

Interactive Catalog Supplements Catalog PDFs

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Sensing and Control
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Catalog...**

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Sensing and Control

Honeywell Inc.

11 West Spring Street

Freeport, IL 61032

In addition to being built to stand up to demanding environments, EPM switches adhere to good human factors principles. The design combines low travel with high tactile feedback and meets arctic glove requirements. Raised barriers on the bezel enhance finger positioning and help prevent inadvertent operation of two abutting units at one push. Lighted display options provide further application versatility.

LED ILLUMINATION

Long-life LEDs enable reliable illumination. They resist effects of shock and vibration, reducing service and maintenance requirements. (Unlighted versions are also available.)

The following lighting functions can be furnished: High-intensity display using two LEDs to create a brilliant light signal that can be distinguished under high ambient conditions, and/or a pair of LEDs which softly backlight the legend for viewing under low ambient conditions.

There is a choice of red, green or yellow LEDs. Matching indicators, which provide lighted display only, complement the switches to help present a uniform panel design.

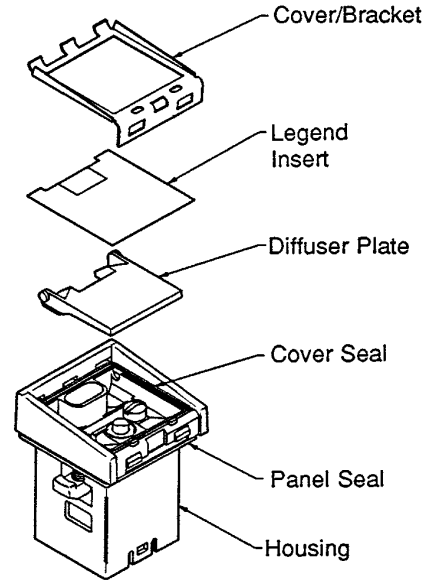
driver (or other tool) to add or change legends.

EPM's 3/4-inch square panel cutout on 1-inch centers is suited to row, column, or matrix arrays.

CONSTRUCTION

Insert can be furnished with or without legends. If legends are to be backlighted, darker colors are recommended for the insert. Black provides maximum contrast in lighted legend displays.

Diffuser plates specified for lighted legend devices are coated on the underside for even illumination. When unlighted legends are specified, diffuser plates are molded from opaque plastic and are not interchangeable with those used for lighted legends.



Silver Contacts

Enhanced Type **B**
Sealed Housing, with
IR filters, EMI shielding
& NBC compliance:

EPM22B

(Gold Contacts)

EPM32B

(Silver Contacts)

LED terminals
and solder T2
switch
terminals

(All are
momentary
action)

X No insert furnished.²

Unlegended insert:¹

B Blue

R Red

Y Yellow

G Green

W White

K Black

1. When specifying Legend Color (**R**, **Y**, **G**), the insert Type suffix letter must be either: **L** (legended insert), or **X** (no insert furnished).
2. To order insert separately, see EPM95 order guide.

Example: EPM22BYR6ACL

Enhanced Type **B** sealed housing, gold contacts; high-intensity single indicator red lighted display and yellow legend backlighting, hook style LED terminals and solder T2 switch terminals; 1-pole circuitry, momentary action, furnished with legended insert, as specified in FO-43973.

Housing Type and Switch Contacts

Standard Type C
Sealed Housing:
EPM41C

Enhanced Type B
Sealed Housing with
IR filters, EMI
shielding & NBC
compliance:
EPM41B

Legend Color¹

R Red
Y Yellow
G Green
X No LED

Hi-Intensity Indicator Color

R Red
Y Yellow
G Green
X No LED

LED Terminals

2
Printed Circuit

6
Hook style

Insert Type

L Legended insert.

Use Legend Order Sheet FO-43973 to designate insert color and legend.

X No insert furnished.²

Unlegended Insert:¹

B Blue
R Red
Y Yellow
G Green
W White
B Black

1. When specifying Legend Color (**R**, **Y**, **G**), the insert Type suffix letter must be either: **L** (legended insert), or **X** (no insert furnished).
2. To order insert separately, see EPM95 order guide.

Example: EPM41BYR2L

Enhanced Type **B** sealed housing; high-intensity single indicator red lighted display and yellow legend backlighting, printed circuit LED and switch terminals; furnished with legended insert, as specified in FO-43973.

Items, order Catalog Listing EPM94, and use Legend Order Sheet to specify the insert color and desired legend. **Unlegended inserts:** Use order guide below to order inserts without legends.

EPM95 UNLEGENDED INSERTS ORDER GUIDE

Unlegended inserts can be furnished with or without a display window for hi-intensity LED lighting.

Color	Inserts for Type B Housings:		Inserts For Type C Housings:	
	With window	Without window	With window	Without window
Blue	EPM95BBW	EPM95BBN	EPM95CBW	EPM95CBN
Green	EPM95BGW	EPM95BGN	EPM95CGW	EPM95CGN
Red	EPM95BRW	EPM95BRN	EPM95CRW	EPM95CRN
White	EPM95BWW	EPM95BWN	EPM95CWW	EPM95CWN
Yellow	EPM95BYW	EPM95BYN	EPM95CYW	EPM95CYN
Black	EPM95BKW	EPM95BKN	EPM95CKW	EPM95CKN
Gray	EPM95BPW	EPM95BPN	EPM95CPW	EPM95CPN

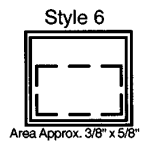
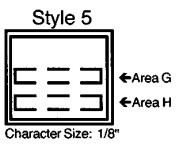
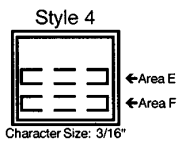
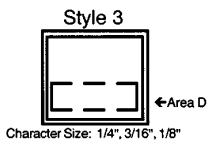
EPM97 INSERTS FOR DUAL INDICATOR DEVICES

Color	Inserts for Type B Housings:		Inserts For Type C Housings:	
	With window	Without window	With window	Without window
Blue	EPM97BBW	EPM97BBN	EPM97CBW	EPM97CBN
Green	EPM97BGW	EPM97BGN	EPM97CGW	EPM97CGN
Red	EPM97BRW	EPM97BRN	EPM97CRW	EPM97CRN
White	EPM97BWW	EPM97BWN	EPM97CWW	EPM97CWN
Yellow	EPM97BYW	EPM97BYN	EPM97CYW	EPM97CYN
Black	EPM97BKW	EPM97BKN	EPM97CKW	EPM97CKN
Gray	EPM97BPW	EPM97BPN	EPM97CPW	EPM97CPN

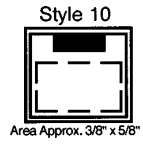
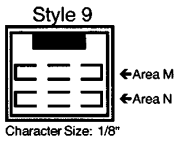
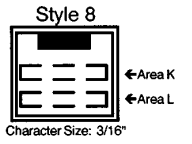
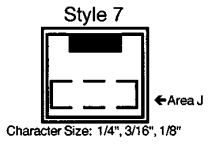
Character Size: 1/8"

Area Approx. 5/8" Square

Lighted or Non-Lighted-Without Indicator LED Display:



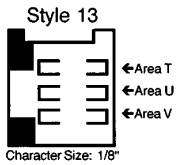
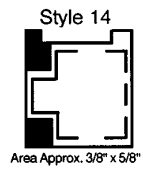
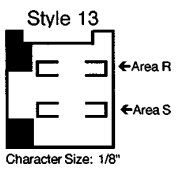
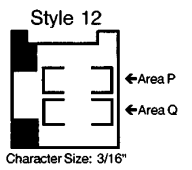
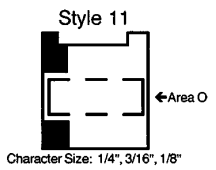
Lighted or Non-Lighted-With Indicator LED Display:



*Special Legends - Non-standard characters will require special SW cost and extended delivery time. Contact MICRON SW (needed).

Lighted or Non-Lighted -

Dual Indicator LED Display:

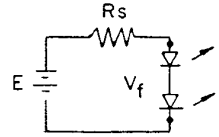


Quantity		Style	Area(s)	Legend - Max Characters/Area 1/4"-3, 3/16"-4, 1/8"-7 Using only one "M" or "W"	Legend Color			Character Size			Back-ground Color	
This Order	Est. Annual				Lighted	Unlighted	Character Size	Character Size	Character Size			
					Trans	Black	White	1/4"	3/16"	1/8"	Special	

F0-43973-C

Manuals

External resistors should be added to maintain the LED current at 30 mA max., 20 mA typical. A minimum of 10 VDC open circuit voltage with an appropriate series resistance be used to drive the LEDs. This minimized the effect of temperature (current variation) on forward voltage of the LEDs. The example below illustrates a simple DC circuit and the equation used to determine the value of the series resistance.



$$R_s = \frac{E - V_f}{I_f}$$

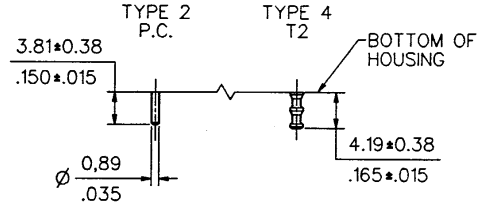
Where: R_s = Series Resistance
 E = Supply
 V_f = Forward Voltage of LED
 I_f = Circuit Current

Example: $R_s = \frac{10 - 4.4}{.020} = 280 \text{ ohms}$

For: $E = 10 \text{ volts}$
 $V_f = 4.4 \text{ volts}$
 $I_f = .020 \text{ amp}$

Characteristics: LED forward voltage @ .020 mA, V_f : Red, 4.4; yellow, 4.4; green, 4.6.

Terminal Detail



Notes:

1. LED terminals are Type 2 – PC only.
2. Mounting torque: 2 to 2½ in.-lbs.

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