NEWALL
Going to Extremes

RPE-PV
Programmable Rotary Encoder

Made in USA

Newall's RPE-PV features a dynamic encoder resolution capability that allows users to easily program the encoder resolution to any value between 1 and 10,000 counts per revolution.

Take the Guesswork Out of Encoder Resolution
When ordering a typical rotary encoder, the resolution is selected at the time an order is placed and it is then fixed for the life of the encoder. With the RPE-PV, the resolution can be programmed and reprogrammed at any time by the user via a PC.

Stock One Type of Encoder
For users with multiple resolution requirements, the RPE-PV can be kept in stock and programmed just prior to installation.

Fast and Simple Resolution Programming
Users can program and reprogram the encoder's resolution on site as needed. First, download and install the application from Newall's website. Then, using the optional programming cable, connect the encoder to a computer via the USB port. Simply enter the new resolution and click 'Program'. A new resolution is now programmed. It's just that simple.

Electrical Specifications

Code	Incremental
Supply Voltage	5 to 28 VDC
Output Format	2 channels in quadrature ½ cycle gated with negative B
Voltage/Output	Voltage out = Voltage In
Cycles per revolution	1 to 10,000
Current Req.	140mA typical+output load, 290mA max.
Frequency Response	Max RPM of 3,000

Mechanical Specifications

Shaft Diameter	0.375" (9.525mm)
Shaft Load	Up to 40 lbs (18kg) axial, 35 lbs (15kg) radial
Shaft Material	416 stainless steel
Shaft Runout	0.0005" (0.0127mm) T.I.R.
Bearings	Class ABEC 7
Flange	2.65" x 2.65" (67.3mm x 67.3mm)
M18 Cable Assembly (optional)	10', 20', 30' and 50' (3M, 6M, 9M and 15M)

For more detailed specifications, visit newall.com

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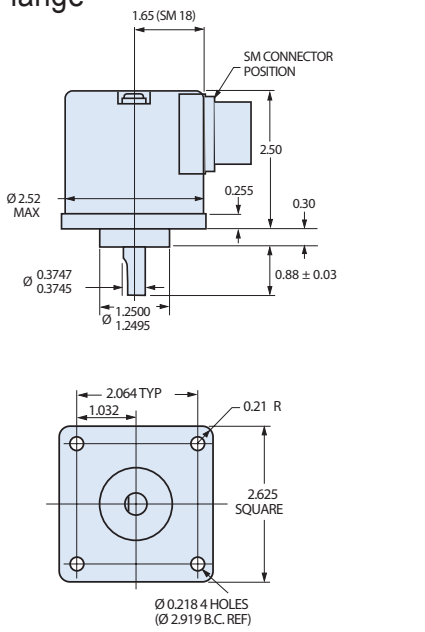
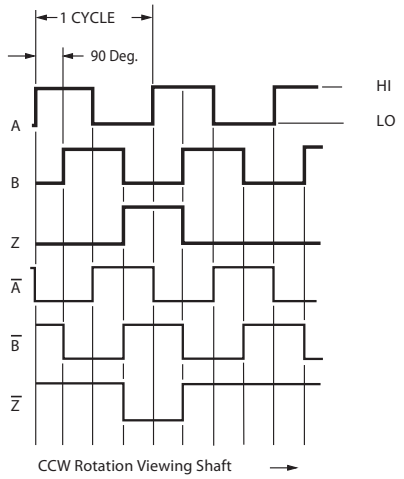
Dimensions

RPE-PV - Square Flange



TOLERANCES: .X X = ± 0.01 , .XXX = ± 0.005

Output Waveform



Incremental Output Terminations

M18 Connector	
PIN	Channel
A	A
B	B
C	Z
D	+V
E	--
F	0V
G	CG
H	$\overline{A}$
I	$\overline{B}$
J	$\overline{Z}$

Installation and Programming

Installing the Driver and Software

1. Go to www.bit.ly/1s4FURU to view the download page
2. Click on the “Windows: USB Virtual COM Port Driver” and save the file to your hard drive. (Note: RPE-PV programming utility is currently supported on Windows only.)
3. Unzip the USB driver to a directory on your hard drive
4. Run “setup” to install drivers
5. From the Newall download web page, click on the “Windows: RPE-PV Programming Installer” and save the file to your hard drive
6. Unzip the program to a directory on the hard drive
7. Run “setup” to install the RPE-PV Programming software
8. The program should start automatically. You have finished installing the software and are now ready to program your RPE-PV.

Programming the RPE-PV Encoder

9. Using the RPE-PV programming cable, plug the USB connector end into your PC. The red X (No cable detected) should change to a green check mark, indicating that the USB Programming Module was detected. (This may take up to 15 seconds)
10. Plug the M18 connector end into the RPE-PV unit. The red X (No encoder detected) should change to a green check mark, and the current RPE-PV resolution will be displayed on your computer screen.
11. To change the RPE-PV resolution, enter a new resolution as an integer between 1 and 10000 in the box labeled “Program New Resolution.” Then click the “Program” button. In a few seconds, the new resolution will be uploaded to the RPE-PV. The RPE-PV is now programmed and can be disconnected.

Ordering

	Part Number
RPE-PV Encoder	RPEPV000A
Programming Cable	307-86400
10’ (3M) M18 Cable	ELDM180030FL1
20’ (6M) M18 Cable	ELDM180061FL1
30’ (9M) M18 Cable	ELDM180091FL1
50’ (15M) M18 Cable	ELDM180152FL1

Notes

All RPE-PV encoders are shipped pre-programmed to 1024 CPT unless otherwise requested.

M18 cable is comprised of an abrasive-resistant PVC jacket and includes mating M18 connector with flying lead.

Multi-voltage Line Driver (7272): 100 mA source/sink. Input voltage 5 to 28 VDC +/- 5% standard (Note: Vout = Vin). This driver is TTL compatible when used with 5 volt supply.

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