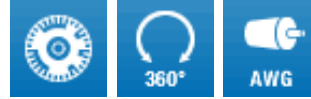




Stainless steel housing  
 Protection IP 67  
 Compact design Ø 100 mm x 120 mm



## Robust Encoder AWG 102 / EAS 57

Optical absolute encoder AWG102 with through shaft for impartment of rotation

### Resolution

#### Resolution (Steps/360°):

4096 = 12 bit                      8192 = 13 bit                      65536 = 16 bit

### Measuring range

#### Measuring range

Single-Turn    1 turn

### Type explanation

#### AWG102 EAS57-8192G-30-D-SMS

Robust Encoder	AWG102
Stainless steel housing	Yes
Encoder type	Absolute
Flange diameter	Ø 100 mm
Case diameter	Ø 100 mm
Number of bits	4096 = 12 bits 8192 = 13 bits 65536 = 16 bits
Single-turn	Yes
Supply voltage	30 = ..30 VDC
Output driver	D-SSI P
Position of connection	S
Connector	C12 = 12 pins M23 C16 = 16 pins M23 M10 = 10 pins MIL
Shaft diameter	Ø 10 mm

## Technical data

### Mechanical data

Rotational speed	$\leq 5000 \text{ min}^{-1}$
Breakaway torque	$\leq 20 \text{ Ncm}$
Loading of bearings	1500 N radial 1000 N axial
Angular acceleration	$\leq 5 \times 10^5 \text{ rad/sec}^2$
Weight	$\leq 5,5 \text{ kg}$
Case	Stainless steel 1.43.01 / AISI 304
Sealings	Viton

### Environmental conditions

Vibration	$200 \text{ ms}^{-2}$ (50 Hz / 1h)
Shock	$500 \text{ ms}^{-2}$ (11 ms)
Operating temperature	-20 ... +70°C standard -40 ... +125°C optional
Atmospheric humidity	$\leq 95\% \text{ r.h.}$
Protection class	IP 67 (DIN 40050/IEC 144)

### Electrical data

Scanning type	Optical, without contact
Transmitter, infrared	LED
Receiver	Photo-Array
Scanning frequency LSB	800 kHz $\pm 1/2 \text{ LSB}$ (12 bit) $\pm 1 \text{ LSB}$ (13 bit) $\pm 2 \text{ LSB}$ (16 bit)
Supply voltage	Vcc = 10...30 VDC
Power consumption	$\leq 100 \text{ mA}$ (Vcc = 24 V)

### Electrical connections

#### SSI

Interface	RS485 Clock and Data
Clock	67 kHz - 1,6 MHz

#### Push-pull parallel

Output frequency	$< 820 \text{ kHz}$
Signal level	High $> V_{cc} - 3 \text{ V}$ (Iout = 30 mA) Low $< 0,4 \text{ V}$ (Iout = 10 mA) Low $< 2,0 \text{ V}$ (Iout = 30 mA)
Load capacity of the outputs	30 mA

#### Inputs

Rotational direction	CW = High $> 0,7 \times V_{cc}$ CCW = Low $> 0,3 \times V_{cc}$
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### AWG options

#### Electrical heating

Temperature control	Thermostat +5° / +15°C
Power consumption	18 W (12 V / 1,5 A) 72 W (24 V / 3,0 A)

#### Forced-air cooling

Pressure reducing valves	1 bar, input and output
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## Cable

Wire colour	Signal
Brown 0,5 mm <sup>2</sup>	+Vcc
White 0,5 mm <sup>2</sup>	0 V GND
Blue	Clock+
White	Clock-
White/Brown	Data+
Yellow	Data-
Brown	CW/CCW
Green	RESET <sup>1)</sup>
Shield	N.C.

1) optional

## Connector 12 pins M23

Connection	Signal
Pin 1	+Vcc
Pin 2	0 V GND
Pin 3	Clock+
Pin 4	Data+
Pin 5	RESET <sup>1)</sup>
Pin 6	Data-
Pin 7	Clock-
Pin 8	N.C.
Pin 9	CW/CCW
Pin 10	N.C.
Pin 11	N.C.
Pin 12	N.C.

1) optional

## Connector 10 pins MIL

Connection	Signal
Pin A	Clock+
Pin B	Data+
Pin C	RESET <sup>1)</sup>
Pin D	+Vcc
Pin E	N.C.
Pin F	0 V GND
Pin G	Clock-
Pin H	Data-
Pin I	CW/CCW
Pin J	N.C.

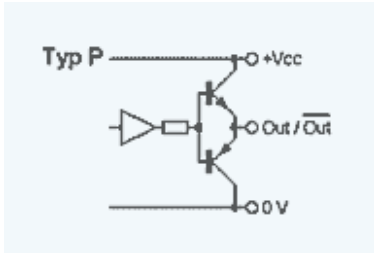
1) optional

## Connector 12 pins M23

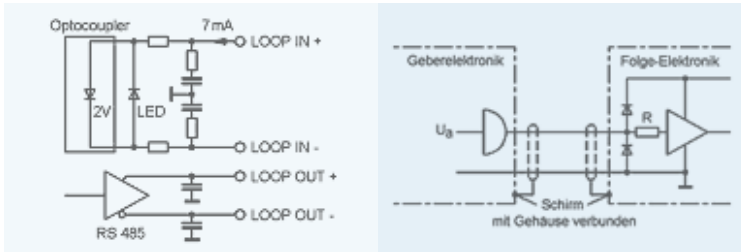
Connection	Signal
Pin 1	G 0 / 2 <sup>0</sup>
Pin 2	G 1 / 2 <sup>1</sup>
Pin 3	G 2 / 2 <sup>2</sup>
Pin 4	G 3 / 2 <sup>3</sup>
Pin 5	G 4 / 2 <sup>4</sup>
Pin 6	G 5 / 2 <sup>5</sup>
Pin 7	G 6 / 2 <sup>6</sup>
Pin 8	G 7 / 2 <sup>7</sup>
Pin 9	G 8 / 2 <sup>8</sup>
Pin 10	G 9 / 2 <sup>9</sup>
Pin 11	G 10 / 2 <sup>10</sup>
Pin 12	G 11 / 2 <sup>11</sup>
Pin 13	CW/CCW
Pin 14	G 12 / 2 <sup>12</sup> oder STORE <sup>1)</sup>
Pin 15	+Vcc
Pin 16	0 V GND

1) G12/2<sup>12</sup> bei 13 Bit, STORE bei Binär-Code, sonst N.C.

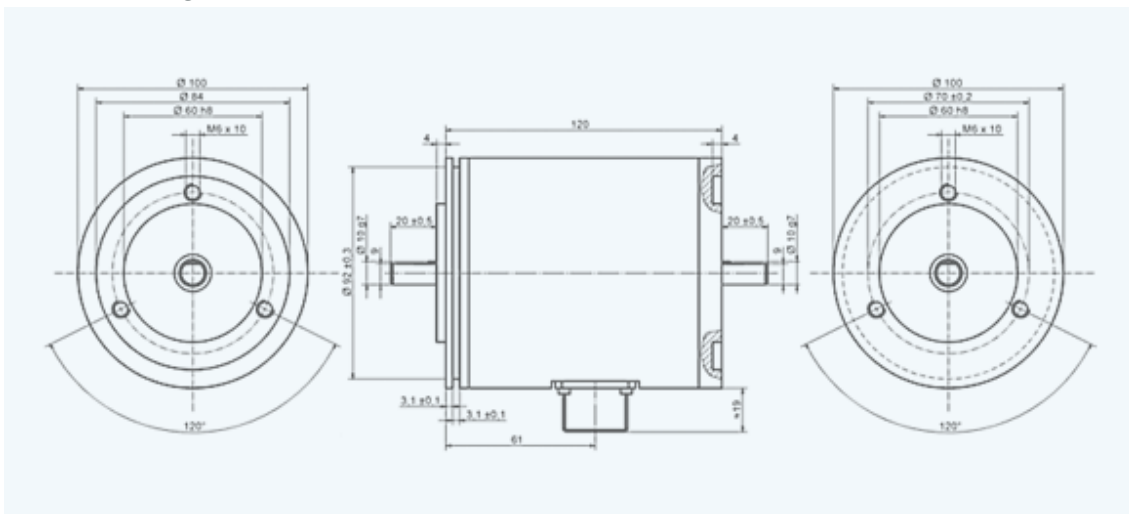
## Output driver



## Channel schematic



## Outline drawing



Version AE 619-607 · Subject to change

INDUcoder® · INDUcoder Messtechnik GmbH, Kaiserstraße 316, 47178 Duisburg, Deutschland  
Tel: (0203) 57047-0, Fax: (0203) 57047-20, E-Mail: [info@inducoder.de](mailto:info@inducoder.de), Internet: [www.inducoder.de](http://www.inducoder.de)