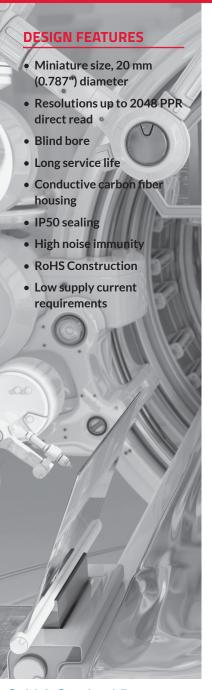


QPhase Encoders

QR787 w/Blind Bore





Quantum Devices, Inc. Model QR787 blind bore version provides a high performance, high resolution digital feedback solution for small motor applications. The QR787 model provides the resolution of larger encoder packages, but in a package only 20 mm (0.787") in diameter. Outputs can be configured in either single ended, 5 volt RS-422 differential or with high voltage differential line driver. QDI's patented sensing scheme embodies a much simplified encoder design, which ultimately results in longer service life and less downtime due to feedback device failure. The encoder housing is constructed of a conductive carbon fiber composite that provides the EMI shielding of an all-metal housing and performance of a lightweight robust assembly.



Configuration Options:

Voltage 05/05 = 5 VDC 05/26 = 5-26 VDC Resolution 500, 512, 1000, 1024, 2000, 2048 Output

01 = TTL

02 = Line Driver

03 = 5-26 VDC Line Drive

I/O Termination

01 = Straight Pins 02 = 8" Ribbon Cable w/Connector Bore Size
H1 = 2.5 mm
H2 = 2 mm
H3 = 0.125"
H4 = 3 mm
H5 = 4 mm

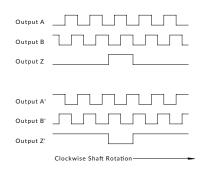
Sold & Serviced By:



Toll Free Phone (877) SERV098 www.electromate.com sales@electromate.com

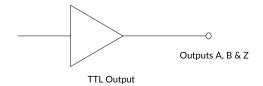


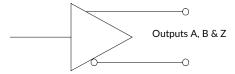
OUTPUT WAVEFORMS



Viewed From Shaft End

OUTPUT CIRCUITS





Outputs A', B' & Z'
26C31 line driver (RS-422)
&
OL7272 5-26 V line driver

QR787 WIRING INFORMATION	
Pin Number	Function
1	Common
2	Vcc
3	Z
4	Z´
5	В
6	B′
7	А
8	A´
9	NC
10	Case

ELECTRICAL SPECIFICATIONS	
Input Voltage	5 VDC ± 5% or 5-26 VDC
Input Current Requirements	80mA Max. output option $01&02,35mA$ max output option $03;$ plus interface loads
Input Ripple	2% peak to peak @ 5 VDC
Output Currents	01 = TTL output (single-ended) 02 = 26C31 line driver (RS-422) 03 = OL7272 high voltage line driver
Output Format	Quadrature with A leading B for CW rotation Ungated Z index pulse true over A and B high
Max Operating Frequency	200 kHz
Symmetry	180° electrical ± 10%
Minimum Edge Separation	54° electrical

ENVIRONMENTAL SPECIFICATIONS	
Storage Temperature	-40 to 125°C
Operating Temperature	0 to 70°C typical -20 to 100°C optional**
Humidity	98% non-condensing
Vibration	20 g's @ 50 to 500 CPS
Shock	50 g's @ 11 ms duration

MECHANICAL SPECIFICATIONS	
Maximum Shaft Speed	8000 RPM
Bore Diameter (Tolerance)	0.125", 2 mm, 2.5 mm, 3 mm, 4 mm (+0.0005/-0.0000")
Shaft Material	360 brass
Bearings	Radial ball bearing, R2 type
Radial Shaft Load	2 lb maximum
Axial Shaft Load	1 lb maximum
Housing	Carbon fiber composite (case ground via connector)
Housing Volume Resistivity	10 ⁻² ohm∙cm
Termination	Two rows of 5 pins on 0.100" centers 8" ten conductor ribbon cable with 2x5 connector
Mounting	Servo
Moment of Inertia	9.5 x 10 ⁻⁶ oz·in·s²
Acceleration	1x10 ⁵ radians/s ²

 $\hbox{\it **} Contact factory for more information \\$

