

# SK-01 SERIES

## CLAMPING FORCE TRANSDUCERS

### FEATURES

- Nominal Force : 300 kN and 400 kN (other nominal force available on request)
- Accuracy Class: 3%
- Stainless Steel Design
- Temperature Compensated
- Amplifier and Display (optional)
- Protection Class: IP66
- Mechanical adaptation for different diameters (rope with diameter 28... 95 mm)



Fig. 1: SK-01 400 & SKG-01

### DESCRIPTION

The Clamping Force Transducer SK-01 from MAGTROL is based on strain gauge technology. It is ideal for the control of ropes, brake clamps and similar devices. It measures the clamping force, independent of the clamp, on the longitudinal axis of the transducer.

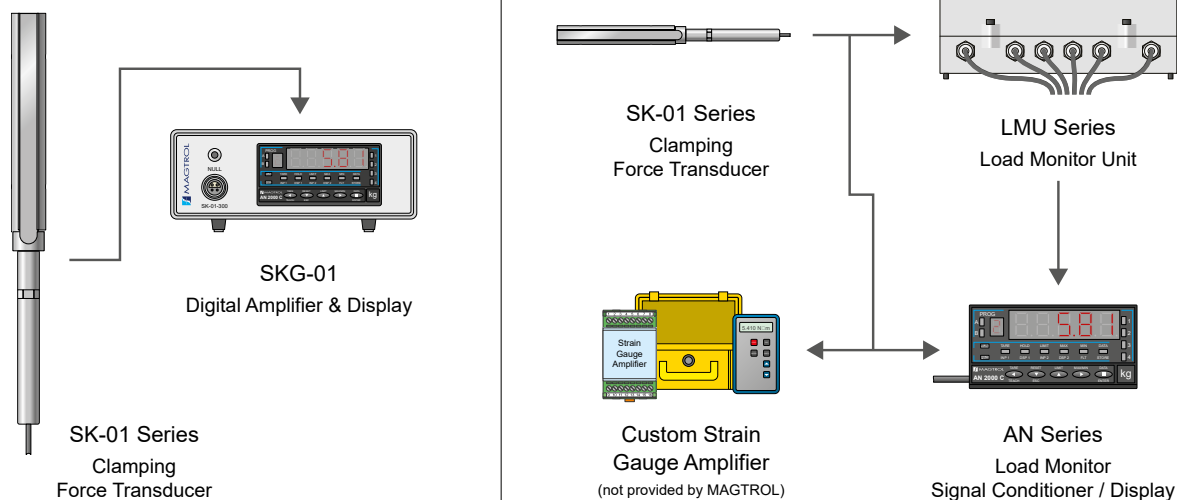
### APPLICATIONS

The SK-01 is available in two different ranges. One for ropes with diameter 28...47 mm and forces up to 300 kN and the second for diameter 48... 92 mm with forces up to 400 kN.

When connected to a SKG-01 Digital Amplifier, the SK-01 is ideally suited for measuring the clamping force on lifts, ski-lifts and similar applications

The capability of this device was tested by Empa (Swiss Federal Laboratories for Materials Testing and Research), see «Prüfbericht Nr. 169 166 from 16 July 1997».

### SYSTEM CONFIGURATION



**SPECIFICATIONS**

MODEL	SK-01-300	SK-01-400
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**MEASUREMENT**

Nominal Load	300 kN	400 kN
Accuracy Class	3%	
Admissible Overload	120%	
Overload Limit	150%	

**ELECTRICAL CHARACTERISTICS**

Nominal Sensitivity	0.7 mV/V
Nominal Input Resistance	3500 Ω
Nominal Output Resistance	3500 Ω
Supply Voltage (max.)	20 VDC

**ENVIRONNEMENT**

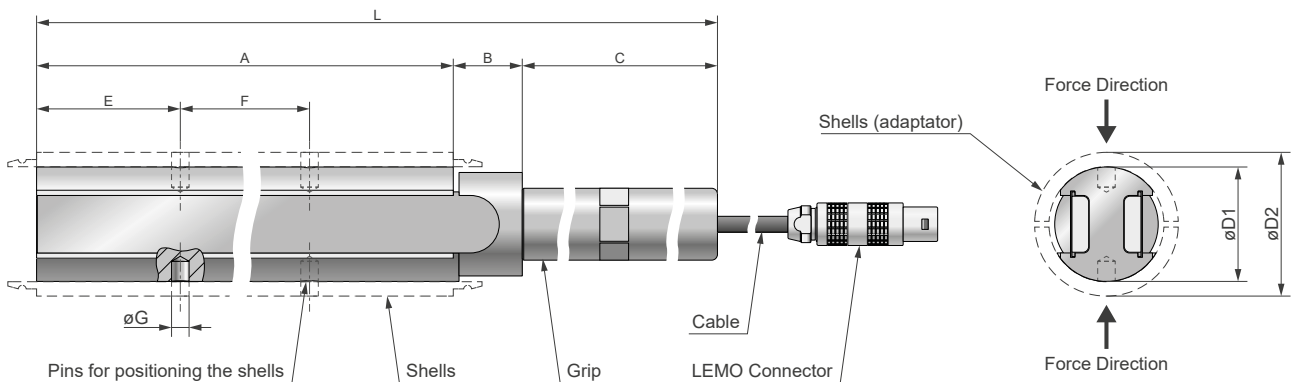
Nominal Temperature	0 °C ... +40 °C
Operating Temperature	-10 °C ... +60 °C
Temperature Coefficient of signal zero per 10K	≤ ±0.2%
Protection Class	IP66

**ELECTRICAL CONNECTION**

Connection Cable	Shielded cable, length 3 m <sup>a)</sup>
Standard Connector	LEMO - FFA.2S.304.CLAL52
Wiring Diagram <sup>A)</sup>	<p>View from outside</p> <ul style="list-style-type: none"> <li>BU - Power -</li> <li>RD - Power +</li> <li>WH - Signal -</li> <li>BK - Signal +</li> </ul>

a) Shielded connection with cable 3m length. The shielding is not connected to the transducer body.

**DIMENSIONS**



MODEL	A	B	C	øD1	øD2	E	F	L	øG
SK-01 - 300	250	22	28	ø19.9	ø28 ... 47	50 ±0.3	150 ±0.1	300	4.1
SK-01 - 400				ø39.9	ø48 ... 92				6.1

**SYSTEM OPTION & ACCESSORIES**

**MEASUREMENT CHARACTERISTICS**

Range	300 kN / 400 kN (according to type)
Accuracy	±0.1 % + 2 count
Temperature Coefficient	100 ppm/°C

**ELECTRICAL CHARACTERISTICS**

Voltage requirements	115/230 VAC 50/60 Hz ±10 %
Transducer voltage	10 VDC

**INPUTS AND OUTPUTS**

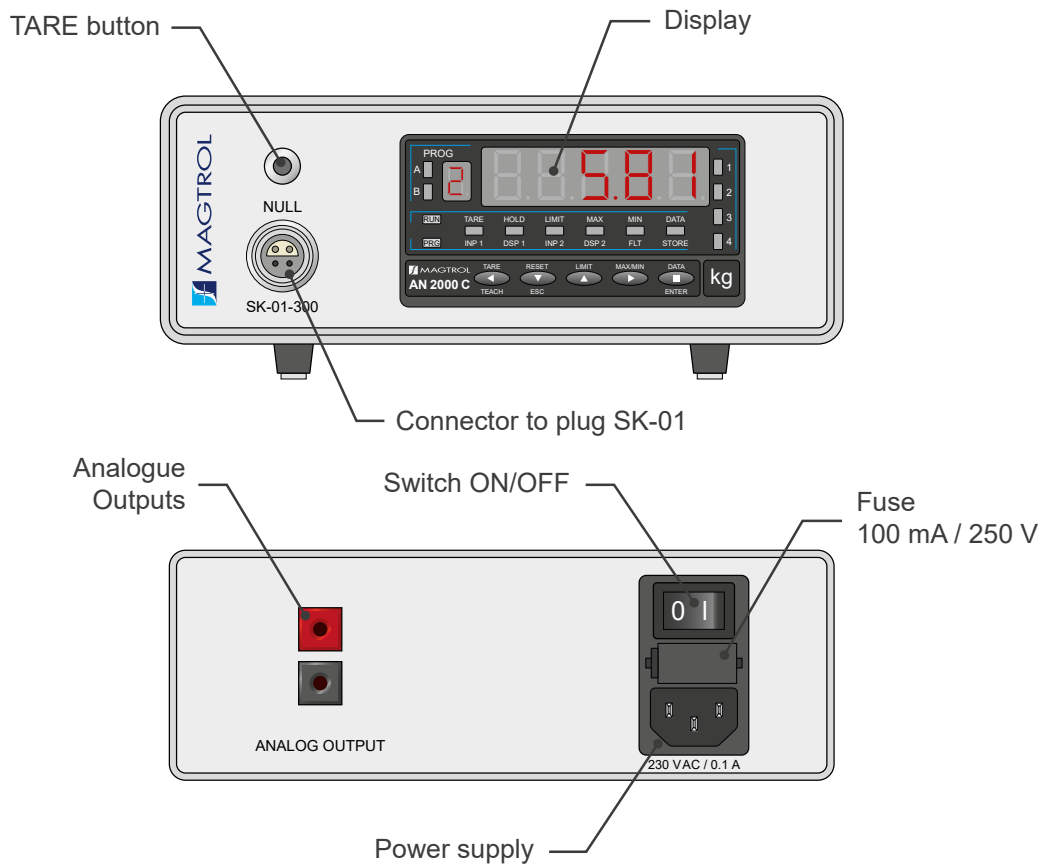
Maximum value input	±300 mV
Analog output	1 V for 100 kN

**ENVIRONMENT**

Operating Temperature	-10 °C ... +60 °C
Storage temperature	-25 °C ... +80 °C
Relative Humidity	<90 %
Warm up time	5 min

**DIMENSIONS**

Width	251 mm	9.88 in
Height	71 mm	2.80 in
Depth	190 mm	7.49 in
Weight	1.66 kg	3.66 lb



**ORDERING INFORMATION**

ORDERING NUMBER	SK-01 - _ _ _
300, 400 : Model number	
Digital Amplifier & Display	SKG-01

Example: SK-01 Clamp Force Transducer, nominal load 300 kN would be ordered as: **SK-01-300**.