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. The DR553 is a drop-in replacement encoder for the Rotopulser 60 on Videojet Triumph and Excel Printers.

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
- IP64 sealing

** Other CPRs may be available, Contact Customer Service*

Contact Customer Service for pricing. Discounts available for volume orders.

DR553	A	A	E	1000	A	B
MODEL DR553	**HOUSING**	**SHAFT**	**OUTPUT TYPE**	**CYCLES PER REVOLUTION**	**CONNECTOR TYPE**	**SEAL**
Size 20 (2.0") encoder with 3.5" servo hub	**A** Standard Housing for Single Shaft	**A** 1/2" Diameter 1" Length with Flat	**5-28V In/Out** **E** Push-Pull **D** Line Driver	Up to 2500 See CPR options below Price adder for CPR >1270	**A** MS Side Mount	**B** IP64

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

Model DR323 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	1000
1024	1200	1270	1500	1800	2000	2400	2500	

The Accu-Coder® Advantage

- *US-based since 1969*
- *Industry-best 3-year warranty*
- *Exceptional customer service*
- *Fast lead times – contact us for lead times and expedite options*

ACCU-CODER® by Encoder Products Company

1-800-366-5412 | encoder.com | sales@encoder.com
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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° (±18°) electrical at 100 kHz output
Quad Phasing	90° (±22.5°) 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.

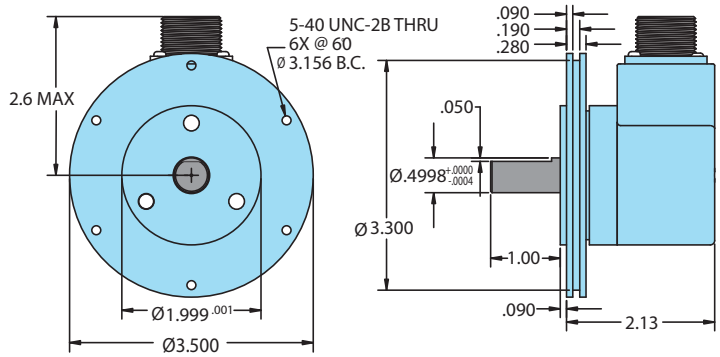
Mechanical

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 10^9 revolutions
Axial Shaft Load	80 lb max. Rated load of 20 to 40 lb for bearing life of 1.5 x 10^9 revolutions
Starting Torque	1.0 oz-in typical with IP64 seal or no seal
Moment of Inertia	5.2 x 10^{-4} oz-in-sec^2
Max Acceleration	1 x 10^5 rad/sec^2
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

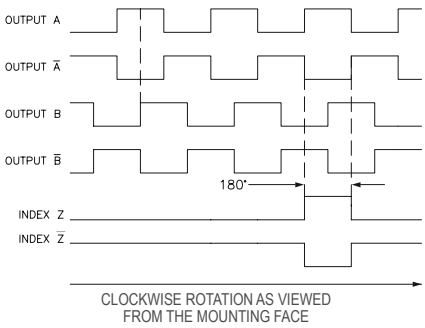
Environmental

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 Diagram



NOTE: ALL DEGREE REFERENCES ARE ELECTRICAL DEGREES

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 Table

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	----	----	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?

*Call **(800) 366-5412** and our Technical Sales Department will cross-reference your encoder to the correct EPC model.*

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