

Absolute single-turn shaft encoder

BAV

parallel

features

- absolute single-turn encoder up to 12 bit
- fast, parallel interface
- servo flange
- Gray code



general data

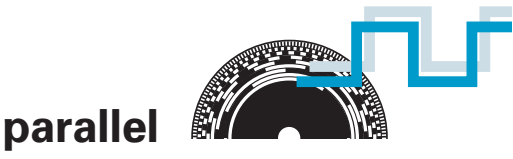
voltage supply	5 VDC $\pm 5\%$ (05N) 10 - 30 VDC (24K)
max. supply current	120 mA (at 5 VDC) (05N)
no load	70 mA (at 24 VDC) (24K)
steps/rev	see order designation
max. resolution	12 bit (1 step = 5' 16")
pulse tolerance	$\pm 1/2$ step
max. switching frequency	50 kHz

mechanical data

max. revolutions	mech. 12'000 rmp electr. dep. on number of steps
moment of inertia	typ. $19,7 \times 10^{-7} \text{ kgm}^2$
torque	typ. 3,2 cNm (3'000 rmp / 20 °C)
max. shaft load	axial: 10 N radial: 20 N
product life	depending on ambient conditions (typ. 10^9 rev.)
max. protection class	shaft: IP 65 housing: IP 65
material	housing: aluminum flange: aluminum
weight	approx. 450 g

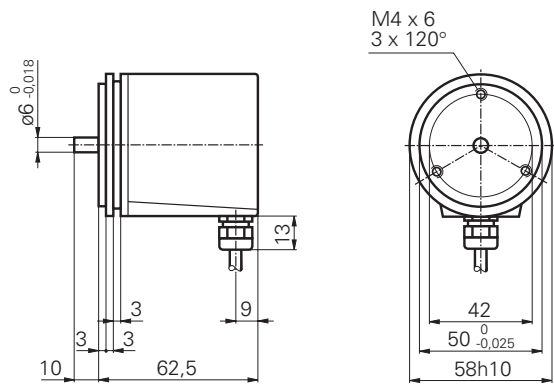
ambient conditions

temperature range	-20...+85 °C
relative humidity	max. 95% non condensing
vibration	IEC 60068-2-6 ($\leq 100 \text{ m/s}^2$ / 10 - 200 Hz)
shock	IEC 60068-2-27 ($\leq 500 \text{ m/s}^2$ / 11 ms)
noise immunity	EN 61000-6-2
emitted interference	EN 61000-6-3



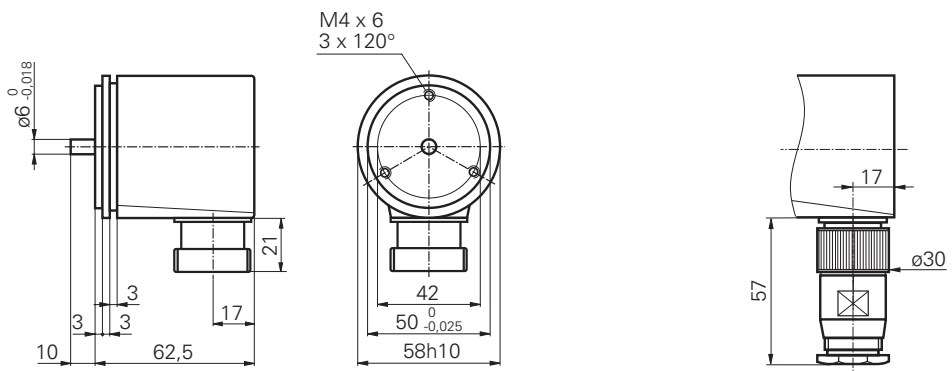
dimensions and connection dimensions

-5



2

-C



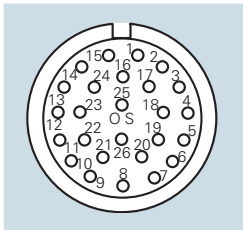
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assignment

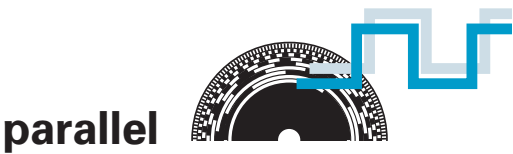
connector 26-pin



looking at the encoder

for connection reference **-5** and **-C**

cable color	connector 26-pin	resolution 4'096	1'024	360/512
white	25	0 V	0 V	0 V
brown	24	+Vs	+Vs	+Vs
green	1	bit 1 LSB	bit 1 LSB	bit 1 LSB
yellow	2	bit 2	bit 2	bit 2
grey	3	bit 3	bit 3	bit 3
pink	4	bit 4	bit 4	bit 4
blue	5	bit 5	bit 5	bit 5
red	6	bit 6	bit 6	bit 6
black	7	bit 7	bit 7	bit 7
violet	8	bit 8	bit 8	bit 8
grey/pink	9	bit 9	bit 9	bit 9 MSB
white/green	10	bit 10	bit 10 MSB	n.c.
brown/green	11	bit 11	n.c.	n.c.
yellow/brown	12	bit 12 MSB	n.c.	n.c.
white/yellow	13	bit 12 MSB*	bit 10 MSB*	bit 9 MSB*
red/blue	-	n.c.	n.c.	n.c.
screen	22	housing	housing	housing
cable		16 x 0,14 mm ²		



rotational direction

The rotational direction from encoders using a Gray code can be defined by connecting the MSB or inverted MSB*. Both signals are available as an output. If the MSB is connected, the encoder counts up as the shaft rotates clockwise. If the inverted MSB* is connected, the encoder counts up if the shaft rotates counter clockwise.

order designation

BAV 1G.

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connection

5 cable 2 m radial

C connector radial

shaft

C6 shaft 6 mm IP 65

standard pulse range

4096 12 bit

1024 10 bit

512 9 bit

360 9 bit (symmetrically clipped)

voltage range, output signals

05N 5 VDC NPN

24K 10-30 VDC push-pull, short-circuit protection

2

Other versions on request.

accessories

connector 26-pin	part nr. 111667
clamp set	part nr. 252773
mounting adapter	part nr. 117667
fixing screws and servo clamps	part nr. 117668
couplings	see chapter accessories