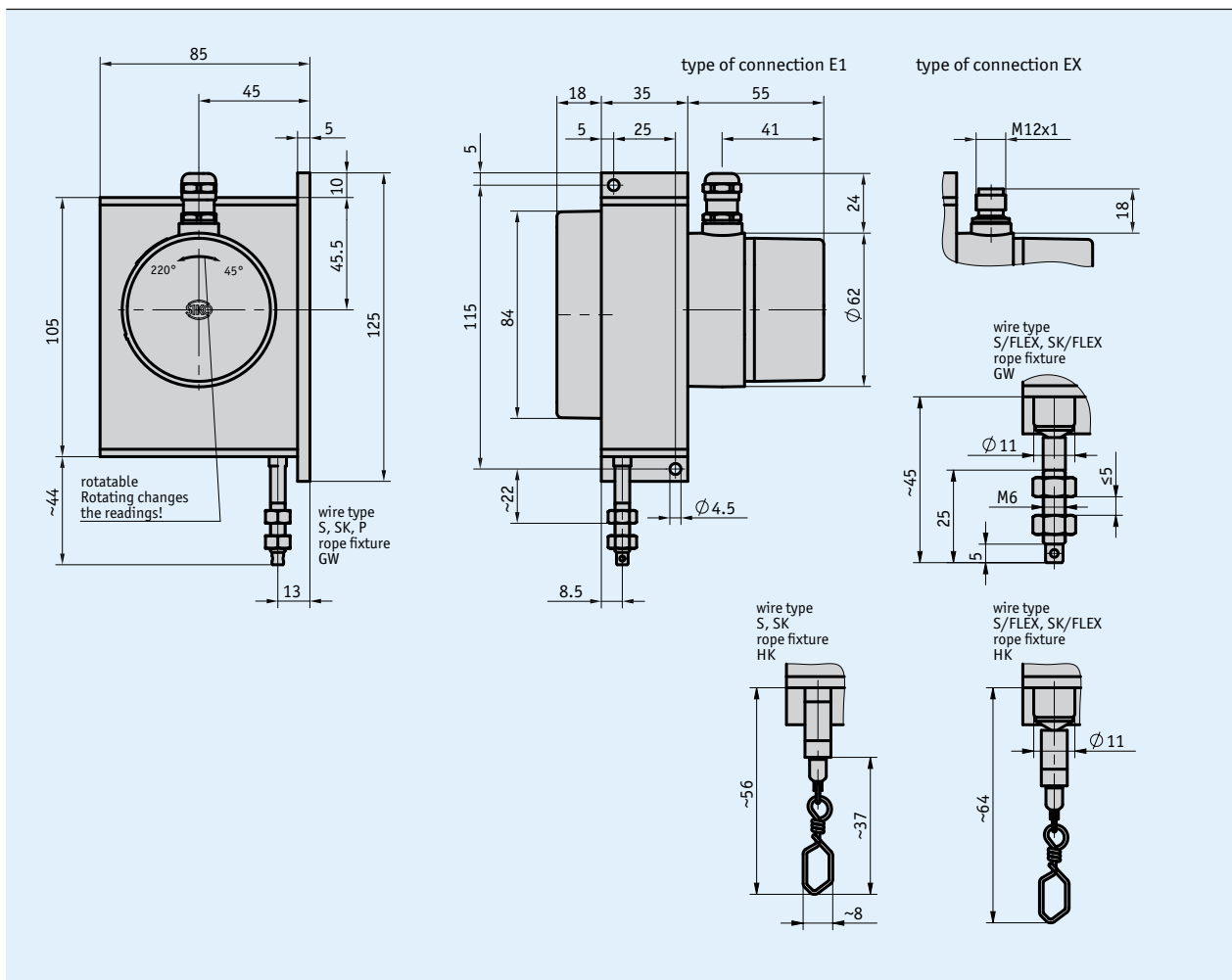


# Wire-actuated encoder SGP/1

robust design with analog output and 6000 mm measurement length

## Profile

- Robust design
- Measurement lengths up to max. 6000 mm
- Potentiometer, voltage or power output
- Housing made of aluminum and plastic
- Potentiometer/resistance range adapted to actual measurement length via an integrated gear
- Various wire types



## Mechanical data

Feature	Technical data	Additional information
Housing	aluminum/plastic	
Wire design	ø0.54 mm	steel wire (stainless)
	ø0.87 mm	steel wire (stainless), plastic coated
	ø1.05 mm	Paraleine
Extension force	≥8 N	
Measured distance/ rope drum revolution	200 mm	
Acceleration	≤23.5 m/s <sup>2</sup>	
Weight	~0.7 kg	

### max. travel speed

Measuring range [mm]	750	1000	1250	1500	1750	2000	2250	2500	2750	3000	3250	3500	6000
Travel speed [mm/s]	≤200	≤300	≤300	≤400	≤490	≤500	≤600	≤700	≤800	≤800	≤900	≤1000	≤1000

## Electrical data

### Encoder potentiometer

Feature	Technical data	Additional information
Power rating	2 W at 70 °C	
Resistance	1 kΩ	P01
	2 kΩ	P02
	5 kΩ	P05
	10 kΩ	P10
Resistance tolerance	±5 %	
Linearity tolerance	±0.25 %	

### Transducer, power output

Feature	Technical data	Additional information
Operating voltage	10 ... 30 V DC	between I+ and I-, load ≤500 Ω
Output current	4 ... 20 mA	

### Transducer, voltage output

Feature	Technical data	Additional information
Operating voltage	15 ... 28 V DC	at 3 mA without load
Output voltage	0 ... 10 V DC	
Resistance	2 ... 10 kΩ	against GND
Load	≤15 mA	

\* Measurement transducers permit optimum adjustment of the output current and output voltage to the measuring range. The measurement transducer is pre-set at the works so that an output signal of 4 ... 20 mA (MWI) or 0 ... 10 V DC (MWU) is available.

## System data

Feature	Technical data	Additional information
Repeat accuracy	~0.5 mm	per direction of approach
Travel speed	see table	

## Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-20 ... 80 °C	T1
	-40 ... 80 °C	T2 (draw-in speed ≤800 mm/s)
Protection category	IP65 (potentiometer part)	EN 600529

## Pin assignment

### ■ Potentiometric outputs P10

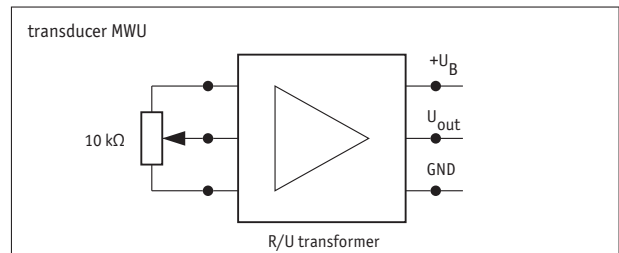
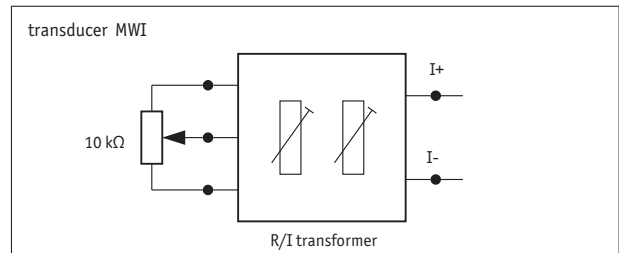
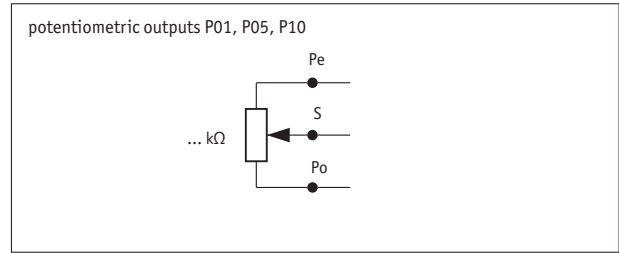
Signal	E1 (terminal)	E12 (connector pin)
Po	brown	1
Pe	white	2
S	green	3
nc		4

### ■ MWI transducer

Signal	E1 (terminal)	E12 (connector pin)
I+	1	1
I-	2	2
nc	3	3
nc		4

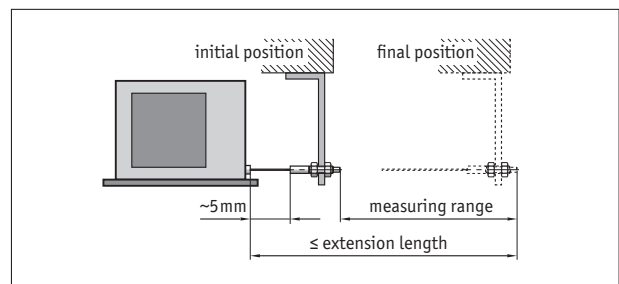
### ■ MWU transducer

Signal	E1 (terminal)	E12 (connector pin)
+24 V DC	1	1
GND	2	2
U <sub>out</sub>	3	3
nc		4



## Hint for mounting

When securing the wire it must be ensured that the wire is straight and vertical in relation to the wire outlet.  
 Recommendation: Only select the starting position after an unwound length of approx. 5 mm. This prevents the wire hitting the end stop when it is rewound.



symbolic depiction

## Order

### Ordering table

Feature	Ordering data	Specification	Additional information
Measuring range	... <b>A</b>	750 ... 6000 mm, in steps of 250 mm	
Rope fixture	<b>GW</b>	wire suspension with thread	
	<b>HK</b>	wire suspension with hook	
Wire design	<b>S</b>	stainless steel rope	measuring range ≤ 6000 mm
	<b>SK</b>	stainless steel rope, plastic-coated	measuring range ≤ 4000 mm
	<b>P</b>	para-line, non-conducting, signal color	measuring range ≤ 2800 mm
	<b>S/FLEX</b>	stainless steel rope, flexible rope outlet	measuring range ≤ 6000 mm
	<b>SK/FLEX</b>	stainless steel rope, plastic-coated, flexible rope outlet	measuring range ≤ 4000 mm
Type of connection	<b>E1</b>	cable gland PG7	cable ø 3-6.5 mm
	<b>EX</b>	for M12 connector	
Potentiometer type	<b>O2</b>	10 helices/wire	(P01, P05, P10)
	<b>O3</b>	10 helices/hybride	(P01, P05, P10)
Analog output	<b>MWI</b>	4 ... 20 mA transducer	
	<b>MWU</b>	0 ... 10 V transducer	
	<b>P01</b>	potentiometer 1 kΩ	
	<b>P05</b>	potentiometer 5 kΩ	
	<b>P10</b>	potentiometer 10 kΩ	
Operating temperature	<b>T1</b>	-20 ... +80 °C	≤ feed speed 800 mm/s
	<b>T2</b>	-40 ... +80 °C	

### Order key

SGP/1 -  -  -  -  -  -  -

A      B      C      D      E      F      G

**Scope of delivery:** SGP/1, Mounting instructions

#### Accessories:

Electronic display MA50

Guide roller UR

Wire extension piece SV

Mating Connector Overview

Mating connector, EX, 4-pole, socket

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Order key 83419