

# FOOT PEDALS

## DESIGNS AND VERSIONS



# MAXIMUM PERFORMANCE IN SERIES

## OUR FOOT PEDAL PROGRAM

FSG foot pedal encoders are characterised by a modular, extremely robust and, above all, flat design. Wear-free, magnetic measuring systems are used for the analogue or digital signal output, which are designed redundantly for safety-relevant applications. The main areas of application are construction machinery, stacker cranes and special vehicles in logistics and transportation, as well as aerial work platforms. – **Made in Germany**

### 2 MAXIMUM FLEXIBILITY

- Flat design for low installation depth
- Actuating force up to 150 N
- Optional: additional lever for manual adjustment

### 1 MAXIMUM FUNCTIONALITY

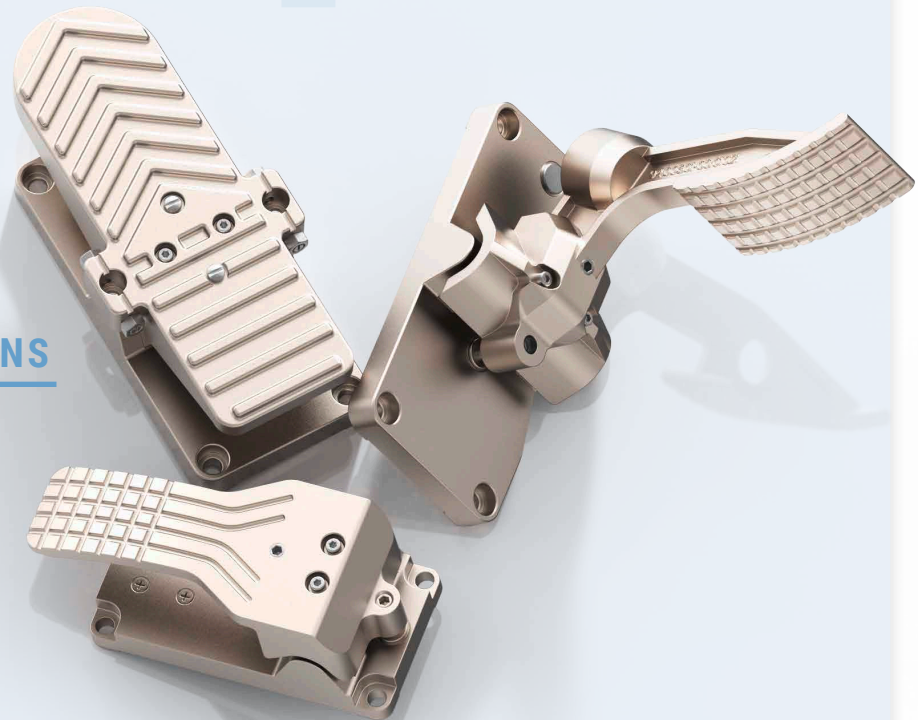
- Wear-free magnetic measurement
- Robust metal housing with high IP protection rating
- Redundant measuring system, suitable for safety relevant applications

### 3 POSSIBLE APPLICATIONS

- Crane and excavator equipment
- Construction and drilling vehicles
- Wheel loaders and lifting platforms
- Forklifts and stacker cranes

### 4 MAXIMUM COMPATIBILITY

- 4–20 mA
- 0–10 V
- CAN / CANopen / CANopen-safety



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



[info@fsg-sensors.de](mailto:info@fsg-sensors.de)



## FOOT PEDALS

Version

# ACCELERATOR PEDALS

FS-G-(KD)  
FS-G-ZF



SPACE SAVING  
due to flat structure



ROBUST  
CONSTRUCTION  
for extreme environments



SAFETY

**SIL**  
IEC 61508

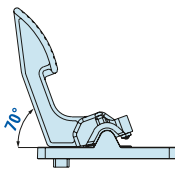
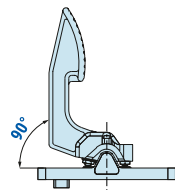
**PL**  
EN 13849

ACCELERATOR PEDALS

# FS-G-(KD)

Classic accelerator pedal for use in demanding environments

- Designed for extreme operating conditions
- Mounting position usually overhead, i.e. as hanging pedal
- Optionally with kick-down functionality (KD)



## TECHNICAL DATA

Housing size	91 x 181 mm	Weight	1050 g
Housing material	Cast aluminum	Measuring system	magnetic, redundant
IP code of housing up to	IP67	Signal output	analogue, digital
Fastening	4 x Ø 8,5	Signal output Current	3-wire technology
Pedal angles	20°	Maximum load current	600 Ω
Actuating force	11–29 N	Supply	18–36 V DC
Temperature range	-30 °C to +80 °C	Current consumption	< 80 mA
Shock	50 g, 6 ms	Test voltage	500 V, 50 Hz, 1 min
Vibration	4 g Sinus, 5–200 Hz	Immunity standard	EN 61 000-6-2
Connection	Plug / cable	Emission standard	EN 61 000-6-4

CE – conform

**SIL**  
IEC 61508

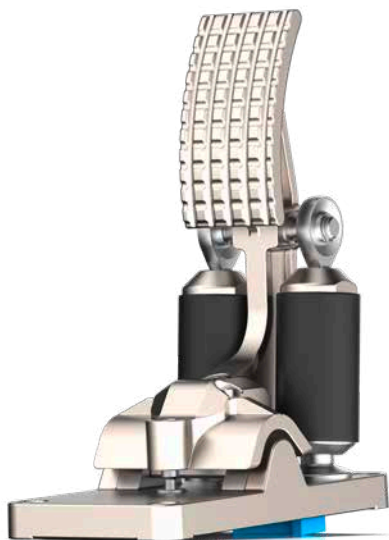
**PL**  
EN 13849

available in following  
**VERSIONS**



Type designation	Signal output
<b>FS-G-(KD)-2-i</b>	2 x 4–20 mA
<b>FS-G-(KD)-CAN</b>	CANopen

You can find all data sheets on [www.fsg-sensors.de](http://www.fsg-sensors.de).



## ACCELERATOR PEDALS

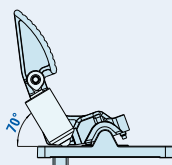
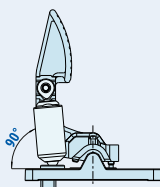
## FS-G-ZF

Accelerator pedal with additional springs for use in demanding environments

- Designed for extreme operating conditions
- Mounting position usually overhead, i.e. as suspended pedal
- With additional spring for high actuating forces (ZF)



## TECHNICAL DATA



Housing size	91 x 181 mm	Weight	1250 g
Housing material	Cast aluminum	Measuring system	magnetic, redundant
IP code of housing up to	IP67	Signal output	analogue, digital
Fastening	4 x Ø 8,5	Signal output Current	3-wire technology
Pedal angles	20°	Maximum load current	600 Ω
Actuating force	50–160 N	Supply	18–36 V DC
Temperature range	-30 °C to +80 °C	Current consumption	< 80 mA
Shock	50 g, 6 ms	Test voltage	500 V, 50 Hz, 1 min
Vibration	4 g Sinus, 5–200 Hz	Immunity standard	EN 61 000-6-2
Connection	Plug / cable	Emission standard	EN 61 000-6-4

CE – conform

**SIL**  
IEC 61508

**PL**  
EN 13849

available in following  
**VERSIONS**



Type designation	Signal output
<b>FS-G-ZF-2-i</b>	2 x 4–20 mA
<b>FS-G-ZF-CAN</b>	CANopen

You can find all data sheets  
on [www.fsg-sensors.de](http://www.fsg-sensors.de).



## FOOT PEDALS

Version

# SINGLE PEDALS



SPACE SAVING  
due to flat structure



ROBUST  
CONSTRUCTION  
for extreme environments



SAFETY

**SIL**  
IEC 61508

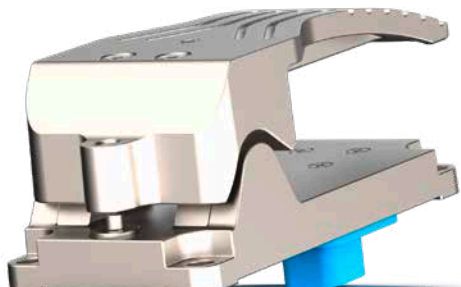
**PL**  
EN 13849

- FS-S
- FS-P
- FS-P-L

SINGLE PEDAL

## FS-S

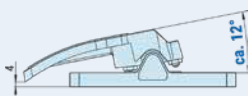
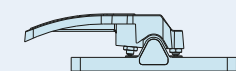
## Robust pedal in compact design



- Small housing design
- Small, angled foot pedal
- Inexpensive design in robust housing



## TECHNICAL DATA



Housing size	76 x 181 mm	Weight	900 g
Housing material	Cast aluminum	Measuring system	magnetic, redundant
IP code of housing up to	IP67	Signal output	analogue, digital
Fastening	4 x Ø 8,5	Signal output Current	3-wire technology
Pedal angles	32°	Maximum load current	600 Ω
Actuating force	20–34 N	Supply	18–36 V DC
Temperature range	-30 °C to +80 °C	Current consumption	< 80 mA
Shock	50 g, 6 ms	Test voltage	500 V, 50 Hz, 1 min
Vibration	4 g Sinus, 5–200 Hz	Immunity standard	EN 61 000-6-2
Connection	Plug / cable	Emission standard	EN 61 000-6-4

CE – conform

SIL  
IEC 61508PL  
EN 13849available in following  
VERSIONS

Type designation	Signal output
<b>FS-S-2-i</b>	2 x 4–20 mA
<b>FS-S-CAN</b>	CANopen

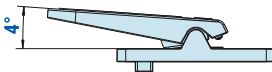
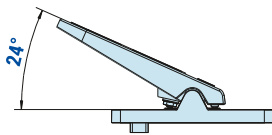
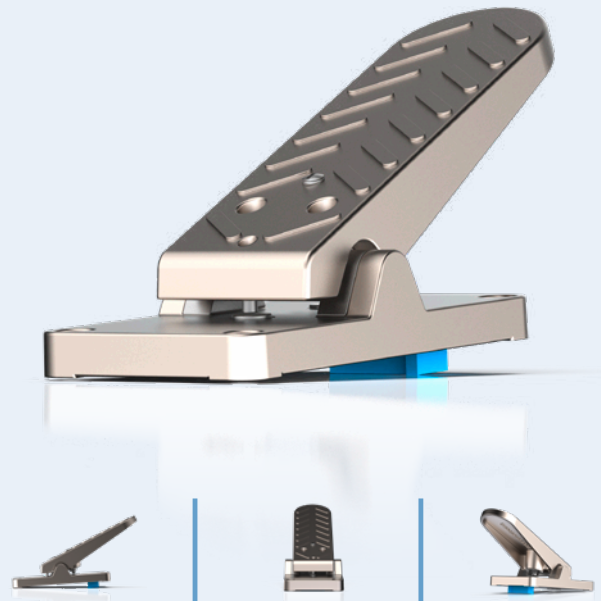
You can find all data sheets  
on [www.fsg-sensors.de](http://www.fsg-sensors.de).

SINGLE PEDAL

# FS-P

## Universal foot pedal with large tread surface

- Classic straight foot pedal
- Optionally with sheet metal pedal and rubber cover
- Optional additional mechanical switch
- Optionally with additional spring for heavy operation



### TECHNICAL DATA

Housing size	91 x 181 mm	Weight	1150 g
Housing material	Cast aluminum	Measuring system	magnetic, redundant
IP code of housing up to	IP67	Signal output	analogue, digital
Fastening	4 x Ø 8,5	Signal output Current	3-wire technology
Pedal angles	20°	Maximum load current	600 Ω
Actuating force	15–45 N	Supply	18–36 V DC
Temperature range	-30 °C to +80 °C	Current consumption	< 80 mA
Shock	50 g, 6 ms	Test voltage	500 V, 50 Hz, 1 min
Vibration	4 g Sinus, 5–200 Hz	Immunity standard	EN 61 000-6-2
Connection	Plug / cable	Emission standard	EN 61 000-6-4

CE – conform

**SIL**  
IEC 61508

**PL**  
EN 13849

available in following  
**VERSIONS**



Type designation	Signal output
<b>FS-P-2-i</b>	2x 4–20 mA
<b>FS-P-CAN</b>	CANopen

You can find all data sheets on [www.fsg-sensors.de](http://www.fsg-sensors.de).





SINGLE PEDAL

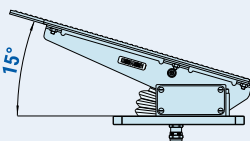
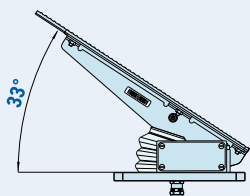
# FS-P-L

Foot pedal with rubber coating for a safe grip

- Lightweight design with sheet metal pedal and rubber cover
- Optionally with sensor element on tread for safety request



## TECHNICAL DATA



Housing size	100 x 150 mm	Weight	1200 g
Housing material	Cast aluminum	Measuring system	magnetic, redundant
IP code of housing up to	IP67	Signal output	analogue
Fastening	4 x Ø 7	Signal output Current	3-wire technology
Pedal angles	18°	Maximum load current	600 Ω
Actuating force	20–42 N	Supply	18–36 V DC
Temperature range	-30 °C to +80 °C	Current consumption	< 80 mA
Shock	50 g, 6 ms	Test voltage	500 V, 50 Hz, 1 min
Vibration	4 g Sinus, 5–200 Hz	Immunity standard	EN 61 000-6-2
Connection	Plug / cable	Emission standard	EN 61 000-6-4

CE – conform

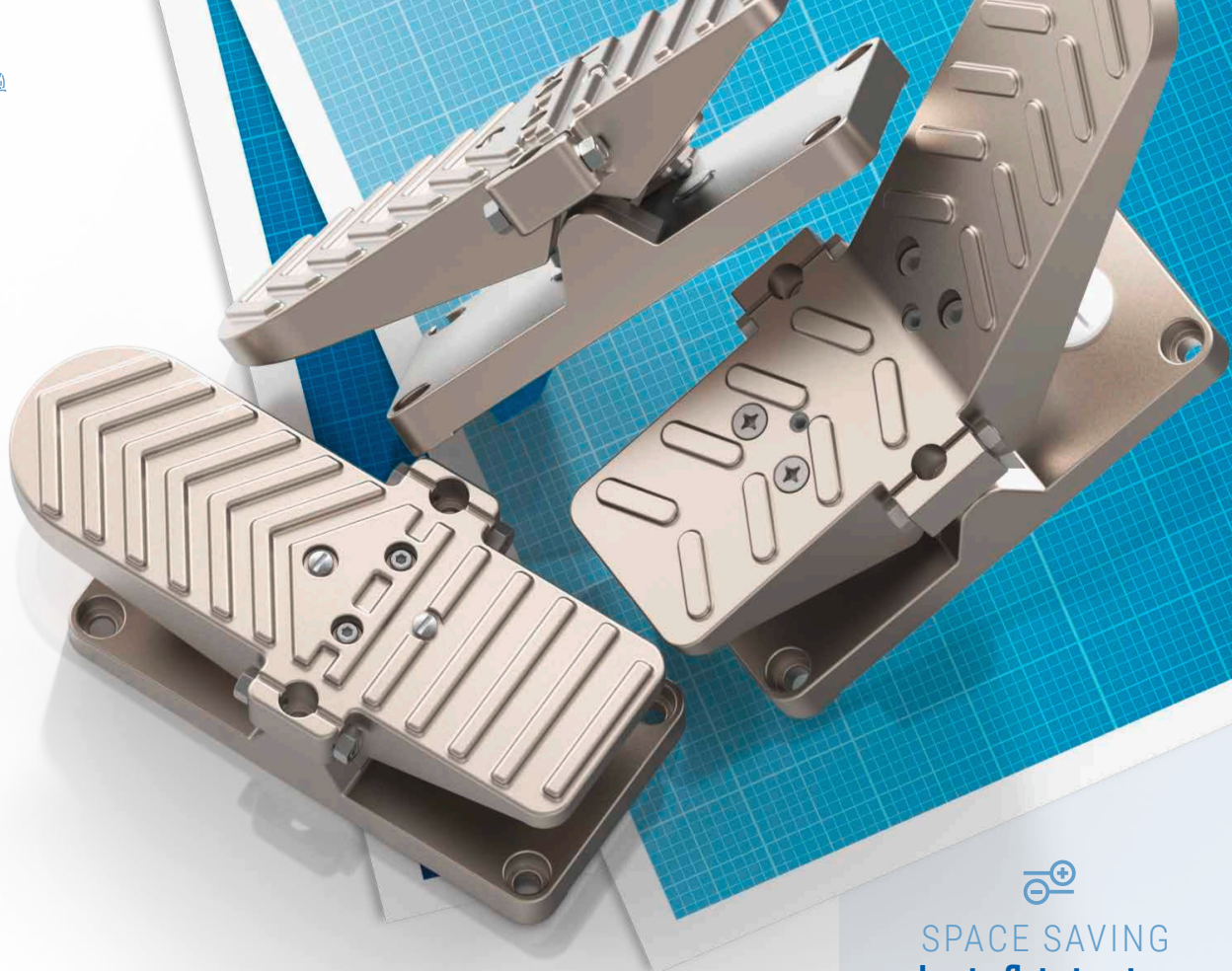
**SIL**  
IEC 61508**PL**  
EN 13849

available in following  
**VERSIONS**



Type designation	Signal output
<b>FS-P-L-2-i</b>	2x4–20 mA
<b>FS-P-L-u</b>	0–10VDC

You can find all data sheets  
on [www.fsg-sensors.de](http://www.fsg-sensors.de).



# FOOT PEDALS

## Version ROCKER PEDALS



SPACE SAVING  
due to flat structure



ROBUST  
CONSTRUCTION  
for extreme environments



SAFETY

**SIL**  
IEC 61508

**PL**  
EN 13849

FS-W  
FS-W1

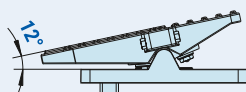
## ROCKER PEDALS

## FS-W

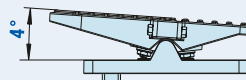
## Foot pedal as rocker with large pedal angle



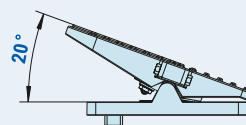
- Classic rocker pedal
- Optionally with lever for manual adjustment



+100%



0%



## TECHNICAL DATA

Housing size 91 x 181 mm

Housing material Cast aluminum

IP code of housing up to IP67

Fastening 4 x Ø 8,5

Pedal angles ±16°

Actuating force 18–47 N

Temperature range -30 °C to +80 °C

Shock 50 g, 6 ms

Vibration 4 g Sinus, 5–200 Hz

Connection Plug / cable

Weight 1450 g

Measuring system magnetic, redundant

Signal output analogue, digital

Signal output Current 3-wire technology

Maximum load current 600 Ω

Supply 18–36 V DC

Current consumption &lt; 80 mA

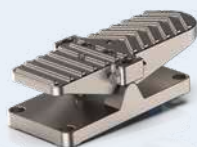
Test voltage 500 V, 50 Hz, 1 min

Immunity standard EN 61 000-6-2

Emission standard EN 61 000-6-4

CE – conform


 SIL  
IEC 61508


 PL  
EN 13849
available in following  
VERSIONS

Type designation

Signal output

FS-W-2-i

2 x 4–20 mA

FS-W-u

0–10 VDC

FS-W-CAN

CANopen

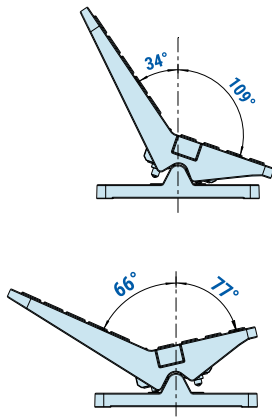
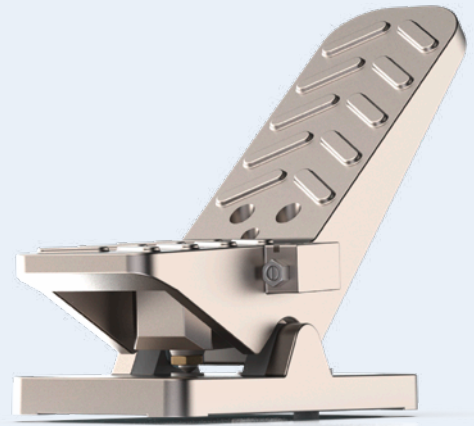
You can find all data sheets  
on [www.fsg-sensors.de](http://www.fsg-sensors.de).

ROCKER PEDALS

# FS-W1

Rocker pedal with high angular radius  
(for special use)

- Designed for extreme operating conditions
- Optionally with lever for manual adjustment



## TECHNICAL DATA

Housing size	91 x 181 mm	Weight	1900 g
Housing material	Cast aluminum	Measuring system	magnetic, redundant
IP code of housing up to	IP67	Signal output	analogue, digital
Fastening	4 x Ø 8,5	Signal output Current	3-wire technology
Pedal angles	±16°	Maximum load current	600 Ω
Actuating force	22–41 N	Supply	18–36 V DC
Temperature range	-30 °C to +80 °C	Current consumption	< 80 mA
Shock	50 g, 6 ms	Test voltage	500 V, 50 Hz, 1 min
Vibration	4 g Sinus, 5–200 Hz	Immunity standard	EN 61 000-6-2
Connection	Plug / cable	Emission standard	EN 61 000-6-4

CE – conform

**SIL**  
IEC 61508

**PL**  
EN 13849

available in following  
**VERSIONS**



Type designation	Signal output
<b>FS-W-1-2-i</b>	2x 4–20 mA
<b>FS-W-1-u</b>	0–10 V DC
<b>FS-W-1-CAN</b>	CANopen








You can find all data sheets  
on [www.fsg-sensors.de](http://www.fsg-sensors.de).

# OVERVIEW

## FOOT PEDALS

### FSG Foot Pedal Versions for you at a glance.

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

	Version	Current output	Voltage output	Bus output	Type designation	Type of pedal	Actuating angle	Actuating force	Size of housing	Weight	IP Code	SIL / PL
	FS-G-(KD)	•			FS-G-(KD)-2-i	Accelerator pedal	20°	11–29 N	91 x 181 mm	1000 g	IP67	•
					FS-G-(KD)-CAN	Accelerator pedal	20°	11–29 N	91 x 181 mm	1000 g	IP67	•
	FS-G-ZF	•			FS-G-ZF-2-i	Accelerator pedal	20°	50–160 N	91 x 181 mm	1100 g	IP67	•
					FS-G-ZF-CAN	Accelerator pedal	20°	50–160 N	91 x 181 mm	1100 g	IP67	•
	FS-S	•			FS-S-2-i	Single pedal	12°	20–34 N	76 x 181 mm	1000 g	IP67	•
					FS-S-CAN	Single pedal	12°	20–34 N	76 x 181 mm	1000 g	IP67	•
	FS-P	•			FS-P-2-i	Single pedal	20°	15–45 N	91 x 181 mm	1000 g	IP67	•
					FS-P-CAN	Single pedal	20°	15–45 N	91 x 181 mm	1000 g	IP67	•
	FS-P-L	•			FS-P-L-2-i	Single pedal	18°	20–42 N	100 x 150 mm	1200 g	IP67	•
					FS-P-L-u	Single pedal	18°	20–42 N	100 x 150 mm	1200 g	IP67	•
	FS-W	•			FS-W-2-i	Rocker pedal	32°	18–47 N	91 x 181 mm	1300 g	IP67	•
					FS-W-u	Rocker pedal	32°	18–47 N	91 x 181 mm	1300 g	IP67	•
					FS-W-CAN	Rocker pedal	32°	18–47 N	91 x 181 mm	1300 g	IP67	•
	FS-W1	•			FS-W-1-2-i	Rocker pedal	±16°	22–41 N	91 x 181 mm	1900 g	IP67	•
					FS-W-1-u	Rocker pedal	±16°	22–41 N	91 x 181 mm	1900 g	IP67	•
					FS-W-1-CAN	Rocker pedal	±16°	22–41 N	91 x 181 mm	1900 g	IP67	•

# 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](mailto: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 requirements, 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



Automation



**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](mailto: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.

## GERMANY

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# 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.



**Our competence – for your satisfaction.**

*Together we will find the sensor solution that is specially tailored to your needs.*

*I look forward to your ideas and visions.*

**S. KÖNIG SALES MANAGER**

[info@fsg-sensors.de](mailto:info@fsg-sensors.de)





WE  
MEASURE  
CONTROL  
REGULATE  
IT

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