

# **SPECIFICATIONS**

## **PCM-QUAD02**

### **Dual Quadrature Encoders**



**MEASUREMENT  
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Typical for 25°C unless otherwise specified.

## Power Consumption

(Not supplying power to external encoders)

+5V 50 mA typical, 80 mA maximum,

(Typical, supplying one Dynamics Research Incremental Optical Rotary Encoder P/N M21AAFOBB2E-2500)

+5V 179 mA

Max. peak current to encoders (each) 400 mA

## Input Section

Receiver type	SN75ALS175 quad differential receiver
Configuration	Each channel consists of Phase A input, Phase B input and Index input; each configured for differential input
Number of channels	2
Common mode input voltage range	±12V maximum
Differential input voltage range	±12V maximum
Input sensitivity	±200mV
Input hysteresis	50mV typical
Input impedance	12 kOhm minimum
Propagation delay	27 ns maximum
Absolute maximum input voltage	
Differential	±25V maximum
Miscellaneous	Meets EIA RS422, 423, 485 and CCITT V.10, V.11, X.26, X.27. Designed for Multipoint busses on long lines in noisy environments.

## Counter Section

Counter type	LS7266R1 24-bit Dual-axis Quadrature Counter
Quadrature Mode	
Clock frequency	4.3 MHz maximum
Separation	57 ns minimum
Clock pulse width	115 ns minimum
Index pulse width	85 ns minimum
Count Mode	
Clock frequency	30 MHz maximum, (25 MHz maximum, Mod-N mode)
Clock A - high pulse width	16 ns minimum
Clock A - low pulse width	16 ns minimum
Filter clock (FCK)	10 MHz
Digital filter rate	10 MHz, software-selectable divider (1 to 256 in single steps)
Crystal oscillator (FCK source)	
Frequency	10 MHz
Frequency accuracy	100 ppm

## Interrupt Controller Section

Controller type	FPGA
Configuration	Polled mode only
Interrupts	2 to 15
Interrupt enable	Programmable
Interrupt sources	All Carry/Borrow outputs from LS7266R1; all Index inputs

## **Environmental**

Operating temperature range	0 to 70°C
Storage temperature range	-40 to 100°C
Humidity	0 to 90% non-condensing

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