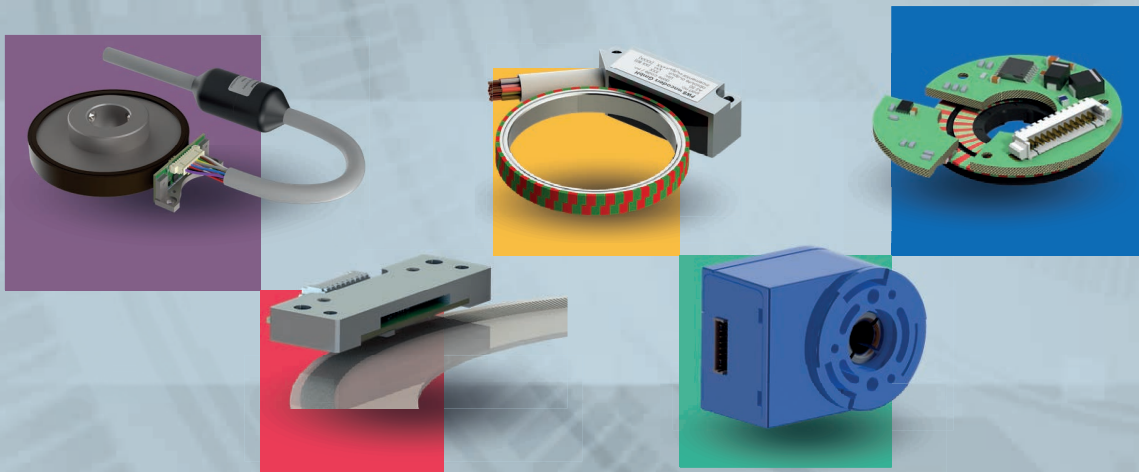

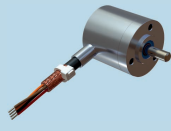


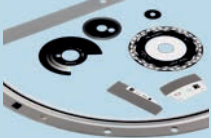
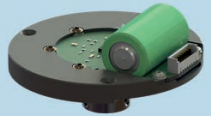

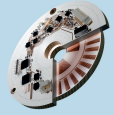




# PRODUCT CATALOG



## Table of contents

»		<b>Hollow shaft encoder</b> optical incremental 3 magnetic absolute 4 magnetic incremental 4
»		<b>Shaft encoder</b> optical incremental 5 magnetic incremental 5
»		<b>KIT encoder systems</b> optical absolute 6 magnetic absolute 6 optical incremental 7
»		<b>Linear encoder</b> optical absolute 7 optical incremental 7 magnetic absolute 7
»		<b>Encoder discs and encoder scales</b> 8
»		<b>Customised solutions</b> 9
»		<b>Areas of application</b> 10
»		<b>Our highlights 25/26</b> 11

# We successfully set production technology & innovation in motion.



Our team

**PWB encoders GmbH** is a German company specialising in the development, production and distribution of high-quality miniature encoders, code wheels, code strips and customised motor encoder systems.

Encoders from PWB provide precise measurement of rotational speed, velocity and position, serving as sensors for motor feedback and linear motion detection. Key application areas include electric drives in medical technology, robotics, packaging, measurement systems and a wide range of automation solutions.



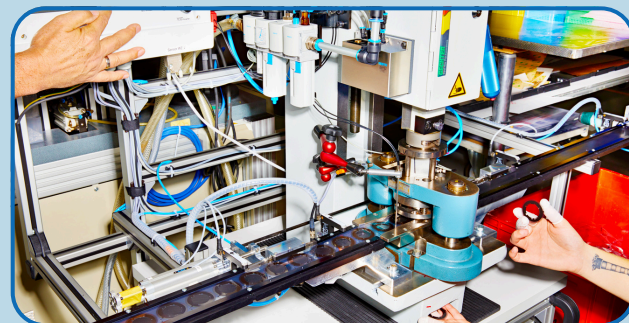
Our encoders

**Our strength** lies in the professional development of both standard and customised products, as well as in our outstanding customer service.

If our standard solutions do not fully meet a specific application, we gladly collaborate with our customers to develop tailor-made products that perfectly align with their requirements and expectations.



Our clean room



Our production

# PWB - precision works better

**Our motivation** is to integrate the latest technologies into the functionality and design of our products – tailored to the needs of diverse industries and applications. In doing so, we contribute to our customers' success, because our long-term success is only possible through theirs.

Personal, expert advice and close, collaborative partnerships form the foundation of our continuous growth.

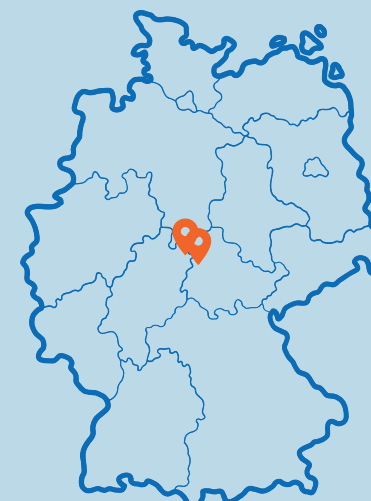
**Made in Germany** – quality without compromise.

At PWB encoders, the highest quality standards are a top priority. All products are developed and manufactured in Germany and are successfully used worldwide. Our processes are continuously reviewed and improved to ensure outstanding product quality and customer service.

We are certified according to DIN ISO 9001:2015 – a standard we meet with conviction.

Founded in 2009, the company is headquartered in Eisenach, Thuringia, with a development office in Berkatal, Hesse.

With the new PWB Innovation Center in Krauthausen near Eisenach, we are creating the foundation for further growth, modern manufacturing processes, and future-oriented development. Covering around 2,200 m<sup>2</sup>, the new site will provide modern production, office, and cleanroom areas that further strengthen our technological expertise. Completion is planned for the end of 2026.



Our locations

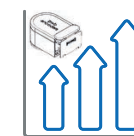


Our new PWB Innovation Center

## About us:



Competent encoder manufacturer for customised solutions



Leading mini encoder manufacturer in Europe



European market leader for polyester film encoder discs



Privately run company



Specialist for high-end technological products

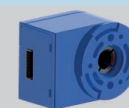
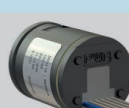

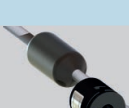
## Hollow shaft encoders

optical incremental

Product image	Product name	Outer diameter (mm)	Resolution (ppr)	Shaft diameter (mm)	Channels	Power supply (VDC)
	AE 30	31	100 - 5000	2.0 - 8.0	2 / 3 / 4 / 6	5
	AE 30 F	31	100 - 5000	2.0 - 8.0	2 / 3 / 4 / 6	5
	AE 30 VX	31	100 - 5000	2.0 - 8.0	4	8 - 30
	EBG 38	38	250 - 4096	3.0 - 10.0	6	5 / 8 - 30
	ME 16	16	36 - 230	1.5 - 3.175	1 / 2	5
	ME 22	22	1 - 360	1.5 - 8.0	2 / 4	5
	MEC 22	22	500 - 2048	1.5 - 8.0	2 / 3	5
	MEC 22 HR	22	2000 - 8192	1.5 - 9.52	2 / 3	5
	MEHR 25 C	25	up to 12.000	4.0 / 6.0	6	5
	MEHR 25 H	25	up to 12.000	4.0 / 6.0	6	5
	MEHR 25 Y01	25	up to 1024	6.0	3	5 / 8 - 30
	MES 25 C	25	250 / 256	4.0 / 6.0	6 Sin / Cos	5
	MES 25 H	25	250 / 256	4.0 - 6.0	6 Sin / Cos	5






## Hollow shaft encoders

magnetic absolute

Product image	Product name	Outer diameter (mm)	Resolution (Bit)	Shaft diameter (mm)	Channels	Power supply (VDC)
	AEM 30	31	up to 36	4.0 - 6.35	SSI, BiSS, SPI	5 / 8 - 24
	MEM 16 M	16	up to 45	1.5 - 3.175	SSI, BiSS, SPI	5
	MEM 22 AE	22	12	2.0 - 8.0	SSI, BiSS, SPI	5 / 8 - 30
	MEM 22 M	22	up to 38	2.0 - 8.0	SSI, BiSS, SPI	5






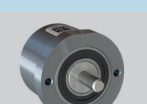
## Hollow shaft encoders

magnetic incremental

Product image	Product name	Outer diameter (mm)	Resolution (ppr)	Shaft diameter (mm)	Channels	Power supply (VDC)
	MEM 16 IE	16	1 - 1024	1.5 - 3.175	2 / 3	5
	MEM 20	22	64	3.0	2	5
	MEM 22 IE	22	1 - 1024	2.0 - 8.0	3 / 6	5 / 8 - 30
	MEM 25 C	25	1 - 1024	2.0 - 6.0	3	5 / 8 - 30
	MEM 25 H	25	1 - 1024	2.0 - 6.0	3	5 / 8 - 30

## Shaft encoders

### optical incremental

Product image	Product name	Outer diameter (mm)	Resolution (ppr)	Shaft diameter (mm)	Channels	Power supply (VDC)
	<b>GEO 24</b>	24	360	4.0	2	8 - 24
	<b>ME 22 S</b>	22	1 - 360	4.0 - 6.0	2	5
	<b>MEHR 25 K</b>	25	up to 12000	4.0 - 6.0	6	5
	<b>MEHR 25 S</b>	25	up to 12000	4.0 - 6.0	6	5
	<b>MES 25 K</b>	25	250 / 256	4.0 - 6.0	6 Sin / Cos	5
	<b>MES 25 S</b>	25	250 / 256	4.0 - 6.0	6 Sin / Cos	5


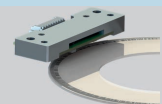
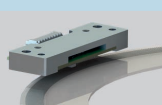
## Shaft encoders

### magnetic incremental

Product image	Product name	Outer diameter (mm)	Resolution (ppr)	Shaft diameter (mm)	Channels	Power supply (VDC)
	<b>MEM 25 K</b>	25	1 - 1024	2.0 - 6.0	3	5 / 8 - 30
	<b>MEM 25 S</b>	25	1 - 1024	2.0 - 6.0	3	5 / 8 - 30


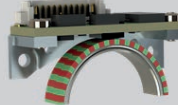


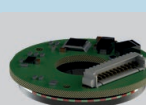
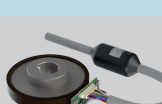

## KIT encoder systems

### optical absolute

Product image	Product name	Outer diameter (mm)	Resolution (Bit)	Shaft diameter (mm)	Channels	Power supply (VDC)
	<b>ABG 26</b>	26	13 / 16 / 18	10	SSI, BiSS, SPI	5
	<b>ABG 69</b>	69	13 / 16 / 18	30	SSI, BiSS, SPI	5
	<b>ABG 138</b>	138	13 / 16 / 18	100	SSI, BiSS, SPI	5

## KIT encoder systems

### magnetic absolute

Product image	Product name	Outer diameter (mm)	Resolution (ppr)	Shaft diameter (mm)	Channels	Power supply (VDC)
	<b>AS 25</b>	24.5	up to 65.536 + 18 Bit	10 / 14 / 20	SSI, BiSS, SPI + 6 incr.	5 / 8 - 30
	<b>AS 25 M</b>	24.5	up to 65.536 + 18 Bit	10 / 14 / 20	SSI, BiSS, SPI + 6 incr.	5
	<b>AS 50</b>	50.7	up to 65.536 + 18 Bit	39.5 / 44.0	SSI, BiSS, SPI + 6 incr.	5 / 8 - 30
	<b>AS 50 M</b>	50.7	up to 65.536 + 18 Bit	39.5 / 44.0	SSI, BiSS, SPI + 6 incr.	5
	<b>ASA 25</b>	34.3	up to 65.536 + 18 Bit	11	SSI, BiSS, SPI + 6 incr.	5
	<b>IMEA 64</b>	64	up to 42 Bit	17,0 / 50,0 / 57,8	SSI, BiSS	5
	<b>WEM 20</b>	20	14 Bit	6	SSI, BiSS	5

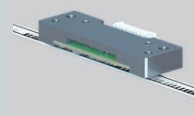
## KIT encoder systems

optical incremental

Product image	Product name	Outer diameter (mm)	Resolution (ppr)	Shaft diameter (mm)	Channels	Power supply (VDC)
	EBG 30	30	up to 102.400	10	6	5
	EBG 132	132	up to 500.000	100	6	5


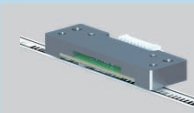
## Linear encoders

optical absolute

Product image	Product name	Measuring length (mm)	Step size (µm)	Channels	Power supply (VDC)
	ABG Head Linear	800	16	SSI, BiSS, SPI	5

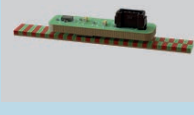
## Linear encoders

optical incremental

Product image	Product name	Measuring length (mm)	Step size (µm)	Channels	Power supply (VDC)
	EBG Head Linear	500	up to 0.8	6	5
	EBS Head Linear	200	20	6 Sin / Cos	5

## Linear encoders

magnetic absolute

Product image	Product name	Measuring length (mm)	Step size (µm)	Channels	Power supply (VDC)
	PALM Head	80	312	SSI, BiSS, SPI	5

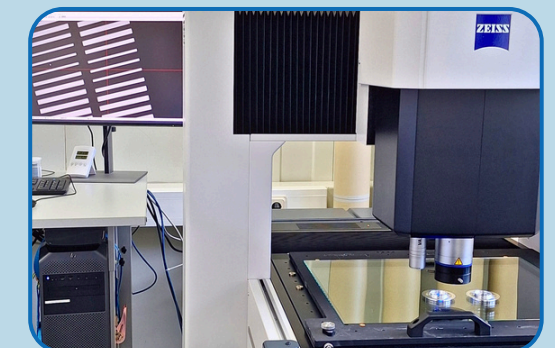
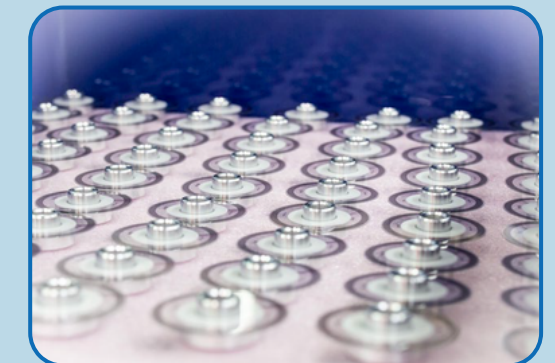
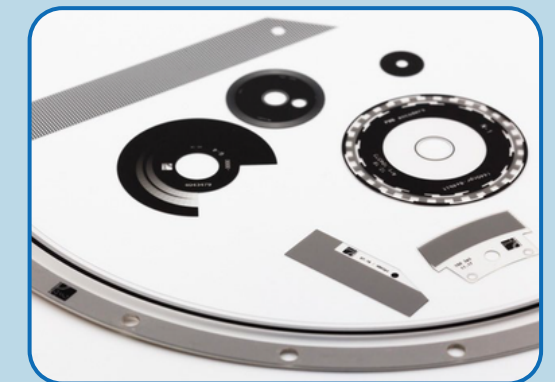
## Production of encoder code wheels and encoder code strips

We manufacture both transmissive and reflective encoder code wheels made from high-quality polyester film and polycarbonate. Our production achieves resolutions of up to **1,270 lines per inch (lpi)** and extremely tight tolerances of **less than 1 µm** for the bar-to-window ratio (optical) and **< 10 µm** for mechanical specifications such as concentricity. These values are a clear reflection of the technological precision and quality standards of our production.

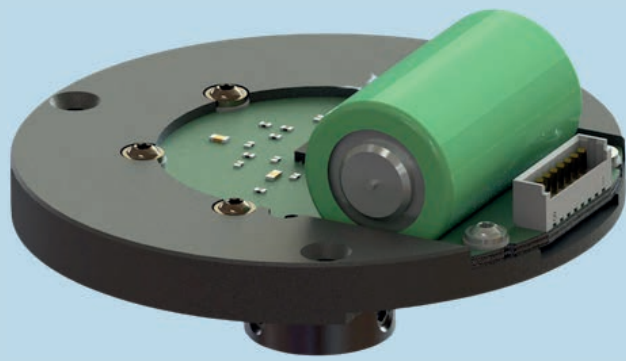
Whether you need a **prototype, small series, or large-scale production**, we manufacture according to your specifications. To simplify installation and broaden application possibilities, our code wheels can be enhanced with **double-sided adhesive films, stabilising discs, or custom hubs**.

### Typical specifications of our encoder discs:

- **Resolution:** up to 1,270 lpi
- **Concentricity:** ≤ 0.015 mm
- **Eccentricity:** ≤ 0.0075 mm
- **Bar-to-window tolerance:** ± 0.002 mm
- **Pitch tolerance:** ± 0.001 mm

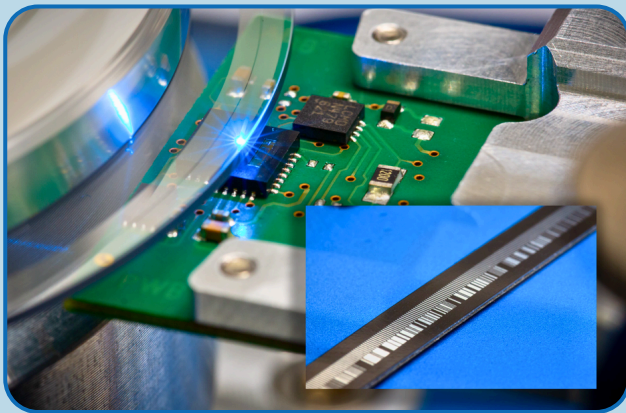


## Customised solutions



### Customised encoders: Tailored Solutions & Dedicated Development

At PWB encoders GmbH, outstanding customer service means more than just answering questions — it's about actively supporting you in turning application-specific challenges into successful encoder solutions. Through close, collaborative dialogue, we help bring your ideas to life.

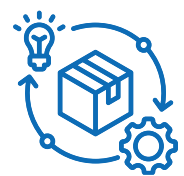


Our comprehensive service approach includes:

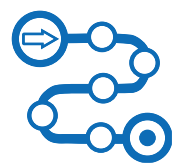
- In-depth needs and problem analysis
- Tailored solution design and product development
- Global logistics and reliable delivery
- After-sales and technical support
- Ongoing optimisation and continuous innovation

We don't just supply encoders — we help shape your success.

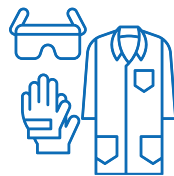
### Our advantages:



In-house development and production



Customised solutions and development projects



Production in air-conditioned clean rooms



Owner of several patents and technical processes



Collegial company structure



REACH and RoHS compliant

## Areas of application

### Benefit from Our Comprehensive Industry Expertise

Our products are in use millions of times across a wide range of industries — from robotics and medical technology to optoelectronics. They are particularly well-suited for applications in handling systems, electric drives, and general mechanical and plant engineering. PWB encoders are trusted wherever precise position and speed measurement or accurate motion control is required.

Years of experience in these demanding application areas are the foundation for the outstanding performance and reliability of PWB products.

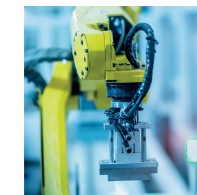
We currently offer solutions for the following sectors (a selection):



AGVs



Industrial robots



Gripping systems



Printing machines



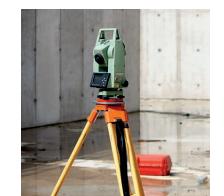
Welding machines



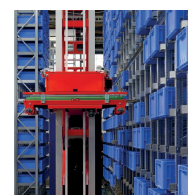
Measuring systems



Winding machines



Surveying



Storage systems



Hexapod



Medical technology



Military Defence



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