



HUBDISK-2 Features

- 2 in. outside diameter
- 64 to 10,000 CPR (256 to 40,000 PPR)



HUBDISK-2 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.

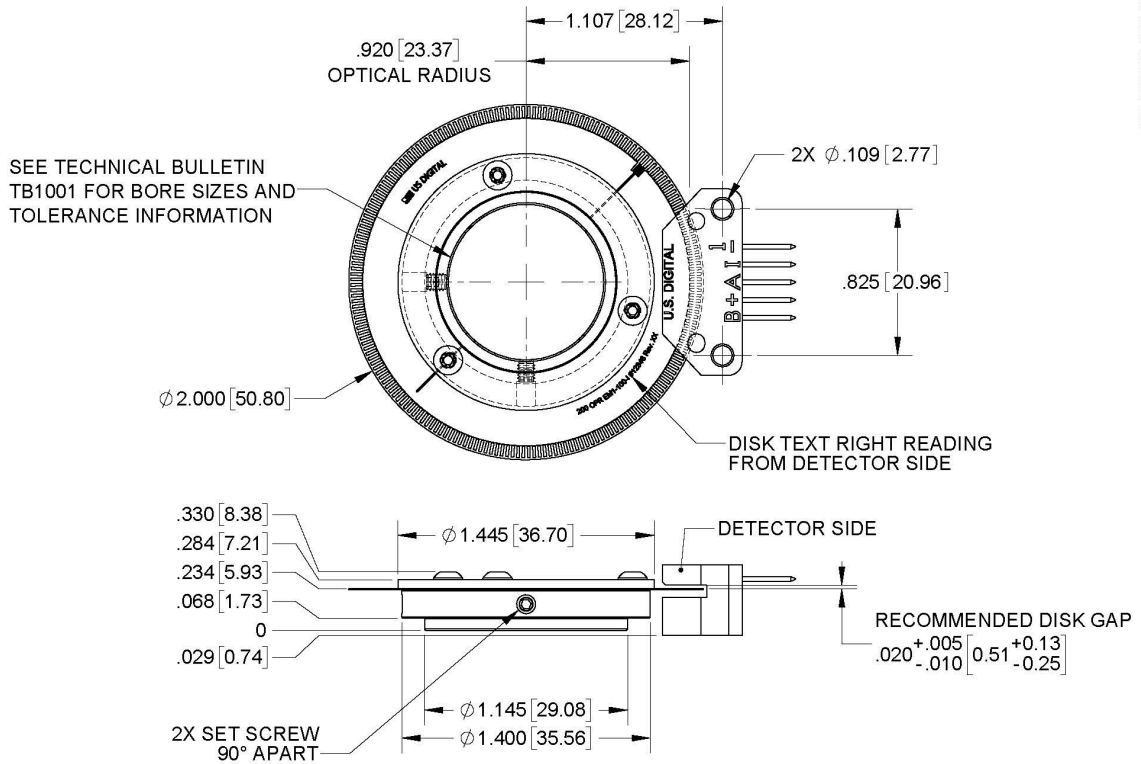


HUBDISK-2 consists of a precision machined aluminum hub fastened to a 2 in. diameter optical encoder disk (DISK-2 (<https://www.usdigital.com/products/encoders/incremental/modules/components/disk-2/>)). One or two .050 in. flat-to-flat set screws (depending on the hub's bore size) are used to fasten the hub to a shaft. The HubDisk assembly is available with bore sizes ranging from 2mm to 1 in. 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-2 2" Transmissive Rotary Codewheel (Bores 12mm & Greater)

RELEASE DATE: 05/13/2020



US DIGITAL 1400 NE 136th Avenue
 Vancouver, Washington 98684, USA

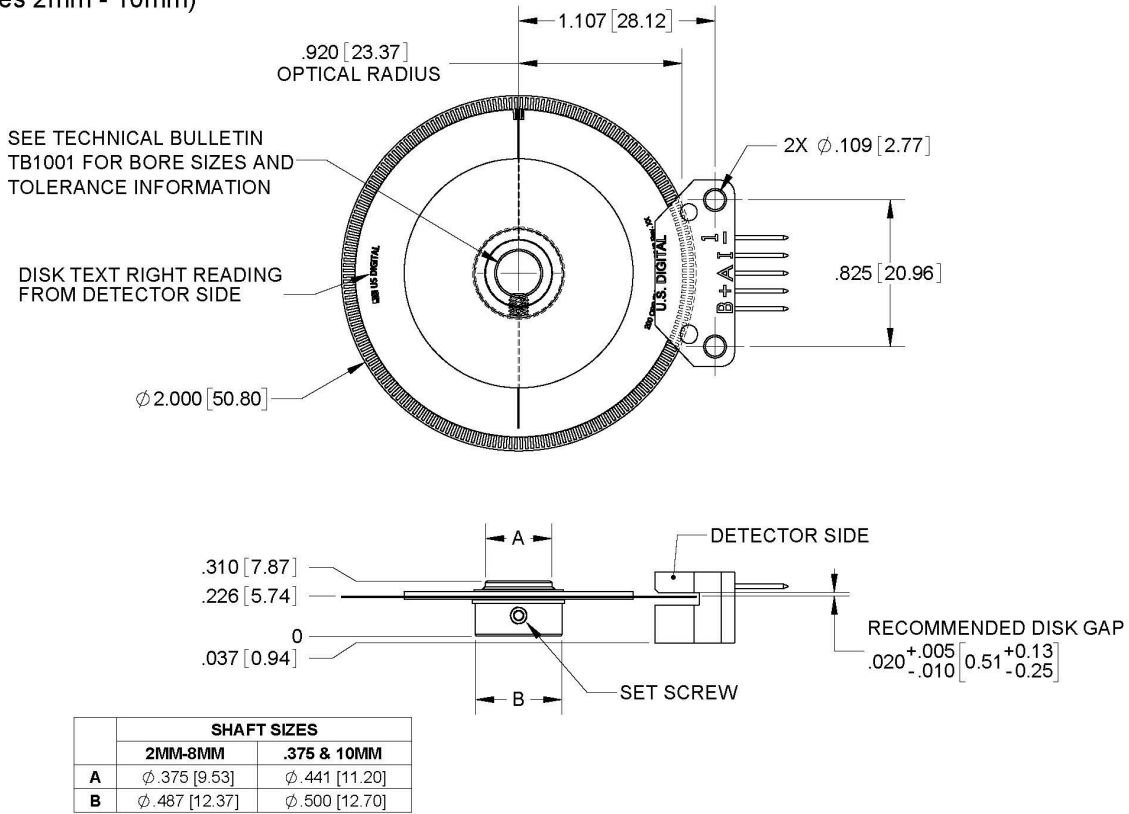
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UNITS: INCHES [MM]
 METRIC SHOWN FOR REFERENCE ONLY

HUBDISK-2 2" Transmissive Rotary Codewheel (Bores 2mm - 10mm)

RELEASE DATE: 05/19/2020



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Specifications

SPECIFICATIONS

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



TECHNICAL BULLETINS

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

COMPATIBLE ENCODER MODULES

| CPR | 2" HUBDISK Non-Index | MODULE Non-Index | 2" 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 |
| 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 |
| 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



HUBDISK-2 2 in. Transmissive Rotary Disk

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

PLEASE NOTE: This chart is for informational use only. Certain product configuration combinations are not available. Visit the HUBDISK-2 product page (<https://www.usdigital.com/products/HUBDISK-2>) for pricing and additional information.