

Incremental encoders

Blind hollow shaft $\varnothing 12$ mm

64...2048 pulses per revolution

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 |

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Part number

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

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, 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 |

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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

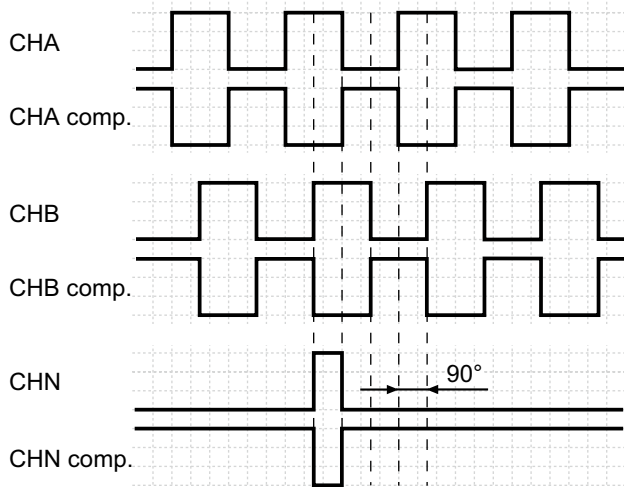
for connection reference -A

| 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

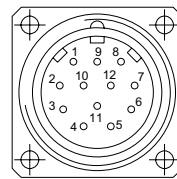
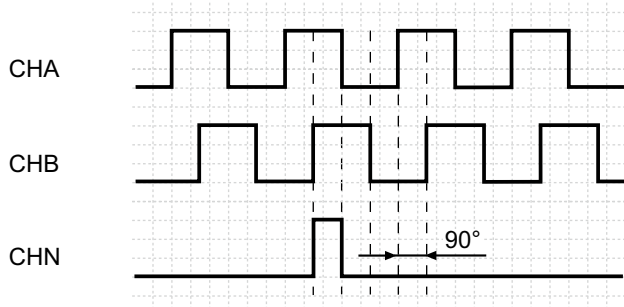
Counter clockwise rotating direction when looking at the flange.

05A



Counter clockwise rotating direction when looking at the flange.

24K



Connector M12, 8-pin / 5-pin

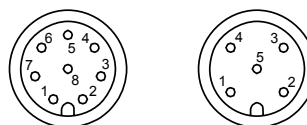
for connection reference -N

| 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.)



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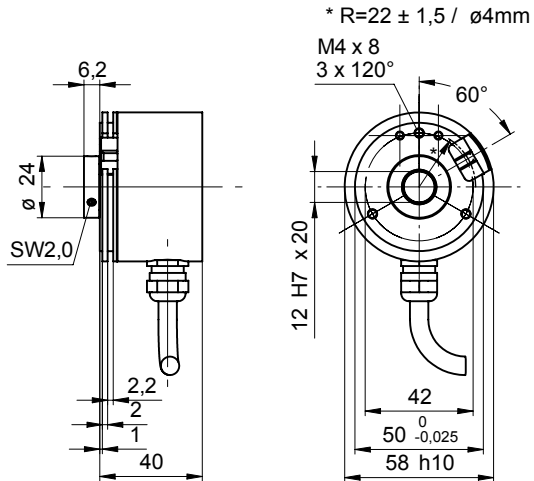
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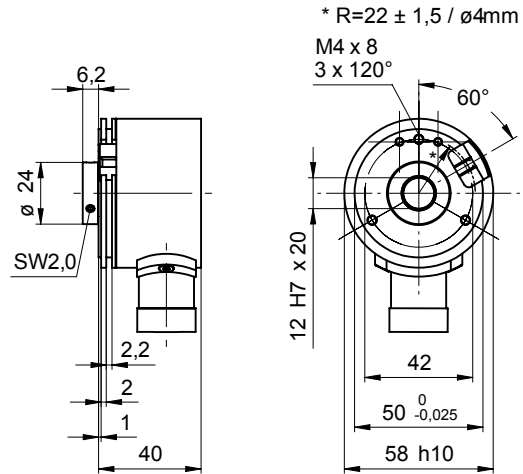
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Dimensions

BRIH cable radial



BRIH connector output M23 radial



BRIH connector output M12 radial

