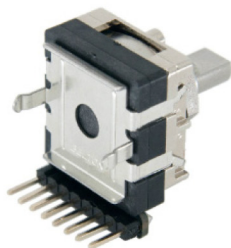


# OPTICAL CODE ENCODER SWITCH

## BTCE20 SERIES

### 20mm Rotary type optical code encoder switch

NEW



#### Features

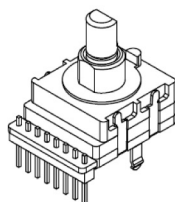
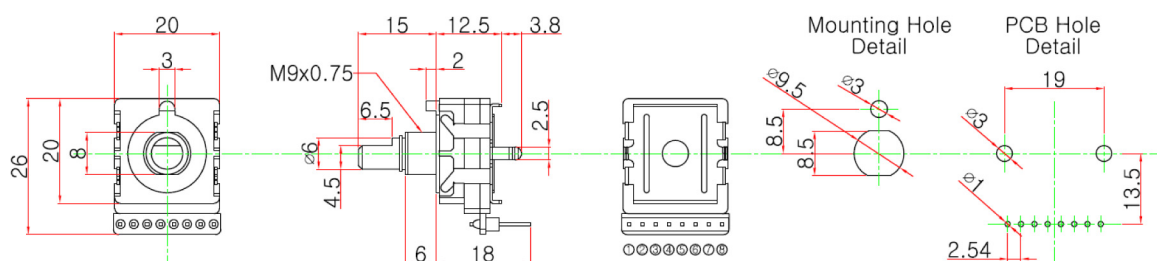
- Metal housing with Metal shaft
- Absolute Position Sensing
- Available in 12, 16 positions
- Over 500,000 rotational cycles

#### Applications

- Machine tools
- Construction site
- Plant construction
- Industrial applications
- Control panel

#### Standard Dimensions

BTCE20VP-16-2F09-5-3



#### Mounting Parts

Nut

t=2.4

12

Washer

t=0.5

13.7

Terminal	Function
1	Output '2'
2	Output '3'
3	Power 3.3V or 5V
4	Output '4'
5	Output '1'
6	Ground
7	For Switch
8	For Switch

# OPTICAL CODE ENCODER SWITCH

## BTCE20 SERIES

### Electrical specifications

- Supplying voltage : DC 3.3V or DC 5V  $\pm$  10%
- Supplying current : 85mA Max. at 5V DC
- Contact Resistance : Contactless
- Insulation resistance : 100 Mohms on 250V DC
- Withstanding voltage : 1min. at 300V AC
- Rating of Push-button switch : 0.1 ~ 10mA, 12V DC
- Electrical life : Over 500,000 cycles

### Mechanical specifications

- Mechanical click :
  - 12 positions per rotation = 30°
  - 16 positions per rotation = 22.5°
- Rotational torque : 650 gf·cm  $\pm$  100 gf·cm
- Mechanical Rotational life : Over 500,000 cycles
- Operating force of Push-button switch : 800 gf·cm  $\pm$  300 gf·cm
- Travel of Push-button switch : 0.25 ~ 0.35mm
- Mechanical life of Push-button switch : Over 500,000 times
- Contact resistance of Push-button switch : 10 $\Omega$  max.
- Strength of End stop : Over 5 Kgf.cm for 1 min.

### Durability characteristics

- Over 500,000 cycles of operation shall be performed under operating temp. range continuously at rate of 15 ~ 20 cycles/minute with load

### Humidity characteristics

- During 48 hours, put specimen in the chamber which is controlled at temp. 40  $\pm$  2°C, moisture 90 ~ 95% condition, and then exposure to normal atmospheric condition for 1 hour

### Solder dipping time

- Within 3 sec. at 280°C

### Operating temperature range

- 0°C ~ +50°C

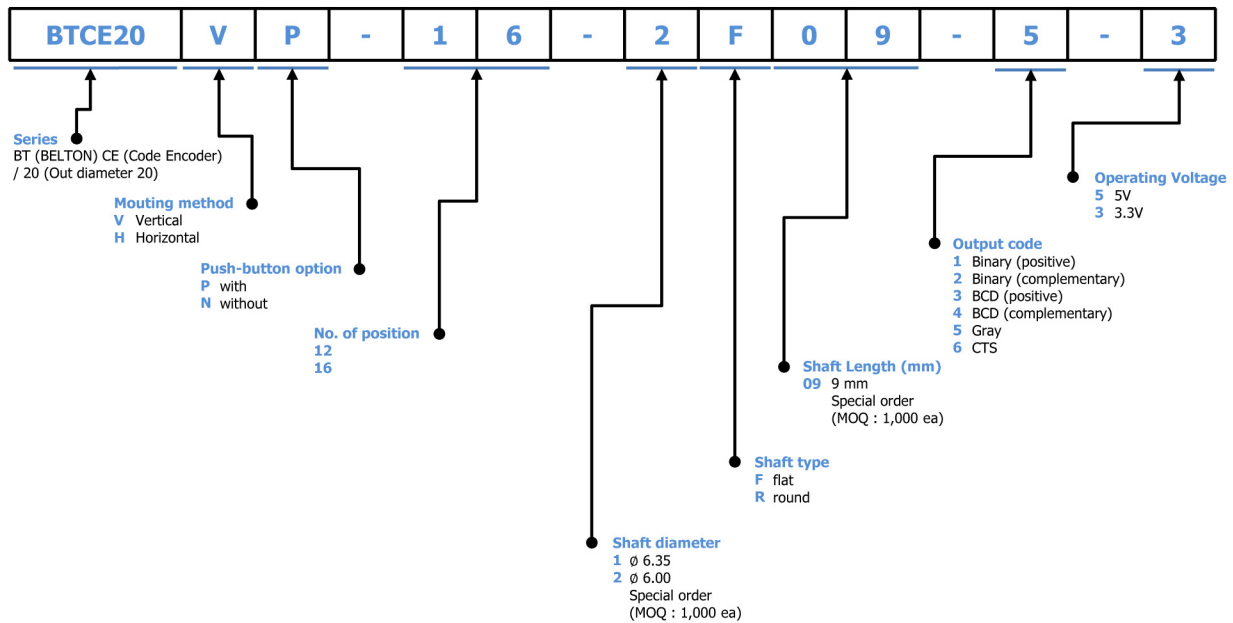
# OPTICAL CODE ENCODER SWITCH

## BTCE20 SERIES

### Storage temperature range

- 20℃ ~ +80℃

### Suggested Ordering Code



### Output code

<div>No. of Position</div> <div>CODE</div>		16															
		12															
		10															
		8															
Gray		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1		●	●			●	●			●	●			●	●	
	2			●	●	●	●					●	●	●	●		
	3					●	●	●	●	●	●	●	●				
	4										●	●	●	●	●	●	●