

# Incremental encoders

Through hollow shaft  $\varnothing 27$  mm  
10000...320000 pulses per revolution

## BHW - HighRes



BHW with through hollow shaft

### Features

- High resolution programmable encoder
- Optical sensing
- Max. 320000 pulses per revolution
- Programmable via BISS
- Small profile depth
- Through hollow shaft  $\varnothing 27$  mm

### Technical data - electrical ratings

Voltage supply	5 VDC $\pm 10$ % 10...30 VDC
Consumption typ.	80 mA (5 VDC, w/o load) 60 mA (24 VDC, w/o load)
Pulses per revolution	10000...320000
Reference signal	Zero pulse, programmable
Sensing method	Optical
Output frequency	$\leq 1300$ kHz
Output signals	A 90° B, N + inverted
Output stages	Antivalent Push-pull short-circuit proof
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Approval	UL approval / E217823

### Technical data - mechanical design

Size (flange)	$\varnothing 80$ mm
Shaft type	$\varnothing 27$ mm (through hollow shaft)
Protection DIN EN 60529	IP 65, IP 42
Operating speed	$\leq 12000$ rpm (IP 42) $\leq 6000$ rpm (IP 65)
Operating torque typ.	0.0075 Nm (IP 42) 0.03 Nm (IP 64)
Materials	Housing: aluminium Flange: aluminium
Operating temperature	-20...+85 °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 M23, 12-pin Cable 2 m
Weight approx.	500 g

# Incremental encoders

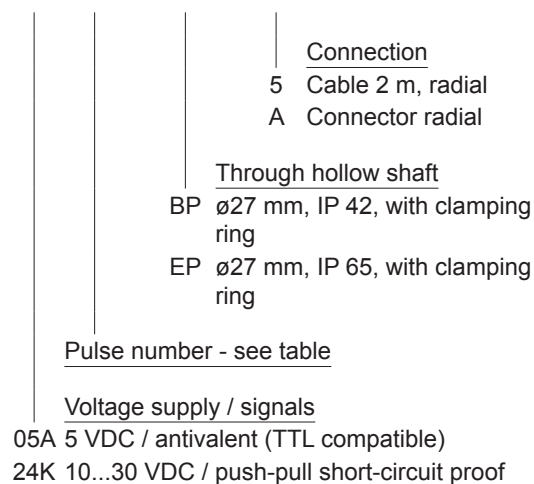
## Through hollow shaft $\varnothing 27$ mm

### 10000...320000 pulses per revolution

BHW - HighRes

#### Part number

BHW 1P.   -  -



#### Accessories

##### Connectors and cables

10130367	Female connector M23, 12-pin, straight, 2 m cable
10118532	Female connector M23, 12-pin, straight, 5 m cable
10107687	Female connector M23, 12-pin, straight

##### Mounting accessories

10252773	Clamp set $\varnothing 15$ mm
10109520	Torque spring washer
10107540	Torque pin
10130313	Set of spring coupling

##### Programming accessories

10161910	Set of programming tools
----------	--------------------------

#### Pulse number

10000	40000	160000
20000	80000	320000

Other pulse numbers on request.

#### 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 24K	Push-pull short-circuit protection
Output level High	$>+V_s - 3,7$ V ( $I = -30$ mA)
Output level Low	$<2,5$ V ( $I = 30$ mA)
Load High	$<30$ mA
Load Low	$<30$ mA

# Incremental encoders

Through hollow shaft  $\varnothing 27$  mm  
10000...320000 pulses per revolution

## BHW - HighRes

### Terminal assignment

#### Cable

for connection reference -5

#### 05A

Core colour	Signals	Core colour	Signals
brown	+Vs	brown	+Vs
green	CHA	green	CHA
red	CHA compl.	–	–
yellow	CHB	yellow	CHB
blue	CHB compl.	–	–
pink	CHN	pink	CHN
grey	CHN compl.	–	–
white	0 V	white	0 V
Cable data	8 x 0.14 mm <sup>2</sup>	5 x 0.14 mm <sup>2</sup>	
Screen	connected to flange		

#### Connector M23 male

for connection reference -A

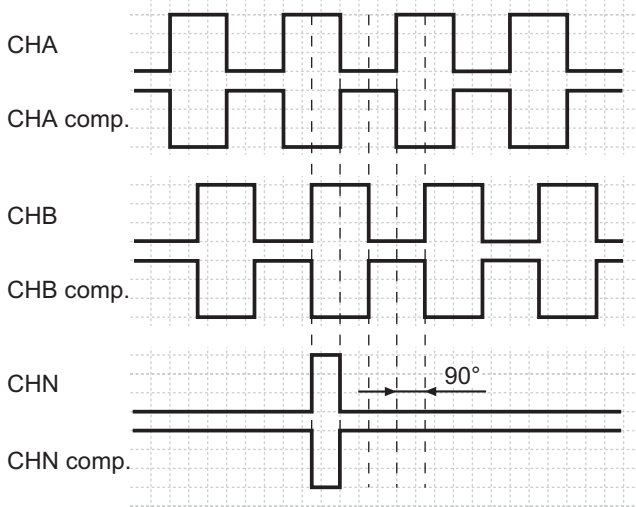
#### 05A, 24K

Connector	Signals
Pin 1	CHA compl.
Pin 2	+Vs
Pin 3	CHN
Pin 4	CHN compl.
Pin 5	CHB
Pin 6	CHB compl.
Pin 7	n.c.
Pin 8	CHA
Pin 9	Housing
Pin 10	0 V
Pin 11	0 V
Pin 12	+ Vs

### Output signals

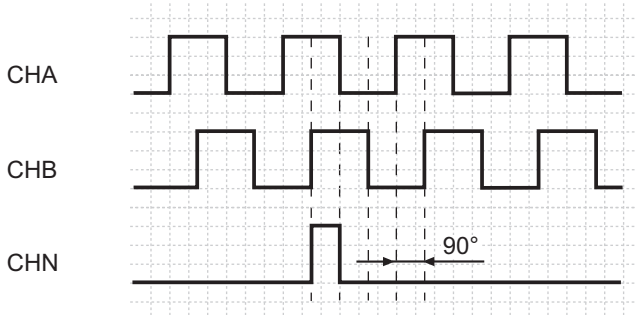
Counter clockwise rotating direction when looking at the flange.

#### 05A

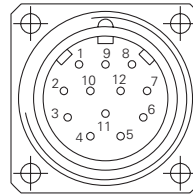


Counter clockwise rotating direction when looking at the flange.

#### 24K



Push-pull version **24K** without CHx complementary signals



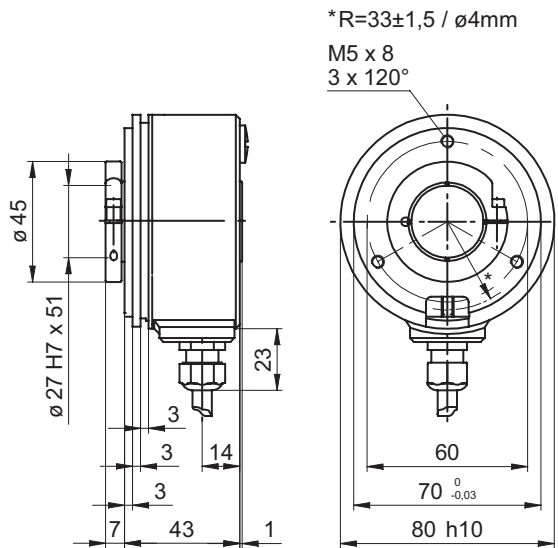
# Incremental encoders

Through hollow shaft  $\varnothing 27$  mm  
10000...320000 pulses per revolution

BHW - HighRes

## Dimensions

BHW HighRes cable radial



BHW HighRes connector output radial

