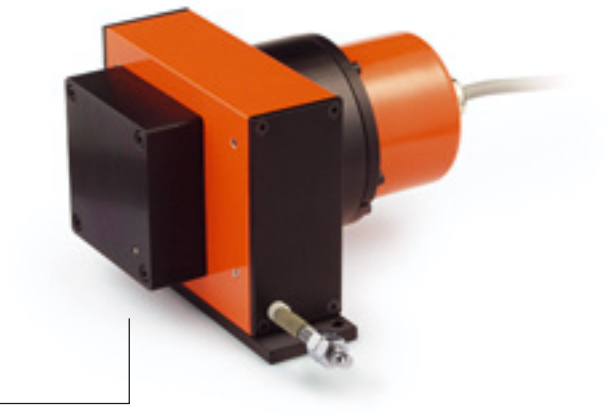
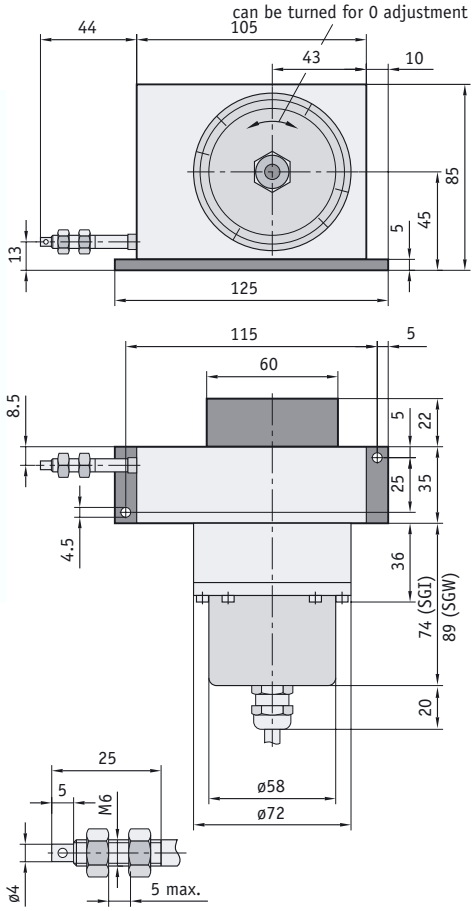
Wire-actuated encoders SGW/SGI

Universal wire-actuated encoders with measurement lengths of max. 6 000 mm, robust design, precise and safe cable guidance, prepared for mounting various rotary encoders with 58 mm standard flange.





Features:

- measurement lengths up to max. 6 000 mm
- all interfaces indicated can be used by adaptation of different standard rotary encoders
- robust aluminium housing

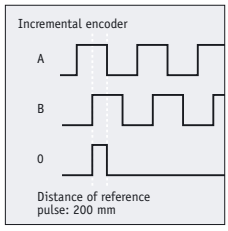
Option

- Choice of cable types:
  (S) steel cable: stainless, standard design
  (SK) steel cable with plastic sheath:
  low surface wear, 2 times more tear-resistant than steel cable
  (P) para-line: 4 times more tear-resistant than steel cable

Output circuits/Interfaces

Encoder type: Incremental (SGI)

Standard encoder N58	**IV58M**
Operating voltage	24 V DC @ 25 mA
Output circuit	PP
Output signals	AB0
Resolution	10 pulses / mm
Cable length (connection)	1 m
Type of protection	IP54



Cable	Pin assignment	
grey	0 V	*
black	0 V Sense	
brown	+UB = +10 … +30 V	*
violet	+UB Sense	
yellow	A	
pink	/A	
white	B	
blue	/B	
green	0	
red	/0	

* internally connected

Encoder type: Absolute, digital

Standard encoder	**WV58M**
Operating voltage	24 V DC @ 40 mA
Steps/revolution	4096 (12bit) at 204.8 mm drum circumference
Interface	SSI
Resolution 1 bit	0.05 mm
Cable length (connection)	1 m
Type of protection	IP65

Cable	Pin assignment
grey	GND
brown	+UB = +10 ... +30 V
black	cycle +
red	cycle -
blue	data +
pink	data -

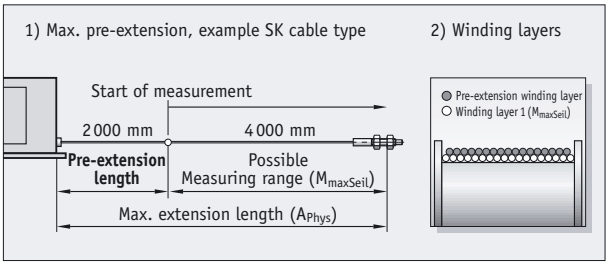
Special features: Cable versions/measurement ranges

Wire-actuated encoders attain their accuracy because only one cable layer is wound on the drum. The comparably smaller diameter of the S steel cable makes it possible to use the encoder's maximum measurement range of 6 000 mm. In contrast, larger cable diameters consume more space leading to shorter measuring ranges as is the case with P and SK cable types.

However, further winding up of the cable is possible with a second layer. For para-line (P), this additional cable length is max. +1400 m and for plastic-sheathed steel (SK) it is max. 2 000 mm. This is especially useful if there is a distance between the start of the measurement range and the encoder. This distance can be bridged by means of an additional pre-extension length (note: this is not a cable extension!). Information on the desired pre-extension length to the start of measurement can be given in steps of 100 mm.

Cable versions/meas. ranges P		SK	S
max. extension length (A_{Phys})	4 200 mm	6 000 mm	6 000 mm
cable-type dependent measuring range ($M_{maxCable}$)	2 800 mm	4 000 mm	6 000 mm
Pre-extension length (A_{Phys}–$M_{maxCable}$)	1 400 mm	2 000 mm	

Table A



Graph B

Feature	Ordering data			Technical data	Additional ionformation
Travel speed				max. 3 m/s	
Required cable extension force				min. 5 N (SGI) or min. 8 N (SGW) on the cable	
Measurement range				up to 6 000 mm	
Extension length				measurement range +10 mm	
Repeat accuracy				dependent on start direction, ~0.05 mm	
Type of protection				IP54 (standard encoder)	other encoders may have another type of protection
Working temperature				approx. -10 °C ... +80 °C	
Housing				aluminium	
Colour				orange, RAL 2004	others on request
Weight				approx. 1 050 g (SGI), approx. 1 300 g (SGW)	
Type	SGI	SGW			
Measurement range in mm	6 000	6 000	A	S, stainless steel	measurement range max. 6 000 mm, intermediate lengths on request
	4 000	4 000		SK, steel, plastic sheath	measurement range max. 4 000 mm, intermediate lengths on request
	2 800	2 800		P, para-line, non-conducting, signal colour	measurement range max. 2 800 mm, intermediate lengths on request
Pre-extension length	0	0	B		**standard**
	...	...		length in mm, in steps of 100 mm	see table A, graph B
Drum circumference		200	C	200 mm (decimal step sequence)	
		204.8		204.8 mm (binary step sequence)	
Cable version*	**S**	**S**	D	steel cable, stainless	**standard**
	SK	SK		steel with plastic sheath	
	P	P		para-line, non-conducting, signal colour	
Encoder type**	N58	WV58M	E	standard diam. 58 mm	
	S	S		customer-defined SIKO encoder	
	0	0		without encoder	see appendix/system components

* Cable thickness: S = diam. 0.54 mm, SK = diam. 0.87 mm, P = diam. 1.05 mm, ** For referencing, the encoders can be rotated on the flange

Your order:

	–		–		–		–		–	
Typ		A		B		C		D		E