

EIL580-SQ

Solid shaft with square flange

100...5000 pulses per revolution

Overview

- Size ø58 mm
- Precise optical sensing
- Output signal level TTL or HTL
- Square flange 2.5" (63.5 mm)
- 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	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Approval	UL 508 / CSA 22.2

Technical data - mechanical design

Size (flange)	2.5 x 2.5" (63.5 x 63.5 mm)
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Technical data - mechanical design

Shaft type	ø10 x 20 mm, solid shaft with flat ø3/8" x 4/5" (ø9.525 x 20.32 mm), solid shaft with flat
Admitted shaft load	≤40 N axial ≤80 N radial
Flange	Square flange 2.5" (63.5 mm)
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	DIN EN 60068-2-6 Vibration 30 g, 10-2000 Hz DIN EN 60068-2-27 Shock 300 g, 6 ms
Connection	Flange connector M12, 8-pin Flange connector M23, 12-pin Cable
Weight approx.	370 g

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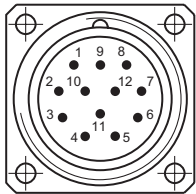
Terminal assignment

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



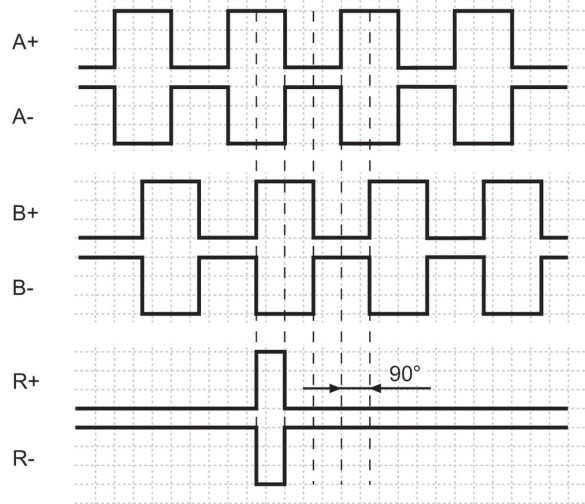
Flange connector M12, 8-pin

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

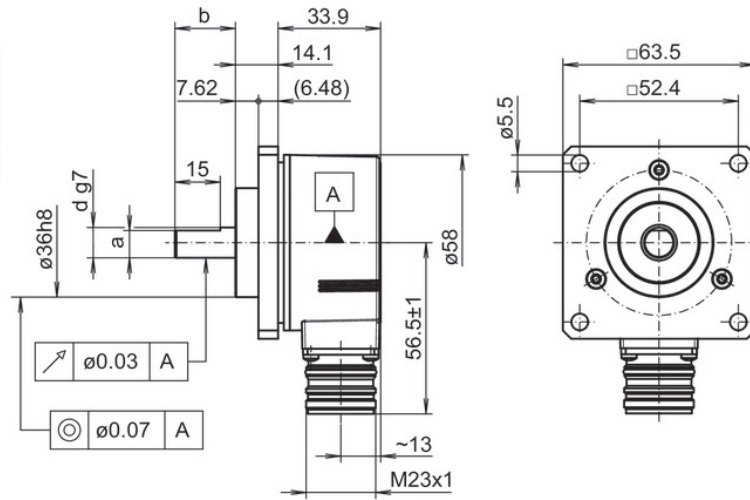
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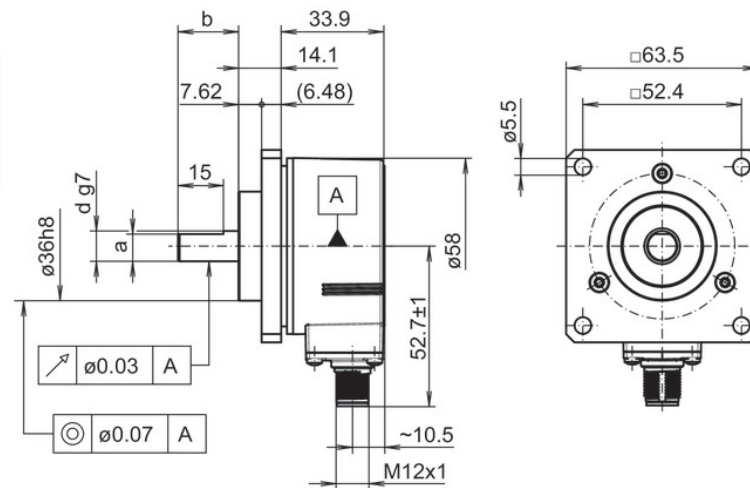
Dimensions

d g7	a	b
ø9.525	8.64	20.32
ø10	9.	20



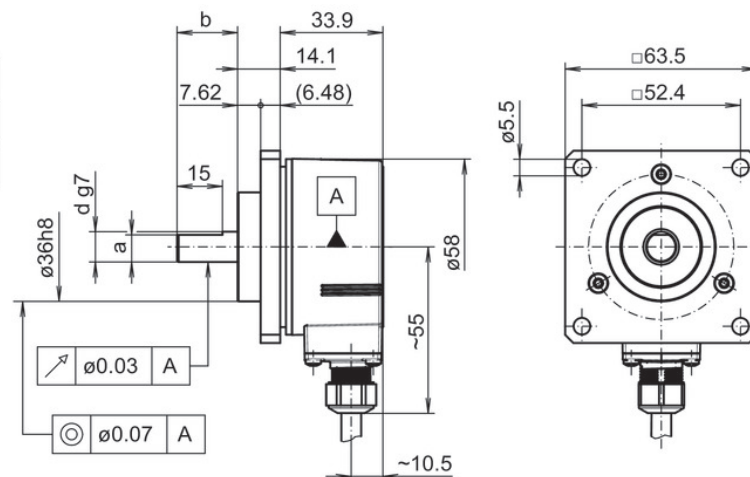
Square flange, flange connector M23, radial

d g7	a	b
ø9.525	8.64	20.32
ø10	9.	20



Square flange, flange connector M12, radial

d g7	a	b
ø9.525	8.64	20.32
ø10	9.	20



Square flange, cable radial

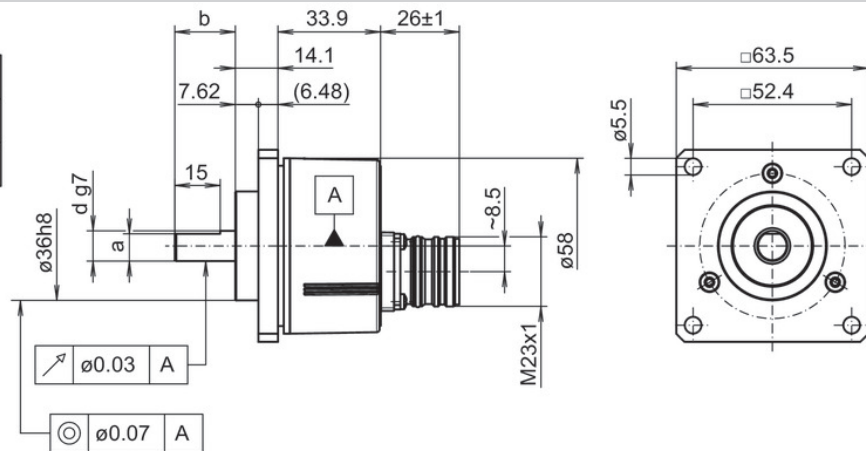
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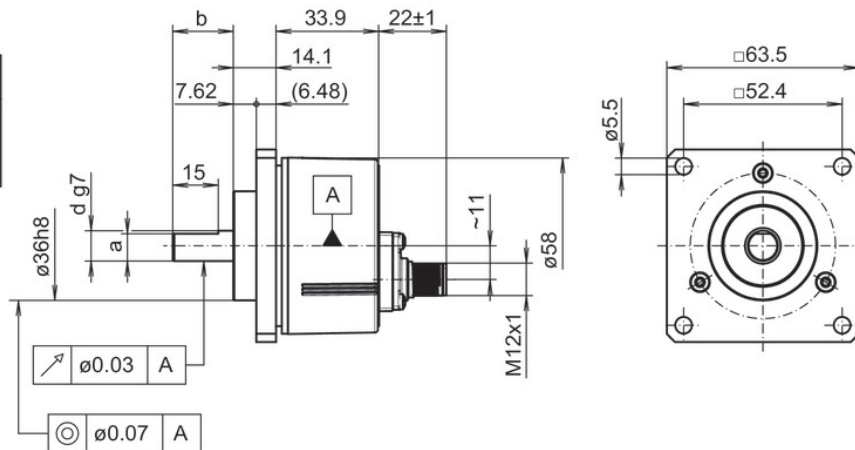
Dimensions

d g7	a	b
ø9.525	8.64	20.32
ø10	9.	20



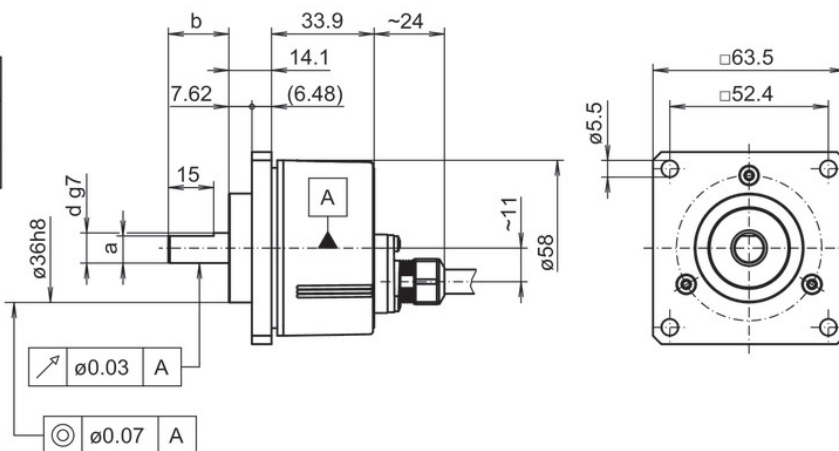
Square flange, flange connector M23, axial

d g7	a	b
ø9.525	8.64	20.32
ø10	9.	20



Square flange, flange connector M12, axial

d g7	a	b
ø9.525	8.64	20.32
ø10	9.	20



Square flange, cable axial

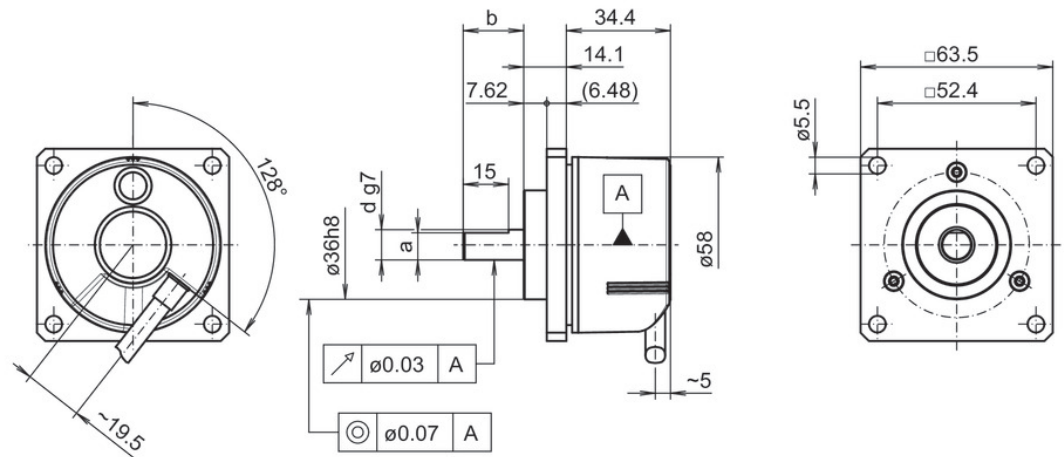
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Dimensions

d g7	a	b
ø9.525	8.64	20.32
ø10	9.	20



Square flange, cable tangential

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Ordering reference

	EIL580	-	S	Q	##	.	#	##	#	.	####	.	A
Product	EIL580												
Shaft type													
Solid shaft			S										
Flange (shaft)													
Square flange 2.5 (63.5 mm), centering collar Ø1.417 x 0.3 (Ø36 x 7.62 mm), square mounting 4 x Ø5.5 / 52.4 x 52.4 mm				Q									
Shaft													
Ø3/8" x 4/5" (Ø9.525 x 20.32 mm), with flat					U3								
Ø10 x 20 mm, with flat					10								
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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Ordering reference

	EIL580	-	S	Q	##	.	#	##	#	.	####	.	A
Pulse number													
100													100
120													120
150													150
200													200
250													250
256													256
300													300
360													360
400													400
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													A

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Accessories

Mounting accessories

11065915	Coupling CPS25 L=19 d1=04/d2=10
11065918	Coupling CPS25 L=19 d1=07/d2=10
11065920	Coupling CPS25 L=19 d1=08/d2=10
11065921	Coupling CPS25 L=19 d1=09/d2=10
11065922	Coupling CPS25 L=19 d1=10/d2=06
11065923	Coupling CPS25 L=19 d1=10/d2=10
11065924	Coupling CPS25 L=19 d1=10/d2=11
11065925	Coupling CPS25 L=19 d1=10/d2=12
10141132	Spring washer coupling D1=6 / D2=10 (Z 121.C01)
10141133	Spring washer coupling D1=10 / D2=10 (Z 121.C03)
11034138	Spring washer coupling D1=10 / D2=16 (Z 121.C04)
11034140	Spring washer coupling D1=10 / D2=14 (Z 121.C06)
11034141	Spring washer coupling D1=10 / D2=12 (Z 121.C07)
11050507	Bellows coupling aluminium/stainless steel D1=06 / D2=10
11101781	Double loops coupling D1=10 / D2=10

Connectors and cables

10127844	Connection cable 2 m shielded with female connector M12, 8-pin, straight (ESG 34FH0200G)
10129332	Connection cable 5 m shielded with female connector M12, 8-pin, straight (ESG 34FH0500G)
10129333	Connection cable 10 m shielded with female connector M12, 8-pin, straight (ESG 34FH1000G)
11053961	Connection cable 2 m shielded with female connector M12, 8-pin, angled (ESW 33FH0200G)
11053962	Connection cable 5 m shielded with female connector M12, 8-pin, angled (ESW 33FH0500G)
10170054	Connection cable 10 m shielded with female connector M12, 8-pin, angled (ESW 33FH1000G)
11095302	Female connector M23, 12-pin, CW, with cable 1 m
11100408	Female connector M23, 12-pin, CW, with cable 2 m
11100430	Female connector M23, 12-pin, CW, with cable 5 m
11100431	Female connector M23, 12-pin, CW, with cable 10 m