

EIL580-S1

Solid shaft with EURO flange B10
100...5000 pulses per revolution

Overview

- Size ø58 mm
- Precise optical sensing
- Output signal level TTL or HTL
- EURO flange B10
- Connection axial, radial or tangential
- Pulses per revolution up to 5000
- High protection up to IP 67
- High resistance to shock and vibrations



Technical data

Technical data - electrical ratings

Voltage supply	5 VDC ±5 % 8...30 VDC 4.75...30 VDC
Reverse polarity protection	Yes
Short-circuit proof	Yes (HTL) Yes (TTL, max. 1 s and 1 signal)
Consumption w/o load	≤70 mA
Pulses per revolution	100 ... 5000
Phase shift	90 ° ±10°
Duty cycle	40...60 %
Reference signal	Zero pulse, width 90° ±10 %
Sensing method	Optical
Output frequency	≤300 kHz (TTL) ≤160 kHz (HTL)
Output signals	A+, B+, R+, A-, B-, R-
Output stages	TTL/RS422 HTL/push-pull
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	UL 508 / CSA 22.2

Technical data - mechanical design

Size (flange)	ø115 mm
Shaft type	ø11 x 30 mm solid shaft with woodruff key
Admitted shaft load	≤40 N axial ≤80 N radial
Protection EN 60529	IP 65 (without shaft seal) IP 67 (with shaft seal)
Operating speed	≤6000 rpm (+20 °C, IP 67) ≤12000 rpm (+20 °C, IP 65)
Starting torque	≤0.015 Nm (+20 °C, IP 65) ≤0.02 Nm (+20 °C, IP 67)
Material	Housing: aluminium die-cast Flange: aluminium Solid shaft: stainless steel
Operating temperature	-40...+85 °C
Relative humidity	90 % non-condensing
Resistance	EN 60068-2-6 Vibration 30 g, 10-2000 Hz EN 60068-2-27 Shock 300 g, 6 ms
Connection	Flange connector M12, 8-pin Flange connector M23, 12-pin Cable
Weight approx.	485 g

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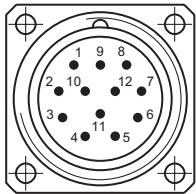
Terminal assignment

Flange connector M23, 12-pin / cable

Pin	Core color	Assignment
1	pink	B-
2	—	—
3	blue	R+
4	red	R-
5	green	A+
6	yellow	A-
7	—	—
8	grey	B+
9	—	—
10	white	GND
11	—	—
12	brown	UB

Screen: Connected to housing

Cable data: PVC, [4x2x0.14 mm²], bending radius >32.5 mm, outer diameter 6.5 mm



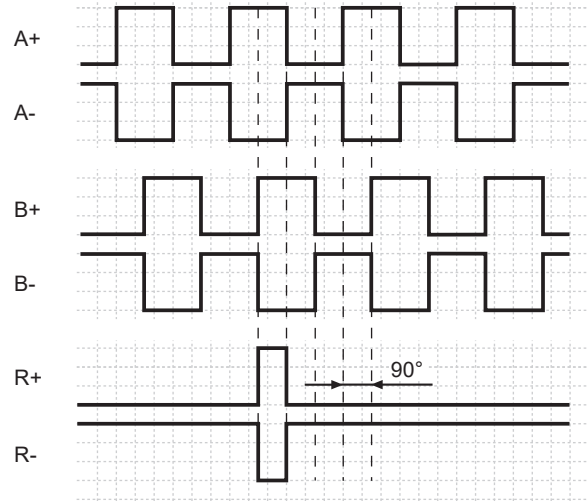
Flange connector M12, 8-pin

Pin	Assignment
1	GND
2	UB
3	A+
4	A-
5	B+
6	B-
7	R+
8	R-



Output signals

Clockwise rotating direction when looking at flange.



Trigger level

Outputs	TTL/RS422
Output level High	≥ 2.5 V
Output level Low	≤ 0.5 V
Load	≤ 20 mA

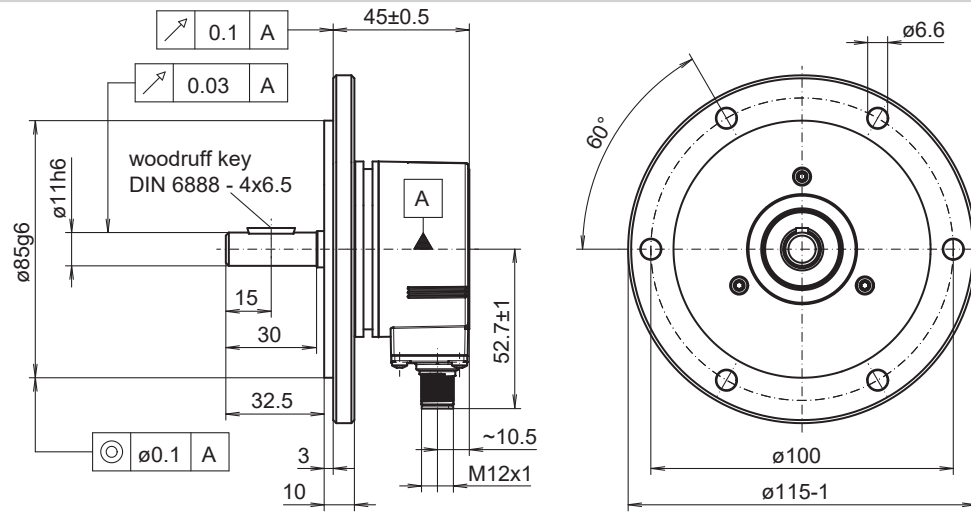
Outputs	HTL/Push-pull
Output level High	$\geq UB - 3$ V
Output level Low	≤ 1.5 V
Load	≤ 20 mA

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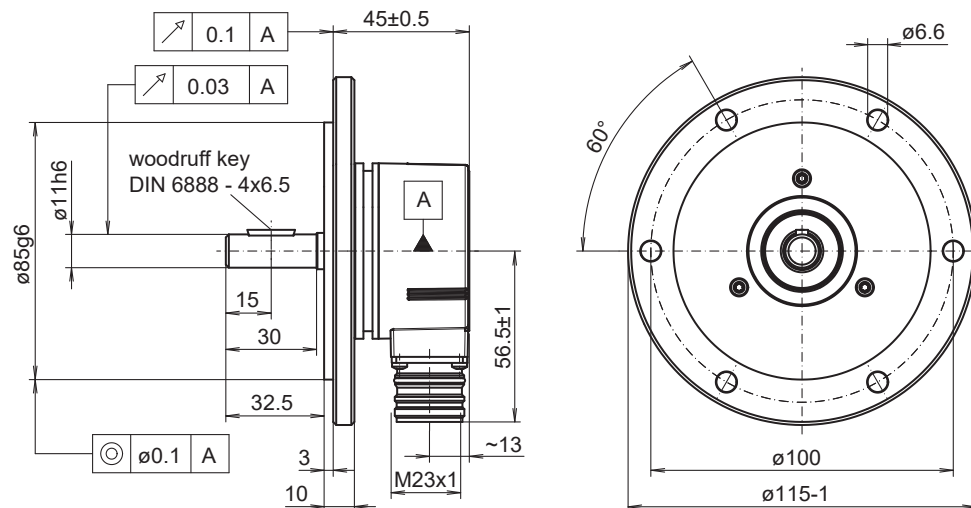
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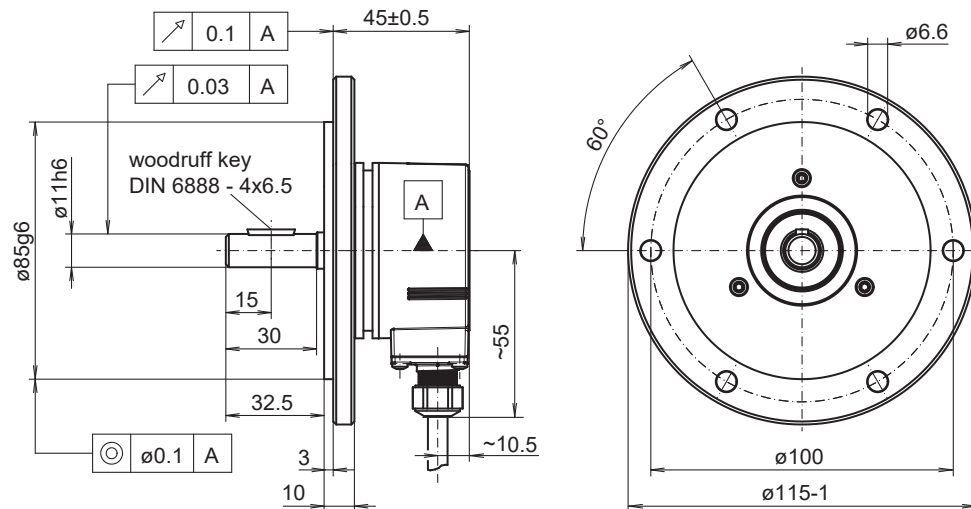
Dimensions



EURO flange B10, flange connector M12, radial



EURO flange B10, flange connector M23, radial



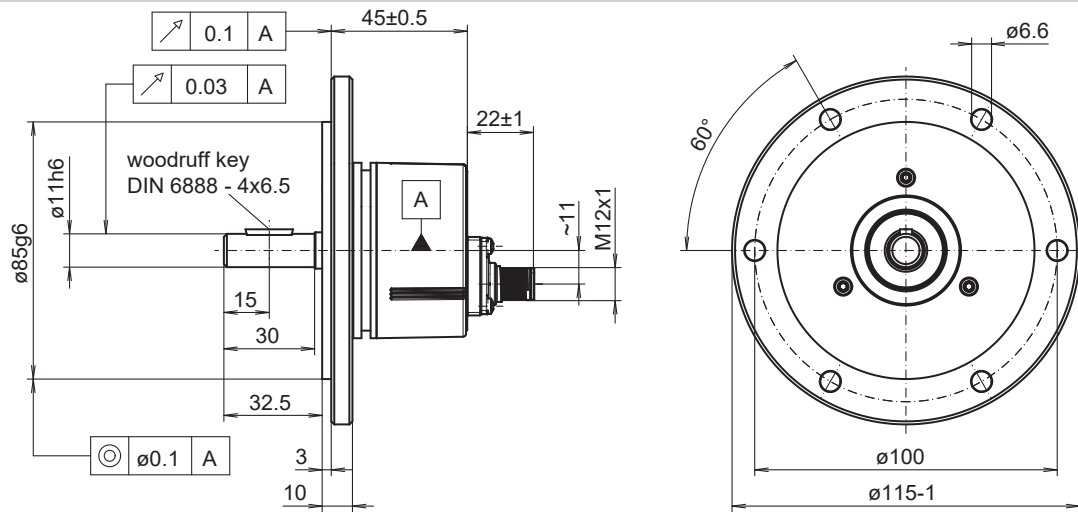
EURO flange B10, cable radial

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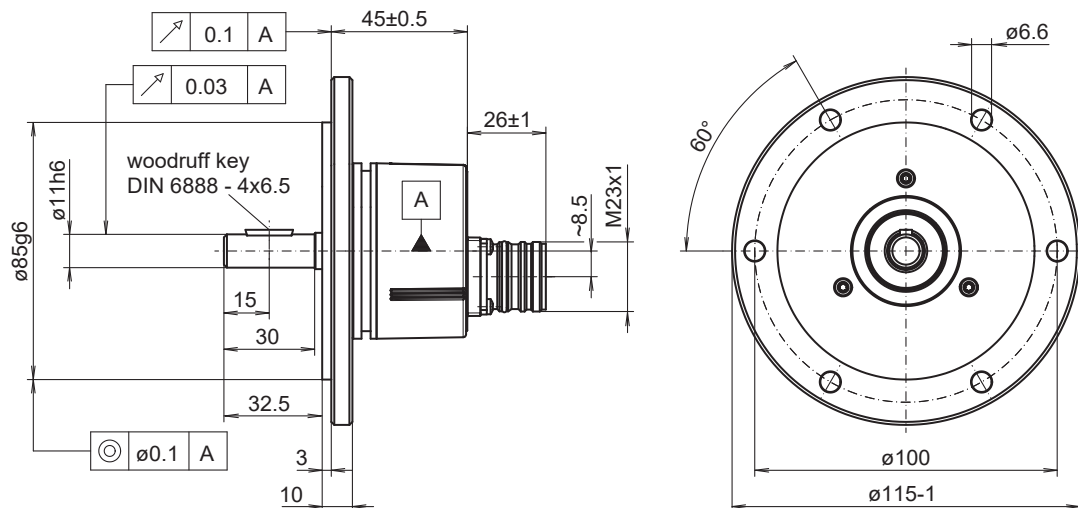
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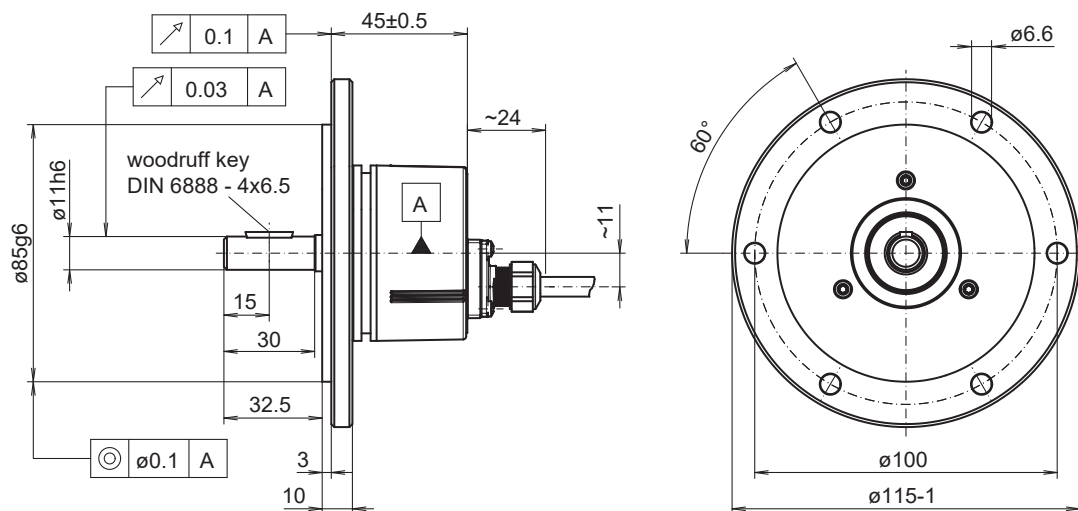
Dimensions



EURO flange B10, flange connector M12, axial



EURO flange B10, flange connector M23, axial



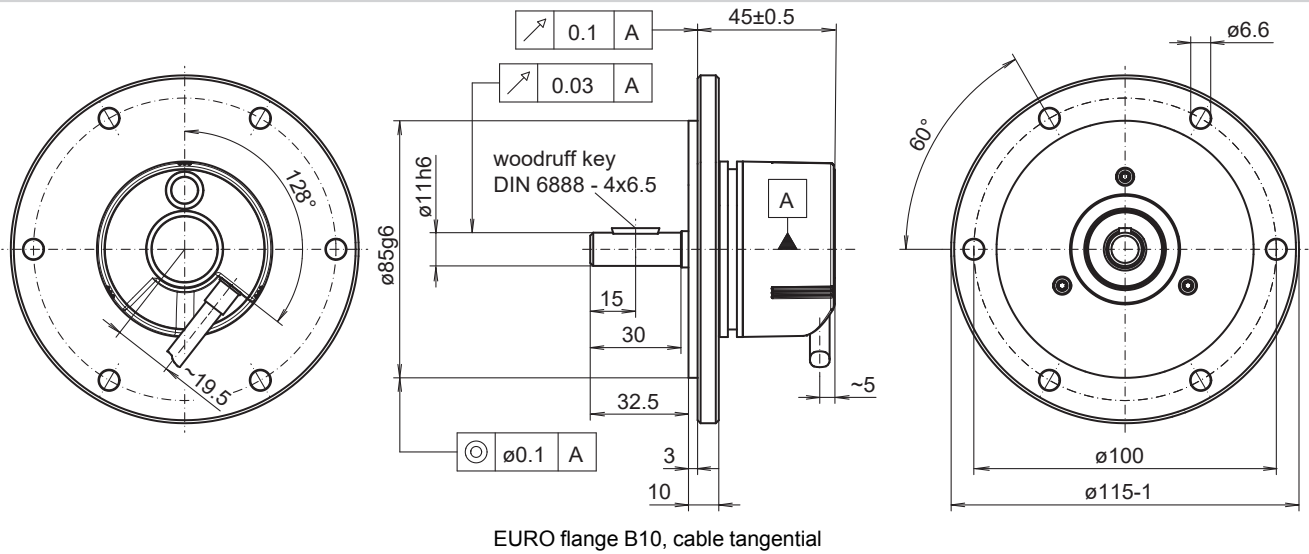
EURO flange B10, cable axial

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Dimensions



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Ordering reference

	EIL580	-	S	1	B1	.	#	##	#	.	#####	.	A
Product	EIL580												
Shaft type													
Solid shaft			S										
Flange (shaft)													
Euro flange B10, centering collar Ø85 x 3 mm, pitch circle diameter 100 mm - 6 x Ø6.6				1									
Shaft													
Ø11 x 30 mm, with woodruff key 4 x 6.5					B1								
Protection class													
IP 65											5		
IP 67											7		
Connection													
Cable radial, 1 m												R	
Cable radial, 2 m												L	
Flange socket radial, M23, 12-pin, male contacts, CCW												F	
Flange socket radial, M12, 8-pin, male contacts, CCW												B	
Cable axial, 1 m												T	
Cable axial, 2 m												U	
Flange socket axial, M23, 12-pin, male contacts, CCW												D	
Flange socket axial, M12, 8-pin, male contacts, CCW												A	
Cable tangential, 1 m												P	
Cable tangential, 2 m												Q	
Voltage supply / output													
5 VDC, TTL/RS422, 6 channel												E	
8...30 VDC, TTL/RS422, 6 channel (Vout=5V)												H	
8...30 VDC, HTL/push pull, 6 channel												N	
4,75...30 VDC, HTL/push pull, 6 channel (Vout=Vin)												Q	

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	EIL580	-	S	1	B1	.	#	##	#	.	#####	.	A
Pulses per revolution													
100													100
120													120
150													150
200													200
250													250
256													256
300													300
360													360
400													400
440													440
500													500
512													512
600													600
720													720
800													800
900													900
1000													1000
1024													1024
1200													1200
1250													1250
1440													1440
1500													1500
1800													1800
2000													2000
2048													2048
2500													2500
3000													3000
3600													3600
4000													4000
4096													4096
5000													5000

Operating temperature

-40...+85 °C

Accessories

Mounting accessories

- Spring disk coupling K 35 (shaft ø6...12 mm)
- Spring disk coupling K 50 (shaft ø11...16 mm)
- Spring disk coupling K 60 (shaft ø11...22 mm)