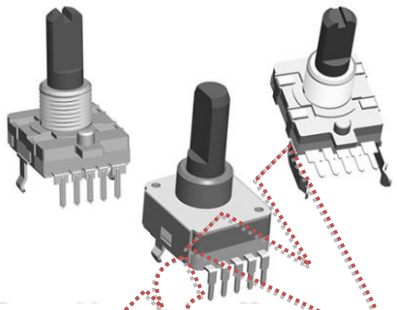
16 mm Absolute Encoder

EN16AB Series

TT Electronics PRO AUDIO

TT Electronics

RoHS compliant



Features:

- 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_A = 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_A = 25°C unless otherwise noted

Rotation	360º 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

EN16AB	HB	1	1	B		F	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 0
1 = 16 pos. option 1
2 = 16 pos. option 2

Shaft Type - F

Shaft Length (see Outline Drawings)

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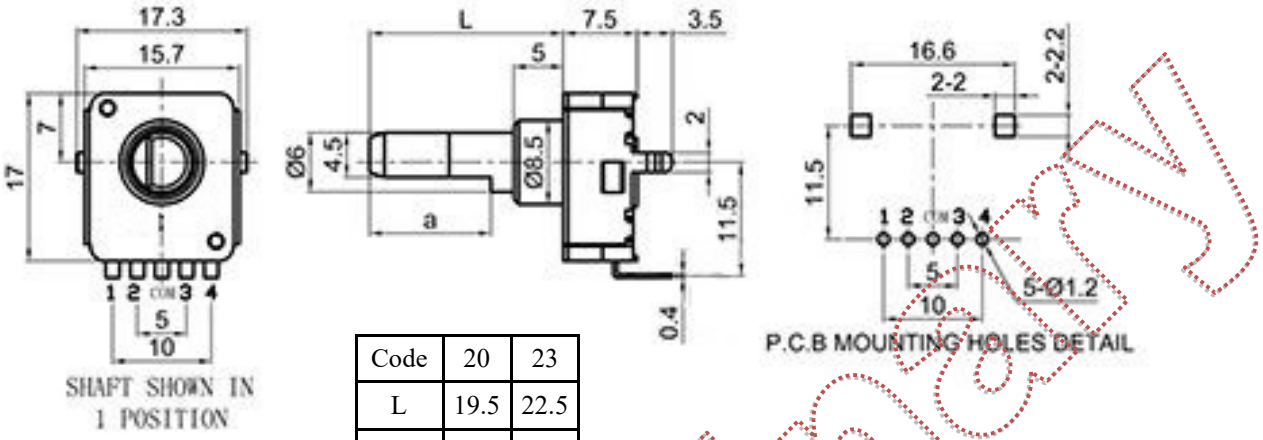
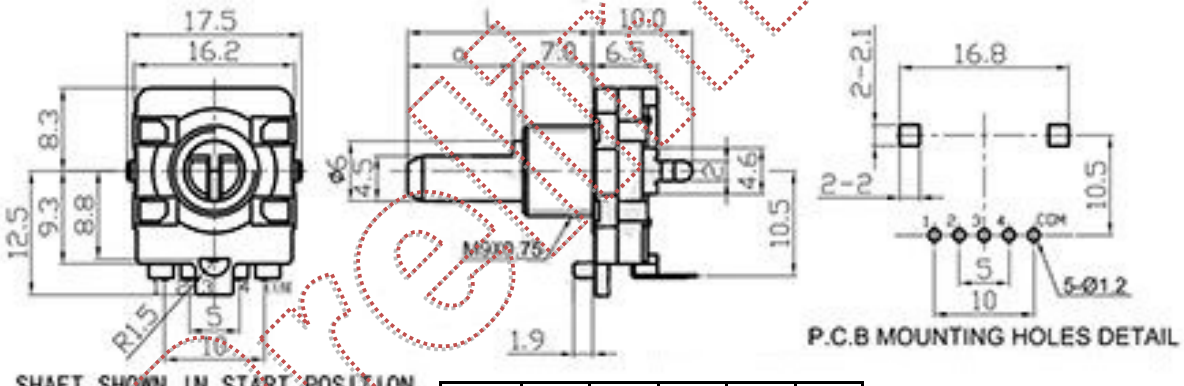
Outline Drawings

EN16AB-HB - Top Adjust, Plain Bushing



Code	20	23
L	19.5	22.5
a	12	12.5

EN16AB-HM - Top Adjust, Threaded Bushing



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

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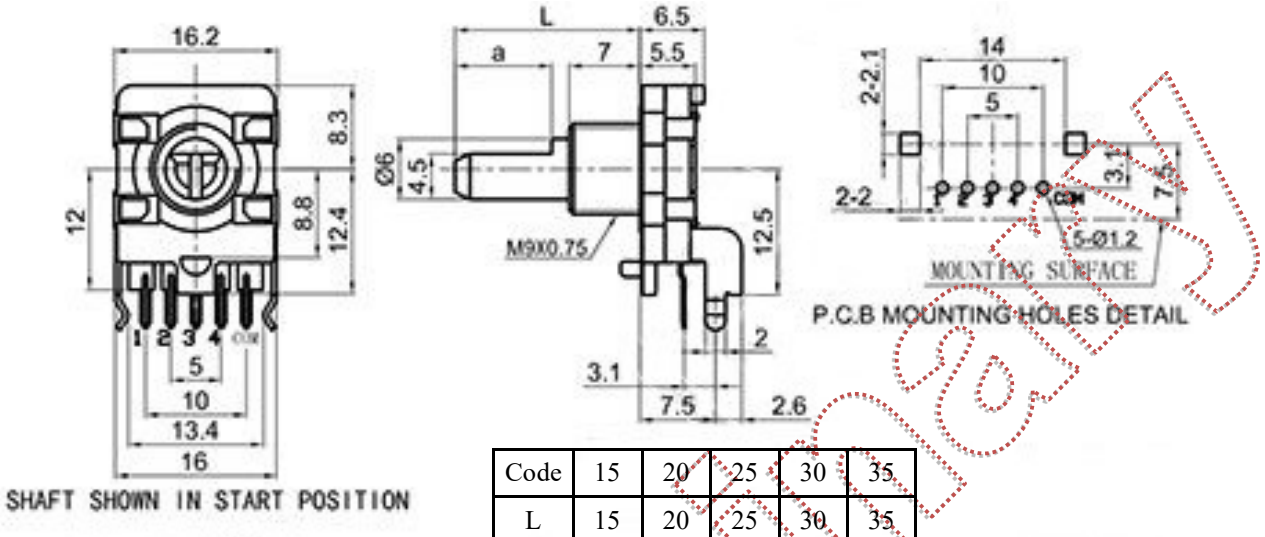
Outline Drawings

EN16AB-VM - Side Adjust, Threaded Bushing



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

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Output Signal Format

C.W →

1:ON
0:OFF

TERM \ POS	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

C.W → [X]=0

1:ON
0:OFF

TERM \ POS	1	2	3	4	5	6	7	8	9	10	11	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

C.W → [X]=1

1:ON
0:OFF

TERM \ POS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
①	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
②	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
③	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0
④	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0

C.W → [X]=2

1:ON
0:OFF

TERM \ POS	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

Packaging

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

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