

# Incremental encoders

Mini series shaft  $\varnothing 6$  mm or  $\varnothing 8$  mm

Resolution 360...5120 pulses

## BVK programmable



BVK

### Features

- Mini encoder programmable
- Resolution max. 5120 ppr
- Optical sensing
- Programmable via DIP-switch
- Housing  $\varnothing 40$  mm
- Operation speed max. 12000 rpm
- Shaft  $\varnothing 6$  mm or  $\varnothing 8$  mm

### Technical data - electrical ratings

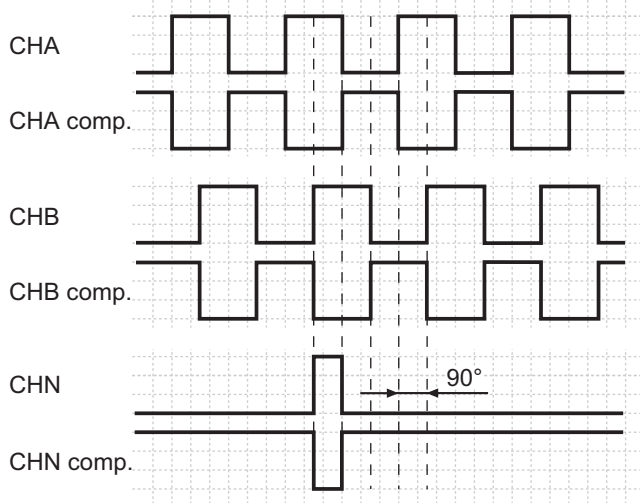
Voltage supply	5 VDC $\pm 10$ % 4.5...30 VDC
Consumption w/o load (typ.)	60 mA (5 VDC) 30 mA (24 VDC)
Resolution (steps/turn)	360...5120
Reference signal	Zero pulse, width $90^\circ$
Sensing method	Optical
Output signals	A $90^\circ$ B, N + inverted
Output circuit	Linedriver RS422 Push-pull antivalent, short-circuit proof (HTL) Open Collector
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3

### Technical data - mechanical design

Housing	$\varnothing 40$ mm
Shaft	$\varnothing 6$ mm $\varnothing 8$ mm
Protection DIN EN 60529	IP 64
Operating speed	$\leq 12000$ rpm (mechanical)
Operating torque typ.	0.0075 Nm IP 64
Materials	Housing: aluminium Flange: aluminium
Operating temperature	$-20 \dots +85$ $^\circ\text{C}$
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 10-200 Hz DIN EN 60068-2-27 Shock 50 g, 11 ms
Connection	Connector M12, 8-pin Cable 2 m
Weight approx.	100 g

### Output signals

Counter clockwise rotating direction when looking at the flange.



### Switch setting (DIP switch)

1	2	3	4	5	Interpolation	Rotation
Off	On	Off	On	On	1x	CCW
On	On	Off	On	On	2x	CCW
On	Off	Off	On	On	3x	CCW
Off	On	On	On	On	4x	CCW
On	On	On	On	On	5x	CCW
Off	On	Off	On	Off	1x	CW
On	On	Off	On	Off	2x	CW
On	Off	Off	On	Off	3x	CW
Off	On	On	On	Off	4x	CW
On	On	On	On	Off	5x	CW

Other settings: don't use

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### Resolution 360...5120 pulses

**BVK programmable**

#### Part number

BVK 1D.   -  -

**Connection**  
 4 Cable 2 m, axial  
 5 Cable 2 m, radial  
 N Connector M12, radial

**Shaft**  
 C6  $\varnothing 6$  mm, IP 64  
 C8  $\varnothing 8$  mm, IP 64

See part number (pulses)

**Voltage supply / signals**  
 05A 5 VDC / antivalent (TTL compatible)  
 25W 4.5...30 VDC / push-pull antivalent  
 short-circuit-proof  
 05V 5 VDC / Open Collector  
 25V 4.5...30 VDC / Open Collector

#### Part number (pulses)

360 | 500 | 512 | 1024

360 (programmable: 360/720/1080/1440/1800/2880/3600)  
 500 (programmable: 500/1000/1500/2000/2500/4000/5000)  
 512 (programmable: 512/1024/1536/2048/2560/4096)  
 1024 (programmable: 1024/2048/3072/4096/5120)

#### Terminal assignment

Connector	Core colour	Signals
Pin 1	white	0 V
Pin 2	brown	+Vs
Pin 3	green	CHA
Pin 4	yellow	CHB
Pin 5	grey	CHN comp.
Pin 6	pink	CHN
Pin 7	blue	CHB comp.
Pin 8	red	CHA comp.

Connector M12 – for connection reference -N



#### Trigger level

Outputs 05A	Complementary Linedriver RS422
Output level High	>2.4 V (I = -20 mA)
Output level Low	<0.4 V (I = 20 mA)
Load High	<20 mA
Load Low	<20 mA

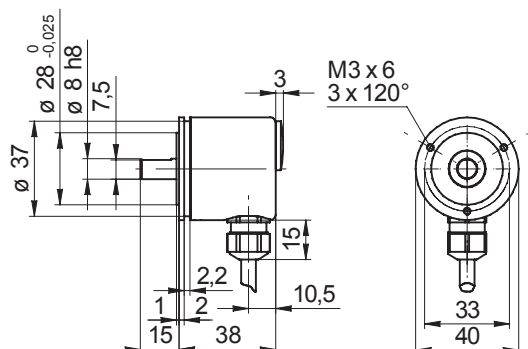
Outputs 25V / 05V	
Output level Low	<0.5 V (I = -20 mA)

Outputs 25W	
Output level High	>Vcc -2.6 V (I = 20 mA)
Output level Low	<0.5 V (I = -20 mA)

#### Dimensions

##### BVK cable radial



##### BVK connector output radial

