

EN580E.IL-T - SinCos

Through hollow shaft

1024 sinewave cycles per revolution

Overview

- Size $\varnothing 58$ mm
- Precise optical sensing
- Output signal level SinCos
- Sinewave cycles per revolution 1024
- High connection flexibility due to flexible M12 connector



Technical data

Technical data - electrical ratings

Voltage supply	5 VDC ± 5 %
Reverse polarity protection	Yes
Short-circuit proof	Yes
Consumption w/o load	≤ 70 mA
Sinewave cycles per revolution	1024
Phase shift	$90^\circ \pm 10^\circ$
Sensing method	Optical
Output frequency	≤ 180 kHz (-3 dB)
Output signals	A+, B+, R+, A-, B-, R-
Output stages	SinCos 1 Vpp
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-4
Approval	UL-Listing: E217823

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
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Technical data - mechanical design

Shaft type	$\varnothing 12$ mm (through hollow shaft) $\varnothing 14$ mm (through hollow shaft)
Motor shaft tolerance	± 0.2 mm (axial offset) ≤ 0.1 mm (radial offset) ≤ 0.1 mm (concentricity)
Protection EN 60529	IP 54 (flange side) IP 65 (housing side)
Operating speed	≤ 6000 rpm (+25 °C)
Starting torque	≤ 0.04 Nm
Material	Housing: aluminium Solid shaft: stainless steel
Operating temperature	-25...+100 °C (see general information)
Relative humidity	95 % non-condensing
Resistance	EN 60068-2-6 Vibration 10 g, 10-2000 Hz EN 60068-2-27 Shock 100 g, 11 ms
Connection	Connector M12, 8-pin, flexible
Weight approx.	300 g

General information

Self-heating correlated to installation and ambient conditions as well as to electronics and supply voltage must be considered for precise thermal dimensioning. Operating the encoder close to the maximum limits requires measuring the real prevailing temperature at the encoder flange.

Terminal assignment

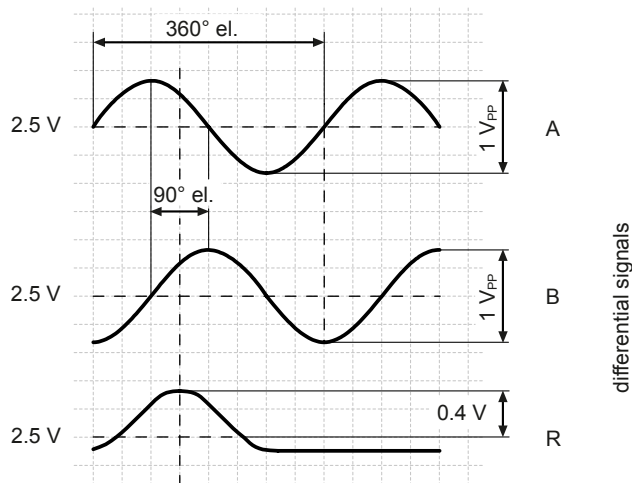
Connector M12, 8-pin

Pin	Assignment
1	0 V
2	+Vs
3	A+
4	A-
5	B+
6	B-
7	R+
8	R-



Output signals

Clockwise rotation when looking at flange.



Output signal level

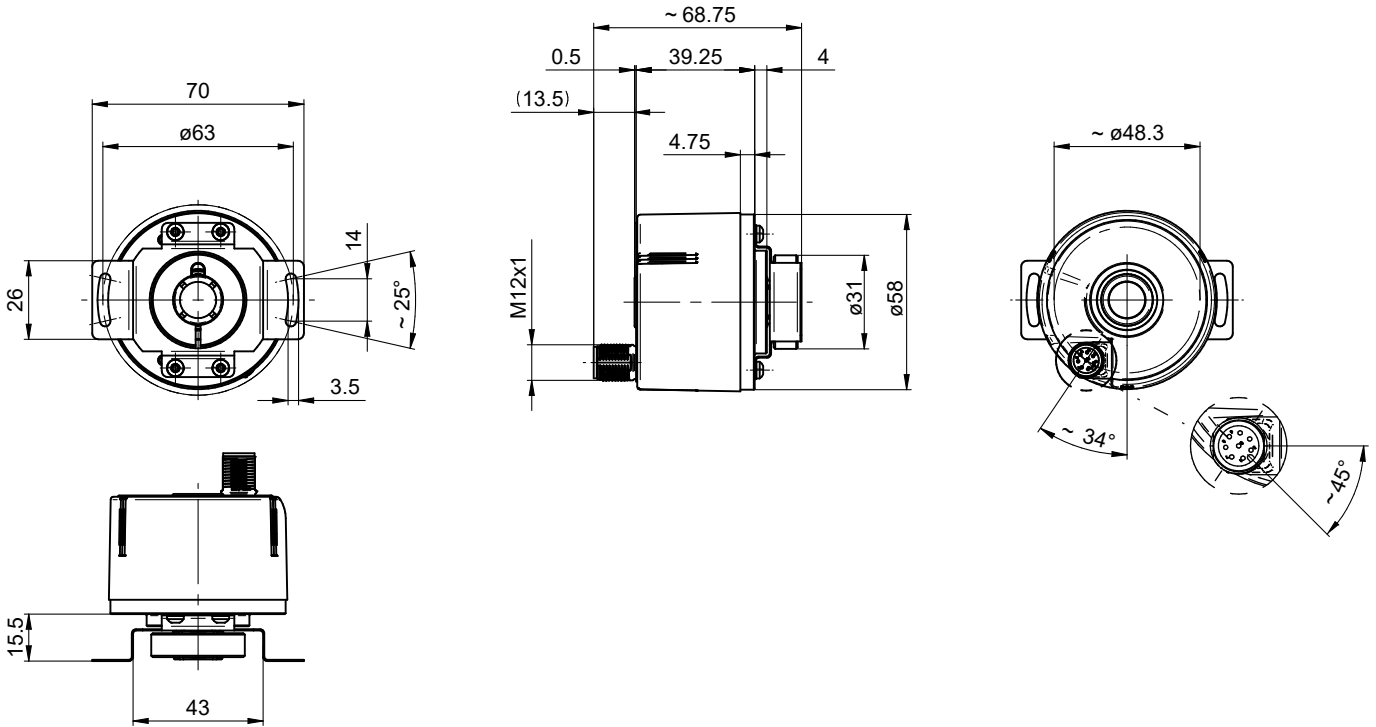
Outputs	Sine
Output amplitude A + B	1 V _{ss} at Z ₀ = 120 Ω
Output amplitude R	Appr. 0.4 V (useable part) at Z ₀ = 120 Ω

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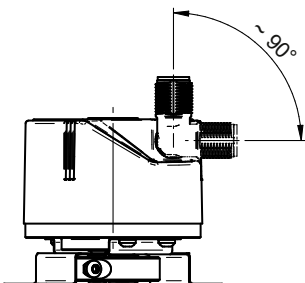
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Dimensions



Through hollow shaft, connector M12



Through hollow shaft, flexible connector M12

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Ordering reference

	EN	580	E	.	I	L	-	T	T	##	.	G	A1	S1	.	01024	.	K
Product	Encoder	EN																
Series	580	580																
Focus	Essential		E															
Function	Incremental				I													
Sensing	Optical					L												
Shaft type	Through hollow shaft							T										
Flange (Hollow shaft)	With stator coupling ø63 mm								T									
Through hollow shaft	ø12 mm, clamping ring, A-side									12								
	ø14 mm, clamping ring, A-side									14								
Protection class	Flange: IP 54, Housing: IP 65											G						
Connection	Connector moveable, M12, 8-pin, male contacts, CCW (A-cod)												A1					
Voltage supply / output	5 VDC ±5 %, sine 1 Vpp, 6 channel													S1				
Sinewave cycles	1024															01024		
Operating temperature	-25...+100°C																	K

Accessories

Mounting accessories

11066083	Torque arm, 1-arm (mounting kit 006)
11073119	Torque arm, 1-arm (mounting kit 021)
11067367	Torque arm, 1-arm (mounting kit 028)
11100198	Stator coupling, 2-armed (mounting kit 046)
11113210	Torque arm, 1-arm (mounting kit 047)
11124300	Torque arm, 1-arm (mounting kit 048)
11155325	Rigid mounting plate, 1-arm (mounting kit 099)