



POTENTIOMETERS

FSG- AND SYNCHRO DESIGNS



MAXIMUM PERFORMANCE IN SERIES

OUR POTENTIOMETER PORTFOLIO

FSG's potentiometer series are characterised by their high precision, flexible design and versatility and, depending on the application and design – **Made in Germany.**

2 MAXIMUM FLEXIBILITY

- Potentiometer with oil filling
- Function windings, e.g. sin/cos or 360° sawtooth course
- Axis on both sides
- Special circuits available
- Multiple versions possible
- Clamp or central fastening

3 POSSIBLE APPLICATIONS

- In traction and brake actuators for railway vehicles and in command transmitters for ships
- In rudder and propeller systems for ships
- In actuators for power stations and chemical plants
- In slewing and lifting gear for cranes and excavators
- In wind vanes for meteorological measuring tasks
- As dancer potentiometers in textile and paper machines
- For many measuring tasks in mechanical engineering and medical technology.

4 MAXIMUM COMPATIBILITY

- Housing diameter 22–70 mm
- Angle range any up to max. 360°
- Resistance value up to max. 100 kΩ

1 MAXIMUM FUNCTIONALITY

- Wire winding / conductive plastic element
- Angle limiting or spinning
- Shaft diameter 3 / 6 mm



Electrical and mechanical adaptations are also possible for **small quantities** at any time on request.



info@fsg-sensors.de

POTENTIOMETERS with WIRE WINDING in Synchro Design

- PW609dy
- PW611
- PW613
- PW620
- PW1023d



100 % COMPATIBLE to synchro designs other manufacturers



TYPE OF CONSTRUCTION Ø 22–60 mm



FLEXIBILITY Angles and resistance values freely selectable

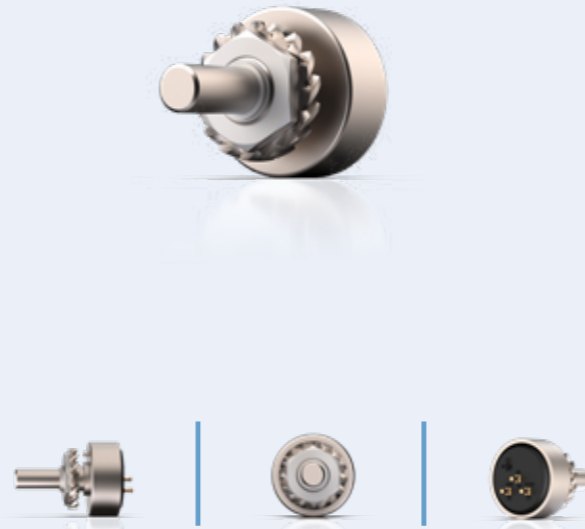
SYNCHRO SIZE 9 DIAMETER 22.2 mm

PW609dy

Miniature Potentiometer with Wire Winding

Precision potentiometers of series PW609dy are designed with a high-resolution constantan-wire winding and are suitable for measured value acquisition in small installation spaces.

- Smallest design
- Housing diameter 22.2 mm
- Central fastening



TECHNICAL DATA

Housing material	aluminum, anodized	Temperature range	-30 °C up to +80 °C
Housing diameter	22.2 mm	Resistance element	caterpillar
IP code of housing up to	IP30	Resistance values	up to 10 kΩ
Shaft diameter	3 / 6 mm	Resistance tolerance	5 %
Adjustment speed	max. 360 U/min	Linearity tolerance	±0.5 %
Torque	0.03 Ncm	Resolution in turns	1033
Active angle	max. 340°	Temperature coefficient	0.0017 % / °C
Multiple execution	up to three times	Capacity	0.5 W
Vibration	5–200 Hz, 10 g	Connection	faston plug / solder-type terminals
Shock	50 g, 6 ms	Fastening	central fixing
Lifetime	10–50 Mio. cycles		



CE – conform

You can find all data sheets on www.fsg-sensors.de

SYNCHRO SIZE 11 DIAMETER 28 mm

PW611

Precision Potentiometer with Wire Winding

The precision potentiometer of the PW611 series is equipped with a high-resolution wire winding. The angle and resistance value can be specified by the user as desired and can also be supplemented by additional short-circuit distances and taps on request.

- Compact design in synchro size 11
- Resistance value and angle range can be set as desired
- Angle measurement up to max. 340°



TECHNICAL DATA

Housing material	aluminum, anodized	Temperature range	-30 °C up to +80 °C
Housing diameter	28 mm	Resistance element	caterpillar
IP code of housing up to	IP30	Resistance values	up to 10 kΩ
Shaft diameter	6 mm	Resistance tolerance	5 %
Adjustment speed	max. 360 U/min	Linearity tolerance	±0.5 %
Torque	0.04 Ncm	Resolution in turns	1369
Active angle	max. 340°	Temperature coefficient	0,0017 % / °C
Multiple execution	triple	Capacity	0.5 W
Vibration	5–200 Hz, 10 g	Connection	faston plug / solder-type terminals
Shock	50 g, 6 ms	Fastening	clamp fixing with synchro flange
Lifetime	10–50 Mio. cycles		

CE – conform

available in following VERSIONS

Type designation	Bearing	Wiper without limit stops
PW611-15d	ball-bearing	for adjustment purposes only
PW611-16d	sintered bearings	for adjustment purposes only



You can find all data sheets on www.fsg-sensors.de

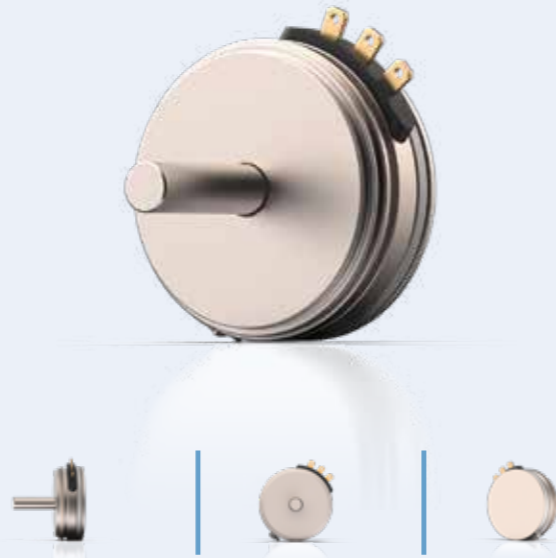
SYNCHRO SIZE 13 DIAMETER 36.5 mm

PW613

Precision Potentiometer with Wire Winding

The precision potentiometer of series PW613 is equipped with a high-resolution wire winding. The angle and resistance value can be specified by the user as desired and can also be supplemented by additional short-circuit distances and taps on request.

- Compact design in synchro size 13
- Angle measurement up to max. 360°



TECHNICAL DATA

Housing material	aluminum, anodized	Lifetime	10–50 Mio. cycles
Housing diameter	36,5 mm	Temperature range	-30 °C up to +80 °C
IP code of housing up to	IP30	Resistance element	caterpillar / ring
Shaft diameter	6 mm	Resistance values	up to 20 kΩ
Adjustment speed	max. 360 U/min	Resistance tolerance	5 % / 2 %
Torque	0,05 Ncm	Linearity tolerance	±0,2 %
Active angle	max. 345° / 360°	Resolution in turns	1851
Multiple execution	sixfold	Temperature coefficient	0,0017 % / °C
Vibration	5–200 Hz, 10 g	Capacity	1 W
Shock	50 g, 6 ms	Connection	faston plug / solder-type terminals
		Fastening	clamp fixing with synchro flange

CE – conform

available in following VERSIONS

Type designation	Bearing	Resistance element	Wiper without limit stops
PW613-15	ball-bearing	caterpillar	no
PW613-15d	ball-bearing	caterpillar	yes
PW613-16	sintered bearings	caterpillar	no
PW613-16d	sintered bearings	caterpillar	yes
PW613-18	ball-bearing	ring	no
PW613-18d	ball-bearing	ring	yes

You can find all data sheets on www.fsg-sensors.de



SYNCHRO SIZE 20 DIAMETER 50.8 mm

PW620

Precision Potentiometer with Wire Winding

The precision potentiometer of series PW620 is equipped with a high-resolution wire winding. The angle and resistance value can be specified by the user as desired and can also be supplemented by additional short-circuit distances and taps on request.

- Compact design in synchro size 20
- Resistance value and angle range can be set as required
- Angle measurement up to max. 360°
- Available with two switches



TECHNICAL DATA

Housing material	aluminum, anodized	Lifetime	10–50 Mio. cycles
Housing diameter	50.8 mm	Temperature range	-30 °C to +80 °C
IP code of housing up to	IP30	Resistance element	caterpillar / ring
Shaft diameter	6 mm	Resistance values	to 20 kΩ
Adjustment speed	max. 360 U/min	Resistance tolerance	5 % / 2 %
Torque	0.05 Ncm	Linearity tolerance	±0.2 %
Active angle	max. 345° / 360°	Resolution in turns	3434
Multiple execution	sixfold	Temperature coefficient	0.00 17 % / °C
Vibration	5–200 Hz, 10 g	Capacity	1 W
Shock	50 g, 6 ms	Connection	faston plug / solder-type terminals
		Fastening	clamp fixing with synchro flange

CE – conform

available in following VERSIONS

Type designation	Bearing	Resistance element	Wiper without limit stops
PW620-15	ball-bearing	caterpillar	no
PW620-15d	ball-bearing	caterpillar	yes
PW620-16	sintered bearings	caterpillar	no
PW620-16d	sintered bearings	caterpillar	yes
PW620-18	ball-bearing	ring	no
PW620-18d	ball-bearing	ring	yes

You can find all data sheets on www.fsg-sensors.de



SYNCHRO SIZE 23 DIAMETER 60 mm

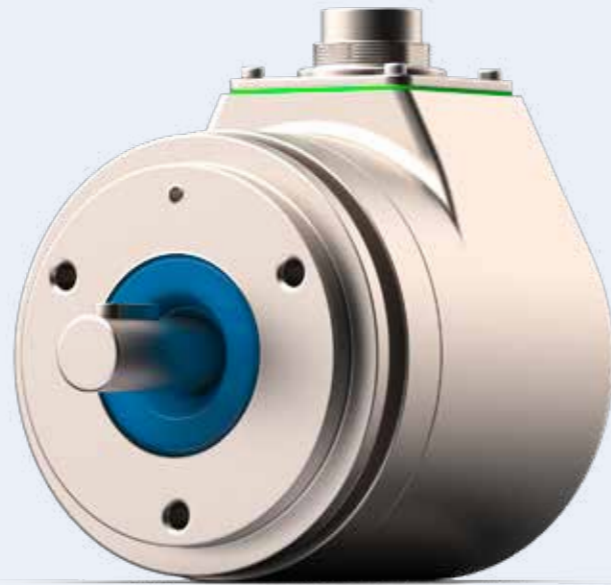
PW1023d

Robust Precision Potentiometer with Wire Winding

The precision potentiometer of series PW1023 is equipped with a high-resolution wire winding.

The angle and resistance value can be specified by the user as desired and can also be supplemented by additional short-circuit distances and taps on request.

- Robust design in synchro size 23
- Resistance value and angle range can be set as required
- Angle measurement up to max. 360°



TECHNICAL DATA

Housing material	aluminum, anodized	Temperature range	-30 °C to +80 °C
Housing diameter	60 mm	Resistance element	ring
IP code of housing up to	IP65	Resistance values	to 20 kΩ
Shaft diameter	10 mm	Resistance tolerance	2 %
Adjustment speed	max. 360 U/min	Linearity tolerance	±0,2 %
Torque	2.5 Ncm	Resolution in turns	max. 2321
Active angle	max. 360°	Temperature coefficient	0,0017 % / °C
Multiple execution	twice	Capacity	2.5 W
Vibration	5–200 Hz, 10 g	Connection	connector / cable
Shock	50 g, 6 ms	Fastening	clamp fixing with synchro flange and 3x M4 to TK 42 mm
Lifetime	10–50 Mio. cycles		



CE – conform

You can find all data sheets on www.fsg-sensors.de

POTENTIOMETERS with WIRE WINDING in FSG-Design

PW0045y
PW45
PW45W10
PW55-01
PW70

TYPE OF CONSTRUCTION
Ø 45–70 mm

FLEXIBILITY
for all angle / resistance values

FSG-DESIGN DIAMETER 45 mm

PW0045y

Low-cost Precision Potentiometer with Wire Winding

The precision potentiometer of series PW0045 is equipped with a high-resolution wire winding. The angle range is fixed at 280° and 345°, only the resistance value can be specified by the user as desired and can also be supplemented by additional short-circuit distances and taps on request.

- Low-cost potentiometer
- Light plastic housing
- Angle measurement for 280° or 345°



TECHNICAL DATA

Housing material	thermoplastic	Temperature range	-30 °C to +80 °C
Housing diameter	45 mm	Resistance element	caterpillar
IP code of housing up to	IP30	Resistance values	to 25 kΩ
Shaft diameter	6 mm	Resistance tolerance	5 %
Adjustment speed	max. 60 U/min	Linearity tolerance	±0.5 %
Torque	0.5 Ncm / 5 Ncm	Resolution in turns	max. 2312
Active angle	max. 280° / 345°	Temperature coefficient	0,0017 % / °C
Multiple execution	simple	Capacity	1.5 W
Vibration	5–200 Hz, 10 g	Connection	solder-type terminals
Shock	50 g, 6 ms	Fastening	central fixing / threaded hole 2x M4
Lifetime	10–50 Mio. cycles		

CE – conform

available in following VERSIONS



Type designation	Torque
PW0045my	0.4–0.5 Ncm
PW0045hy	3–5 Ncm

You can find all data sheets on www.fsg-sensors.de

FSG-DESIGN DIAMETER 45 mm

PW45

Precision Potentiometer with Wire Winding

The precision potentiometer of series PW45 is equipped with a high-resolution wire winding. The angle and resistance value can be specified by the user as desired and can also be supplemented by additional short-circuit distances and taps on request.

- Compact FSG-Design
- Resistance value and angle range can be set as required
- Angle measurement up to max. 360°



TECHNICAL DATA

Housing material	thermoplastic	Temperature range	-30 °C to +80 °C
Housing diameter	45 mm	Resistance element	ring
IP code of housing up to	IP30	Resistance values	to 20 kΩ
Shaft diameter	6 mm	Resistance tolerance	2 %
Adjustment speed	max. 360 U/min	Linearity tolerance	±0,3 %
Torque	0.3 Ncm / 3 Ncm	Resolution in turns	max. 2321
Active angle	max. 360°	Temperature coefficient	0,0017 % / °C
Multiple execution	twice	Capacity	2.5 W
Vibration	5–200 Hz, 10 g	Connection	screw connection / solder connection
Shock	50 g, 6 ms	Fastening	threaded hole 2x M4, distance 32 mm
Lifetime	10–50 Mio. cycles		

CE – conform

available in following VERSIONS



Type designation	Torque	Wiper without limit stops
PW45	3–5 Ncm	no
PW45d	3–5 Ncm	yes

You can find all data sheets on www.fsg-sensors.de

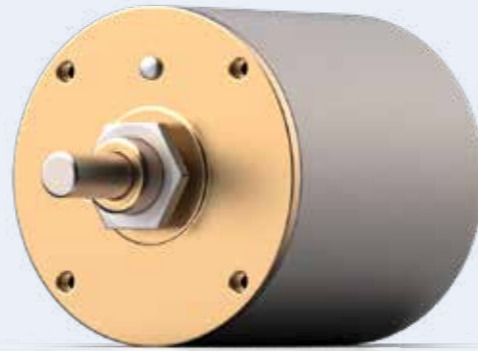
FSG-DESIGN DIAMETER 45 mm

PW45W

10-turn Precision Potentiometer

The multi-turn precision potentiometer of series PW45W10 is equipped with a high-resolution wire winding and can detect up to 10 turns absolutely. The resistance value can be set by the user as desired.

- Multi-turn precision potentiometer
- Resistance value can be set as required
- Absolute angle measurement up to max. 3600°



TECHNICAL DATA

Housing material	brass / thermoplastic	Temperature range	-30 °C to +80 °C
Housing diameter	45 mm	Resistance element	caterpillar
IP code of housing up to	IP30	Resistance values	to 25 kΩ
Shaft diameter	6 mm	Resistance tolerance	5 %
Adjustment speed	max. 360 U/min	Linearity tolerance	±0.1 %
Torque	0.5 Ncm	Resolution in turns	max. 21049
Active angle	max. 1800° / 3600°	Temperature coefficient	0,0017 % / °C
Multiple execution	twice	Capacity	2 W
Vibration	5–200 Hz, 10 g	Connection	solder-type terminals
Shock	50 g, 6 ms	Fastening	central fixing / optional clamp fixing
Lifetime	10–50 Mio. cycles		

CE – conform

available in following VERSIONS



Type designation	Active angle
PW45W3	1800°
PW45W10	3600°

You can find all data sheets on www.fsg-sensors.de

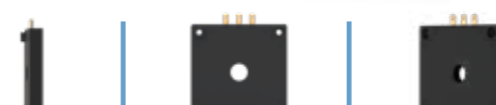
FSG-DESIGN DIAMETER 55 mm

PW55-01

Precision Potentiometer with Wire Winding in flat design

The precision potentiometer of the PW55 series is equipped with a high-resolution wire winding. The angle and resistance value can be specified by the user as desired and can also be supplemented by additional short-circuit distances and taps on request..

- Low-cost potentiometer
- Potentiometer in flat design
- Angle measurement up to max. 350°



TECHNICAL DATA

Housing material	thermoplastic	Temperature range	-30 °C to +80 °C
Housing	55 mm	Resistance element	caterpillar
IP code of housing up to	IP30	Resistance values	to 20 kΩ
Shaft diameter	hollow shaft 6 x 6 mm	Resistance tolerance	5 %
Adjustment speed	max. 60 U/min	Linearity tolerance	±0.5 %
Torque	0.2 Ncm	Resolution in turns	1620
Active angle	max. 350°	Temperature coefficient	0,0017 % / °C
Multiple execution	stackable	Capacity	1.5 W
Vibration	5–200 Hz, 10 g	Connection	faston plug
Shock	50 g, 6 ms	Fastening	4 mounting holes Ø 3.2 mm
Lifetime	10–50 Mio. cycles		

CE – conform

available in following VERSIONS



Type designation	Wiper without limit stops
PW55-01	no
PW55-01d	yes

You can find all data sheets on www.fsg-sensors.de

FSG-DESIGN

DIAMETER 70 mm

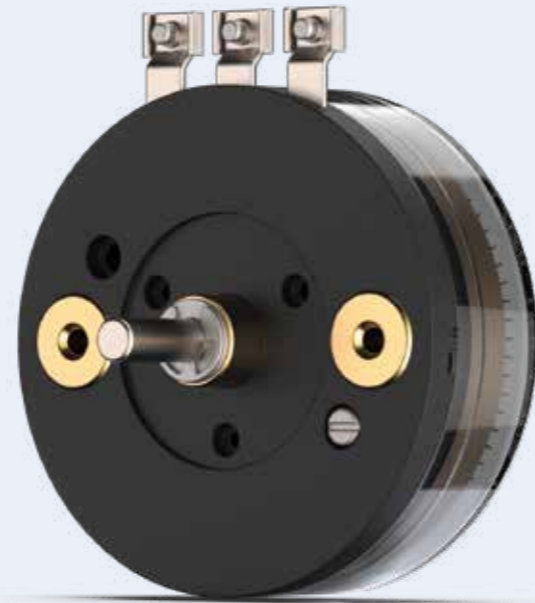
PW70

Precision Potentiometer with Wire Winding

The precision potentiometer of series PW70 is equipped with a high-resolution wire winding.

The angle and resistance value can be specified by the user as desired and can also be supplemented by additional short-circuit distances and taps on request.

- Compact FSG-Design
- Resistance value and angle range can be set as desired
- Angle measurement up to max. 360°
- Available with max. 6 switches



TECHNICAL DATA

Housing material	thermoset	Temperature range	-30 °C to +80 °C
Housing diameter	70 mm	Resistance element	ring
IP code of housing up to	IP30	Resistance values	to 50 kΩ
Shaft diameter	6 mm	Resistance tolerance	2 %
Adjustment speed	max. 360 U/min	Linearity tolerance	±0.15 %
Torque	0.5 Ncm	Resolution in turns	max. 3621
Active angle	max. 360°	Temperature coefficient	0.0017 % / °C
Multiple execution	sixfold	Capacity	6 W
Vibration	5–200 Hz, 10 g	Connection	screw connection / solder-type terminals
Shock	50 g, 6 ms	Fastening	2x M4 at a distance of 50 mm
Lifetime	10–50 Mio. cycles		

CE – conform

available in following
VERSIONS



Type designation	Wiper without limit stops
PW70	no
PW70d	yes

You can find all data sheets on www.fsg-sensors.de



POTENTIOMETERS with CONDUCTIVE PLASTIC in Synchro Design

PK309
PK611
PK613
PK620
PK1023

100% COMPATIBLE to Synchro Designs other manufacturers

TYPE OF CONSTRUCTION
Ø 22–60 mm

FLEXIBILITY for all angle / resistance values

SYNCHRO SIZE 9 DIAMETER 22.2 mm

PK309

Miniature Potentiometer with Conductive Plastic Resistive Element

The precision potentiometer of series PK309 is equipped with a high-resolution resistive element of conductive plastic resistance element.

Due to its design, the sensor is particularly suitable for recording measured values in small installation spaces.



- Smallest potentiometer design
- Resistance element made of high-resolution conductive plastic
- Angle measurement up to max. 3500°



TECHNICAL DATA

Housing material	aluminum, anodized		
Housing diameter	22.2 mm	Temperature range	-30 °C to +80 °C
IP code of housing up to	IP30	Resistance element	conductive plastic
Shaft diameter	3 / 6 mm	Resistance values	to 10 kΩ
Adjustment speed	max. 1000 U/min	Resistance tolerance	±20 %
Torque	0.03 Ncm	Linearity tolerance	±2 % / ±0,5%
Active angle	max. 345°	Resolution	almost infinitely
Multiple execution	triple	Temperature coefficient	0.02 % / °C
Vibration	5–200 Hz, 10 g	Capacity	0.5 W
Shock	50 g, 6 ms	Connection	faston plug / solder-type terminals
Lifetime	10–50 Mio. cycles	Fastening	clamp fixing with synchro flange

CE – conform

available in following VERSIONS



Type designation	Multiple execution	Connection	Wiper without limit stops
PK309-15d	triple	faston plug / solder-type terminals	yes
PK309-25d	no	strands	yes

You can find all data sheets on www.fsg-sensors.de

SYNCHRO SIZE 11 DIAMETER 28 mm

PK611

Precision Potentiometer with Conductive Plastic Resistance Element

The precision potentiometer of series PK611 has a high-resolution resistance element made of conductive plastic.

Due to its small size design the sensor is mainly used in automation.



- Small potentiometer design
- Resistance element made of high-resolution conductive plastic
- Angle measurement up to max. 345°

TECHNICAL DATA

Housing material	aluminum, anodized		
Housing diameter	28 mm	Temperature range	-30 °C to +80 °C
IP code of housing up to	IP30	Resistance element	conductive plastic
Shaft diameter	6 mm	Resistance values	to 10 kΩ
Adjustment speed	max. 1000 U/min	Resistance tolerance	±20 %
Torque	0.04 Ncm	Linearity tolerance	±2 % / ±0,2 %
Active angle	max. 345°	Resolution	almost infinitely
Multiple execution	triple	Temperature coefficient	0.02 % / °C
Vibration	5–200 Hz, 10 g	Capacity	0.5 W
Shock	50 g, 6 ms	Connection	faston plug / solder-type terminals
Lifetime	10–50 Mio. cycles	Fastening	clamp fixing with synchro flange

CE – conform

available in following VERSIONS



Type designation	Wiper without limit stops
PK611	no
PK611-15d	yes

You can find all data sheets on www.fsg-sensors.de

SYNCHRO SIZE 13 DIAMETER 36.5 mm

PK613

Precision Potentiometer with Conductive Plastic Resistance Element

The precision potentiometer of series PK613 has a high-resolution resistance element made of conductive plastic. Due to its compact design the sensor is mainly used in the automation and marine industry.

- Compact Design in synchro size 13
- Resistance element made of high-resolution conductive plastic
- Angle measurement up to max. 352°



TECHNICAL DATA

Housing material	aluminum, anodized	Temperature range	-30 °C to +80 °C
Housing diameter	36.5 mm	Resistance element	conductive plastic
IP code of housing up to	IP30	Resistance values	to 10 kΩ
Shaft diameter	6 mm	Resistance tolerance	±10 %
Adjustment speed	max. 1000 U/min	Linearity tolerance	±1.5 % / ±0.15 %
Torque	0.05 Ncm	Resolution	almost infinitely
Active angle	max. 352°	Temperature coefficient	0.02 % / °C
Multiple execution	sixfold	Capacity	1 W
Vibration	5–200 Hz, 10 g	Connection	faston plug / solder-type terminals
Shock	50 g, 6 ms	Fastening	clamp fixing with synchro flange
Lifetime	10–50 Mio. cycles		

Type designation	Bearing	Wiper without limit stops
PK613-15	ball-bearing	no
PK613-15d	ball-bearing	yes
PK613-16	sintered bearings	no
PK613-16d	sintered bearings	yes

You can find all data sheets on www.fsg-sensors.de

CE – conform

available in following VERSIONS



SYNCHRO SIZE 20 DIAMETER 50.8 mm

PK620

Precision Potentiometer with Conductive Plastic Resistance Element

The precision potentiometer of series PK620 has a high-resolution resistance element made of conductive plastic. Due to its compact size design the sensor is mainly used in the automation and marine industry.

- Compact Design in synchro size 20
- Resistive element made of high-resolution conductive plastic
- Angle measurement up to max. 355°
- Additional switches max. 2



TECHNICAL DATA

Housing material	aluminum, anodized	Temperature range	-30 °C to +80 °C
Housing diameter	50,8 mm	Resistance element	conductive plastic
IP code of housing up to	IP30	Resistance values	to 10 kΩ
Shaft diameter	6 mm	Resistance tolerance	±10 %
Adjustment speed	max. 1000 U/min	Linearity tolerance	±1.5 % / ±0.1 %
Torque	0.05 Ncm	Resolution	almost infinitely
Active angle	max. 355°	Temperature coefficient	0.02 % / °C
Multiple execution	sixfold	Capacity	1 W
Vibration	5–200 Hz, 10 g	Connection	faston plug / solder-type terminals
Shock	50 g, 6 ms	Fastening	clamp fixing with synchro flange
Lifetime	10–50 Mio. cycles		

Type designation	Bearing	Schleifer drehend
PK620-15	ball-bearing	no
PK62015d	ball-bearing	yes
PK620-16	sintered bearings	no
PK620-16d	sintered bearings	yes

You can find all data sheets on www.fsg-sensors.de

CE – conform

available in following VERSIONS



SYNCHRO SIZE 23 DIAMETER 60 mm

PK1023d

Robust precision Potentiometer with Conductive Plastic Resistance Element

The robust precision potentiometer of series PK1023 has a high-resolution resistance element made of conductive plastic. Due to its robust design the sensor is predominantly used in automation and in particularly demanding environmental conditions.

- Robust design in protection class IP65
- Resistance element made of high-resolution conductive plastic
- Angle measurement up to max. 355°



TECHNICAL DATA

Housing material	aluminum, anodized	Temperature range	-30 °C to +80 °C
Housing diameter	60 mm	Resistance element	conductive plastic
IP code of housing up to	IP65	Resistance values	to 10 kΩ
Shaft diameter	6 mm / 10 mm	Resistance tolerance	±10 %
Adjustment speed	max. 1000 U/min	Linearity tolerance	±1.5 % / ±0.1 %
Torque	2.5 Ncm	Resolution in turns	almost infinitely
Active angle	max. 355°	Temperature coefficient	0.02 % / °C
Multiple execution	twice	Capacity	1 W
Vibration	5–200 Hz, 10 g	Connection	connector / cable
Shock	50 g, 6 ms	Fastening	clamp fixing with synchro flange and 3x M4 to TK 42 mm
Lifetime	10–50 Mio. cycles		



CE – conform

You can find all data sheets on www.fsg-sensors.de

OVERVIEW

POTENTIOMETER SERIES

FSG Potentiometer series for you at a glance.

For further specifications in comparison, please feel free to contact us.

	Serie	Active angle max.	Degree of protection max.	Type designation – Wiper without limit stops (d)	Wire winding	Conductive plastic
	PW609dy	340°	IP30		•	–
	PW611	340°	IP30	PW611-15d	•	–
		340°	IP30	PW611-16d	•	–
	PW613	345°	IP30	PW613-15	•	–
		345°	IP30	PW613-16	•	–
		360°	IP30	PW613-18	•	–
	PW620	345°	IP30	PW620-15	•	–
		345°	IP30	PW620-16	•	–
		345°	IP30	PW620-18	•	–
		360°	IP30	PW 620-18d	•	–
	PW1023d	360°	IP65		•	–
	PW0045y	280° / 345°	IP30	PW0045my	•	–
		280° / 345°	IP30	PW0045hy	•	–
	PW45	345°	IP30	PW45	•	–
		360°	IP30	PW45d	•	–
	PW45W	1800°	IP30	PW45W3	•	–
		3600°	IP30	PW45W10	•	–
	PW55-01	350°	IP30	PW55-01	•	–
	PW70	350°	IP30	PW70	•	–
		360°	IP30	PW 70d	•	–
	PK309	345°	IP30		–	•
		345°	IP30		–	•
	PK611	345°	IP30		–	•
	PK613	352°	IP30	PK613-15	–	•
		352°	IP30	PK613-16	–	•
	PK620	355°	IP30	PK620-15	–	•
		355°	IP30	PK620-16	–	•
	PK1023d	355°	IP65		–	•

OVERVIEW

PROTECTIVE HOUSING

To protect against mechanical damage as well as dusty and damp industrial atmospheres, a range of housings are available for all angle of rotary encoders, some with built-in backlash-free gear adapters in protection class IP40 to IP67 and EX protection class. For final storage, most types of housing offer the option of installing cam limit switches with forced opening.



	G90	GS100	GS120	GS150
Gearing	1:1-1:10 backlash-free 1:1-25:1 backlash-free 1:1-125:1 low-backlash gearing	1:1-1:10 backlash-free 1:1-256:1 low-backlash gearing 1:1-256:1 backlash-free	1:1-1:10 backlash-free 1:1-216:1 backlash-free 1:1-1296:1 low-backlash gearing	1:1-1:10 backlash-free 1:1-1296:1 backlash-free
Housing material	aluminum, painted gray RAL7032	aluminum, painted gray RAL7032	aluminum, painted gray RAL7032	aluminum, painted gray RAL7032
Housing diameter	80 x 100 mm	100 mm	120 mm	150 mm
Ip code of housing up to	IP65	IP65, optional IP68	IP65	IP65, optional IP68
Shaft diameter	6 mm	10 / 12 mm	10 mm	12 mm
Shaft bearing	ball-bearing	ball-bearing	ball-bearing	ball-bearing
Shaft material	stainless steel	stainless steel	stainless steel	stainless steel
Torque	1,5 Ncm	1,5 Ncm	1,5 Ncm	4 Ncm
Weight	about 1 kg	about 1,5 kg	about 2,5 kg	about 3-8 kg
Resistance to compression	5-200 Hz, 10 g	5-200 Hz, 10 g	5-200 Hz, 10 g	5-200 Hz, 10 g
Shock	50 g, 6 ms	50 g, 6 ms	50 g, 6 ms	50 g, 6 ms
Temperature range	-30 °C to +80 °C	-30 °C to +80 °C	-30 °C to +80 °C	-30 °C to +80 °C
Connection	max. 2 x M16 x 1,5	max. 2 x M16 x 1,5	max. 2 x M25 x 1,5	max. 2 x M16 x 1,5 / optionally with plug
Additional switches	-	-	max. 14 switches	max. 10 switches

OUR PRODUCT PORTFOLIO KNOWS NO LIMITS, ONLY POSSIBILITIES.

AS VERSATILE AS YOUR REQUIREMENTS – OUR PRODUCT PORTFOLIO

Do you have any questions about our extensive product portfolio or are you looking for a solution for a special application?

No problem – all our product groups can be easily combined with each other and together with our technical support we will develop the optimal solution specifically for your application.

info@fsg-sensors.de



Rotary Encoders



Potentiometers



Inclination Sensors



Draw-Wire Sensors



Cable Drums



Joysticks



Foot Pedals



Wind Sensors

QUALITY & RELIABILITY

WE LEAVE NOTHING TO CHANCE.

When it comes to quality, there are no compromises for FSG – regardless of when and where our devices are in use worldwide. Maximum reliability and seamless readiness for action are our top priority.

We will develop and manufacture all of our products for a long sensor life for every condition.

All series devices go through an extensive 100% test in in-house laboratories and test stands.

In this way we always have full control over the quality process. Our new developments pass a detailed type approval test and are certified by external institutes.



With us you are always on the safe side through:

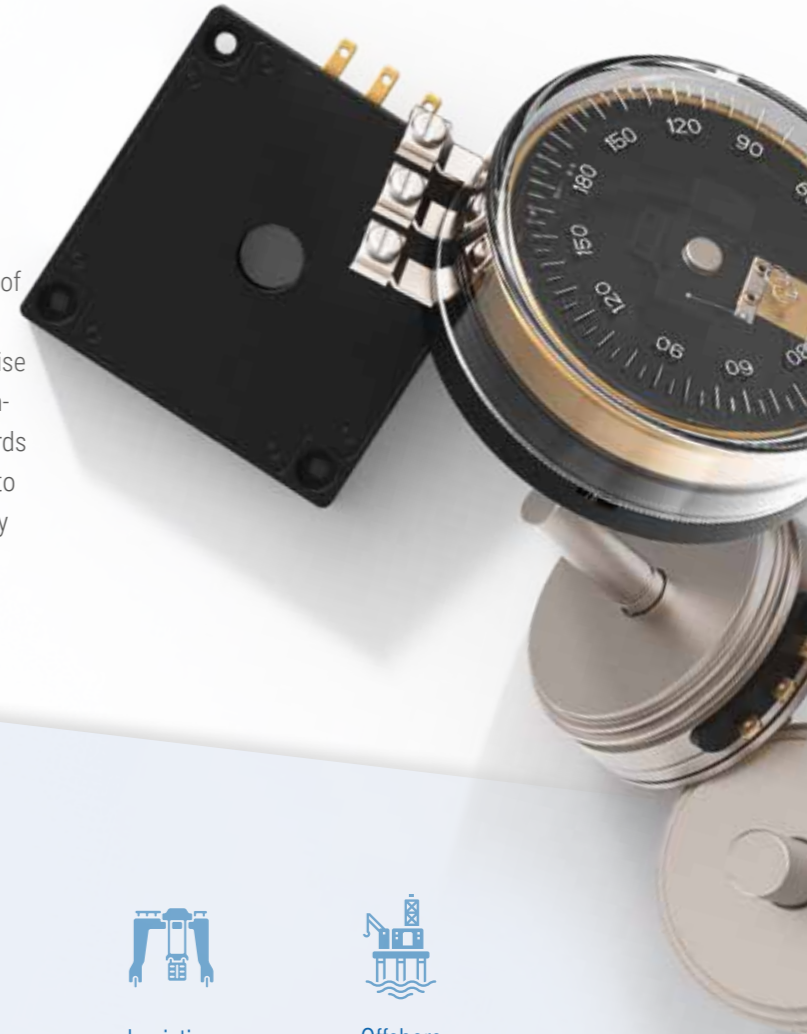


INDUSTRY SOLUTIONS













ANYONE DEVELOPING FOR THE INDUSTRY MUST LEARN FROM THE INDUSTRY.

Every industrial sector has its own language and its own requirements, so there is no one-size-fits-all solution. It is therefore important to us to work with our customers to develop solutions for their individual needs, regardless of which industry they come from.

As a result, FSG has been able to develop trust and expertise in all key industries over the decades. Thanks to unconventional approaches, we have often been able to set standards that many industrial sectors cannot be imagined without to this day. Today our components are trademarks for quality and innovation in many branches of industry.



THE RIGHT SOLUTION FOR EVERY INDUSTRY.

- | | | | | |
|---|---|---|--|---|
| 
Construction machine | 
Ship | 
Rails | 
Logistics | 
Offshore |
| 
Medicine | 
Industry | 
Energy | 
Transport | |
| 
Automation | 
Agricultural | 
Mining | | |



A small selection of our Industry opportunities

We feel at home in every industry.

Therefore, we can answer any question about our products and together we will find solutions to your ideas.

Contact us!

info@fsg-sensors.de

DISTRIBUTION NETWORK

DISTRIBUTION MEANS TRUST. THAT'S WHY WE ONLY TRUST THE BEST.

Through the international orientation of our company and the consistent expansion of new sales structures and opportunities, we offer our global customers a presence close to the market of specialists for measurement and sensor technology from FSG Fernsteuergeräte.

EUROPE

Germany - Headquarters
FERNSTEUERGERÄTE Kurt Oelsch GmbH
 +49 30 6291-1
 sales@fsg-sensors.de
 www.fsg-sensors.de

Finland
FISEG Oy
 +358 50 5726268
 aki.luukkainen@fiseg.fi
 www.fiseg.fi

France
ICA systèmes Motion
 +33 390 226683
 info@icacontact.fr
 www.icacontact.fr

Italy
MILEXIA ITALIA S.p.A.
 +39 24 81900
 info@milexia.it
 www.milexia.com

Netherlands / BEL / LUX
Batenburg Applied Technologies
 +31 10 2928787
 controllers-sensors@batenburg.nl
 www.batenburg-appliedtechnologies.nl

Norway
Elteco AS
 +47 35 562070
 ci@elteco.no
 www.elteco.no

Sweden
Pulsteknik AB
 +46 702277811
 andreas.anselmus@pulsteknik.se
 www.pulsteknik.se

Switzerland
Omni Ray AG
 +41 44 8022737
 m.leemann@omniray.ch
 www.omniray.ch

Spain
Electromediciones Kainos, S.A.U.
 +34 93 4742333
 sballus@kainos.es
 www.kainos.es

Czech Republic
SCHMACHTL CZ spol. s r.o.
 +420 244 001 500
 office@schmachtl.cz
 www.schmachtl.cz

Austria
Schmachtl GmbH
 +43 732 7646-0
 j.petschl@schmachtl.at
 www.schmachtl.at

INTERNATIONAL

North and South America
FSG Sensors Inc.
 +1 207 480-3173
 sales@fsg-sensors.com
 www.fsg-sensors.com

South Africa
Mecosa (Pty) Ltd.
 +27 11 257-6100
 measure@mecosa.co.za
 www.mecosa.co.za

India
Manglam Electricals
 +91 11 23942222
 karn.shanker@manglamelectricals.com
 www.manglamelectricals.com



OUR DAY-TO-DAY BUSINESS: MAKING A DIFFERENCE.

OUR FIVEFOLD PROMISE OF PERFORMANCE

90% depth of production, 100% passion

Due to 90% vertical integration, we can customize our products 100% to your needs.

4 plants, one location: Germany

Every day, over 470 employees ensure that you are satisfied and that „Made in Germany“ continues to stand for quality.

Our standard: customization

FSG products are not only excellent, they are always perfectly designed and customized for your requirements.

75 years of innovation is tradition

We will develop measurement sensors that are reliable and perfectly matched to their intended use. Our solutions often become industry innovations – and have been for 75 years.

Always where our customers are

FSG is represented internationally and we guarantee you the best support, no matter when and where you need us.

IMPRINT

Publisher
 FERNSTEUERGERÄTE Kurt Oelsch GmbH
 Jahnstraße 68 + 70, 12347 Berlin

Editing and responsible for content
 Carsten Schulz (gemäß § 18 Abs. 2 MStV)

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 **BERLIN (HQ)**

Fernsteuergeräte
Kurt Oelsch GmbH
Jahnstraße 68 + 70
12347 Berlin

fon +49 30 6291-1
fax +49 30 6291-277

info@fsg-sensors.de
www.fsg-sensors.de

