

Incremental encoders

Hollow shaft $\varnothing 27$ mm

Resolution 1024...4096 pulses

BHW



BHW with hollow shaft

Features

- Encoder with hollow shaft $\varnothing 27$ mm
- Optical sensing
- Resolution max. 4096 ppr
- Housing $\varnothing 80$ mm
- Internal interpolation
- Small profile depth

Technical data - electrical ratings

Voltage supply	5 VDC ± 10 % 10...30 VDC
Consumption w/o load (typ.)	80 mA (5 VDC) 60 mA (24 VDC)
Resolution (steps/turn)	1024...4096
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 750 kHz
Output signals	A 90° B, N + inverted
Output circuit	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

Dimensions (flange)	$\varnothing 80$ mm
Shaft	$\varnothing 27$ mm hollow shaft
Protection DIN EN 60529	IP 65, IP 42
Operating speed	≤ 12000 rpm (IP 42) ≤ 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

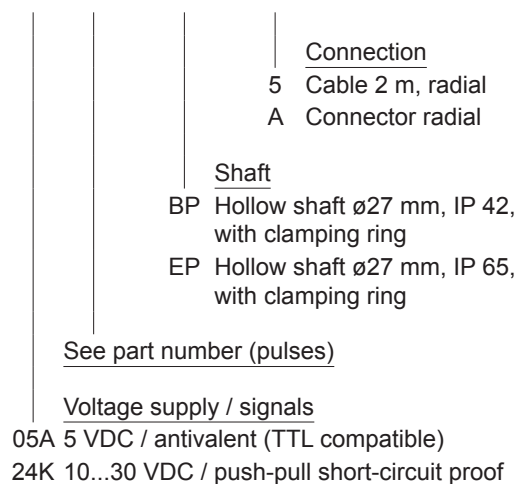
Hollow shaft ø27 mm

Resolution 1024...4096 pulses

BHW

Part number

BHW 16. - -



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
10109520	Torque spring washer
10107540	Torque pin
10130313	Set of spring coupling

Part number (pulses)

1024 | 4096

Other pulse numbers upon 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 (25 Ω)	Push-pull short-circuit protection
Output level High	>+Vs - 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

Hollow shaft $\varnothing 27$ mm

Resolution 1024...4096 pulses

BHW

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 ²	5 x 0.14 mm ²	
Screen	connected to flange		

Connector M23 male

for connection reference -A

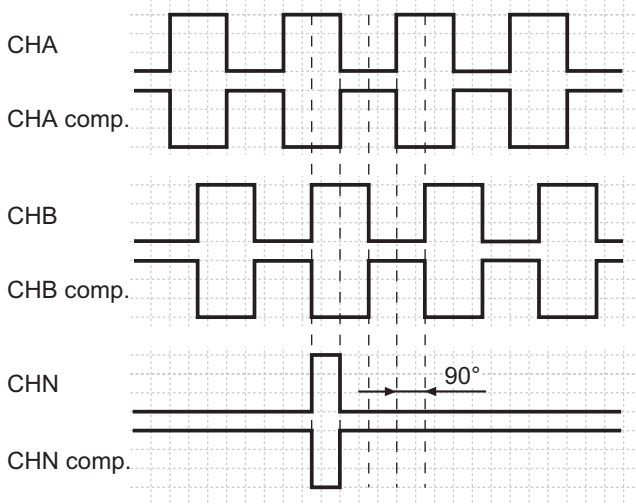
05A, 24K

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

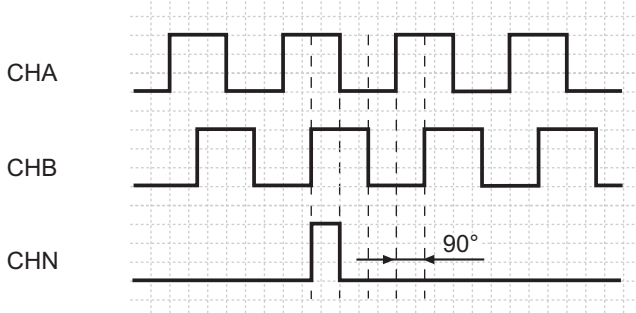
Counter clockwise rotating direction when looking at the flange.

05A

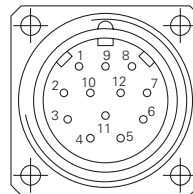


Counter clockwise rotating direction when looking at the flange.

24K



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



Incremental encoders

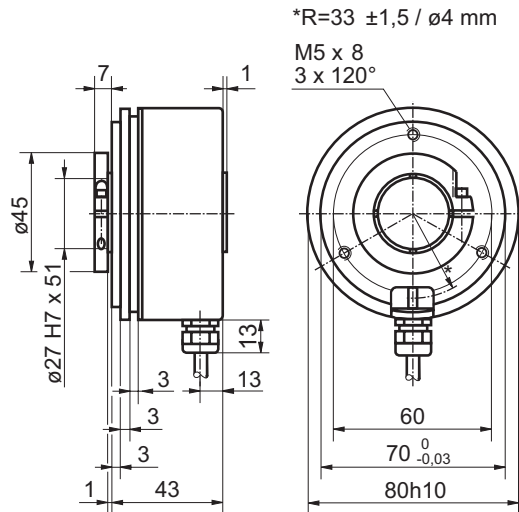
Hollow shaft $\varnothing 27$ mm

Resolution 1024...4096 pulses

BHW

Dimensions

BHW cable radial



BHW connector output radial

