



Stainless steel housing Ø 100 x 160 mm  
 Optional water- or air-cooling, electrical heating  
 against condensing of humidity  
 Protection IP 67



## Robust Encoder AWG 101 / ED 58

Optical incremental encoder AWG101, For operation at rough conditions

### Resolution

#### Resolution (Pulses/Revolution):

Jede Auflösung von 1 -	7000	7200	7500
6000			
8000	8192	9000	9144
10000			

Every other resolution up to 500 000 on request

### Type explanation

#### AWG101 /ED58-6-2500-30-P-RC12

Robust Encoder	AWG101
Stainless steel housing	Yes
Encoder type	Incremental
Flange diameter	Ø 100 mm
Case diameter	Ø 100 mm
Number of channels	3 = A + B + M 6 = AA + BB + MM
Resolutions	xxxx = Impulse pro Umdrehung
Supply voltage	05 = 5 VDC ± 5% 30 = 10..30 VDC
Output driver	D-RS422 P S
Position of connection	R S
Connector	C12 = 12 pins M23 M10 = 10 pins MIL
Shaft diameter	Ø 10 mm

## Technical data

### Mechanical data

Rotational speed	? 5000 min <sup>-1</sup>
Breakaway torque	? 15 Ncm
Loading of bearings	1500 N radial 1000 N axial
Angular acceleration	? 10 <sup>4</sup> rad/sec <sup>2</sup>
Weight	? 6 kg
Case	Stainless steel 1.43.01 / AISI 304
Sealings	Viton

### Environmental conditions

Vibration	200 ms <sup>-2</sup> (50 Hz / 1h)
Shock	2000 ms <sup>-2</sup> (11 ms)
Operating temperature	0 .. +80°C standard -40 .. +200°C optional
Atmospheric humidity	? 95% r.h.
Protection class	IP 67 (DIN 40050/IEC 144)

### Electrical data

Scanning type	Optical, without contact
Transmitter, infrared	LED
Receiver	Photo-Transistor
Measurement accuracy	± 1' standard
Supply voltage	V <sub>cc</sub> = 5 VDC ±5% V <sub>cc</sub> = 10...30 VDC
Power consumption	200 mA max.
Output frequency	? 300 kHz (Output D) ? 160 kHz (Output P, S)
Signal level	High > V <sub>cc</sub> -2 V (Output D, P) Low < 0,5 V (Output D, P) Analog 1 V <sub>ss</sub> (Output S)
Load capacity of the outputs	20 mA, kurzschlußfest, verpolungssicher Short-circuit proof, protection against reverse connection of supply voltage

### 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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#### Water cooling

Cooling-helix	Copper pipe 3/8" with 2 chromed 5/8" hose couplings
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## Cable

Wire colour	Signal
Brown 0,5 mm <sup>2</sup>	+Vcc
Blue	+Vcc Sense <sup>1)</sup>
White/Green	0 V GND
White	0 V Sense
Brown	Signal A+
Green	Signal A- <sup>2)</sup>
Grey	Signal B+
Pink	Signal B- <sup>2)</sup>
Red	Signal M+
Black	Signal M- <sup>2)</sup>
Shield	N.C.

1) nur bei Vcc = 5 VDC TTL

2) nur bei 6 Ausgangskanälen

## Connector 12 pins M23

Connection	Signal
Pin 1	Signal B- <sup>1)</sup>
Pin 2	+Vcc Sense <sup>2)</sup>
Pin 3	Signal M+
Pin 4	Signal M- <sup>1)</sup>
Pin 5	Signal A+
Pin 6	Signal A- <sup>1)</sup>
Pin 7	N.C.
Pin 8	Signal B+
Pin 9	Shield
Pin 10	0 V GND
Pin 11	0 V Sense
Pin 12	+Vcc

1) nur bei 6 Ausgangskanälen

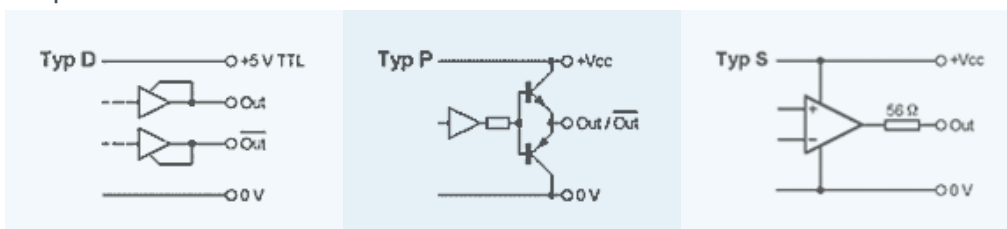
2) nur bei Vcc = 5 VDC TTL

## Connector 10 pins MIL

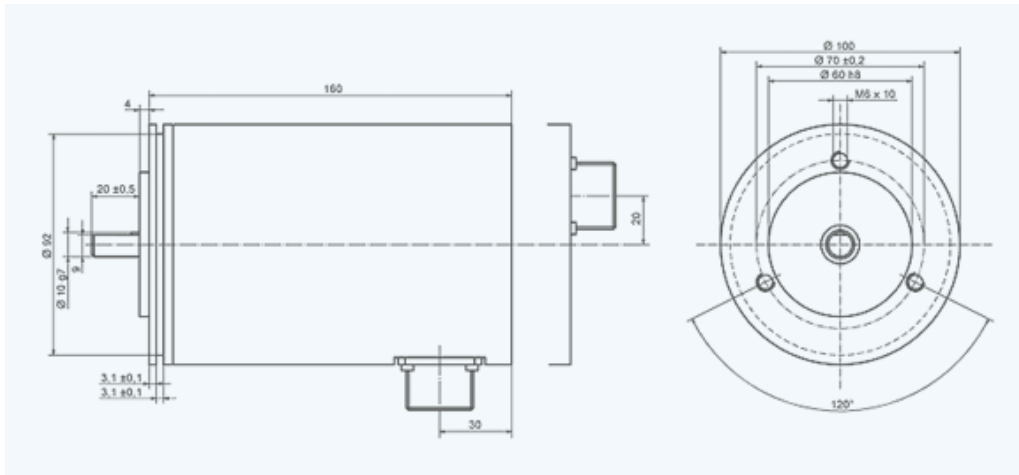
Connection	Signal
Pin A	Signal B+
Pin B	Signal A+
Pin C	Signal M+
Pin D	+Vcc
Pin E	+Vcc Sense
Pin F	0 V GND
Pin G	Shield
Pin H	Signal B- <sup>1)</sup>
Pin I	Signal A- <sup>1)</sup>
Pin J	Signal M- <sup>1)</sup>

1) nur bei 6 Ausgangskanälen

## Output driver



## Outline drawing



Version E 620-304 · Subject to change

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