

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:

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

Where F_{max} = 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.

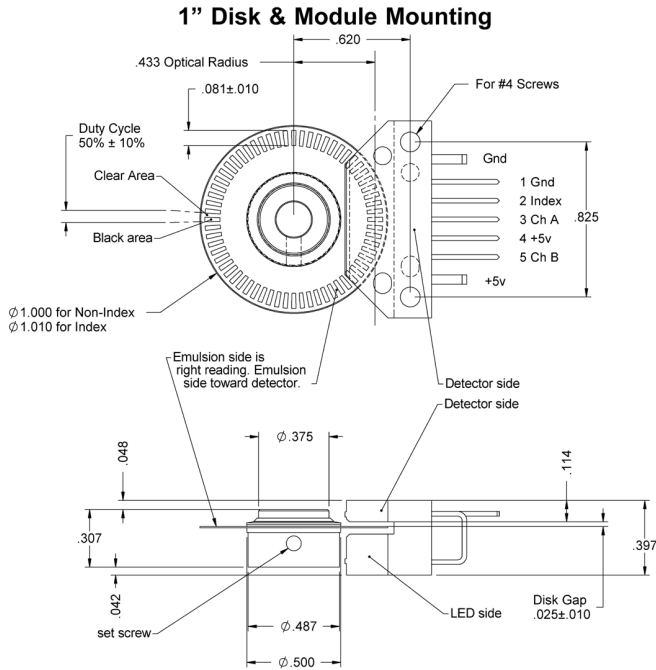
Mechanical alignment drawings for optical encoder rotary disks and optical encoder modules are available (see the EM1 page).



Features

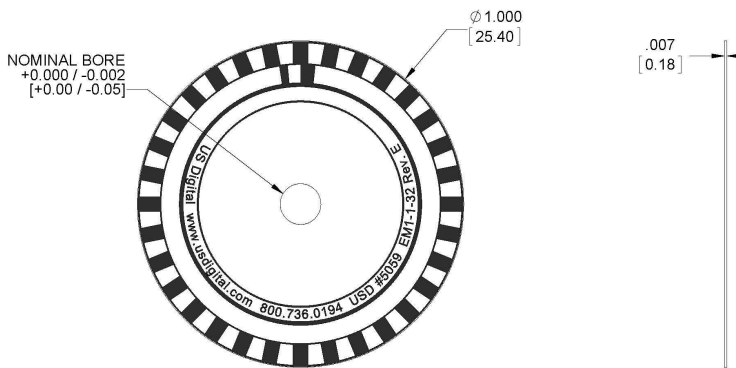
- ▶ 1" Outside Diameter
- ▶ .433" Optical Radius
- ▶ Up to 1250 CPR
- ▶ Index track option

Disk and Module Mounting



Disk-1_Mech_1.jpg

DISK-1 1" Transmissive Rotary Disk



RELEASE DATE: 09/02/2011

Specifications

Inside Diameter (ID) tolerance	+0.000" / -0.002"
Outside Diameter (OD)	1" ±0.010"
Thickness	0.007"
Temperature Range	-40C to 100C

▸ .004" disk thickness also available. Please contact customer service.

Ordering Information

DISK-1 - - -

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

- Rules**
- ▶ Index must be equal to NE when CPR is equal to 32
 - ▶ Index must be something other than N when CPR is equal to 720, 900 or 1250
 - ▶ Index must be something other than I when CPR is equal to 720, 900, 1000, 1024 or 1250

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

Base Pricing

Quantity	Price
1	\$11.65
5	\$8.05
10	\$6.93

For volume discounts, please contact us at sales@usdigital.com or 800.736.0194.

- ▶ Add 11% per unit for **Index** of Index (3rd Channel), Avago Compatible or Index (3rd Channel), EM1 Compatible