EDIVIDE Encoder Resolution Divider

Description

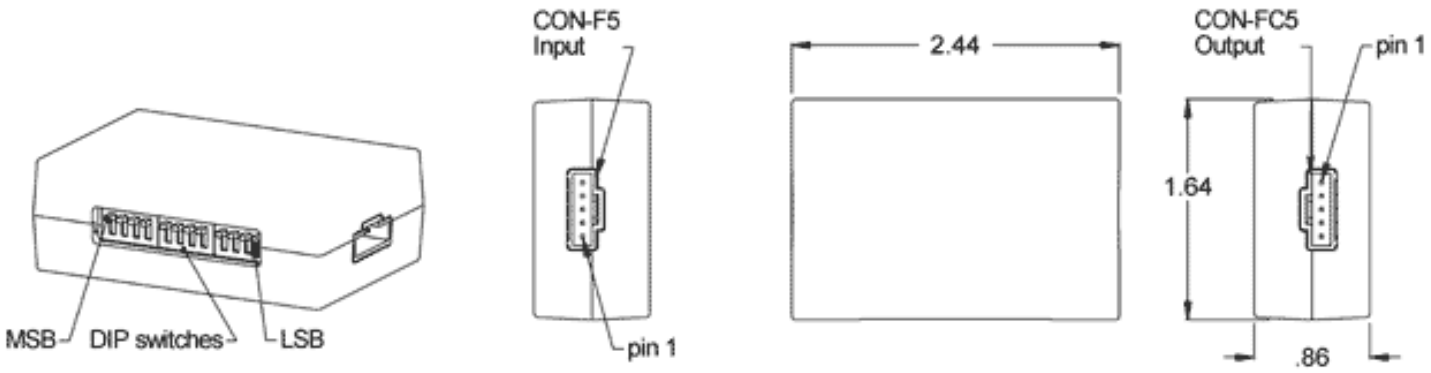
The **EDIVIDE** divides the resolution of an optical incremental encoder by any integer number set by the DIP switch. The **EDIVIDE** draws its +5 V power from the encoder cable. It outputs quadrature codes with 50% symmetry and 90 deg. quadrature outputs. The index signal from the encoder is simply passed straight through from input to output with no change. It tracks bidirectional encoder inputs from DC to 1 MHz. DIN rail mounting is available.

Since incremental encoders are available with only limited resolution choices, the EDIVIDE greatly extends the possible choices. Set the DIP switch to the desired divisor in binary (i.e. to divide by 161, set the DIP switch to 128 + 32 + 1). It is best to cycle the power after any changes are made to the the DIP switch.

Features

- Divides resolution by any number between 1 and 4096
- Produces 90 deg. quadrature with 50% duty cycle
- Low cost solution for custom resolutions
- Tracks encoder position in real-time from DC to 1 MHz
- Positive finger-latching connectors
- Optional DIN rail mount

Mechanical Drawing



DC Electrical Characteristics

Parameter	Min.	Typ.	Max.	Units

US DIGITAL
1400 NE 136th Avenue
Vancouver, Washington 98684, USA
info@usdigital.com
www.usdigital.com
Local: 360.260.2468
Toll-free: 800.736.0194

Supply Voltage (into **EDIVIDE**)	4.75	5.0	5.25	V
Supply Current (without encoders)	-	120	-	mA
Input Low Voltage	0	-	0.8	V
Input High Voltage	2.0	-	Vcc	V
Output Low (at 8mA current, sink)	-	-	0.4	V
Output High (at -4mA current, source)	2.4	-	-	V
Phase Delay (from input to output)	-	500	-	nSec

Absolute Maximum Ratings

Parameter	Min.	Max.	Units
Storage Temperature	-40	100	C
Operating Temperature	0	70	C
Humidity (non-condensing)	0	95	%
Encoder Inputs (diode clamped)	-0.6	5.6	V
Encoder Input Frequency	0	2.5	MHz

Encoder Connector Pin-out

Pin	Description
1	Ground
2	Index
3	A channel
4	+5VDC power
5	B channel

DIP Switch Setting

- **1** = divide by 1
- **2** = divide by 2
- **2+1** = divide by 3*
- **128+32+1** = divide by 161*
- **0** = divide by 4096

* DIP switches may be combined to create any possible CPR division.

Product Change Notifications

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Title	Date	Description	Download
PCN 1011	9/21/2011	The AD2B, AD4B, AD7, EADAPT, EDAC2, EDIVIDE, EPOT, EQUAD, ESUM, ESWITCH, ETACH2, SEI-USB, USB-232 currently utilizes a printed thermal transfer label. This label will no longer be used and will be replaced by laser marking directly onto the housing of the product. The purpose for this change is to create a more durable solution, and eliminate the possibility of the label being inadvertently removed from the housing.	Download

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Ordering Information

EDIVIDE -

Mounting
D =*Default*
R =*DIN rail (35mm wide)*

Notes

- Cables and connectors are not included and must be ordered separately.
- US Digital warrants its products against defects in materials and workmanship for two years. See complete warranty for details.

Base Pricing

Quantity	Price
1	$50.95
10	$41.90
50	$38.70
100	$36.75

- Add $10.00 per unit for **Mounting** of DIN rail (35mm wide)

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