

Incremental encoders

Micro series - shaft max. $\varnothing 8$ mm

2...1024 pulses per revolution

BRIV 30R - EcoMag



BRIV 30R with shaft

Features

- Micro encoder with solid shaft max. $\varnothing 8$ mm
- Magnetic sensing
- Max. 1024 pulses per revolution
- Housing $\varnothing 30$ mm
- Temperature range $-40...+85$ °C
- Robust steel flange

Technical data - electrical ratings

Voltage supply	5 VDC ± 10 % 20...28 VDC
Consumption typ.	25 mA (5 VDC, w/o load) 30 mA (24 VDC, w/o load)
Pulses per revolution	2...1024
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)	$\varnothing 30$ mm
Shaft type	$\varnothing 6$ mm solid shaft $\varnothing 8$ mm solid shaft
Admitted shaft load	≤ 30 N axial ≤ 50 N radial
Flange	Synchro flange
Protection DIN EN 60529	IP 67
Operating speed	≤ 6000 rpm
Operating torque typ.	0.011 Nm (IP 67)
Materials	Housing: steel zinc-coated Flange: stainless steel 1.4305
Operating temperature	$-40...+85$ °C (only 5 VDC) $-40...+65$ °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 M9, 5-pin Connector M9, 8-pin Cable 2 m
Weight approx.	100 g

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Part number

BRIV 30R

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				<u>Connection</u>	
				4	Cable 2 m, axial
				5	Cable 2 m, radial
				6	Connector axial
				9	Connector radial
					<u>Solid shaft</u>
					N6 $\varnothing 6$ mm, IP 67
					N8 $\varnothing 8$ mm, IP 67
					<u>Pulse number - see table</u>
					<u>Voltage supply / signals</u>
					05A 5 VDC / antivalent (TTL compatible)
					17K 20...28 VDC / push-pull short-circuit proof
					<u>Operating temperature</u>
	5				-40...+85 °C / only 5 VDC (05A)
	6				-40...+65 °C

Accessories

Connectors and cables

10132983	Female connector M9, 8-pin, straight
11094664	Female connector M9, 8-pin, straight, 2 m cable
11094665	Female connector M9, 8-pin, straight, 5 m cable
11094660	Female connector M9, 5-pin, straight, 2 m cable
11094662	Female connector M9, 5-pin, straight, 5 m cable

Mounting accessories

10106004	Clamp set $\varnothing 10$ mm
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Pulse number

2	32	128	400	1024
4	40	160	500	
8	50	200	512	
16	64	250	800	
20	100	256	1000	

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 17K	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

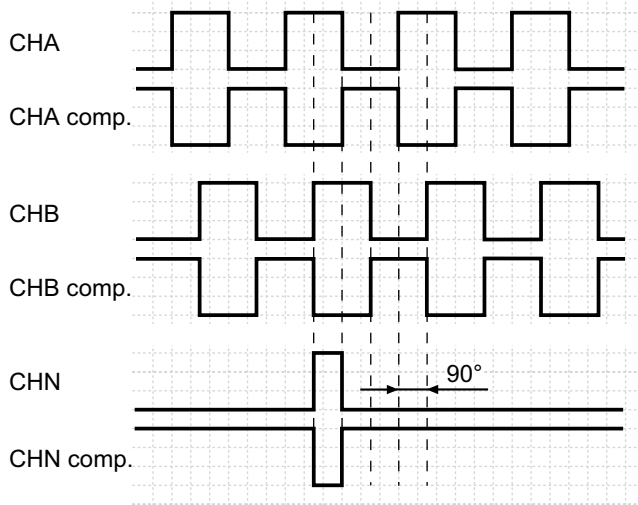
for connection reference **-4** and **-5**

05A		17K	
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		

Output signals

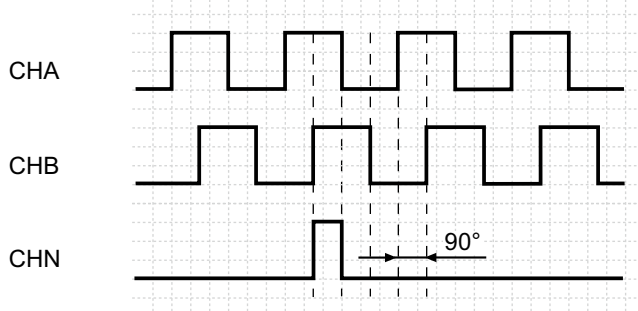
Counter clockwise rotating direction when looking at the flange.

05A



Counter clockwise rotating direction when looking at the flange.

17K



Connector M9 male

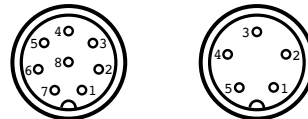
for connection reference **-6** and **-9**

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 compl.
Pin 6	pink	CHN
Pin 7	blue	CHB compl.
Pin 8	red	CHA compl.

17K

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

*these core colours are valid for the assembled mating connectors (see accessories)



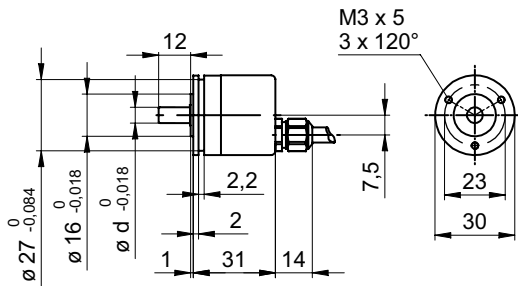
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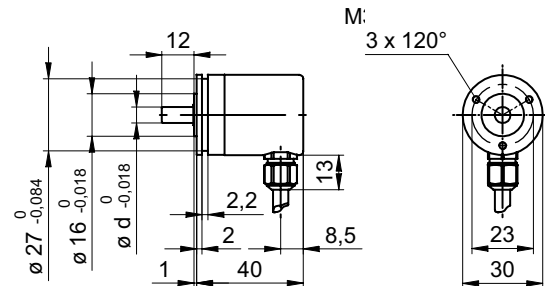
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Dimensions

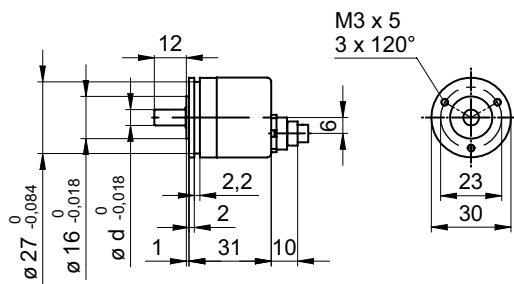
BRIV 30R, cable axial



BRIV 30R, cable radial



BRIV 30R, connector output axial



BRIV 30R, connector output radial

