EN16AB Series

Electronics TT Electronics PRO AUDIO

Features:

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





Description: 16 mm encoder is an absolute type encoder, therefore output position is maintained after 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

$T_A = 25^{\circ}C$ 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

I _A = 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.

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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

	E	N16AE	BH	B	1	1	B	6	F	23
Part Family										
Style				J						
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)										
<u>Detents</u>										
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) <u>Start Position</u> (see Output Signal Format) None = 12 pos. 0 = 16 pos. option 0 1 = 16 pos. option 1 2 = 16 pos. option 2										
<u>Shaft Type</u> - F										
Shaft Length (see Outline Drawings)										

General Note

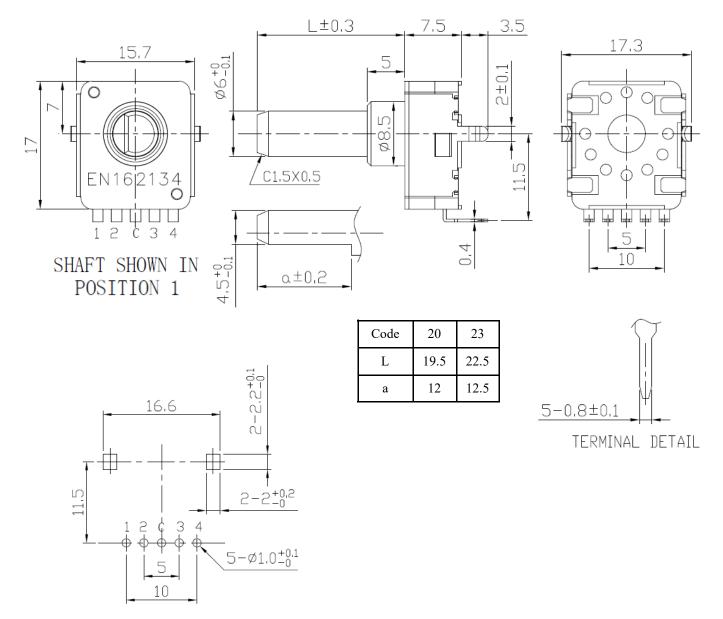
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Outline Drawings

EN16AB-HB - Top Adjust, Plain Bushing



P.C.B MOUNTING HOLES

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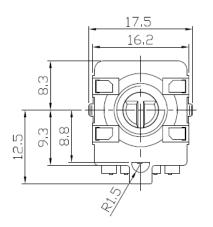
Rev A 02/2022 Page 3

EN16AB Series



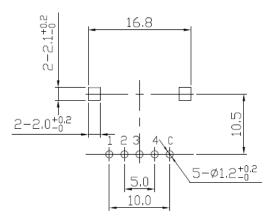
Outline Drawings

EN16AB-HM - Top Adjust, Threaded Bushing



SHAFT SHOWN IN POSITION 1

Code	15	20	25	30	35
L	15	20	25	30	35
а	7	12	12	12	12



P.C.B MOUNTING HOLES

6.5 5.5 a±0.2 7.0 2-2±0.1 4.5-0.1 А Ś 4 ഗ 10 C0.5×1.5 M9x.75 (3.5) 1.9 Ø6-0.1 MOUNTING SURFACE VIEW A 5-1.0±0.1 TERMINAL DETAIL

10.0

L±0.3

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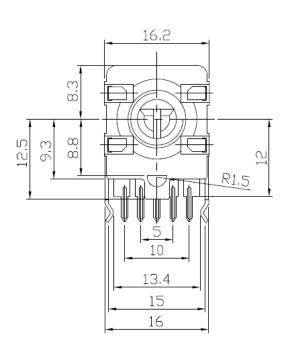
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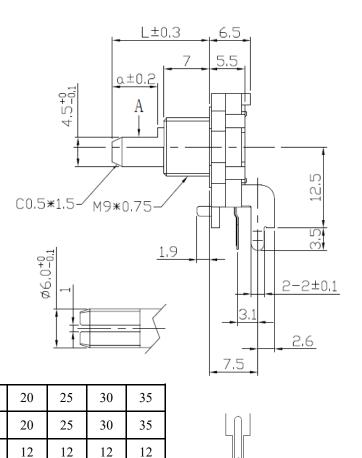


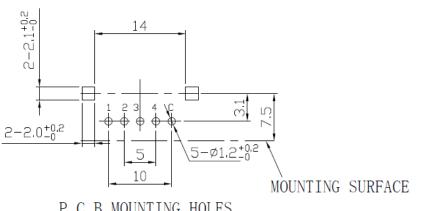
Outline Drawings

EN16AB-VM - Side Adjust, Threaded Bushing



SHAFT SHOWN IN POSITION 1





Code

L

а

15

15

7

P.C.B MOUNTING HOLES

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5-1.0±0.1

TERMINAL DETAIL

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Output Signal Format

X-NONE	STA	RTPC	SITO	1	C. 1		1:0N 0:0FF					
TERM	1	2	3	4	5	6	7	8	9	10	11	12
1	0	1	1	1	1	0	0	0	0	0	0	0
2	1	1	0	0	1	1	1	1	0	0	0	0
3	0	0	0	1	1	1	1	0	0	1	1	0
4	0	0	0	0	0	0	1	1	1	1	0	0

X-0	STA	RTPO	SITO	N			1:0N C.W									
TERM	1	2	3	4	5	6	7	8	9	10	11	0FF 12	13	14	15	16
1	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0
2	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0
3	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
4	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1

X	(=1	STA	NRT PC	OSITO	4				1:0N C.W									
F	POS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Γ	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	
Γ	2	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	
Γ	3	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	
Γ	4	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	

X=2	ST/	NRT PC	SITO	1				C. 1								
TERM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
2	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
3	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
4	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1

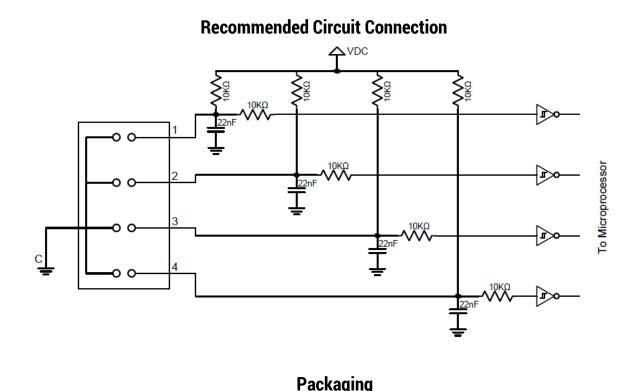
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	5 5
Standard Packaging	Plastic Trays
Included Hardware	Nut & Washer—VM & HM Styles