

&lt;RoHS Compliance&gt;

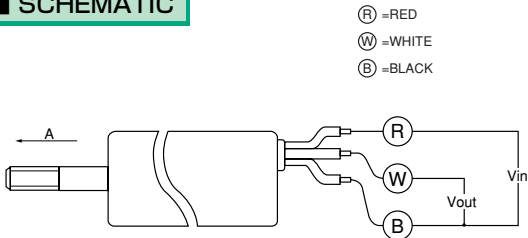
# LP-FP series

## LP-30FQJ

### FEATURES

- Compact & Light weight
- $\phi$  12mm housing: LP-FP series
- $\phi$  8mm housing: LP-30FQJ

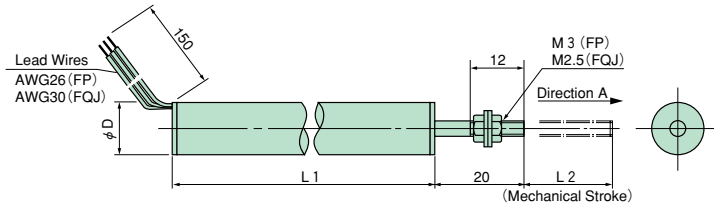
### SCHEMATIC



Red, White and Black indicate harness colors

(R) =RED  
 (W) =WHITE  
 (B) =BLACK

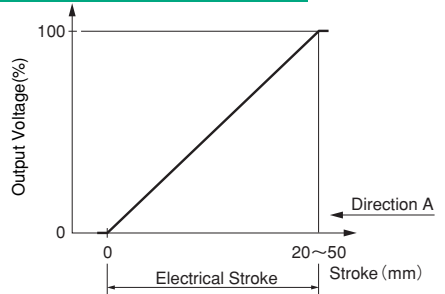
### DIMENSION (mm)



### Housing Length

Model No.	LP-20FP	LP-30FP	LP-50FP	LP-30FQJ
Housing	48mm	58mm	78mm	63mm
Length(L1)	$\phi$ 12mm			$\phi$ 8mm
Mech. Stroke(L2)	$22 \pm 1$ mm	$32 \pm 1$ mm	$52 \pm 1$ mm	$35 \pm 1$ mm

### OUTPUT CHARACTERISTICS



### Electrical Specifications

Model No.	LP-20FP	LP-30FP	LP-50FP	LP-30FQJ
Electrical Stroke	$20\text{mm} \pm 0.5\text{mm}$	$30\text{mm} \pm 0.5\text{mm}$	$50\text{mm} \pm 0.5\text{mm}$	$30\text{mm} \pm 0.5\text{mm}$
Total Resistance	1k $\Omega$			1k $\Omega$
Total Resistance Tolerance	$\pm 20\%$			
Independent Linearity	$\pm 1\%$			
Power Rating	0.6W/70°C	0.9W/70°C	1.5W/70°C	0.9W/70°C
Output Smoothness	0.1%MAX.			
Insulation Resistance	100M $\Omega$ MIN. DC 500V			
Dielectric Strength	AC500V 1 Minute			
TC of Resistance	$\pm 1000\text{ppm} / ^\circ\text{C}$			$\pm 400\text{ppm} / ^\circ\text{C}$

### Mechanical Specifications

Friction		0.4N MAX.		0.3N MAX.
Weight	Approx. 18g	Approx. 20g	Approx. 25g	Approx. 15g

### MOUNTING HARDWARE

2-M3 Nuts, 2-Washers

10740

REF. NO:

**GENERAL DESCRIPTION:**

LP-XXFP IS A CONDUCTIVE PLASTIC RESISTIVE ELEMENT LINEAR MOTION POTENTIOMETER DESIGNED FOR HIGH PERFORMANCE AND RELIABILITY IN ITS COMPACT LIGHT WEIGHT PACKAGE. ELECTRICAL CONNECTIONS ARE MADE WITH PIGTAILED, 150mm LONG INSULATED LEADS.

**ELECTRICAL SPECIFICATIONS:**

ELECTRICAL TRAVEL:	SEE TABLE 1												
TOTAL RESISTANCE:	<table border="0"> <tr> <td>ⓑ) LP-10FP</td> <td>0.5, or 1kOHMS±20%</td> </tr> <tr> <td>LP-20FP</td> <td>0.5, 1, 2, or 5 kOHMS ±20%</td> </tr> <tr> <td>LP-30FP</td> <td>0.5, 1, 2, or 5 kOHMS ±20%</td> </tr> <tr> <td>LP-50FP</td> <td>1, 2, 5, or 10 kOHMS ±20%</td> </tr> <tr> <td>ⓑ) LP-75FP</td> <td>1, 2, 5, or 10 kOHMS ±20%</td> </tr> <tr> <td>LP-100FP</td> <td>2, 5, 10, or 20 kOHMS ±20%</td> </tr> </table>	ⓑ) LP-10FP	0.5, or 1kOHMS±20%	LP-20FP	0.5, 1, 2, or 5 kOHMS ±20%	LP-30FP	0.5, 1, 2, or 5 kOHMS ±20%	LP-50FP	1, 2, 5, or 10 kOHMS ±20%	ⓑ) LP-75FP	1, 2, 5, or 10 kOHMS ±20%	LP-100FP	2, 5, 10, or 20 kOHMS ±20%
ⓑ) LP-10FP	0.5, or 1kOHMS±20%												
LP-20FP	0.5, 1, 2, or 5 kOHMS ±20%												
LP-30FP	0.5, 1, 2, or 5 kOHMS ±20%												
LP-50FP	1, 2, 5, or 10 kOHMS ±20%												
ⓑ) LP-75FP	1, 2, 5, or 10 kOHMS ±20%												
LP-100FP	2, 5, 10, or 20 kOHMS ±20%												
LINEARITY, INDEPENDENT:	±1%												
OUTPUT SMOOTHNESS:	0.1% MAX.												
POWER RATING :	SEE TABLE 1												
TEMPERATURE COEFFICIENT:	±400 ppm MAX.												
INSULATION RESISTANCE:	100 meg OHMS @ 500Vdc												
DIELECTRIC STRENGTH:	500 Vrms @ 50/60 Hz.												

**MECHANICAL SPECIFICATIONS:**

MECHANICAL STROKE:	SEE TABLE 1
FRICTION:	40 g MAX
WEIGHT:	SEE TABLE 1

**ENVIRONMENTAL SPECIFICATIONS:**

OPERATING TEMPERATURE:	-25°C to +80°C
VIBRATION:	15 G's THROUGH 1,000 Hz
SHOCK:	50 G's
LIFE EXPECTANCY:	10 MILLION OPERATIONS MIN.

**MARKING:**

UNITS SHALL BE MARKED WITH MODEL NUMBER, RESISTANCE VALUE, AND SERIAL NUMBER ( OR DATE CODE ).

**MATERIALS:**

HOUSING:	NICKEL PLATED BRASS
SHAFT:	STAINLESS STEEL
SIDE PLATES:	THERMOSET PLASTIC, GLASS ENFORCED
INSULATED WIRES:	#26AWG, PVC INSULATION SLEEVE ( UL1061 )

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN mm(in).  
TOLERANCES:  
ANGLES: ±1.5°  
<10 mm: ±0.25  
<100 mm: ±0.5  
>100 mm: ±1

REVISION

C.O.N	SYM	DESCRIPTION	DATE	DRAWN	APPR'D
	A	0.2 kOHMS deleted from LP-20 & 30FP. 0.5 kOHMS deleted from LP-50FP.	5/29/91	TSUGAWA	
	B	1) MODELS LP-10FP AND LP-75FP ADDED.	11/19/99	TSUGAWA	

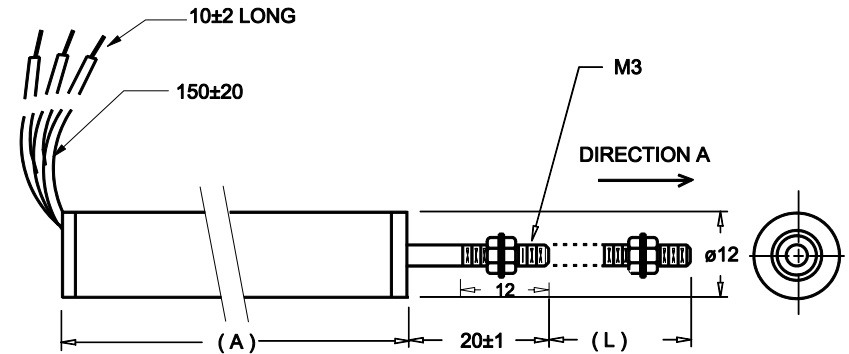


FIGURE1 OUTLINE DIMENSION

TABLE 1

MODEL NO.	POWER RATING	ELECT STROKE	BODY LENG. (A)	MECH. STROKE (L)	NOMINAL WEIGHT
LP-10FP: ⓑ)	0.3W @70°C	10 mm	38 ±1 mm	12 ±1 mm	10 gm
LP-20FP:	0.6W @70°C	20 mm	48 ±1 mm	22 ±1 mm	20 gm
LP-30FP:	0.9W @70°C	30 mm	58 ±1 mm	32 ±1 mm	30 gm
LP-50FP:	1.5W @70°C	50 mm	78 ±1 mm	52 ±1 mm	40 gm
LP-75FP: ⓑ)	1.7W @70°C	75 mm	103 ±1 mm	77 ±1 mm	45 gm
LP-100FP:	2.0W @70°C	100 mm	128 ±1 mm	102 ±1 mm	50 gm

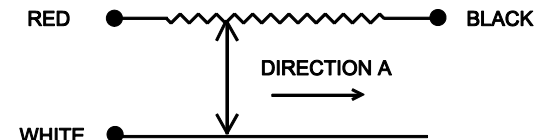


FIGURE 2 SCHEMATIC

DRAWN T. TSUGAWA	DATE 10/24/90	SPECIFICATION DWG FOR MODEL LP-xxFP LINEAR POTENTIOMETER	Midori America Corporation FULLERTON, CA	A-MAC-B03	B	
CHECKED Y. NAKAMURA	DATE 7/15/91					
APPROVED I. SOMA	DATE 7/15/91		FILE: LP-xxFP	1	OF	1
APPROVED	DATE					