

Description

US Digital offers a wide variety of standard rotary encoder disks. They may be ordered as a stand alone disk (see below) or as a codewheel (see the Disks page). These rotary encoder disks are made from mylar polyester film. This material allows for a wide temperature range and is virtually unbreakable. There is no minimum order.

DISK-1 has an outer diameter (OD) of 1". The optical radius of the disk is .433". The optical radius is defined as the distance from the center of the disk to the middle of the quadrature track. We recommend that the shaft or hub diameter the disk is designed to fit be .001" to .002" larger than the disk hole diameter (ID). This gives an interference fit that ensures disk concentricity. The drawings shown represent our standard disks.

The maximum allowed RPM of the disk is typically limited by the maximum output frequency of the encoder module. The maximum allowed RPM is calculated as follows:

$$\text{Max. RPM} = (60 * \text{Fmax}) / \text{CPR}$$

Where Fmax = maximum encoder module output frequency and CPR is the Cycles per Revolution of the disk.

Only the No Index, EM1 Compatible option (NE) is available with the 32 CPR option. Other resolutions are available with or without an index track.

Mechanical alignment drawings for optical encoder rotary disks and optical encoder modules are available (see the EM1 page).

Mechanical Drawing



Features

- ▶ 1" Outside Diameter
- ▶ .433" Optical Radius
- ▶ Up to 5000 CPR
- ▶ Index track option

Rev. 140424155005

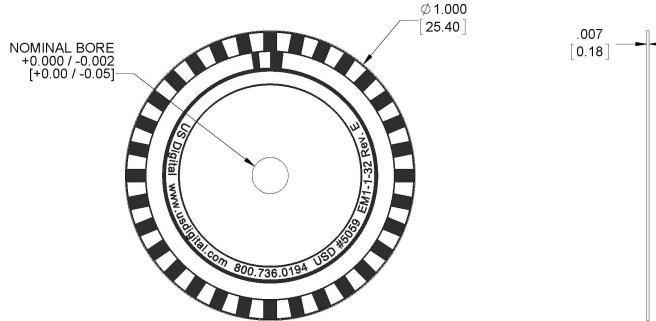


DISK-1 1" Transmissive Rotary Disk

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DISK-1 1" Transmissive Rotary Disk



RELEASE DATE: 10/10/2011

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UNITS: INCHES (MM)
 METRIC SHOWN FOR REFERENCE ONLY

Specifications

Inside Diameter (ID) tolerance	±0.004"
Outside Diameter (OD)	1" ± 0.010"
Thickness	0.007"
Temperature Range	-40C to 100C

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DISK-1

1" Transmissive Rotary Disk

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Ordering Information

DISK-1 - - -

CPR	ID	Index
32 =	093 = .093"	NE =No Index, EM1 Compatible
50 =	125 = .125"	IE =Index (3rd Channel), EM1 Compatible
96 =	375 = .375"	
100 =	441 = .441"	
110 =		
120 =		
192 =		
200 =		
250 =		
256 =		
360 =		
400 =		
500 =		
512 =		
540 =		
720 =		
900 =		
1000 =		
1024 =		
1250 =		
2000 =		
2048 =		
2500 =		
4000 =		
4096 =		
5000 =		

Notes
 ▶ US Digital warrants its products against defects in materials and workmanship for two years. See complete warranty for details.

Rev. 140424155005

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