



Features of the 2 in. Transmissive Rotary Disk



- 2 in. disk with mounting hub
- Supports 22 shaft sizes (2 to 25 mm and 1/8 in. to 1 in.)
- 21 Resolutions from 64 to 10,000 CPR (256 to 40,000 PPR)
- Optional Index location

Description

HUBDISK-2 consists of a 2 in. diameter optical encoder disk mounted on a precision-machined aluminum hub. These *Disk*⁽¹⁾ are also available as stand-alone components. The disk is manufactured from 0.007 in. thick Mylar film and is rated for an operating temperature range of -40 °C to +100 °C. One or two set screws (depending on bore size) secure the hub to the shaft.



The 64 CPR is only available without an index (NE). Resolutions of 2500 CPR and below may be ordered with or without an index, while 3600 CPR and above are only available with an index (IE).

The HubDisk assembly is available with 23 bore sizes ranging from 2 mm to 1 in. All hub bores are held to tight tolerances defined by US Digital Technical Bulletin, *Shaft and Bore Tolerances TB1001*⁽²⁾. The disk on the HubDisk assembly comes attached with the emulsion side up when the disk text is right-reading.

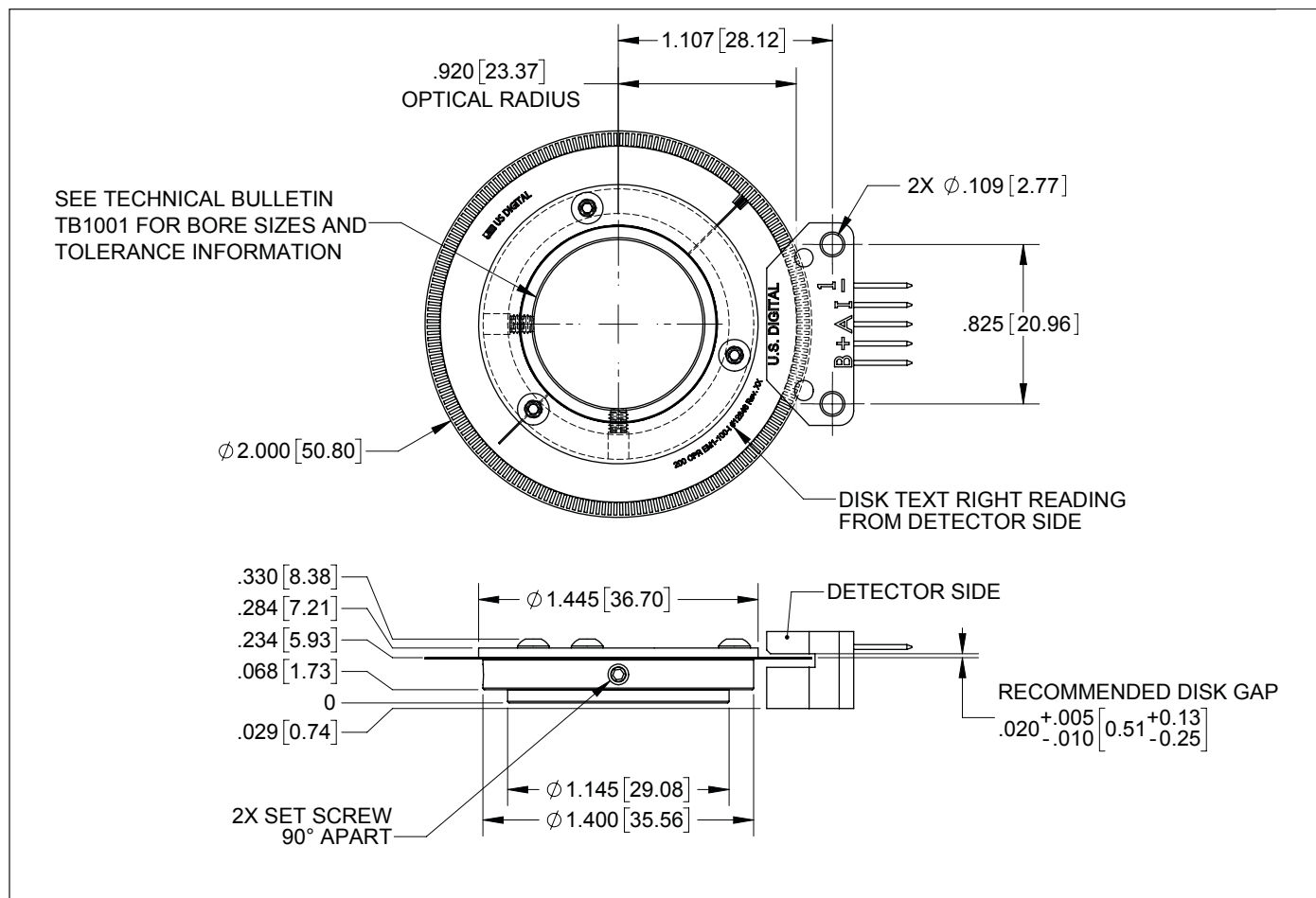
For custom HubDisk assemblies, contact our support team: 360-397-9999 | support@usdigital.com

2 in. Transmissive Rotary Disk

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Mechanical Drawings



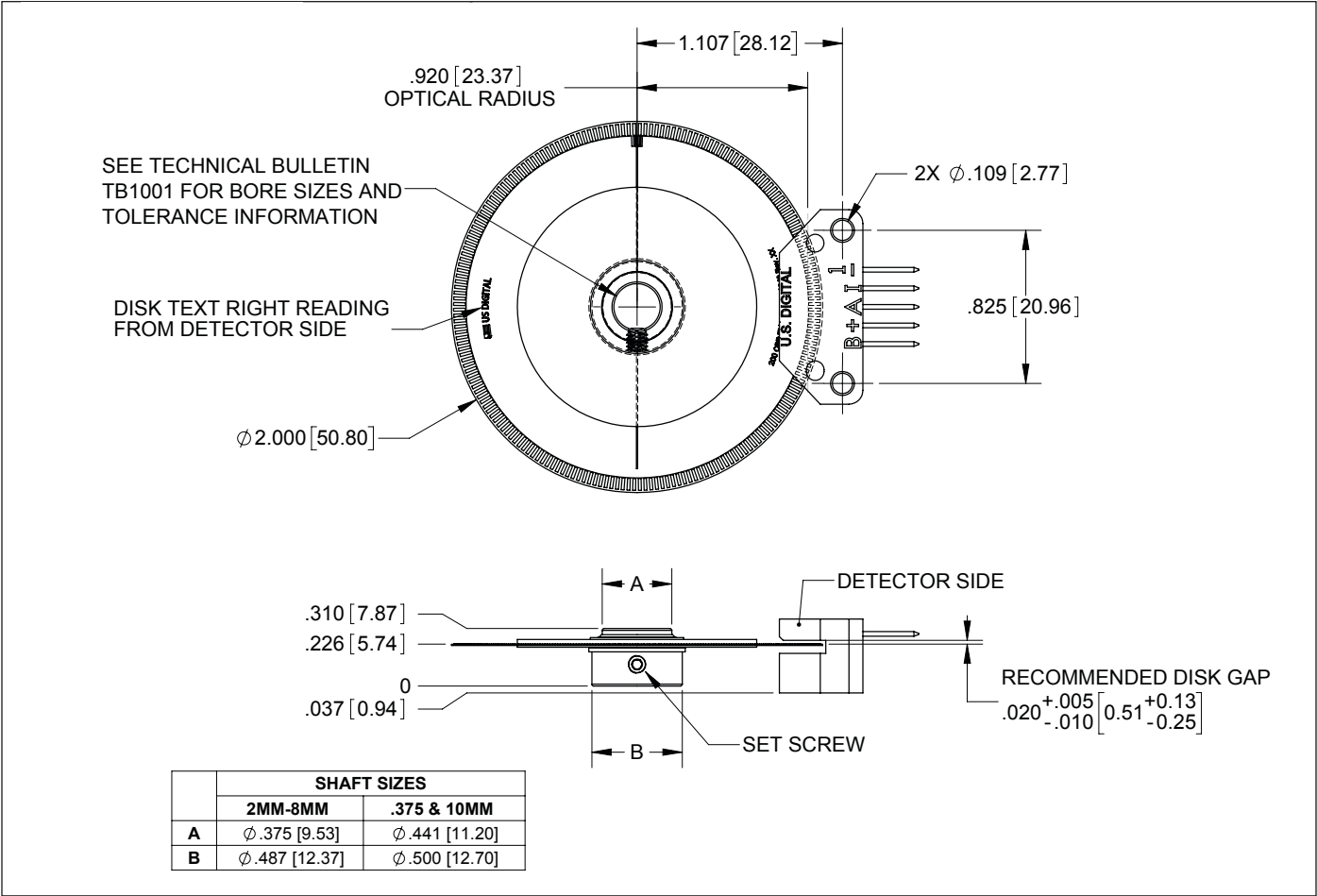
DISK-2 2 in. Transmissive Rotary Disk (Bores 12mm & Greater)

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Mechanical Drawings



DISK-2 2 in. Transmissive Rotary Disk (Bores 2mm - 10mm)

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Specifications

General

Parameter	Value
Temperature Range	-40C to 100C
Hub Set Screw Torque	2-3 in-lbs
Outside Disk Diameter (OD)	2 in. $\pm$ 0.010 in.
Bore Diameter Tolerance	<i>See Technical Bulletin TB1001⁽³⁾</i>
Disk Thickness	0.007 in.

Technical Bulletins

Title	Download
Technical Bulletin TB1001 - Shaft and Bore Tolerances	<i>Download⁽³⁾</i>

Compatible Encoder Modules

CPR	2 in. HUBDISK Non-Index	MODULE Non-Index	2 in. HUBDISK Index	MODULE Index
64	HUBDISK-2-64-*-NE	EM1-1-32-N		
100	HUBDISK-2-100-*-NE	EM1-1-50-N	HUBDISK-2-100-*-IE	EM1-1-50-I
200	HUBDISK-2-200-*-NE	EM1-1-100-N	HUBDISK-2-200-*-IE	EM1-1-100-I
400	HUBDISK-2-400-*-NE	EM1-1-200-N	HUBDISK-2-400-*-IE	EM1-1-200-I
800	HUBDISK-2-800-*-NE	EM1-1-400-N	HUBDISK-2-800-*-IE	EM1-1-400-I
500	HUBDISK-2-500-*-NE	EM1-2-500-N	HUBDISK-2-500-*-IE	EM1-2-500-I
512	HUBDISK-2-512-*-NE	EM1-2-500-N	HUBDISK-2-512-*-IE	EM1-2-500-I
1000	HUBDISK-2-1000-*-NE	EM1-2-1000-N	HUBDISK-2-1000-*-IE	EM1-2-1000-I
1024	HUBDISK-2-1024-*-NE	EM1-2-1024-N	HUBDISK-2-1024-*-IE	EM1-2-1024-I
1800	HUBDISK-2-1800-*-NE	EM1-2-1800-N	HUBDISK-2-1800-*-IE	EM1-2-1800-I
2000	HUBDISK-2-2000-*-NE	EM1-2-2000-N	HUBDISK-2-2000-*-IE	EM1-2-2000-I
2048	HUBDISK-2-2048-*-NE	EM1-2-2048-N	HUBDISK-2-2048-*-IE	EM1-2-2048-I
2500	HUBDISK-2-2500-*-NE	EM1-2-2500-N	HUBDISK-2-2500-*-IE	EM1-2-2500-I

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Specifications

Compatible Encoder Modules

CPR	2 in. HUBDISK Non-Index	MODULE Non-Index	2 in. HUBDISK Index	MODULE Index
3600			HUBDISK-2-3600-*-IE	EM2-2-3600-I
4000			HUBDISK-2-4000-*-IE	EM2-2-4000-I
4096			HUBDISK-2-4096-*-IE	EM2-2-4096-I
5000			HUBDISK-2-5000-*-IE	EM2-2-5000-I
7200			HUBDISK-2-7200-*-IE	EM2-2-7200-I
8000			HUBDISK-2-8000-*-IE	EM2-2-8000-I
8192			HUBDISK-2-8192-*-IE	EM2-2-8192-I
10000			HUBDISK-2-10000-*-IE	EM2-2-10000-I

*Represents the bore size

Notes

- Cables and connectors are not included and must be ordered separately.
- US Digital® warrants its products against defects in materials and workmanship for two years. See complete warranty⁽³⁾ for details.

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Part Number Guide and Configuration Options

Product ID -

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HUBDISK-2	CPR	Bore Size	Index
	64	079 (2.0mm)	IE (Index)
	100	118 (3.0mm)	I (Index)
	200	125 (1/8 in.)	NE (Non-Index)
	400	156 (5/32 in.)	
	500	157 (4.0mm)	
	512	188 (3/16 in.)	
	800	197 (5.0mm)	
	1000	236 (6.0mm)	
	1024	250 (1/4 in.)	
	1800	276 (7.0mm)	
	2000	313 (5/16 in.)	
	2048	315 (8.0mm)	
	2500	375 (3/8 in.)	
	3600	394 (10.0mm)	
	4000	472 (12.0mm)	
	4096	500 (1/2 in.)	
	5000	551 (14.0mm)	
	7200	625 (5/8 in. Bore)	
	8000	750 (3/4 in. Bore)	
	8192	787 (20.0mm)	
	10000	875 (7/8 in.)	
		984 (25.0mm)	
		1000 (1 in.)	

PLEASE NOTE: This chart is for informational use only. Certain product configuration combinations are not available. Visit the [HUBDISK-2^{\(4\)}](#) product page for pricing and additional information.

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Reference Links



(1) 2 in. Transmissive Rotary Encoder Disk



(2) Technical Bulletin TB1001 - Shaft and Bore Tolerances



(3) Legal Terms and Conditions, Warranty



(4) HUBDISK-2 2 In. Transmissive Rotary Disk