

### Sine wave output Type 5824



- Only 42 mm clearance needed
- Very easy mounting. The encoder is mounted directly on the drive shaft without couplings. This saves up to 30 % cost and 60 % clearance compared to shaft versions
- Many variations
- Temperature and ageing compensation
- Short-circuit proof outputs
- Reverse connection protection for voltage supply
- Sine wave output 1 Vpp
- Resolution up to 5000 ppr
- IP 66
- available as explosion proof zone 2 and 22

#### Mechanical characteristics:

Speed without sealing:	max. 12000 min <sup>-1</sup>
Speed with sealing: <sup>1)</sup>	max. 6000 min <sup>-1</sup>
Rotor moment of inertia:	appr. 6 x 10 <sup>-6</sup> kgm <sup>2</sup>
Starting torque without sealing:	< 0,01 Nm
Starting torque with sealing:	< 0,05 Nm
Weight:	appr. 0,4 kg
Protection acc. to EN 60 529 without sealing:	IP 40
Protection acc. to EN 60 529 with sealing:	IP 66
Working temperature without sealing:	-20 °C ... +85 °C <sup>2)3)</sup>
Working temperature with sealing:	-20 °C ... +80 °C <sup>2)3)</sup>
Operating temperature without sealing:	-20 °C ... +90 °C <sup>2)4)</sup>
Operating temperature with sealing:	-20 °C ... +85 °C <sup>2)4)</sup>
Shaft:	stainless steel
Shock resistance acc. to DIN-IEC 68-2-27	2000 m/s <sup>2</sup> , 6 ms
Vibration resistance acc. to DIN-IEC 68-2-6:	100 m/s <sup>2</sup> , 10...2000Hz

<sup>1)</sup>for continuous operation max. 3000 min<sup>-1</sup> ventilated

<sup>2)</sup> non-condensing

<sup>3)</sup> 70 °C with Cable

<sup>4)</sup> 80 °C with Cable

#### Electrical characteristics:

Output circuit:	Sine wave	Sine wave
	U = 1 Vpp	U = 1 Vpp
Supply voltage:	5 V (±5%)	10 ... 30 V DC
Current consumption	type. 65 mA /	type. 65 mA /
(no load) with inverted signals:	max. 110 mA	max. 110 mA
-3 dB frequency:	≥ 180 kHz	≥ 180 kHz
Signal level channels A/B:	1 Vpp (±20 %)	1 Vpp (±20 %)
Signal level channel 0:	0,1 ... 1,2 V	0,1 ... 1,2 V
Short circuit proof outputs: <sup>1)</sup>	yes	yes
Reverse connection protection at U <sub>B</sub> :	no	yes
Conforms to CE requirements acc. to EN 61000-6-1, EN 61000-6-4 and EN 61000-6-3		

<sup>1)</sup>When supply voltage correctly applied

#### Pulse rates available at short notice:

at voltage-sine wave version  
 500, 512, 600, 625, 720, 745, 750, 762, 800, 900,  
 927, 1000, **1024**, 1250, 1270, 1400, 1500, 1800,  
 2000, **2048**, 2250, 2400, 2500, 3000, 3600, 4000,  
**4096**, 5000

Other pulse rates on request

# Rotary Measuring Technology

## Incremental hollow shaft encoder

### Sine wave output Type 5824

#### Terminal assignment voltage sine wave output:

Signal:	0 V	0 V Sensor <sup>2)</sup>	+U <sub>B</sub>	+U <sub>B</sub> Sensor <sup>2)</sup>	A	$\bar{A}$	B	$\bar{B}$	0	$\bar{0}$	Shield
12 pin plug; Pin:	10	11	12	2	5	6	8	1	3	4	PH <sup>1)</sup>
Colour:	WH 0,5 mm <sup>2</sup>	WH	BN 0,5 mm <sup>2</sup>	BN	GN	YE	GY	PK	BU	RD	

<sup>1)</sup>PH = Shield is attached to connector housing

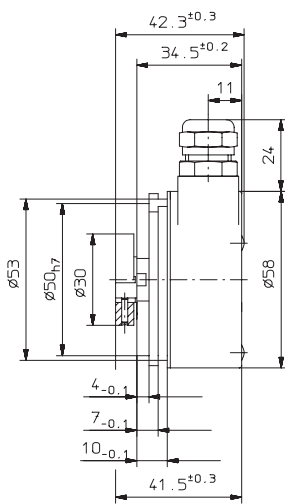
<sup>2)</sup>The sensor cables are connected to the supply voltage internally if long feeder cables are involved they can be used to adjust or control the voltage at the encoder

- If the sensor cables are not in use, they have to be insulated or 0 V<sub>Sensor</sub> has to be connected to 0 V and U<sub>B</sub><sub>Sensor</sub> has to be connected to U<sub>B</sub>

Insulate unused outputs before initial startup.

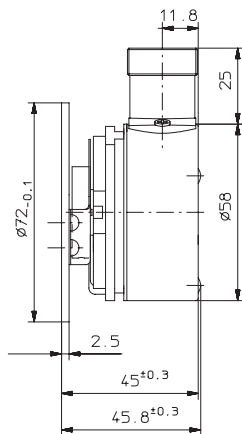
#### Dimensions

#### Flange Type 1

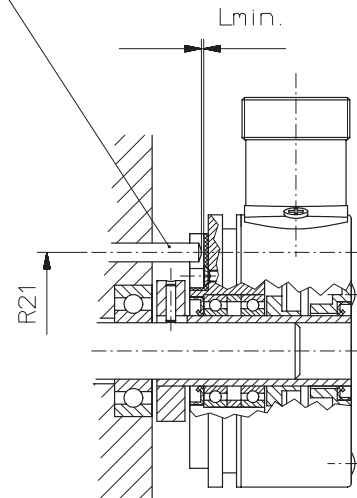


torque stop slot  
Recommendation:  
Cyl.-pin according to DIN 7  $\phi$  4

#### Flange Type 3 with stator coupling



Cyl. pin acc. to DIN 7  $\phi$  4



#### Mounting advice:

1) Do not connect encoder and drive rigidly to one another at shafts and flanges!

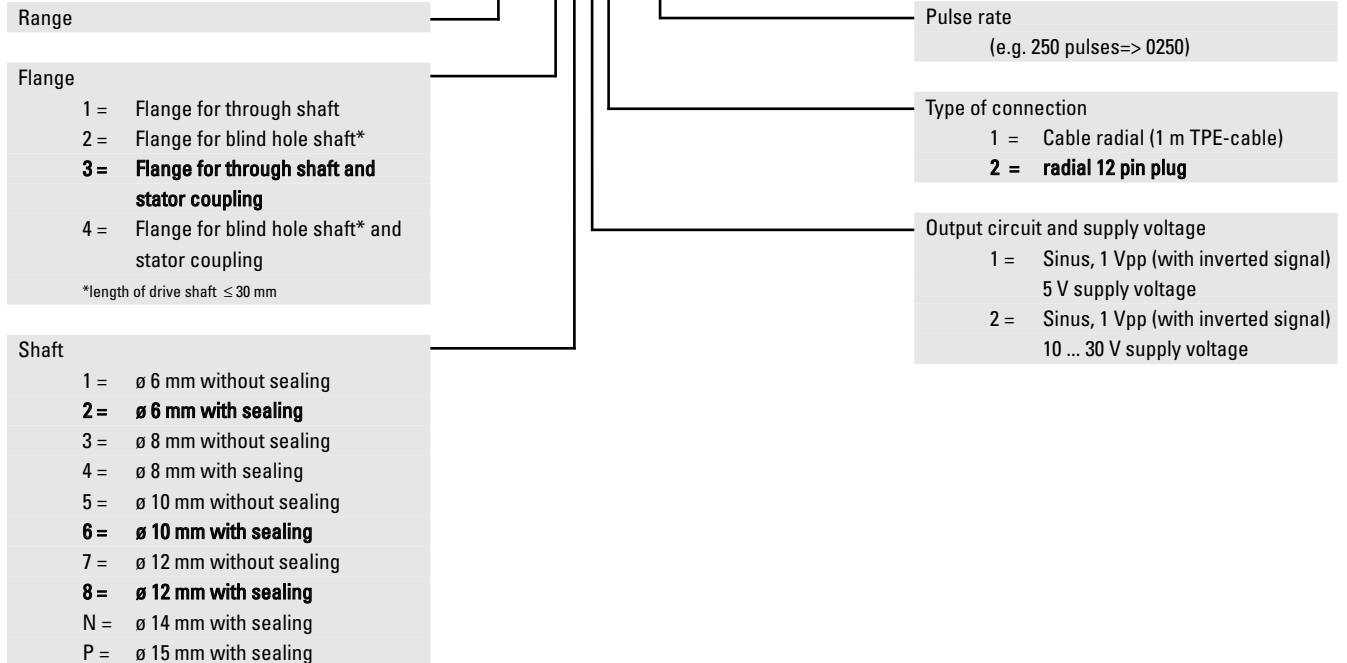
2) To mount a hollow shaft encoder, we recommend to use a torque stop pin that fits into the torque stop slot or a stator coupling.

3) When mounting the encoder ensure that Lmin. is larger than the axial play of the drive.

### Sine wave output Type 5824

Order code:

8.5824.XXXX.XXXX



Rotary Measuring Technology  
Incremental Encoders

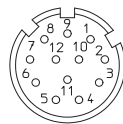
### Accessories

Corresponding mating connector to Type of connection 3 or 5, 12 pin: Art.-No. 8.0000.5012.0000 pin assignment ccw

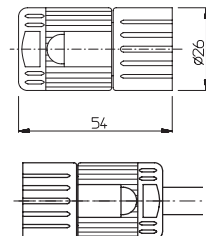
Corresponding mating connector with cable pre-assembled: Art.- No. 8.0000.6101.XXXX (XXXX = length [m])

Set includes Connector typ 8.0000.5012.0000 and cable typ 8.0000.6100.XXXX (Cable PUR 10 x 0,14 mm<sup>2</sup> + 2 x 0,5 mm<sup>2</sup>)

#### PIN allocation:



#### Dimensions:



### Mounting kit for hollow shaft encoder ø 58 mm:

Various mounting variations can be supplied

Delivery includes:

- 1 x cylindric pin with thread  
Ord.-No. 8.0010.4700.0000
- 1 x mounting bracket  
Art.-no. T.035.009
- Screw M3x5  
Ord.-No. N.630.305
- 1 x long torque support slot  
Ord.-No. T.051.672

Complete set:

Ord.-No. 8.0010.4600.0000

#### Stator coupling two wings

– for high dynamic application

Includes:

- 1x coupling two wings
- 2x 2 screws

#### Complete as set:

Order-No.: 8.0010.4D00.0000  
(see page 235 )

#### Tether arm short

Order-No.: 8.0010.4R00.0000  
(see page 238)