

FP2800A **DECODER/DRIVER IC**

Proven **Technology** evolving market

GENERAL DESCRIPTION

The FP2800A Decoder Driver provides the logic functions of a "one of 28 decoder". That is, to decode its 5 bit parallel port input to one of 28 outputs at sufficient current to directly drive the coils of the following range of FP Electronics display component products.

- XY5 flip disk all strips
- Series 36 and 54 indicators all
- XY7 flip disk all strips
- SS5,7,8 or 9 all 1 inch 7 segment modules

In all applications, the device is designed to drive one disk or segment at a time until all have been changed. Additional FP2800As can be used to easily expand the desired display matrix, example: two of these ICs can be interconnected to drive a matrix 14 disks high by 28 disks wide.

2F 2C 2A VS GROUND 2E 2G 31 30 11 nn 13 28 27 3A GROUND 16 **ENABLE** 18 DATA A0 19 **B1** PIN ASSIGNMENT (TOP VIEW)

APPLICATIONS

- Parking meter
- Gas pump readout
- Changeable price displays
- Modular disk matrix PWAs, line or full matrix

FEATURES and BENEFITS

- **CMOS** compatible inputs (microprocessor direct)
- Coil drive voltage operation of up to 27.5 Vdc.
- Source or sink coil drive current up to 370 mA.
- Low saturation devices assure the fastest possible switching times for the device under normal load and environmental conditions.
- Internal clamping diodes handle the normal inductive loads for all the above stated product range.
- Complementary driver outputs allow for bridge configuration coil driving schemes

RELIABILITY

A simple external RC timing circuit protects the output from staying on too long thus avoiding any coil damage due to extended input timing conditions.

This one IC replaces many (see below) other components thus increases reliability in the overall driver circuit design.

Website: www.fpelectronics.com **ISO 9001 CERTIFIED**

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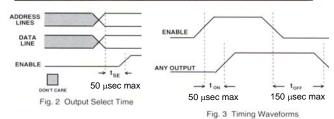
ECONOMY

Replaces a circuit design that would include multiple CMOS logic ICs and current boost devices otherwise required for driving these coils.

Specifications

	MIN	NORMAL	MAX	UNITS
Logic supply voltage, V _{cc}	4.5	5	5.5	V
Power supply voltage, V _s		26	27.5	V
Power supply current, I _s		350	370	mA
Operating temperature range	-40		80	°C
Duty cycle of the circuit, at 80°C , at 25°C			25 50	% %
Operating Frequency	5			Hz

ABSOLUTE MAXIMUM RATINGS		
Logic supply voltage	V _{cc}	7V
Input voltage	VIN	6V
Power supply voltage	V _s	30V
Power supply current	I _s	500mA
Operating temperature	TA	-40°C to 80°C



ELECTRICAL CHARACTERIST	CS OVER RECOMME	NDED O	PERATIN	IG	
	TEST CONDITION	MIN	TYP.	MAX	UNITS
V _{IH} High Level Input Voltage	V _{cc} = 5V	2			v
V _{IL} Low Level Input Voltage	V _{cc} = 5V			0.8	v
I _H High Level Input Current	V _{cc} = 5V V _{IN} = 5V			1	uA
I _{IL} Low Level Input Enable (E) Input Other Inputs	V _{cc} = 5V V _{IN} = 0V		1 46	-10 -60	uA uA
I _{cc} Logic Current	V _{cc} = 5V	2.0	6.6	10	mA
I _{so} Off State Driver Power Supply Current	V _s = 26V E = 0V			1	mA
I _{oL} Output Leakage	V _s = 27.5V, E = 0V All output shorted to V _a = 26			1.0	mA
VSAT Output Saturation Voltage	I _s = 350mA Source Trans. Sink Trans.			3.0 2.0	v



FP2800A - Truth Table



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Application notes: for XY5 matrix use A317875-008, for 1 inch 7 bar use A317875-009

Additional application notes including typical timing diagrams are found on our web pages.

The above specifications are current at the time of publication although they are subject to change without notice. Please consult the Sales office for update information.

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