## **EN16AB Series**

# TT Electronics PRO AUDIO





# Features: Absolut

- Absolute type
- Plastic Shaft
- Vertical and Horizontal mount versions
- IP51 rated



### **Description:**

16 mm encoder is an absolute type encoder, therefore output is maintained in power loss. It is a good fit for various electronic applications such as frequency modulation, volume adjustment, and function switching.

#### **Applications:**

- Home Appliances
- Audio Equipment
- Temperature Control

# **Electrical Characteristics**

#### T<sub>A</sub> = 25°C unless otherwise noted

Output	Absolute
Positions (Per Revolution)	12, 16
Power Rating	12 Vdc / 4 mA
Insulation Resistance	10MΩ 1 Minute at 50 Vdc Max.
Dielectric Strength	1 Minute at 50 Vac
Contact Resistance	100 mΩ maximum

# **Encoder Characteristics**

#### T<sub>A</sub> = 25°C unless otherwise noted

Rotation	360° continuous
Rotational Torque	30-200 gf.cm
Detents per Rotation	12, 16
Rotational Life	30,000 Cycles Min.

## **EN16AB Series**



#### **Environmental Characteristics**

#### TA = 25°C unless otherwise noted

Operating Temperature	10°C to +70°C
IP Rating	IP 51
Soldering Condition	Wave/Reflow Soldering 260°C maximum for 1-3 seconds
	Hand Soldering 350°C maximum for 3 seconds
RoHS	Please refer to TT Electronics website
REACH	Please refer to TT Electronics website

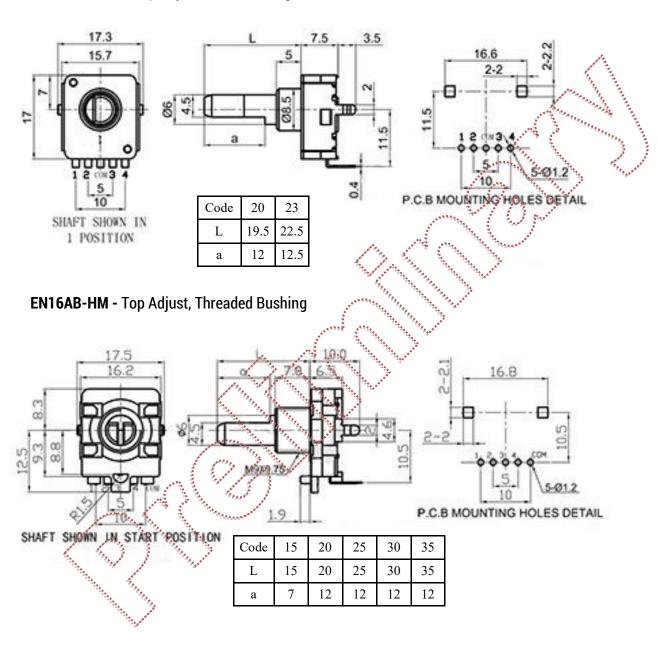
# **Ordering** EN16AB HB 23 **Part Family Style** HB = Top Adjust, Plain Bushing HM = Top Adjust, Threaded Bushing VM = Side Adjust, Threaded Bushing **Positions** 1 = 12 positions (HB style only) 2 = 16 positions (HM & VM style only **Detents** 1 = 12 (for 12 positions only 2 = 16 (for 16 positions only) Bushing Length A = 5 mm (plain bushing only) B = 7 mm (threaded bushing only) Start Position (see Output Signal Format) None = 12 pos. 0 = 16 pos. option 01 = 16 pos. option 1 2 = 16 pos. option 2 Shaft Type - F **Shaft Length** (see Outline Drawings)

## **EN16AB Series**



# **Outline Drawings**

## EN16AB-HB - Top Adjust, Plain Bushing

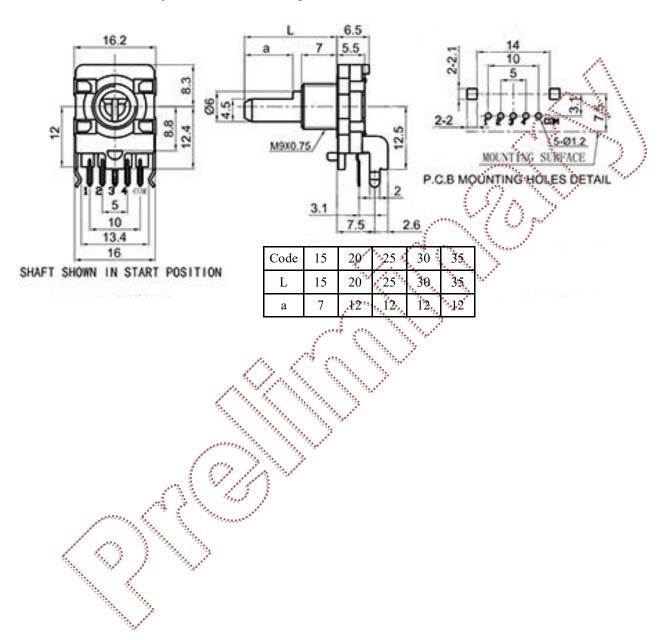


## **EN16AB Series**



# **Outline Drawings**

## EN16AB-VM - Side Adjust, Threaded Bushing



# **EN16AB Series**



# **Output Signal Format**

c.w	TERM POS	1	2	3	4	5	6	7	8	9	10	11	12					
	0	0	1	1	1	1	0	0	0	0	0	0	0					
	Θ	1	1	0	0	1	1	1	1	0	0	0	0					1.
1:ON	0	0	0	0	1	1	1	1	0	0	1	1	0					
0:OFF	0	0	0	0	0	0	0	1	1	1	1	0	0					
c.w —	- POS	1	1 2	-		-		7	0		10	100	112	12	1.6	15	1.0	
X=0	TERM POS		2	3	9	5	6	1	8	9	10	11	12	13	14	15		
[A]-0	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	
	00	0	0	7	0	1	1	0	0	0	0	1	1	0	0	0	0	
1:ON	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	.0	
0:OFF		v	U.	·W	0	U	v	V.	U	-	1	1	. 1				1 -	
C.W	TERM POS	1	2	3		5	6	7	8	9	10	111	11	12	14		16	1
X=1	TERM POS D	0	0	0	0	0	0	0	0	1	-	1	1	1	1	1	1	f
OH STA	ő	0	0	0	0	1	1	1	1	1	7	1	1	0	0	0	0	1
1.00	0	0	0	1	1	1	1	0	0	0	0	1	1.	1	1	0	0	1
1:ON 0:OFF	(3)	0	1	1	0	0	1	1	0	ō	1	1	-	0		1	0	1
0.011									4,111			**				-		援
C.W	TERM POS	1	2	3	4	5	6	7	8	9	10	111	12	13	14	15	16	1
X=2	0	0	1	0	1/	ā	1	0	1	0	1	0	1	0	1	0	1	1
	ŏ	0	0	1	100	0	0	Ī.	1	0	0	1	1	0	0	1	1	1
1:ON	0	0	0	0	0	1	.1	1		0	_	0	0	1	1	1	1	1
0:OFF	0	0	0	0	ŋ	0	Ů.	0	0		1	1	1	1	1	1	1	

## **Packaging**

Standard Packaging	Plastic Trays
Included Hardware	Nut & Washer—Threaded Bushing Only

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