

# DR553

Direct Replacement Encoder for Dynapar Rotopulser Model 60



The Accu-Coder™ DR553 is a direct replacement encoder for the Dynapar Rotopulser Model 60. These encoders are used on Ink Jet printers, cut to length applications, motor drive speed feedback, and a variety of other applications. If you have tried to order the Rotopulser 60 you may have encountered long lead times. The DR553 from Encoder Products Company is the perfect substitution for the Rotopulser 60.

**Order the DR553 as a Direct Replacement Encoder for Videojet Triumph and Excel Printers!**

**DR553 Price: \$620**

Additional discounts available for volume orders.

## Features:

- 3.5" servo hub on a rugged 2" encoder
- 1/2" stainless steel shaft
- Quadrature with index
- Resolutions up to 2500 CPR
- Line Driver and Push-Pull outputs
- 5 to 28 VDC
- 6-pin and 10-pin side mount MS connectors
- Sealing of IP64

**DR553**

MODEL DR553  
Size 20 (2.0") Encoder  
with 3.5" servo hub

**A**

HOUSING  
A Standard Housing  
for Single Shaft

**A**

SHAFT  
A 1/2" Diameter  
1" Length with Flat

**E**

OUTPUT TYPE  
5-28V In/Out  
E Push-Pull  
D Line Driver

**1000**

CYCLES PER  
REVOLUTION  
Up to 2500  
See CPR options below  
Add \$31 for  
CPR >1270

**A**

CONNECTOR  
TYPE  
A MS Side Mount

**B**

SEAL

B IP64

*Blue type indicates price adder options.  
Contact Customer Service for details.*

## Model DR553 CPR Options

0001	0002	0004	0005	0006	0010	0012	0020	0025
0040	0045	0050	0060	0064	0100	0120	0125	0128
0150	0180	0192	0200	0240	0250	0256	0300	0360
0400	0500	0512	0530	0600	0625	0720	0800	0900
1000	1024	1200	1270	1500	1800	2000	2400	2500

## The Accu-Coder™ Advantage

- ✓ Get this encoder FAST – you'll get your encoders in days, not weeks.
- ✓ Huge savings in price comparison – the DR553 is your economical solution
- ✓ The accuracy, reliability, and quality that only come from an Accu-Coder™
- ✓ Industry Best 3-year warranty!

**ACCU>>CODER™**  
by Encoder Products Company

### Model DR553 Specifications

#### Electrical

Input Voltage ..... 4.75 to 28 VDC max for temperatures up to 70°C  
 Input Current ..... 100 mA max with no output load  
 Input Ripple ..... 100 mV peak-to-peak at 0 to 100 kHz  
 Output Format ..... Incremental – Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the encoder mounting face. See Waveform Diagrams below.  
 Output Type ..... Push-Pull – 20 mA max per channel  
 Line Driver – 20 mA max per channel (Meets RS 422 at 5 VDC supply)  
 Index ..... Occurs once per revolution. See Waveform Diagrams below.  
 Freq Response ..... Up to 100 kHz.  
 Noise Immunity ..... Tested to BS EN61000-4-2; IEC801-3; BS EN61000-4-4; DDENV 50141; DDENV 50204; BS EN55022 (with European compliance option); BS EN61000-6-2; BS EN50081-2  
 Symmetry ..... 180° ( $\pm 18^\circ$ ) electrical at 100 kHz output  
 Quad Phasing ..... 90° ( $\pm 22.5^\circ$ ) electrical at 100 kHz output  
 Min Edge Sep ..... 67.5° electrical at 100 kHz output  
 Rise Time ..... Less than 1 microsecond  
 Accuracy ..... Instrument and Quadrature Error: For 200 to 1999 CPR, 0.017° mechanical (1.0 arc minutes) from one cycle to any other cycle. For 2000 to 2500 CPR, 0.01° mechanical (0.6 arc minutes) from one cycle to any other cycle.

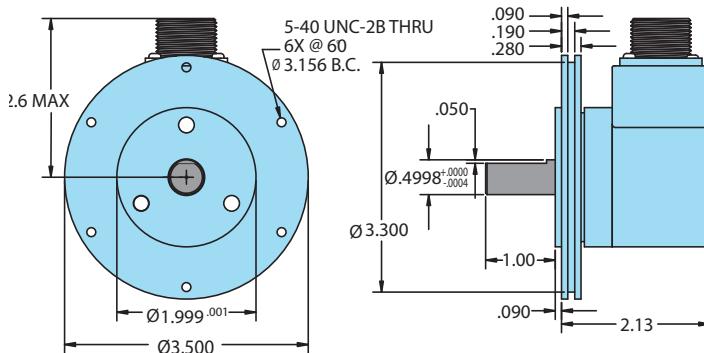
#### Mechanical

Max Shaft Speed ..... 8000 RPM. Higher shaft speeds may be achievable, contact Customer Service.  
 Shaft Size ..... 0.50"  
 Shaft Rotation ..... Bi-directional  
 Radial Shaft Load ..... 80 lb max. Rated load of 20 to 40 lb for bearing life of 1.5 x 109 revolutions  
 Axial Shaft Load ..... 80 lb max. Rated load of 20 to 40 lb for bearing life of 1.5 x 109 revolutions  
 Starting Torque ..... 1.0 oz-in typical with IP64 seal or no seal  
 Moment of Inertia .....  $5.2 \times 10^{-4}$  oz-in-sec<sup>2</sup>  
 Max Acceleration ..... 1 x 105 rad/sec<sup>2</sup>  
 Connector Type ..... 6- and 10-pin side mount MS connector  
 Housing ..... All metal construction with black protective coating  
 Bearings ..... Precision ABEC ball bearings  
 Mounting ..... 3.5" servo mount  
 Weight ..... 11 oz typical

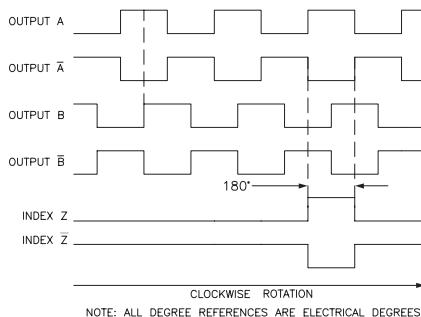
#### Environmental

Operating Temp ..... 0° to 70° C for standard models  
 Storage Temp ..... -25° to 85° C  
 Humidity ..... 98% RH non-condensing  
 Vibration ..... 20 g @ 58 to 500 Hz  
 Shock ..... 75 g @ 11 ms duration  
 Sealing ..... IP64

### DR553 Dimensions



### DR553 Waveform Diagrams



#### Line Driver and Push Pull Waveform

The Line Driver output waveform is shown in the figure to the left. Output A leads Output B for clockwise rotation of the encoder shaft as viewed from the encoder mounting face. Push Pull outputs do not include complimentary channels.

### DR553 Wiring Tables

Function	6-Pin MS (E)	10-Pin MS (D)	10-Pin Cable Assy
COM	C	C	Black ]*
+VDC	E	E	White ]
A	B	B	Red ]*
A'	----	G	Black ]
B	D	D	Blue ]*
B'	----	H	Black ]
Z	A	A	Green ]*
Z'	----	I	Black ]
Shield	F	F	Bare
Not Used	----	J	

\*NOTE: Cable is twisted pairs. Wire pairs indicated by brace [ ]

#### Mating Connectors

To order a 6-pin MS mating connector order stock # 080014

To order a 10-pin MS mating connector order stock # 080113

#### Cordsets

To order a 10-pin MS cable assembly order stock # 410C-xxx-HV-R-N-SPEC553  
 xxx=cable length in feet

**Don't see the exact encoder you need replaced?**  
 Call 1-800-366-5412 and our Technical Services Department will cross-reference the encoder to the correct EPC model.