

# THE NEXT GENERATION

# Digital Display Proportional Valve Driver

## Function

The Digital Display Proportional Valve Driver supplies a solenoid with current proportional to the input signal from a potentiometer, joystick, PLC or other control system.

## Features and Benefits

- ▶ Independent adjustments (Incl. ramp up & ramp down)
- ▶ Wide range of supply voltage
- ▶ Locally supplied reference voltage
- ▶ Load can be connected and disconnected live

## NEW Features and Benefits

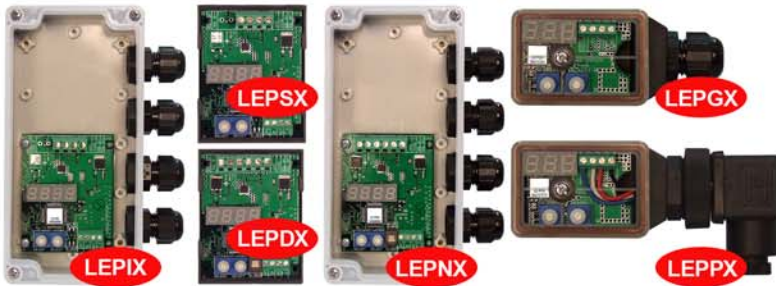
- ▶ 3 to 4 digit extra bright displays
- ▶ Display and adjust actual values (Current & Voltage)
- ▶ Easier and more intuitive to use
- ▶ Easy to customize
- ▶ Easy part selection and ordering
- ▶ User selectable input type through menu setup  
(ex: 0 to 5V, 0 to 10V, 4 to 20mA for all drivers & additional -10V to +10V for dual)
- ▶ Adjustable maximum current output
- ▶ Wide ramp time range (0 to 99.5 Sec)
- ▶ Wider dither range (40 to 450Hz)
- ▶ Short circuit, reverse polarity protection
- ▶ Command input overcurrent protection



## Lets you Be Certain

- ▶ Power is Present
- ▶ Settings are Accurate
- ▶ Input/Output is Correct

## Several Forms Available



Note: Customization of functionality and enclosure type are available as per customer request.

## Standard Specifications

Operating voltage: 9 to 36 VDC  
 Maximum output current: 3.00Amps  
 Input signal: 5V, 10V, 4 to 20mA (Dual -10V to +10V)  
 Maximum ramp time: 99.5 Sec  
 PWM / Dither frequency: 40-450Hz  
 Linearity: 1%  
 Operating Temperature: -40° to +80° Celsius

**PART NUMBER SYSTEM** Proportional Solenoid Driver, Single, solenoid mount with DIN 43650 base **Example: LE PPX**

TYPE	MODEL	FORM	PARAMETERS = X						
LE	Lynch Electronics								
P	Proportional Solenoid Driver								
		G Single, solenoid mount with PG9 cable gland	<b>INCLUDED IN ALL FORM TYPES</b> <table border="1"> <tr> <td>COMMAND INPUT</td> <td>0 to 5V, 0 to 10V, 4 to 20mA, - 10V to + 10V for dual</td> </tr> <tr> <td>MAX CURRENT OUTPUT</td> <td>0.20 to 3.00A</td> </tr> <tr> <td>RAMP TIME</td> <td>0 to 99.5 Sec</td> </tr> </table>	COMMAND INPUT	0 to 5V, 0 to 10V, 4 to 20mA, - 10V to + 10V for dual	MAX CURRENT OUTPUT	0.20 to 3.00A	RAMP TIME	0 to 99.5 Sec
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MAX CURRENT OUTPUT	0.20 to 3.00A								
RAMP TIME	0 to 99.5 Sec								
		P Single, solenoid mount with DIN43650 base							
		I Single, NEMA 4X enclosure with clear lid							
		S Single, DIN rail mount open PCB							
		D Dual, DIN rail mount open PCB							
		N Dual, NEMA 4X enclosure with clear lid							

### Single Solenoid Driver Settings & Range:

- Hi:** HIGH, Maximum Current Output **0.20** to **3.00** [Amps]
- Lo:** LOW, Minimum Current Output, **0.00** to **2.99** [Amps]  
(See: NOTE 1)
- rUP:** RAMP UP, Time for Output to Increase from min to max, **0.00** to **99.5** [SEC]
- rDn:** RAMP DOWN, Time for Output to decrease from max to min, **0.0** to **99.5** [SEC]
- Cdb:** COMMAND DEADBAND, Output disabled if command signal less than deadband, **0** to **5** [%]
- dFr:** DITHER FREQUENCY, **40** (40Hz) to **450** (450Hz)
- in:** INPUT SIGNAL SELECTION, **5** (0 to 5V) or **10** (0 to 10V) or **420** (4 to 20mA)
- di:** DISPLAYED SIGNAL FOR TROUBLESHOOTING, **0** (command signal in [Volts] or [milliAmps]) or **1** (solenoid current in [Amps])  
\*\*Flashing decimal point is an indicator for display mode setting presently in\*\*
  - Fast Flashing decimal point, several flashes per second indicates **di = 0**
  - Slow Flashing decimal point, 1 per second indicates **di = 1**
  - No Flashing decimal point or No decimal point indicates display in SETTING/ADJUST mode
- SR:** SAVE SETTINGS
- rFP:** RESET FACTORY PARAMETERS (See: NOTE 2)
- Err:** ERROR STATUS
  - Error 0 - No Errors
  - Error 1 - Overcurrent in driver is likely due to short circuit in the solenoid
  - Error 2 - Current exceeding 20mA in "4 to 20mA" input mode
- CLr:** CLEAR ERROR, Clears Driver of Error State (See: NOTE 2)

**NOTE 1:** When adjusting the HI and LO parameters note the HI parameter value cannot be adjusted below the LO parameter value as well the LO parameter value cannot exceed the HI parameter value.

**NOTE 2:** Adjust Parameter Value up past 9 to operate this command setting

### Dual Solenoid Driver Settings & Range:

- A Hi:** Solenoid A HIGH, Maximum Current Output, **0.20** to **3.00** [Amps]
- A Lo:** Solenoid A LOW, Minimum Current Output, **0.00** to **2.99** [Amps]  
(See: NOTE 1)
- ArUP:** Solenoid A RAMP UP, Time for Output to Increase from min to max, **0.0** to **99.5** [SEC]
- ArDn:** Solenoid A RAMP DOWN, Time for Output to decrease from max to min, **0.0** to **99.5** [SEC]
- b Hi:** Solenoid B HIGH, Maximum Current Output, **0.20** to **3.00** [Amps]
- b Lo:** Solenoid B LOW, Minimum Current Output, **0.00** to **2.99** [Amps]  
(See: NOTE 1)
- brUP:** Solenoid B RAMP UP, Time for Output to Increase from min to max, **0.0** to **99.5** [SEC]
- brDn:** Solenoid B RAMP DOWN, Time for Output to decrease from max to min, **0.0** to **99.5** [SEC]
- Cdb:** COMMAND DEADBAND, Output disabled if command signal less than deadband, **0** to **5** [%]
- JC:** JOYSTICK CALIBRATION / INPUT OFFSET COMPENSATION, Adjusts the midpoint between solenoid A and B  
Midpoint at 50%, Range from **40** to **50** to **60** [%]
- dFr:** DITHER FREQUENCY, **40** (40Hz) to **450** (450Hz)
- in:** INPUT SIGNAL SELECTION, **5** (0 to 5V) or **10** (0 to 10V) or **420** (4 to 20mA) or **-10** (-10 to +10V)  
\*\*Requires to change setting of Input DIP SWITCH\*\*
- di:** DISPLAYED SIGNAL FOR TROUBLESHOOTING **0** (command signal in [Volts] or [milliAmps]) or **1** (solenoid current) [Amps]  
\*\*Flashing decimal point is an indicator for display mode setting presently in\*\*
  - Fast Flashing decimal point, several flashes per second indicates **di = 0**
  - Slow Flashing decimal point, 1 per second indicates **di = 1**
  - No Flashing decimal point or No decimal point indicates display in SETTING/ADJUST mode
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  - Error 2 - Current exceeding 20mA in "4 to 20mA" input mode
- CLr:** CLEAR ERROR, Clears Driver of Error State (See: NOTE 2)

## Contact Us For More Information

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