

NOTES: UNLESS OTHERWISE SPECIFIED

- 1.0 SCOPE
 1.1 THIS SPECIFICATION DESCRIBES THE REQUIREMENTS FOR AN INCREMENTAL MODULAR ENCODER W/ OPTIONAL COMMUTATION SIGNALS AND ONCE AROUND PULSE MARKER.
- 2.0 MECHANICAL SPECIFICATIONS
 2.1 DIMENSIONS: SEE FIGURE 1 ON PAGE 2
 2.2 MOUNTING REQUIREMENTS: SEE FIGURE 2 ON PAGE 2
 2.3 TERMINATION: SEE TERMINATION TABLE
 2.4 MTG HARDWARE TO BE SUPPLIED BY CUSTOMER
 2.5 HUB BORE SIZE: SEE TABLE 2 ON PAGE 2
 2.6 HUB MATL: SST
 2.7 DISC MATERIAL: CHROME ON GLASS, .060" THICK.
- 3.0 ELECTRICAL SPECIFICATIONS
 3.1 CODE: INCREMENTAL PLUS COMMUTATION AND ONCE AROUND PULSE MARKER.
 3.2 PULSES PER REVOLUTION: SEE TABLE 1
 3.3 SUPPLY VOLTAGE: 5.0 SINGLE OR DUAL
 3.4 CURRENT: 150mA MAX @ 5 VDC
 3.4.1 DATA CHANNEL SUPPLY CURRENT: 75 mA
 3.4.2 COMM CHANNEL SUPPLY CURRENT: 75 mA
 3.5 OUTPUT FORMAT: DATA (SEE FIGURE 3)
 3.5.1 OUTPUT LOGIC LEVELS: LOGIC "1" 2.5 VDC MIN. LOGIC "0" .5 VDC MAX.
 3.5.2 OUTPUT TYPE: VO/VC SEE FIGURE 4 LD SEE FIGURE 6
 3.6 OUTPUT FORMAT: COMMUTATION (SEE FIGURE 3)
 /2 = 4 POLE MOTOR = 2 COMMUTATION CYCLES/360°
 /3 = 6 POLE MOTOR = 3 COMMUTATION CYCLES/360°
 /4 = 8 POLE MOTOR = 4 COMMUTATION CYCLES/360°
 3.6.1 OUTPUT LOGIC LEVELS: LOGIC "1" 2.5 VDC MIN. LOGIC "0" .5 VDC MAX.
 3.6.2 OUTPUT TYPE: SINGLE SUPPLY VO/VC SEE FIGURE 4 LD SEE FIGURE 6
 DUAL SUPPLY VO/VC SEE FIGURE 5 LD SEE FIGURE 6
 3.7 OPERATING FREQUENCY: TO 300 KHZ
- 4.0 ENVIROMENTAL SPECIFICATIONS
 4.1 OPERATING TEMPERATURE: -10° TO 115° C.
 4.2 STORAGE TEMPERATURE: -30° TO + 125° C.
 4.3 HUMIDITY: 90% RELATIVE HUMIDITY (NON-CONDENSING)

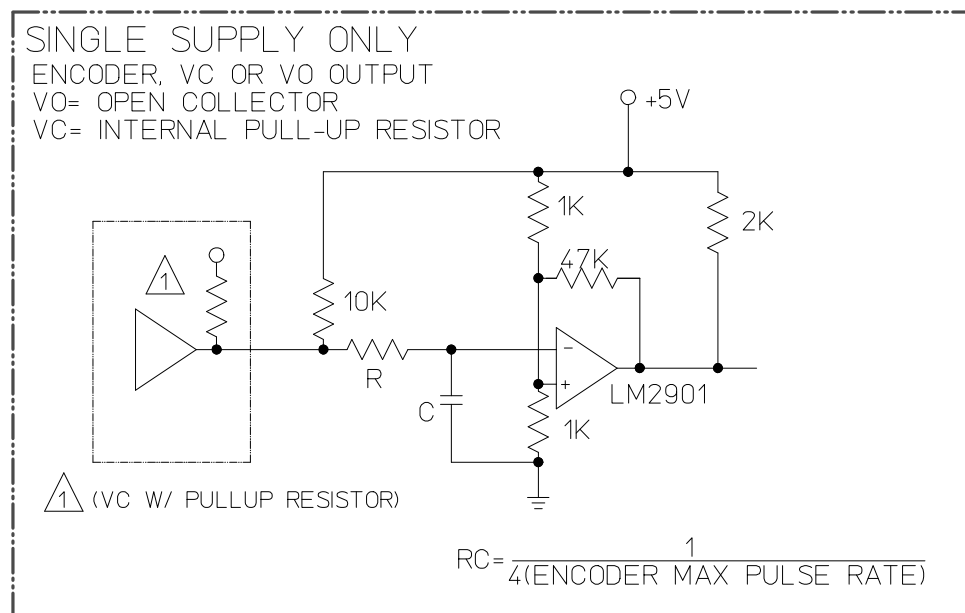


FIGURE 4

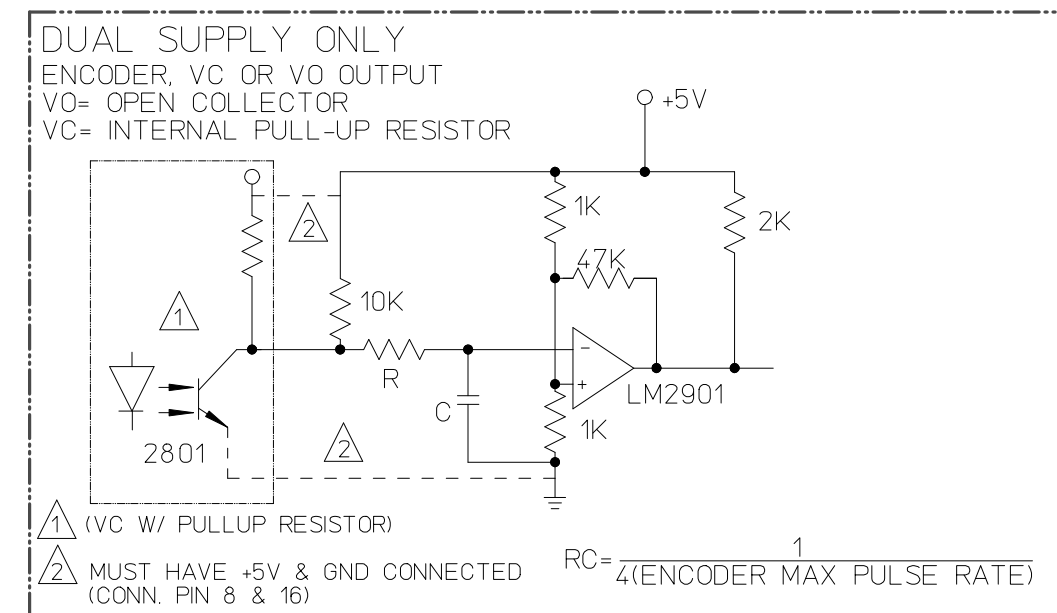


FIGURE 5

TERMINATION	
FUNCTION	PIN NO.
+Vcc DATA	1
S1	2
GND DATA	3
S2	4
CH A	5
S3	6
CH A-	7
+Vcc COMM	8
CH B	9
S1-	10
CH B-	11
S2-	12
INDEX	13
S3-	14
INDEX-	15
GND COMM	16

TABLE 1	
RESOLUTIONS	
	250
	256
	500
	512
	1000
	1024
	2000
	2048
	4000
	4096

✱

✱

✱ PINS 8 & 16 ARE UNUSED FOR ENCODERS W/SINGLE SUPPLY VOLTAGE

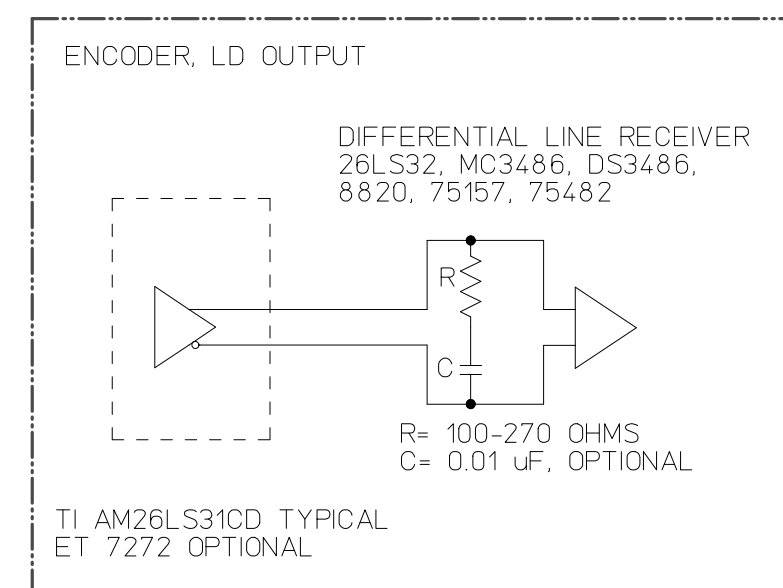


FIGURE 6

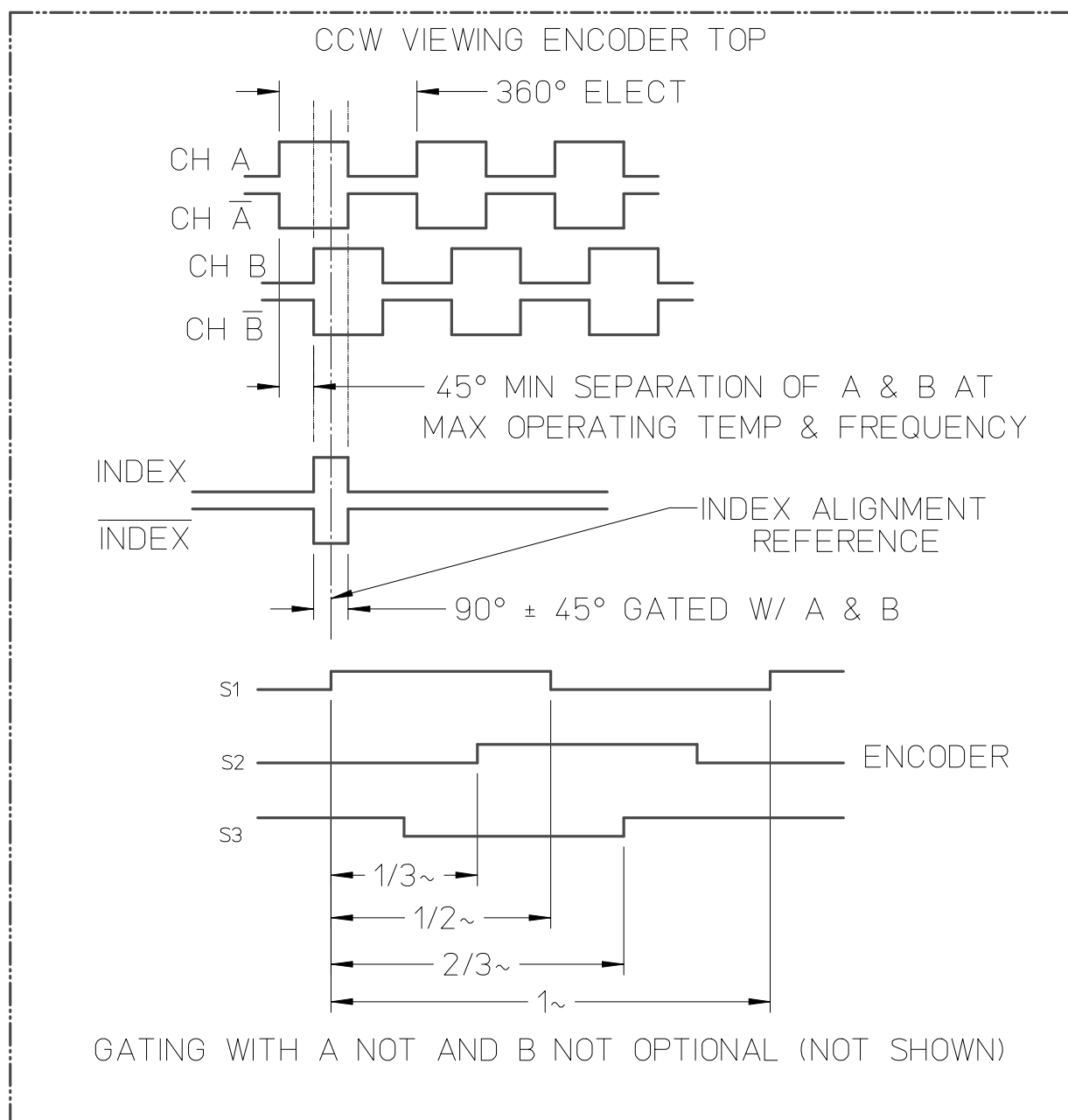


FIGURE 3

RCM21D4 - XXXX/X - XXX - 5/X - XX/XX - X - X

RESOLUTIONS SEE TABLE 1

HUB SIZE SEE TABLE 2 PAGE 2

LD/LD
 LD/VC
 LD/VO
 VC/VC
 VC/VO
 VO/VO

0= SINGLE SUPPLY
 5= DUAL SUPPLY

1= GATED WITH A & B
 6= GATED WITH A- & B-

C= CLOSED COVER
 H= COVER W/ HOLE

RELEASE # 03814	TEXT Remove 14MM from Table 2																		
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MAT'L	FINISH																		
THIRD ANGLE PROJECTION	TOLERANCES UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES																		
<table border="1"> <tr> <td colspan="2"> RENCO ENCODERS INC. 26 COROMAR DR. GOLETA, CA. 93117 </td> </tr> <tr> <td>TITLE</td> <td>Outline dwg, RCM21D4, std</td> </tr> <tr> <td>SIZE</td> <td>FSCM NO. 34479</td> </tr> <tr> <td>DWG NO.</td> <td>546600-02-A-01</td> </tr> <tr> <td>SCALE</td> <td>NONE</td> </tr> <tr> <td>VER</td> <td>REV</td> </tr> <tr> <td>SHT</td> <td>SHT</td> </tr> <tr> <td colspan="2">THIS DWG PREPARED IN ACCORDANCE WITH: ASME Y14.5M -1994</td> </tr> <tr> <td>PAGE</td> <td>1 OF 2</td> </tr> </table>		RENCO ENCODERS INC. 26 COROMAR DR. GOLETA, CA. 93117		TITLE	Outline dwg, RCM21D4, std	SIZE	FSCM NO. 34479	DWG NO.	546600-02-A-01	SCALE	NONE	VER	REV	SHT	SHT	THIS DWG PREPARED IN ACCORDANCE WITH: ASME Y14.5M -1994		PAGE	1 OF 2
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HUB BORE	SHAFT SIZE
.5001	1/2+
.4998	1/2
.4731	12 MM SPL
.4724	12 MM
.4373	7/16
.3937	10 MM
.3751	3/8+
.3748	3/8
.3150	8 MM
.2501	1/4+
.2498	1/4
.2362	6 MM

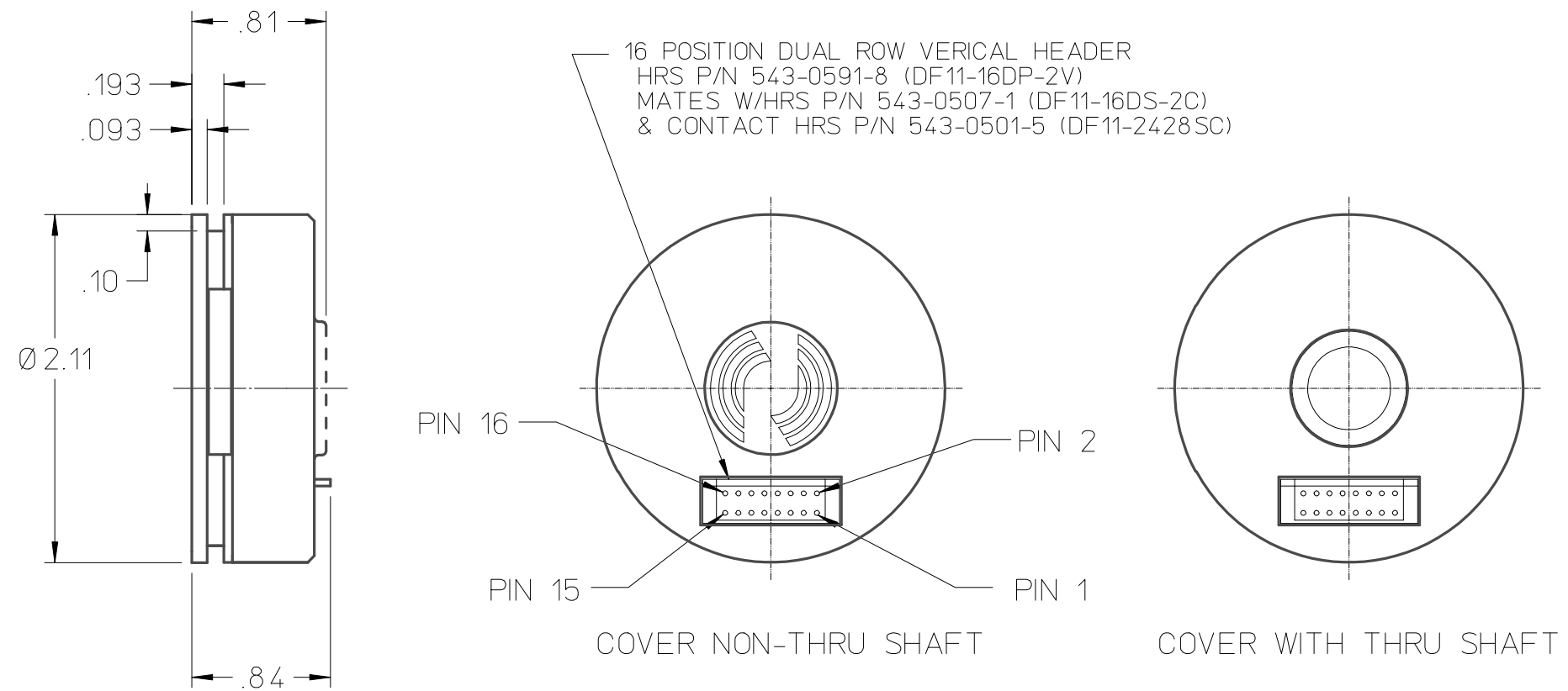


FIGURE 1

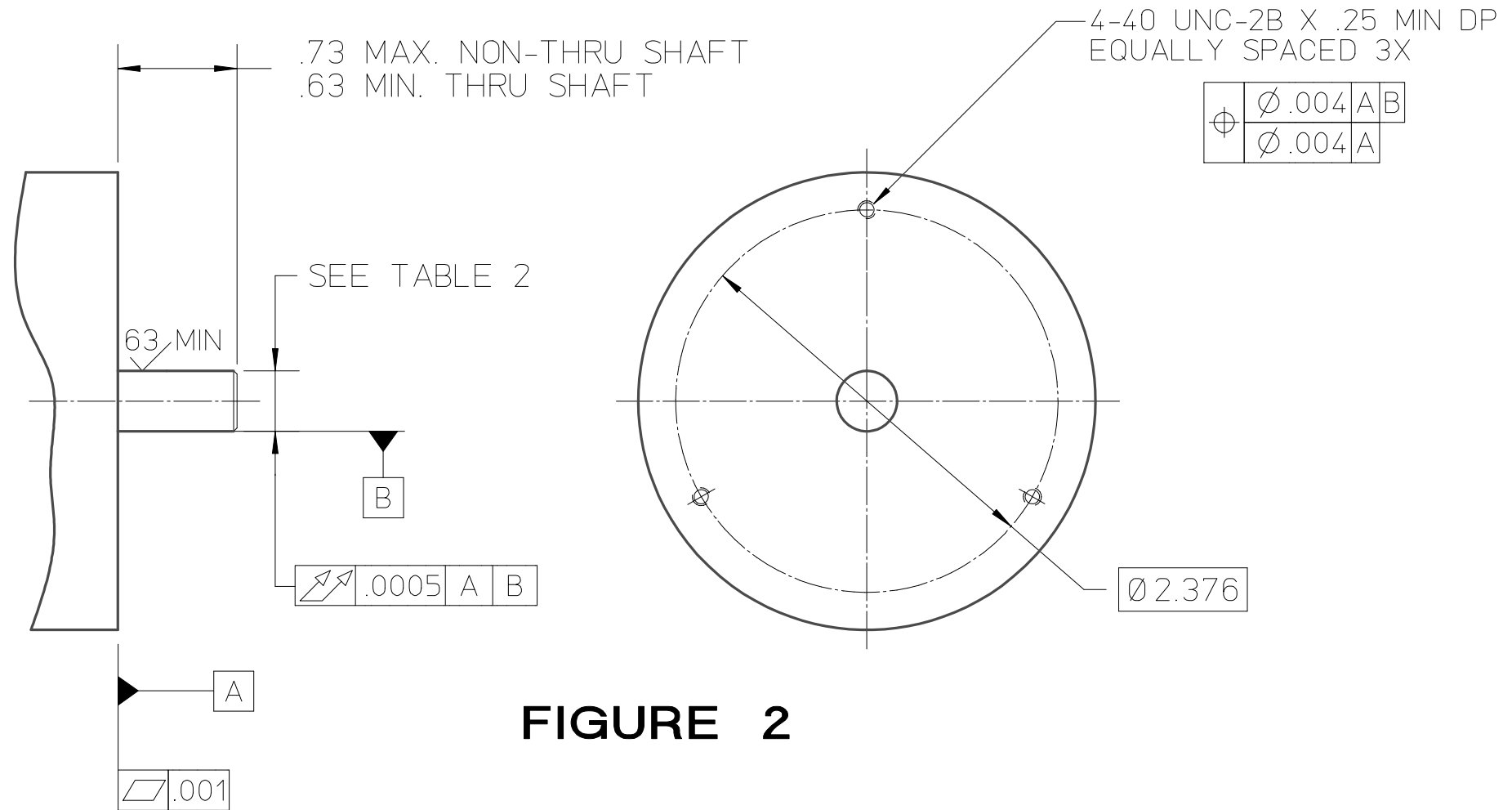


FIGURE 2

RELEASE # 03814	TEXT Remove 14MM from Table 2
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	APPV'D
	REL'D
MAT'L	FINISH
TOLERANCES UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES	
THIRD ANGLE PROJECTION	
.XXXX ± .005 FRACT. ± 1/16" .XXX ± .005 ANGULAR ± .5° .XX ± .01 .X ± .02	
SCALE NONE	TITLE Outline dwg, RCM21D4, std
SIZE C	FSCM NO. 34479
DWG NO. 546600-02-A-01	VER [REV] SHT
THIS DWG PREPARED IN ACCORDANCE WITH: ASME Y14.5M -1994	
PAGE 2 OF 2	