

Incremental encoders

Blind or through hollow shaft ø12 mm

64...2048 pulses per revolution

BRIH, BRID - EcoMag



BRIH with blind hollow shaft

Technical data - electrical ratings

Voltage supply	5 VDC $\pm$ 10 % 10...30 VDC
Consumption typ.	30 mA (5 VDC, w/o load) 15 mA (24 VDC, w/o load)
Pulses per revolution	64...2048
Reference signal	Zero pulse, width 90°
Sensing method	Magnetic
Output frequency	$\leq$ 320 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

Features

- Encoder with blind or through hollow shaft ø12 mm
- Magnetic sensing
- Max. 2048 pulses per revolution
- High resistance to shock and vibrations
- Wide pulse number range
- High limit frequency

Technical data - mechanical design

Size (flange)	ø58 mm
Protection DIN EN 60529	IP 42, IP 65
Operating speed	$\leq$ 12000 rpm (IP 42) $\leq$ 6000 rpm (IP 65)
Materials	Housing: aluminium Flange: aluminium
Operating temperature	-20...+85 °C
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 30 g, 10-2000 Hz DIN EN 60068-2-27 Shock 500 g, 6 ms
Connection	Connector M12, 5-pin Connector M12, 8-pin Connector M23, 12-pin Cable 2 m
Weight approx.	150 g

BRIH

Shaft type	ø12 mm (blind hollow shaft)
Operating torque typ.	0.009 Nm (IP 42) 0.037 Nm (IP 65)

BRID

Shaft type	ø12 mm (through hollow shaft)
Operating torque typ.	0.0175 Nm (IP 42) 0.047 Nm (IP 65)

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Part number

Blind hollow shaft

BRIH 58S16

Connection
5 Cable 2 m, radial
N Connector M12, radial
A Connector M23, radial

Blind hollow shaft
B2 ø12 mm, IP 42, with clamping ring
P2 ø12 mm, IP 65, with clamping ring

Pulse number - see table

Voltage supply / signals

05A 5 VDC / antivalent (TTL compatible)

24K 10...30 VDC / push-pull short-circuit proof

Through hollow shaft

BRID 58S16

Connection
5 Cable 2 m, radial
N Connector M12, radial
A Connector M23, radial

Through hollow shaft
B2 ø12 mm, IP 42, with clamping ring
P2 ø12 mm, IP 65, with clamping ring

Pulse number - see table

Voltage supply / signals

05A 5 VDC / antivalent (TTL compatible)

24K 10...30 VDC / push-pull short-circuit proof

Pulse number

64	512	1024	2000
360	1000	1800	2048

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	>+Vs - 3,7 V (I = -30 mA)
Output level Low	<2,5 V (I = 30 mA)
Load High	<30 mA
Load Low	<30 mA

Accessories

Connectors and cables

10107687	Female connector M23, 12-pin, straight
10130367	Female connector M23, 12-pin, straight, 2 m cable
10118532	Female connector M23, 12-pin, straight, 5 m cable
10146775	Female connector M12, 8-pin, straight
10127844	Female connector M12, 8-pin, straight, shielded, 2 m
10129332	Female connector M12, 8-pin, straight, shielded, 5 m cable
10153968	Female connector M12, 5-pin, straight
11046264	Female connector M12, 5-pin, straight, shielded, 2 m
11046266	Female connector M12, 5-pin, straight, shielded, 5 m

Mounting accessories

10154742	Set of spring coupling BRIH, BRID
10107540	Torque pin
10109520	Torque spring washer

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Terminal assignment

Cable

for connection reference -5

05A

Core colour	Signals	Core colour	Signals
brown	+Vs	brown	+Vs
green	CHA	green	CHA
red	CHA comp.	—	—
yellow	CHB	yellow	CHB
blue	CHB comp.	—	—
pink	CHN	pink	CHN
grey	CHN comp.	—	—
white	0 V	white	0 V
Cable data	8 x 0.14 mm ²	5 x 0.14 mm ²	
Screen	connected to housing		

24K

Connector M23, 12-pin

for connection reference -A

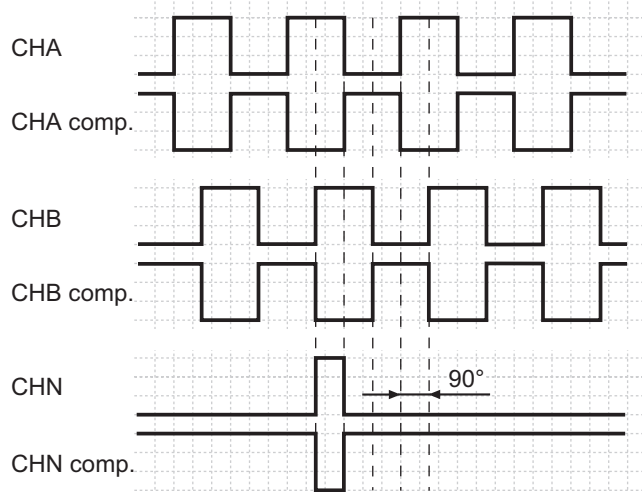
05A, 24K

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

Output signals

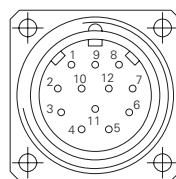
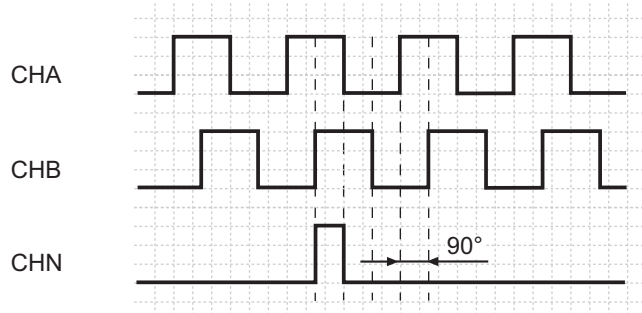
Counter clockwise rotating direction when looking at the flange.

05A



Counter clockwise rotating direction when looking at the flange.

24K



Connector M12, 8-pin / 5-pin

for connection reference -N

05A

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.

24K

Connector	Core colour*	Signals
Pin 1	brown	+Vs
Pin 2	white	0 V
Pin 3	blue	CHA
Pin 4	black	CHB
Pin 5	grey	CHN

*valid for the assembled mating connectors (see access.)



Incremental encoders

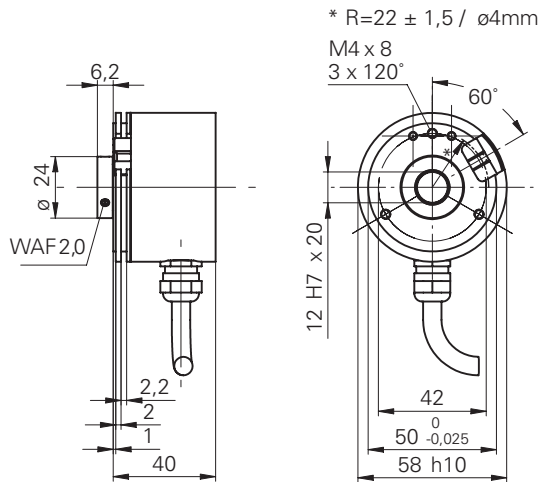
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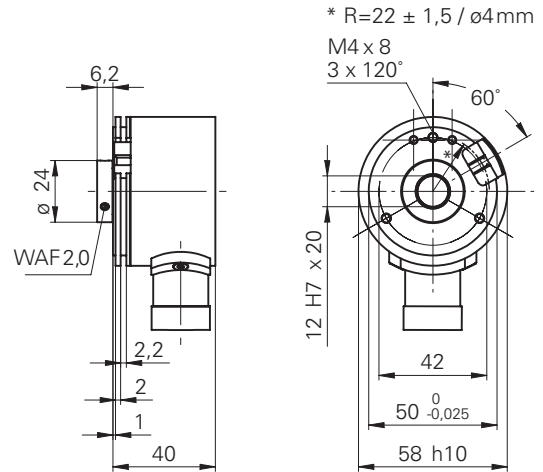
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Dimensions

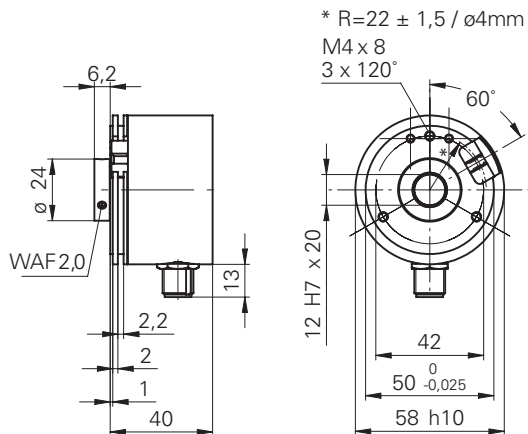
BRIH cable radial



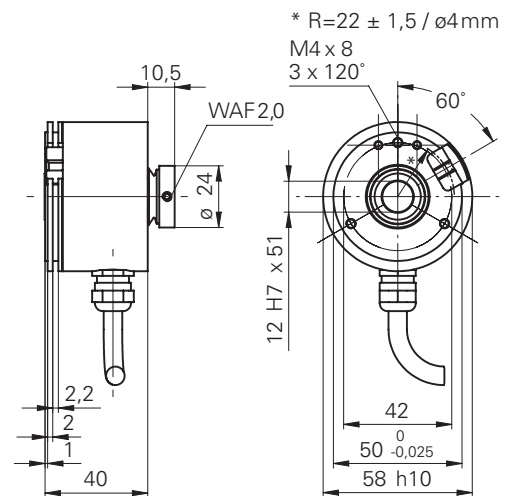
BRIH connector output M23 radial



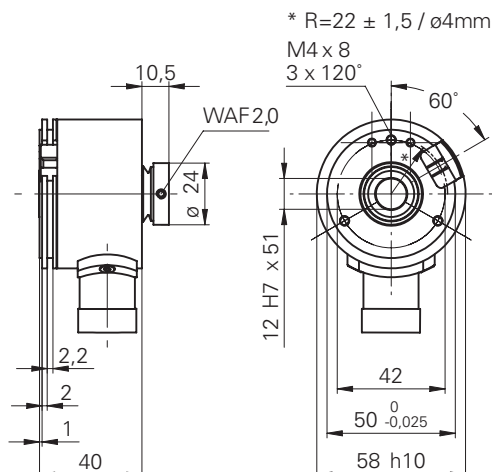
BRIH connector output M12 radial



BRID cable radial



BRID connector output M23 radial



BRID connector output M12 radial

