



## HUBDISK-1 Features

- 1 in. disk with hub
- 32 to 5,000 CPR (128 to 20,000 PPR)



## HUBDISK-1 Product Description

US Digital offers a wide variety of standard HubDisk assemblies (optical encoder disk attached to an aluminum hub) to aid mounting onto a shaft. Encoder disks may also be ordered as stand-alone items. The rotary encoder disks are made from 0.007 in. thick Mylar polyester film, and the material allows for a -40C to 100C temperature range. The disk on the HubDisk assembly comes attached with the emulsion side up when the disk text is right-reading.



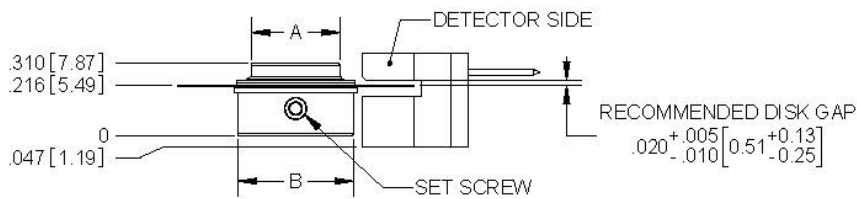
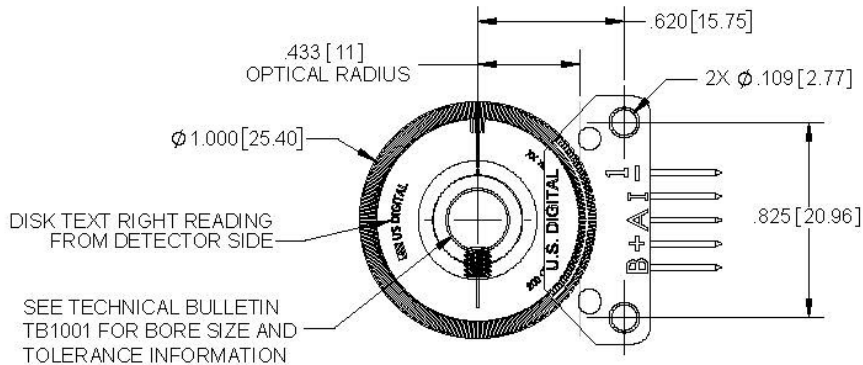
HUBDISK-1 consists of a precision machined aluminum hub fastened to a 1 in. diameter optical encoder disk (DISK-1 (<https://www.usdigital.com/disk-1>)). One .050 in. flat-to-flat set screw is used to fasten the hub to a shaft. The HubDisk assembly is available with bore sizes ranging from 2mm to 10mm. All HubDisk assembly bores are held to a very tight tolerance defined by US Digital Technical Bulletin, Shaft and Bore Tolerances TB1001

(<https://www.usdigital.com/support/resources/reference/technical-docs/technical-bulletins/shaft-and-bore-tolerances-tb1001/>).

## Mechanical Drawings

## HUBDISK-1 1" Transmissive Rotary Codewheel

RELEASE DATE: 10/23/2019



SHAFT SIZES		
	2MM-8MM	.375 & 10MM
A	φ .375 [9.53]	φ .441 [11.20]
B	φ .487 [12.37]	φ 500 [12.70]

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UNITS: INCHES [MM]  
METRIC SHOWN FOR REFERENCE ONLY

## Specifications

### SPECIFICATIONS

Temperature Range	-40C to 100C
Hub Set Screw Torque	2-3 in-lbs
Bore Diameter Tolerance	See Technical Bulletin TB1001 ( <a href="https://www.usdigital.com/support/resources/reference/technical-docs/technical-bulletins/shaft-and-bore-tolerances-tb1001/">https://www.usdigital.com/support/resources/reference/technical-docs/technical-bulletins/shaft-and-bore-tolerances-tb1001/</a> )
Outside Disk Diameter (OD)	1" ± 0.010 in.
Disk Thickness	0.007"



## TECHNICAL BULLETINS

TITLE	DOWNLOAD
Technical Bulletin TB1001 - Shaft and Bore Tolerances	Download ( <a href="https://www.usdigital.com/support/resources/reference/technical-docs/technical-bulletins/shaft-and-bore-tolerances-tb1001/">https://www.usdigital.com/support/resources/reference/technical-docs/technical-bulletins/shaft-and-bore-tolerances-tb1001/</a> )

## COMPATIBLE ENCODER MODULES

CPR	1" HUBDISK Non-Index	MODULE Non-Index	1" HUBDISK Index	MODULE Index
32	HUBDISK-1-32-*-NE	EM1-1-32-N		
50	HUBDISK-1-50-*-NE	EM1-1-50-N	HUBDISK-1-50-*-IE	EM1-1-50-I
96	HUBDISK-1-96-*-NE	EM1-1-100-N	HUBDISK-1-96-*-IE	EM1-1-100-I
100	HUBDISK-1-100-*-NE	EM1-1-100-N	HUBDISK-1-100-*-IE	EM1-1-100-I
120	HUBDISK-1-120-*-NE	EM1-1-100-N		
200	HUBDISK-1-200-*-NE	EM1-1-200-N	HUBDISK-1-200-*-IE	EM1-1-200-I
192	HUBDISK-1-192-*-NE	EM1-1-200-N	HUBDISK-1-192-*-IE	EM1-1-200-I
250	HUBDISK-1-250-*-NE	EM1-1-250-N	HUBDISK-1-250-*-IE	EM1-1-250-I
256	HUBDISK-1-256-*-NE	EM1-1-250-N	HUBDISK-1-256-*-IE	EM1-1-250-I
360	HUBDISK-1-360-*-NE	EM1-1-360-N	HUBDISK-1-360-*-IE	EM1-1-360-I
400	HUBDISK-1-400-*-NE	EM1-1-400-N	HUBDISK-1-400-*-IE	EM1-1-400-I
500	HUBDISK-1-500-*-NE	EM1-1-500-N	HUBDISK-1-500-*-IE	EM1-1-500-I
512	HUBDISK-1-512-*-NE	EM1-1-512-N	HUBDISK-1-512-*-IE	EM1-1-512-I
540	HUBDISK-1-540-*-NE	EM1-1-540-N	HUBDISK-1-540-*-IE	EM1-1-540-I
720	HUBDISK-1-720-*-NE	EM1-1-720-N	HUBDISK-1-720-*-IE	EM1-1-720-I
800	HUBDISK-1-800-*-NE	EM1-1-800-N	HUBDISK-1-800-*-IE	EM1-1-800-I



# HUBDISK-1 1 in. Transmissive Rotary Disk

CPR	1" HUBDISK Non-Index	MODULE Non-Index	1" HUBDISK Index	MODULE Index
900	HUBDISK-1-900*-NE	EM1-1-900-N	HUBDISK-1-900*-IE	EM1-1-900-I
1000	HUBDISK-1-1000*-NE	EM1-1-1000-N	HUBDISK-1-1000*-IE	EM1-1-1000-I
1024	HUBDISK-1-1024*-NE	EM1-1-1024-N	HUBDISK-1-1024*-IE	EM1-1-1024-I
2000			HUBDISK-1-2000*-IE	EM2-1-2000-I
2048			HUBDISK-1-2048*-IE	EM2-1-2048-I
2500			HUBDISK-1-2500*-IE	EM2-1-2500-I
4000			HUBDISK-1-4000*-IE	EM2-1-4000-I
4096			HUBDISK-1-4096*-IE	EM2-1-4096-I
5000			HUBDISK-1-5000*-IE	EM2-1-5000-I

\*Represents the bore size

## Notes

- US Digital® warrants its products against defects in materials and workmanship for two years. See complete warranty (<https://www.usdigital.com/company/warranty>) for details.



## Configuration Options

HUBDISK-1	CPR (Cycles Per Revolution)	Bore Size	Index
	32	079 (2.0mm)	IE (Index)
	50	118 (3.0mm)	I (Index)
	96	125 (1/8")	NE (Non-Index)
	100	156 (5/32")	
	120	157 (4.0mm)	
	192	188 (3/16")	
	200	197 (5.0mm)	
	250	236 (6.0mm)	
	256	250 (1/4")	
	360	276 (7.0mm)	
	400	313 (5/16")	
	500	315 (8.0mm)	
	512	375 (3/8")	
	540	394 (10.0mm)	
	720		
	800		
	900		
	1000		
	1024		
	1250		
	2000		
	2048		
	2500		
	4000		
	4096		
	5000		

**PLEASE NOTE: This chart is for informational use only.** Certain product configuration combinations are not available. Visit the HUBDISK-1 product page (<https://www.usdigital.com/products/HUBDISK-1>) for pricing and additional information.