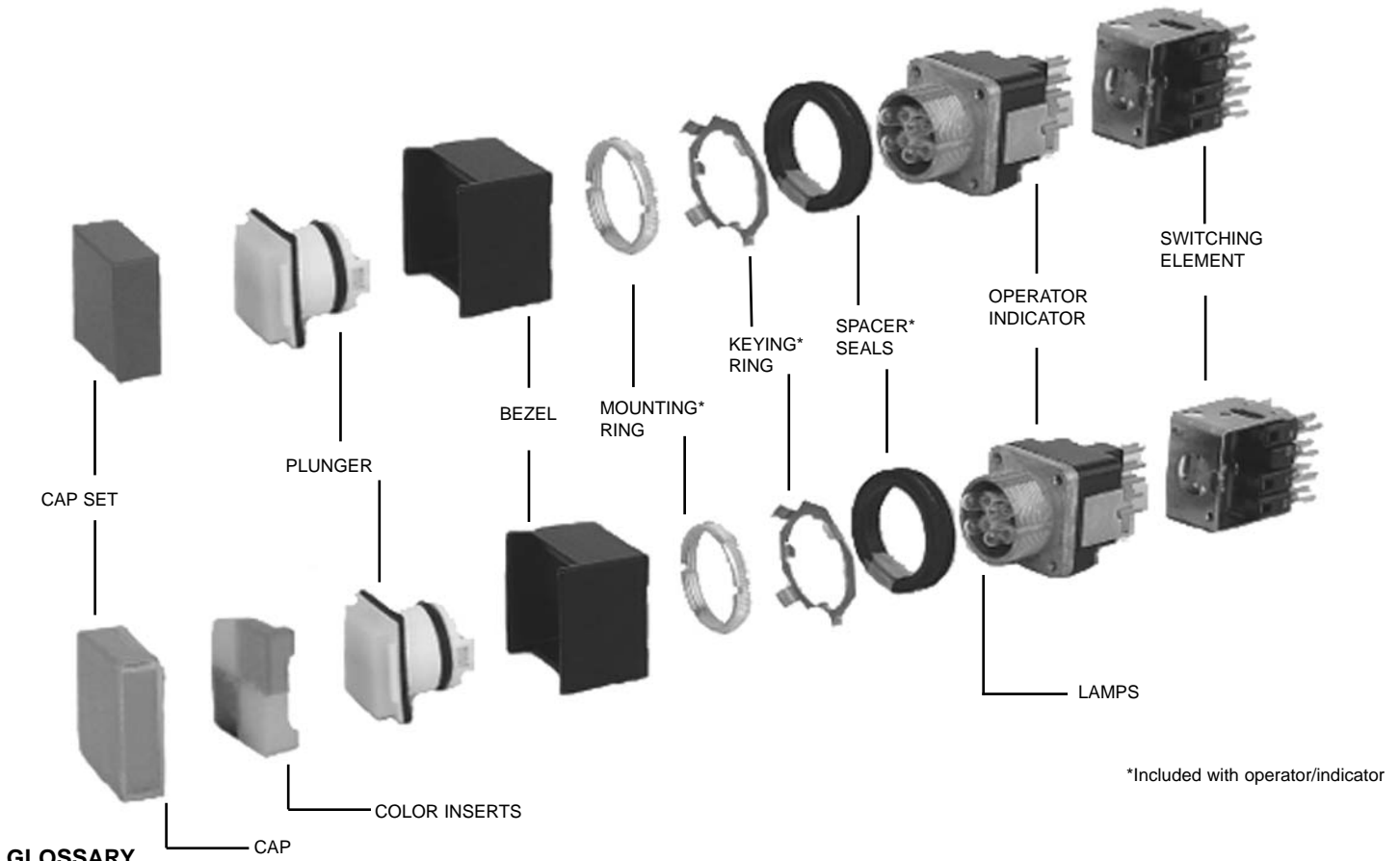


Miniature oiltight controls PM

IN THIS SECTION

All about PM.....	91	Indicators.....	98
Miniature oiltight ordering guide.....	92	Standard legends.....	99
Switching elements.....	94	Special legends.....	100
Order guide.....	95	Accessories and replacement parts.....	101
Unlighted pushbuttons.....	96	Replacement parts.....	102
Lighted pushbuttons.....	97	Mounting dimensions.....	103

• Suitable for use in NEMA 4 and 13 enclosures.



*Included with operator/indicator

GLOSSARY

Bezel . . . A functional guard frame which snaps onto the panel to add identification and definition to individual units or groups of units. The bezel attaches to the keying ring, over the mounting hardware. (See page 93).

Cap . . . The clear or opaque outer “shell” of the cap set or display set. This part is contacted by the finger operating the button or pushbutton devices.

Cap Set . . . On unlighted pushbuttons. Consists of an opaque cap or a clear cap with a color insert. Assembles to the plunger. (See page 101).

Color Inserts . . . Full, 1/2 and 1/4 section elements used under clear caps to give color to the displays. (See page 101).

Display Set . . . On lighted pushbuttons and indicators. Consists of clear cap and translucent color inserts. Assembles to the plunger. M (See page 101).

Keying Ring . . . Attaches to the bushing to which the unit is attached and provide a means of attaching the bezel.

Mounting Ring . . . Assembles to the bushing to hold the unit in the panel, and tighten the panel seal.

Operator/Indicator . . . The main body of the device to which the bezel, display set or cap set and switching elements assemble. The lamp housing of lighted pushbuttons and indicators.

Plunger . . . The sealed shaft that transmits motion to the switching elements on pushbuttons and conducts light from the

lamps to the display on lighted devices. Does not include cap set or display set.

Spacer Seals . . . Assembled to bushing behind the panel. One to four can be used to maintain the seal on various panel thicknesses.

Switching Element . . . A module consisting of the switch(es), keyed bracket, and operating mechanism (momentary or alternate action). Attaches to lighted and unlighted pushbutton operators. It also provides a snap feel to pushbutton operation. (See page 94).

PM Miniature oiltight controls

PM ORDERING INFORMATION

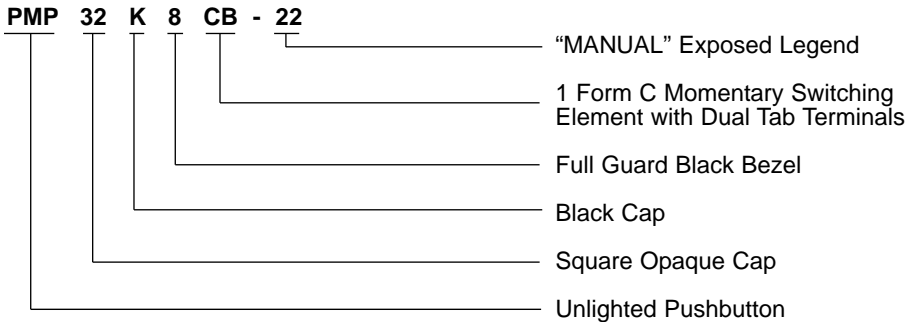
PM oiltight pushbuttons may be ordered in the following manner to satisfy various pre-production stock and/or production assembly requirements.

1. BY UNIT

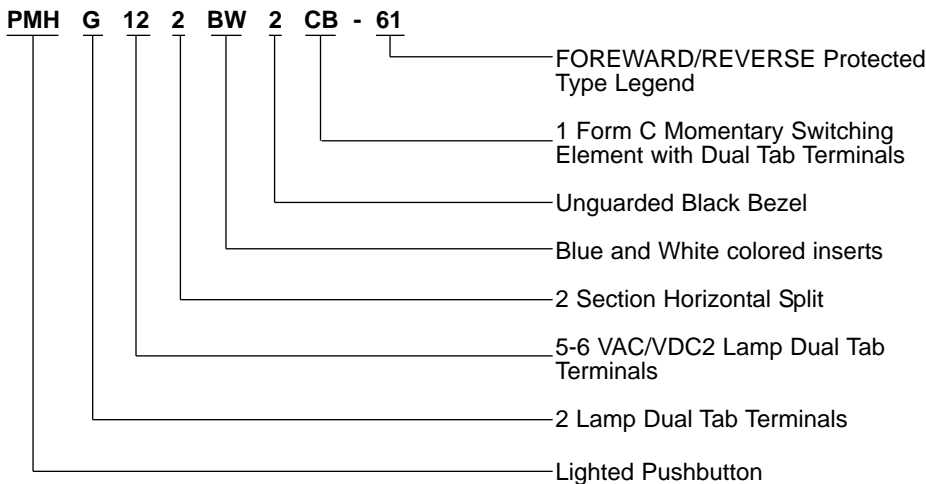
Complete, unassembled and individually packaged components within a "unit" box marked with a complete catalog listing. Unit listings are developed in the charts on the following pages.

EXAMPLES

Unlighted Pushbuttons—PMP32K8CB-22 (Chart on page 96).



Lighted Pushbutton—PMHG122BW2CB-61 (Chart on page 97).



PRICING INFORMATION

To determine the price of a PM unit follow the price instructions in the order guide charts. The price is accumulated as the catalog listing is determined; i.e. the base price (operator/indicator and plunger) and the added cost for the button style, bezel, switching element and legend.

Catalog Listing PMHG122BW2CB-61

PMH	(Base Price)
G	(2 Lamp Dual Tab Terminals)
12	(Lamp Voltage)
2	(2 Section Horizontal Split)
BW	(Insert Colors)
2	(Unguarded Black Bezel)
CB	(Switching Element)
61	(Standard Legend)

2. BY COMPONENT

As shown in the exploded views on page ____, each device consists of several components. Components may be ordered individually by specifying:

- a. the "stripped down" listings (without cap set or display set, without switching elements, without bezel) in the unit listings charts on the following pages.
- b. the applicable modification parts on page 92. (Bezels are shown on page 93).

EXAMPLE:

To obtain the equivalent of the unlighted pushbutton unit Catalog Listing PMP32R8CB-23 by components, order:

PMP21A1—Stripped down unit page 96.

PMPZ12R23—Legended cap set ("OFF" exposed legend, .203" (5,16mm) high, page 99).

PMPZ58—Bezel (full guarded black Bezel, page 93).

PMCCB—Switching element (1 Form C momentary switching element with dual tab terminals page 94).

Prices of component listings (bezels, switching elements, cap sets, Display sets, etc.) are shown in the component listing charts.

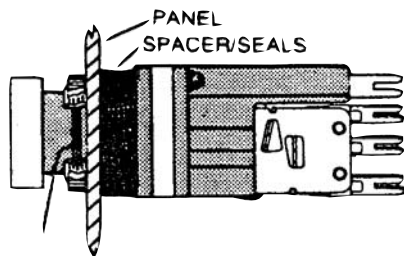
For assistance in selecting PM devices to meet your control needs, contact *Senasys*.

Miniature oiltight controls PM

OILTIGHT SEAL

Buna N elastomer shaft and panel seal prevent cutting oils, lubricants, petroleum, hydraulic fluids, alcoholic solvents, and similar liquids from entering through the device or the panel hole. One to four spacer seals are used, depending upon the panel thickness.

Three .062 in. (1,57mm) and two .032 in. (0,81mm) spacer seals are provided with each switch. They can be used in combinations to adjust to your panel thickness.



PLUNGER/BUSHING SEAL

BEZELS

Used effectively, bezels help identify functions, enhance panel appearance, and guard against accidental operation.

- Full guard type
- Half guard type
- Unguarded type
- Flat black or aluminum finish
- Rectangular buttons on extended plungers require a half guard bezel.
- Bezels push onto the keying washer on the bushing on 90° increments.

(BEZELS SHOWN INSTALLED ON A PM DEVICE)

DISPLAY INFORMATION

PM lighted devices offer the following display options:

	Display Configuration	Number of Lamps Used	Lamp Type	Voltage
	Full or Single Section	1	T 1- 3/4 Bi-Pin	6 14 28
	2 Section, Horizontal	2	T 1- 1/4 Bi-Pin	6 14 28
	3 Section, Half Horizontal	4*	T 1- 3/4 Bi-Pin	6 14 28
	4 Section	4*	T 1- 3/4 Bi-Pin	6 14 28

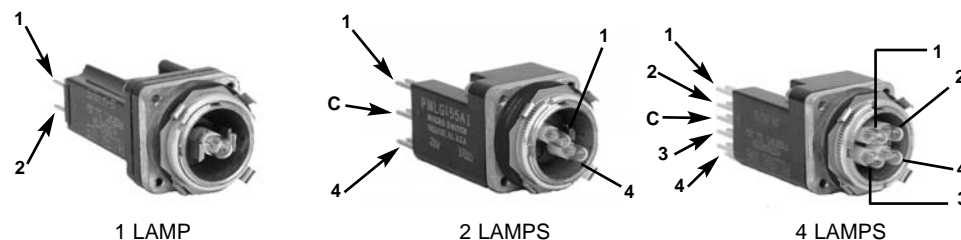
Displays are keyed to PM devices in 180° increments.

*In four lamp devices, no more than two lamps may be lighted continuously at full voltage.

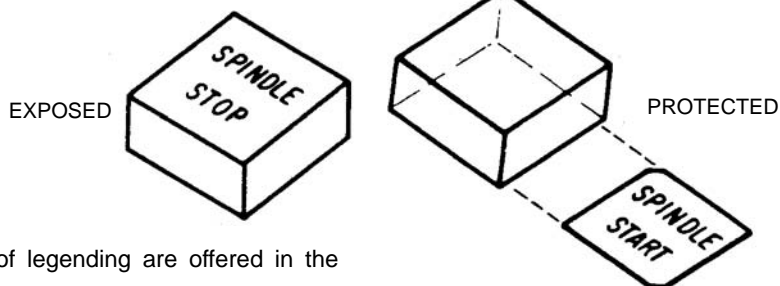
Except where indicated, lamps are included in lighted pushbutton and indicator unit listings. When devices are ordered without

them, lamps may be ordered separately in the "Accessories" chart on page 101.

LAMP LOCATION



LEGENDS



Two styles of legending are offered in the "PM" line:

- Exposed (for unlighted devices), with legend embossed on the surface of the colored opaque cap. White legends are embossed on black caps only; black legends on all other color caps;
- Protected (for lighted or unlighted devices), with black or white letters on a .007" (0, 18mm) thick clear film inserted under a clear cap.

ALL LEGENDS ARE SUPPLIED IN CAPITAL LETTERS ONLY.

ORDER GUIDE

Guard Configuration	Finish Black
Unguarded	PMPZ52
Half Guard	PMPZ54
Full Guard	PMPZ58

PM Miniature oiltight controls

PM MECHANICAL SWITCHING ELEMENTS



2-SPDT



4-SPDT



2 CKT DB

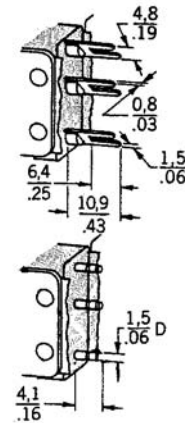
PM modular mechanical switching elements consist of Senasys proven snap-action basic switches, keyed mounting bracket, and operating mechanism. Their modularity permits circuit flexibility: 1,2, 3, and 4 Form C (SPDT) circuits, and Form Z (2 CKT DB) contact arrangements' momentary and alternate-action. Operation is positive as circuits cannot be teased. The switching element mechanism also imparts a snap feel to pushbutton operation.

PM terminals are well exposed for easy, direct back-of-panel wiring even after the devices are installed in the panel. Most lamp and switching element terminals are on a common level. Terminal identification is molded into the operator housings and switch cases.

Molded and tube type insulators are available to further isolate and protect the connections of the dual push-on terminal. (Order from accessories chart on page 101.)

PM mechanical devices are offered with three push-on terminal styles: dual tab, and single pin.

Dual tab terminal present these wiring option: 1) One or two individually attached wires on each terminal (one on each blade) using .062 x .032 inch wide push-on connectors. 2) One wire on each terminal, using a .187 x .032 inch push-on connector (covering both blades). AMP #60196-3 only. For 16-20 AWG. Connectors are shown in the assesories chart on page 101.



Volts	Form Z Silver Contacts		Form C Silver Contacts		Form C Gold Contacts	
	Load	Amp	Load	Amps	Load	Amps
120 VAC	Inductive	Make 30 Break 3	Inductive	Make 7.5 Break 1.2	No AC rating established	
240 VAC	Inductive	Make 15 Break 1.5	Resistive	Make 5 Break 5		
	Resistive -	Make 10 Break 10	-	-		
Continuous		10	-	5		
30 VDC	Resistive	Make 10 Break 10	Inductive	Make 2.5 Break 2.5	Inductive	0.25
			Resistive	Make 5 Break 5	Resistive	1.0
125 VDC			Resistive	.5		
			Inductive	0.25		
25,000 operations						

PERFORMANCE

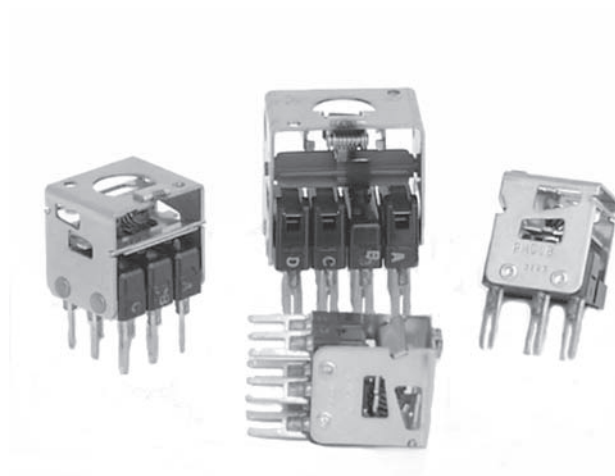
Operating Voltage Range	5VDC + 10%
Operating Temperature	Unlighted: +31°F to +125°F (0 to 52° C) Lighted: +32°F to + 125°F (0 to 52° C) (+32°F to + 110°F (0 to 43°C) when four or more lighted modules used in an array.)
Storage Temperature	-40°F to +140°F (-40 to +60°C)

Miniature oiltight controls **PM**

PM SWITCHING ELEMENTS

ORDER GUIDE

Switching elements may be ordered as separate items by specifying the complete listings shown in these charts. They also may be ordered as part of the complete listing by adding the last two letters of the switching element listing to the unit listings on pages 96-98. Add the price of the switching element to the unit price listing.



Contact Arrangement	Switching Action	Terminal Type	Catalog Listing
1 SPDT			
1 Form C (SPDT) Silver Contacts	Momentary	Dual Tab	PMC CB
		Single Pin	PMC DB
	Momentary	Dual Tab	PMC CM
2 SPDT			
2 Form C (DPDT) Silver Contacts	Momentary	Dual Tab	PMC CC
		Single Pin	PMC DC
	Alternate	Dual Tab	PMC CG
		Single Pin	PMC DG
2 Form C (SPDT) Gold Contacts	Momentary Low Force	Dual Tab	PMC CL
	Momentary	Dual Tab	PMC JC
	Alternate	Dual Tab	PMC JG

Contact Arrangement	Switching Action	Terminal Type	Catalog Listing
4 SPDT			
4 Form C (SPDT) Silver Contacts	Alternate	Dual Tab	PMC CJ
	(1) Momentary (3) Alternate	Dual Tab	PMC CP

PM Miniature oiltight controls

PMP and PMS UNLIGHTED PUSHBUTTONS

• Suitable for NEMA 4 and 13 enclosures.



STANDARD PLUNGER



EXTENDED PLUNGER

EXAMPLE:

PMP

32

K

8

CB -

22

Category	Button Style	Button or Insert Color	Bezel	Switching Element	Legend Standard
PMP Standard plunger	21 –Without capset 32 –Square opaque cap.	A –None (button style 21 only) R R –Red T –Orange Y –Yellow G –Green B –Blue W –White K –Black	1 –None 2 –Unguarded, black 4 –Half guard, black 8 –Full guard, black	Add two letter suffix and price from chart on page 94. NOTE: To order a device without a switching element, omit this code. For stock flexibility, switching elements may be ordered separately on page 94.	Add two or three digit suffix from chart on page 99. Special ADD: Suffix -99 plus special instructions and price as described on page 100. To order a device without a legend omit this code.
PMS Extended plunger	33 –Square clear cap, translucent full insert. (For use with PMP only.) 42 –Rectangular, opaque cap. (For use with PMS and half guard bezel only.)	Separate cap sets (buttons) or color inserts can be found on page 101.			

ORDERING INFORMATION

1. Select the type of pushbutton desired. (PMS or PMP).
2. Select and add the button style (2 numbers) and color (letter) to the above listing.
3. Select bezel and add appropriate number to listing.
4. From page 94 select the contact, switching action and terminal type desired and insert the last 2 letters in the catalog listing.
5. If a legend is desired, see page 99 and add proper 2 or 3 digit suffix to the listing. Separate from rest of listing with a dash.

Example:

PMP
Standard plunger

32
Square opaque cap

R
Red

8
Black full guard bezel

CC-
2-SPDT silver contacts

35
Stop legend

Miniature oiltight controls PM

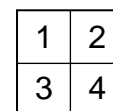
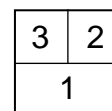
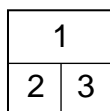
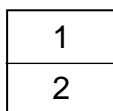
PMH LIGHTED PUSHBUTTONS

• Suitable for NEMA 4 and 13 enclosures.



One Lamp Full display Single Section	Two Lamp** 2- Section Display	Four Lamp 3-Section Display		Four Lamp*** 4-Section Display
		Half at Top	Half at Bottom	

Color Code Sequence:



Display Configuration:

(5)

(2)

(3)

(8)

(4)

**Also available with full display.

***Also available with 2-Section display. Contact Senasys.

Note: on 4-lamp devices, no more than 2 lamps may be lighted continuously at full voltage.

EXAMPLE:

Category	No Lamps & Term. Style	Lamp Voltage	Display Configuration	Insert Colors	Bezel	Switching Element	Legend
PMH	<p>C -1 lamp dual tab term.</p> <p>G -2 lamp dual tab term.</p> <p>L -4 lamp dual tab term.</p>	<p>10 -No lamps provided</p> <p>12 -5-6 VAC/CD</p> <p>13 -12-14 VAC/CD</p> <p>15 -24-28 VAC/CD</p> <p>Devices are not equipped with transformers. supply voltage must match lamp rating.</p>	<p>2 -2 section horizontal split</p> <p>3 -3 section 1/2 at top</p> <p>4 -4 section</p> <p>5 -single section</p> <p>8 -3 section 1/2 at bottom</p>	<p>A -No display. Set . may be ordered separately.</p> <p>R -Red</p> <p>T -Amber</p> <p>Y -Yellow</p> <p>G -Green</p> <p>B -Blue</p> <p>W -White</p> <p>Add 1 to 4 letters. 1 for full display 2 for 2-sec. dis. 3 for 3-sec. dis. 4 for 4-sec. dis.</p> <p>Insert in listing in order shown in drawings above., even if colors are the same; i.e., BB for 2-sec. split with both sect. blue.</p> <p>Separate cap sets (buttons) or color inserts can be found on page 101.</p>	<p>1 -None</p> <p>2 -Unguarded black</p> <p>4 -Half guarded black</p> <p>8 -Full guard black</p>	<p>Add two letter suffix from chart on page 94.</p> <p>NOTE: To order a device without a switching element omit this code.</p> <p>Switching elements may be ordered separately. See page 94.</p> <p>Terminal type should match with second column.</p>	<p>Standard Add two or three digit suffix from chart on page 99.</p> <p>Special ADD: Suffix -99 plus special instructions and price as described on page 100.</p> <p>Custom Contact Senasys.</p> <p>To order a device without a legend omit this code.</p>

PM Miniature oiltight controls

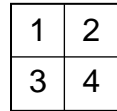
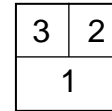
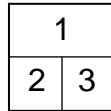
PML INDICATORS

• Suitable for NEMA 4 and 13 enclosures.



One Lamp Full display Single Section	Two Lamp** 2- Section Display	Four Lamp 3-Section Display		Four Lamp*** 4-Section Display
		Half at Top	Half at Bottom	

Color Code Sequence:



Display Configuration:

(5)

(2)

(3)

(8)

(4)

**Also available with full display.

***Also available with 2-Section display. Contact Senasys.

Note: on 4-lamp devices, no more than 2 lamps may be lighted continuously at full voltage.

EXAMPLE:

Category	No Lamps & Term. Style	Lamp Voltage	Display Configuration	Insert Colors	Bezel Configuration and Color	Legend
PML	<p>C -1 lamp dual tab term.</p> <p>G -2 lamp dual tab term.</p> <p>L -4 lamp dual tab term.</p>	<p>10 -No lamps provided</p> <p>12 -5-6 VAC/CD</p> <p>13 -12-14 VAC/CD</p> <p>15 -24-28 VAC/CD</p> <p>Devices are not equipped with transformers. Supply voltage must match lamp rating.</p>	<p>2 -2 section horizontal split</p> <p>3 -3 section 1/2 at top</p> <p>4 -4 section</p> <p>5 -single section</p> <p>8 -3 section 1/2 at bottom</p>	<p>A -No display. Set . may be ordered separately.</p> <p>R -Red</p> <p>T -Amber</p> <p>Y -Yellow</p> <p>G -Green</p> <p>B -Blue</p> <p>W -White</p> <p>Add 1 to 4 letters. 1 for full display 2 for 2-sec. dis. 3 for 3-sec. dis. 4 for 4-sec. dis.</p> <p>Insert in listing in order shown in drawings above., even if colors are the same; i.e., BB for 2-sec. split with both sect. blue.</p> <p>Separate cap sets (buttons) or color inserts can be found on page 101.</p>	<p>1 -None</p> <p>2 -Unguarded black</p> <p>4 -Half guarded black</p> <p>8 -Full guard black</p>	<p>Standard Add two pr three digit suffix from chart on the following page.</p> <p>Special: Add: Suffix -99 plus special instructions and price as described on page 100.</p> <p>To order a device without a legend omit this code.</p>

LEGEND STYLE AND SIZES

Sizes available in full capital alphabetic and numeric characters are:

.141" .203"
 3,57mm .5,16mm

Characters available are:
 A B C D E F G H I J K L M
 N O P Q R S T U V W X Y Z
 & . , ' - + -
 0 1 2 3 4 5 6 7 8 9

Protected legends: Black only (on clear film) **PMNB** _ _
 White only (on clear film) **PMNB** _ _ _
 Complete the listings from table below.

Two function legends are used on two section horizontal split display lighted devices. Three and four section displays require special legends.

Exposed legend listings in this chart specify a legended opaque cap set. Protected legend listings specify a .007" (0,18mm) thick clear film insert.

Legended Colors – Exposed legends: Standard exposed type legends are made only in colors shown in chart. Any other combination is special.

One function legends are generally used on full display lighted devices.

One Function	Legend Inserts (.141/3,58 High Only) Catalog Listing*		Cap Set – Unlighted Pushbuttons Exposed Type				
	Black	White	Catalog Listing	Cap Style	Cap Color	Legend Color	Character Size Inches/mm)
(BLANK)	PMNB+ 00		–	–	–	–	–
ALARM	PMNB+ 11	111	–	–	–	–	–
AUTO	PMNB 12	112	PMPZ12K 12	Square	Black	White	.141/3,58
CHUCK	PMNB 13	113	PMPZ12K 13	Square	Black	White	
CLAMP	PMNB 14	114	PMPZ12K 14	Square	Black	White	
CLEAR	PMNB 15	115	PMPZ12K 15	Square	Black	White	
CLOSE	PMNB 16	116	PMPZ12K 16	Square	Black	White	
CLOSED	PMNB 17	117	–	–	–	–	–
CYCLE START	PMNB 18	118	PMPZ12K 18	Square	Green	Black	.141/3,58
CYCLE STOP	PMNB 19	119	PMPZ12K 19	Square	Red	Black	
JOG	PMNB 20	120	PMPZ12K 20	Square	Black	White	
LOAD	PMNB 21	121	PMPZ12K 21	Square	Black	White	
MANUAL	PMNB 22	122	PMPZ12K 22	Square	Black	White	
OFF	PMNB 23	123	PMPZ12K 43	Square	Red	Black	
OFF			PMPZ12K 23	Square	Red	Black	.203/5,16
ON	PMNB 24	124	PMPZ12K 24	Square	Black	White	.141/3,58
OPEN	PMNB 25	125	PMPZ12K 25	Square	Black	White	
POWER	PMNB 26	126	–	–	–	–	–
RESET	PMNB 27	127	PMPZ12K 27	Square	Black	White	.141/3,58
RUN	PMNB 28	128	PMPZ12K 28	Square	Black	White	
SPINDLE START	PMNB 29	129	PMPZ12K 29	Square	Green	Black	
SPINDLE STOP	PMNB 30	130	PMPZ12K 30	Square	Red	Black	
START	PMNB 31	131	PMPZ12K 31	Square	Black	White	
START			PMPZ12K 32	Square	Black	White	
START			PMPZ12K 33	Square	White	Black	.203/5,16
START			PMPZ12K 34	Square	Green	Black	
START			PMPZ12K 44	Square	Green	Black	
STOP	PMNB 35	135	PMPZ12K 35	Square	Red	Black	.141/3,58
TEST	PMNB 38	138	PMPZ12K 38	Square	Black	White	.203/5,16
TRAV'SE	PMNB 39	139	PMPZ12K 39	Square	Black	White	.141/3,58
UNCLAMP	PMNB 40	140	PMPZ12K 40	Square	Black	White	
VALVE CLOSED	PMNB 41	141	–	–	–	–	–
VALVE OPEN	PMNB 42	142	–	–	–	–	–
TWO FUNCTION							
FAST/SLOW	PMNB 60	160	–	–	–	–	–
FORWARD/REVERSE	PMNB 61	161	–	–	–	–	–
MANUAL/AUTO	PMNB 62	162	–	–	–	–	–
OPENED/CLOSED	PMNB 63	163	–	–	–	–	–
ON/OFF	PMNB 64	164	–	–	–	–	–

*Bold digit suffixes may be inserted as part of a unit listing when ordering a complete PM device from charts on the preceding pages.

PM Miniature oiltight controls

PM SPECIAL LEGENDS

Special legends are offered in full capital alphabetic and numeric characters only.

Legend Colors – Exposed Legends:
White on black opaque cap sets only. Black on all other cap set colors.

Protected legends: Black or white only (on clear film).

TO ORDER – special legends may be ordered in the following manner:

- As part of a PM unit listing (shown in unit listing charts on pages 96-98. add suffix “-99” to the unit listing and supply the additional information described under “SPECIAL INSTRUCTIONS” below.
EXAMPLE: unlighted Pushbutton Unit Listing – PMS32R4CB-99 Indicator Light Listing – PMLH122RG2-99

- Exposed type only, as part of an opaque cap set listing (charted on page 101). Add suffix “-99” to the cap set listing and supply the additional information described under “SPECIAL INSTRUCTIONS” below. EXAMPLE: PMPZ12R-99

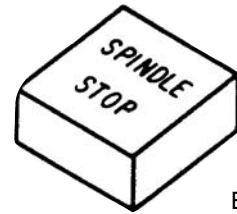
- Protected type only, as part of a display set listing (charted on page 101). Add suffix “-99” to the display set listing and supply the additional information described under “SPECIAL INSTRUCTIONS” below.
EXAMPLE: PMHZ22RY-99

- Protected type only, as a separate legend insert. .007” (0,18mm) thick clear film only, legended. Specify listing PMNBB99 and supply the additional information described under “SPECIAL INSTRUCTIONS” below.

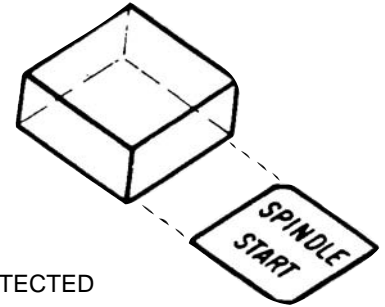
SPECIAL INSTRUCTIONS

All special legend orders must be accompanied by the following additional information for each listing:

- The AREA where each legend is to appear (Chart 1).
- The LEGEND word(s) or number(s). (Observe maximum character count, Chart 2.)
- The SIZE of character .109/2,77, .141/3,58 or 203/5,16.
- Specify BLACK or WHITE for protected legends.
- The QUANTITY of each legended piece.



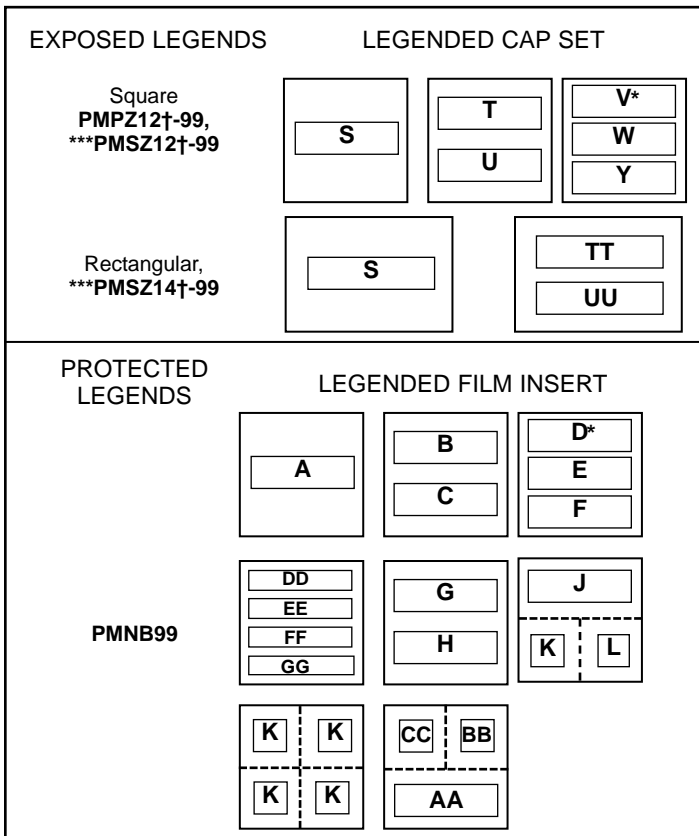
EXPOSED



PROTECTED

Special legends may be ordered in the exposed and protected types. An exposed legend listing specifies a legended opaque cap set. Protected legend listings are a .007” (0.18mm) thick clear film insert.

CHART 1- LEGEND AREA



TYPICAL SPECIAL LEGEND INSTRUCTIONS

As part of lighted pushbutton unit listing

	Area	Legend	Type Size	Color	Quantity
Listing: PMHG132RW4CB-99	G H	Rewind Out	.141	White	3

Key: $\frac{0,0}{0.00} = \text{mm}$
 $\frac{0.00}{0.00} = \text{inches}$

CHART 2 – LEGEND CHARACTER COUNT

Legend Area	Maximum Characters Per Area		
	2,77 .109	3,58 .141	5,16 .203
A through F,* G, H, J, AA S through Y*		7	4 or 5**
SS, TT, UU		12	8
K through R, BB, CC		3	2
DD, EE, FF, GG	7		

*Only .141/3,58 character can be used in areas D, E, F, V, W, Y.

**4 when legend includes letters M or W.





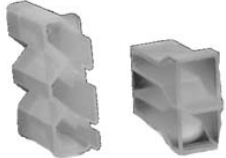


5 when legend does not include M or W.

***For extended plunger devices.

†insert color code

Miniature oiltight controls PM

PM ACCESSORIES AND REPLACEMENT PARTS




	Description	Min. Order Quantity	Catalog Listing
	Mounting wrench		PMZO2
	Mounting wrench for use with PMPZ62, PMPZ64, and PMPZ68 special bezels		PMZ33
	1.125" (28,6mm) square hole plug	Black Metallic Gray	PMZ03 PMZ03 PMZ05
	Connector for each blade of dual tab terminals (18-22 AWG wire only) AMP 61454-1 .062" x .032"	Package of 100	PMZO9 [△]
	Terminal connector to cover both blades of dual tab terminals (16-20 AWG) MOLEX-ETC AA-4173-032 .187" side	Package of 100	PMZ32 [△]
<p>Optional terminal connectors available for dual tab terminals: For each blade - AMP type 60900. For crimping with automatic equipment or ratchet type hand tool (AMP #90021)). Purchase from AMP, INC., Harrisburg, PA.</p> <p>Terminal connectors for single pin terminals: 20-24 AWG wire order AMP #60598-2. Purchase from AMP, Inc., Harrisburg, PA.</p>			
	Insulator, molded for dual tab terminals only 1 lamp form - 1 required for each lamp device 2 lamp form - 1 required for each lamp device 4 lamp form - 1 required for each 4 lamp 1 Form C (SPDT) switch form - 1 required for each pole	Package of 10 Package of 10 Package of 10 Package of 10	PMZ20* PMZ22* PMZ24* PMZ26*
	Insulator, tubular individual .140" (3,56mm) O.D. x .52" (13,2mm) for PMZO9 connectors	Package of 100	PMZ18
	Lamp, T 1 3/4 for 2 and 4 lamp devices 5-6V type OL-628BP (1,000 hrs.) .2 amp 12-14V type OL-646BP (1,000 hrs.) .08 amp 24-28V type OL-632BP (1,000 hrs.) .04 ^o amp	Package of 10 Package of 10 Package of 10	PWZ41* PWZ43* PWZ47*
	Lamp, T 1 3/4 for 2 and 4 lamp devices 5-6V type OL-628BP (1,000 hrs.) .2 amp 12-14V type OL-646BP (1,000 hrs.) .08 amp 24-28V type OL-632BP (1,000 hrs.) .04 ^o amp	Package of 10 Package of 10 Package of 10	PWZ30B* PWZ30C* PWZ30D*

[△] Catalog number is one piece. Can only be purchased in multiples of 100. Example: 400 pieces of PMZO9 connectors are ordered as "400 of PMZO9".

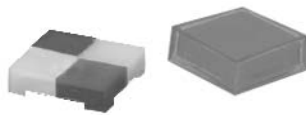
*Can only be purchased in multiples of 10. Example: 80 pieces of PMZ20 insulators would be ordered as "80 OF pmz20".

PM Miniature oiltight controls

PM ACCESSORIES AND REPLACEMENT PARTS

	Description	Catalog Listing
	Blank legend insert (.007", 0,18mm thick clear film)	PMNB00
	Keying ring	PMZ31
	Plunger for one lamp or unlighted units For two lamp version For four lamp version For four lamp, three-way split version For two lamp version with full display	PMHZ85 PMHZ82 PMHZ84 PMHZ83 PMHZ88
	Plunger extraction tool for use when PMPZ62, PMPZ64, and PMPZ68 special bezels are used.	PMZ34

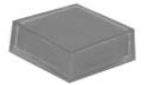
PM PARTS LIST



DISPLAY SET

For lighted pushbuttons and indicators

Display	Catalog Listing	†Add Color Insert Suffix	Insert Sequence	Color Code
Full	¹ PMHZ25†	Add one letter from color code	1	R – Red T – Amber Y – Yellow G – Green B – Blue W – White K – Black*
2-Section Horizontal	¹ PMHZ22†	Add two letters (in sequence) from color code	1 2	
3-Section Horizontal	¹ PMHZ23†	Add three letters (in sequence) from color code	1 2 3	
4-Section	¹ PMHZ24†	Add four letters (in sequence) from color code	1 2 3 4	



INDIVIDUAL COLOR INSERT

Configuration	Catalog Listing	† Add Color Suffix:
Full	PMHZ65†	R – Red T – Amber Y – Yellow G – Green B – Blue W – White K – Black*
Half	PMHZ65†	
Quarter	PMHZ65†	

*Full configuration only.

¹A PMHZ25A designates a clear cap only (no color inserts). For ALL display sets (full, 2, 3, and 4-section).

NOTE: Display sets may be ordered with legends by adding a legend suffix to these listings. See legend charts on pages 99-100.

*Full display set only.

CAP SET

For unlighted pushbuttons

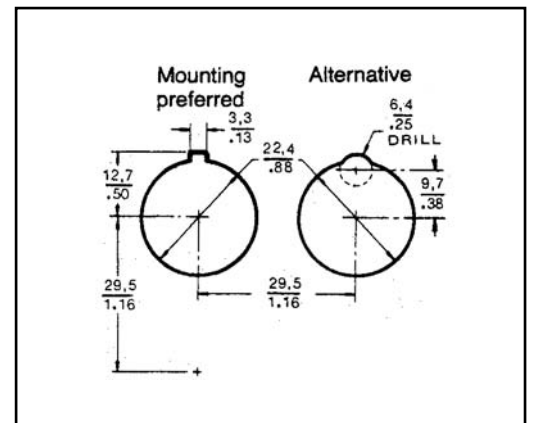


Description	Catalog Listing	†Add Color Suffix (one only)
Square, opaque cap	PMPZ12†	R – Red T – Orange (opaque) Amber (translucent) Y – Yellow G – Green B – Blue W – White
Rectangular, opaque cap	PMSZ14†	
Square, clear cap, translucent insert	PMHZ25†	

²For a clear cap only, without a color insert, specify **PMHZ25A**.

³For extended plunger devices.

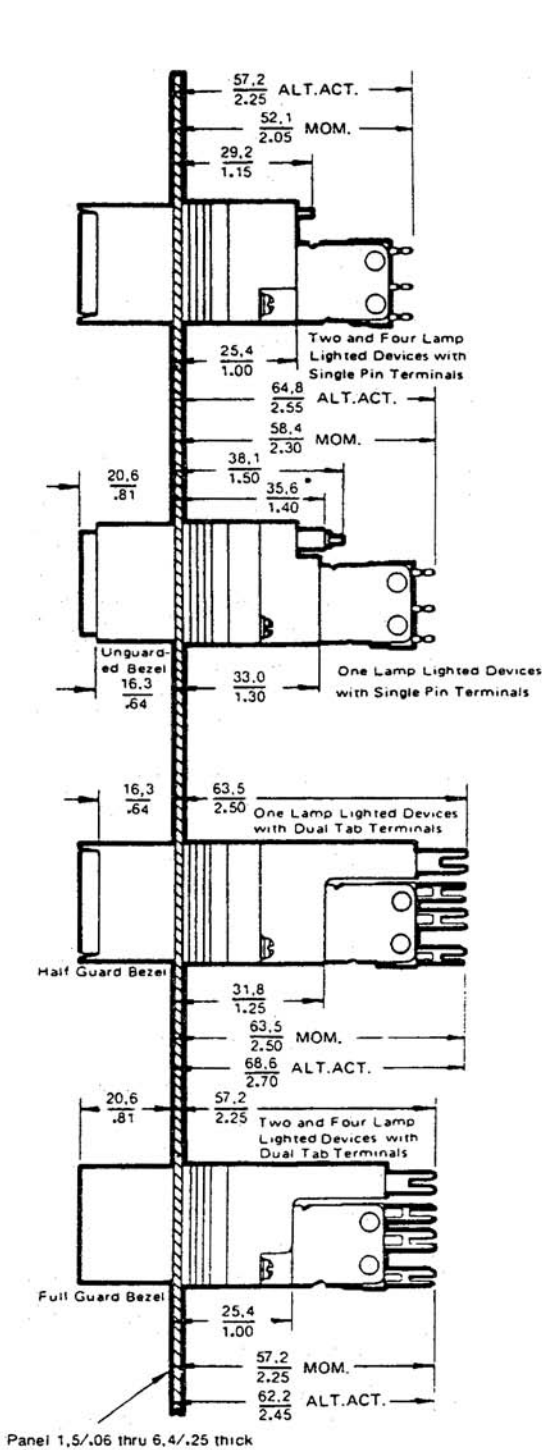
For cap sets with legends, refer to legend charts on pages 99-100.



Miniature oiltight controls PM

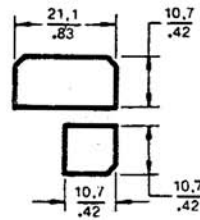
PM MOUNTING DIMENSIONS

VIEWED FROM TOP

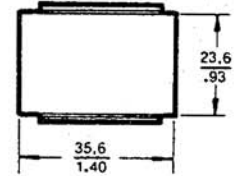


Panel 1.5/.06 thru 6.4/.25 thick

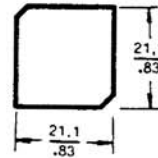
Color Inserts



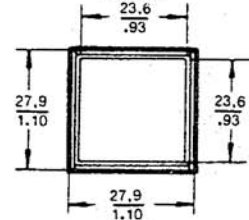
Rectangular Display with Bezel



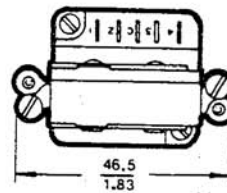
Full Color Insert/ Protected Film Legend



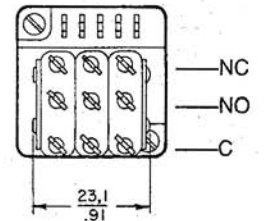
Square Display with Bezel



1 Form Z Circuit

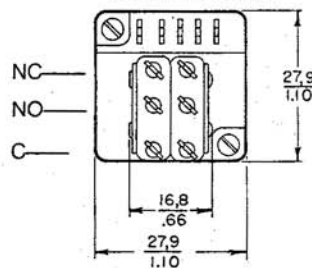


3 FORM C CIRCUITS

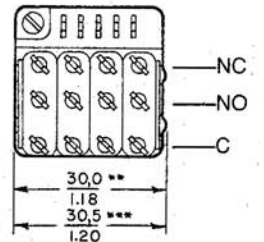


Wgt. 1 oz.

1 FORM C AND 2 FORM C CIRCUITS



4 FORM C CIRCUITS



** MOMENTARY
*** ALTERNATE ACTION



DIMENSIONS SHOWN ARE FOR REFERENCE ONLY