

Incremental encoders

Blind hollow shaft $\varnothing 12$ mm

64...2048 pulses per revolution



RAD ELECTRIC Int.
www.radelectric.co

BRIH - EcoMag



BRIH with blind hollow shaft

Features

- Encoder with blind hollow shaft $\varnothing 12$ mm
- Magnetic sensing method
- Max. 2048 pulses per revolution
- High resistance to shock and vibrations
- Wide pulse number range
- High limit frequency

Technical data - electrical ratings

Voltage supply	5 VDC ± 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	≤ 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

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 12$ mm (blind hollow shaft)
Protection DIN EN 60529	IP 42, IP 65
Operating speed	≤ 12000 rpm (IP 42) ≤ 6000 rpm (IP 65)
Operating torque typ.	0.009 Nm (IP 42) 0.037 Nm (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

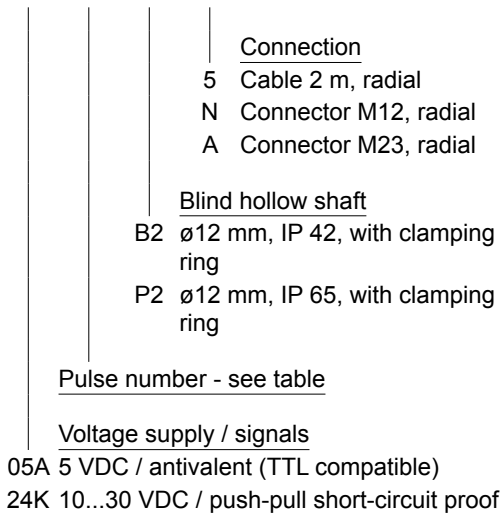
Subject to modification in technic and design. Errors and omissions excepted.



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Part number

BRIH 58S16



Accessories

Connectors and cables

10107687	Female connector M23, 12-pin, straight, without cable
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, without cable
10127844	Female connector M12, 8-pin, straight, shielded, 2 m cable
10153968	Female connector M12, 5-pin, straight, without cable
11046264	Female connector M12, 5-pin, straight, shielded, 2 m cable
11046266	Female connector M12, 5-pin, straight, shielded, 5 m cable

Mounting accessories

10154742	Set of spring plate BRIH, BRID
10107540	Torque pin
10109520	Torque spring

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

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Terminal assignment

Cable

for connection reference -5

05A		24K	
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		

Connector M23, 12-pin

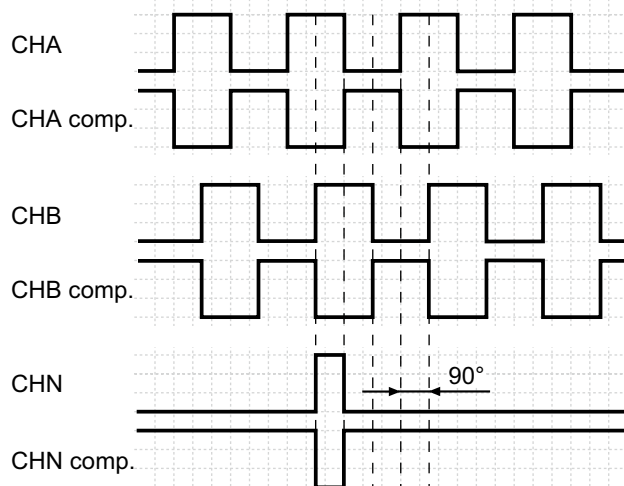
for connection reference -A

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

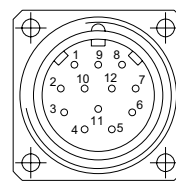
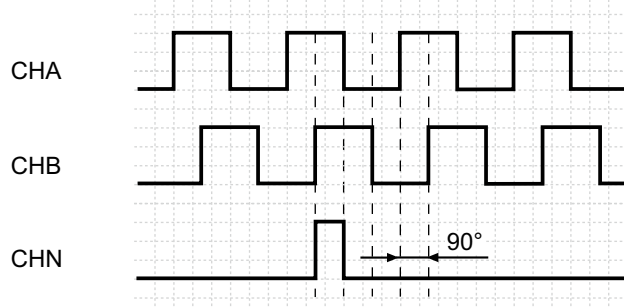
Counter clockwise rotating direction when looking at the flange.

05A



Counter clockwise rotating direction when looking at the flange.

24K



Connector M12, 8-pin / 5-pin

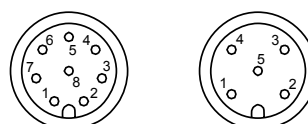
for connection reference -N

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

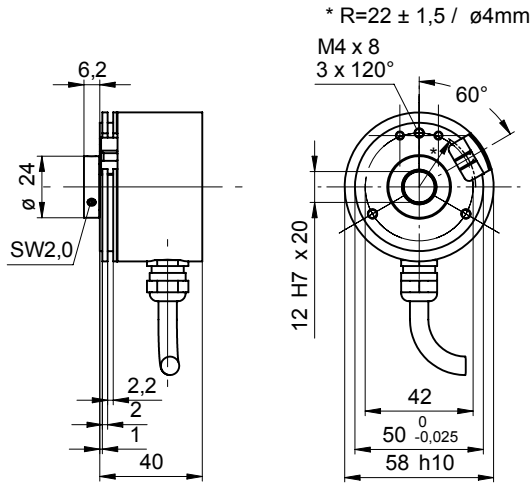
*valid for the assembled mating connectors (see access.)



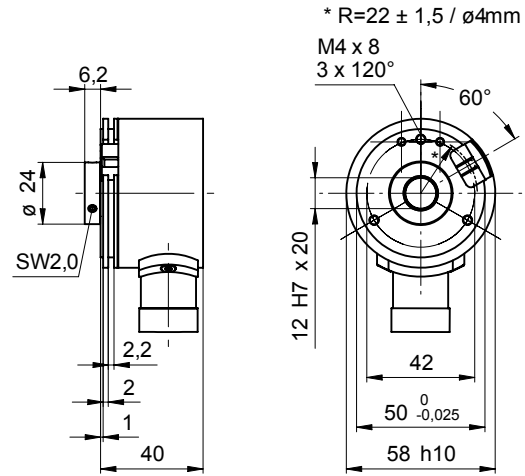


Dimensions

BRIH cable radial



BRIH connector output M23 radial



BRIH connector output M12 radial

