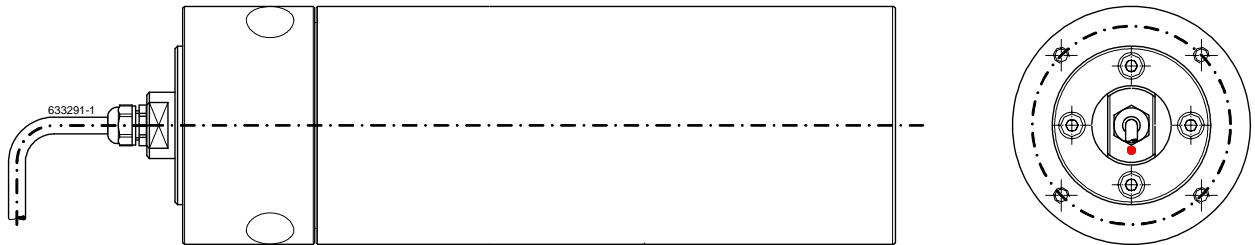


## Cantilever Sensor Roll - CSW

### *Precision web tension measurement online*



The **Cantilever sensor roll** with integrated force measurement can be installed just like an unilateral installed standard web guide roll without major mechanical modifications.

The **Cantilever sensor roll** provides two functions at once:

- measurement of tension in the web
- guiding and reserving the product web

### **NEW**

The **Cantilever sensor roll** is checked and assembled ready for installation.

➔ for the customer the complicated installation of electromechanical and mechanical components is reduced to a minimum.

### **Special Features:**

- easy and one-sided flange mounting with tapped hole
- integrated **Direction Adjuster**  
offers the possibility for precise and stepless direction adjustment of measurement axis, while the sensor roll is **completely installed in the machine**
- precise, the measurement accuracy is independent of the force introduction point, i.e. the sensor is not affected by lever arm action
- easy-turning roller bearings with lifetime lubrication
- floating and fixed bearing construction with contactless labyrinth seal
- precision dynamic balancing as per VDI 2060
- robust, efficient overload protection by mechanical fixed stop
- custom specific dimensions and rated measurement ranges available
- every coating and geometric structure of the roll surface available - just like standard web guide rolls

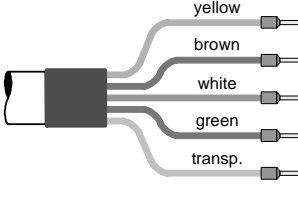
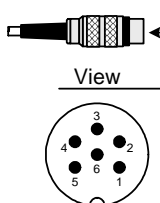
## Technical Data

Type of sensor	Cantilever sensor roll - CSW	
Rated measuring ranges available ( $F_N$ ) - construction size BG1 - construction size BG2 - construction size BG3	N	0 - 5 to 0 - 5000  Construction size is depending on the customers application
Rated output	mV/V	1,5
Rated output tolerance	%	< $\pm 0,2$
Accuracy class		0,5
Excitation voltage max.	V	12
Reference excitation voltage	V	10
Input resistance	$\Omega$	175 $\pm$ 3
Output resistance	$\Omega$	175 $\pm$ 1
Isolation resistance	G $\Omega$	> 10
Rated temperature range	$^{\circ}\text{C}$	+5 to +50, Option: -10 to +70
Operational temperature range	$^{\circ}\text{C}$	
- sensor	$^{\circ}\text{C}$	-10 to +70
- connection cable	$^{\circ}\text{C}$	-30 to +80
Storage temperature range	$^{\circ}\text{C}$	-30 to +70
Reference temperature	$^{\circ}\text{C}$	+23
Temperature influence per 10 $^{\circ}\text{C}$		
- on the zero point	% $F_N$	< $\pm 0,1$
- on the calibration	% $F_N$	< $\pm 0,15$
Creep after 30 minutes	% $F_N$	< $\pm 0,05$
Linear output signal up to	% $F_N$	approx. 130
Mech. overload protection takes effect at	% $F_N$	approx. 150
Overload protected <sup>1</sup>	% $F_N$	300 to 500, depending on nominal force
Ultimate side load	% $F_N$	200
Typ. deflection at nominal force	mm	0,07 $\pm$ 20%
Weight	g	depending on construction design
Connection cable	robust, flexible, shielded 4 x 0,14mm <sup>2</sup> , cable diameter 4,5mm, 5m long, open ends with splices, sheath special PVC	
System of protection	IP 50	

<sup>1</sup> radial incoming force without additional bending or tilting moment

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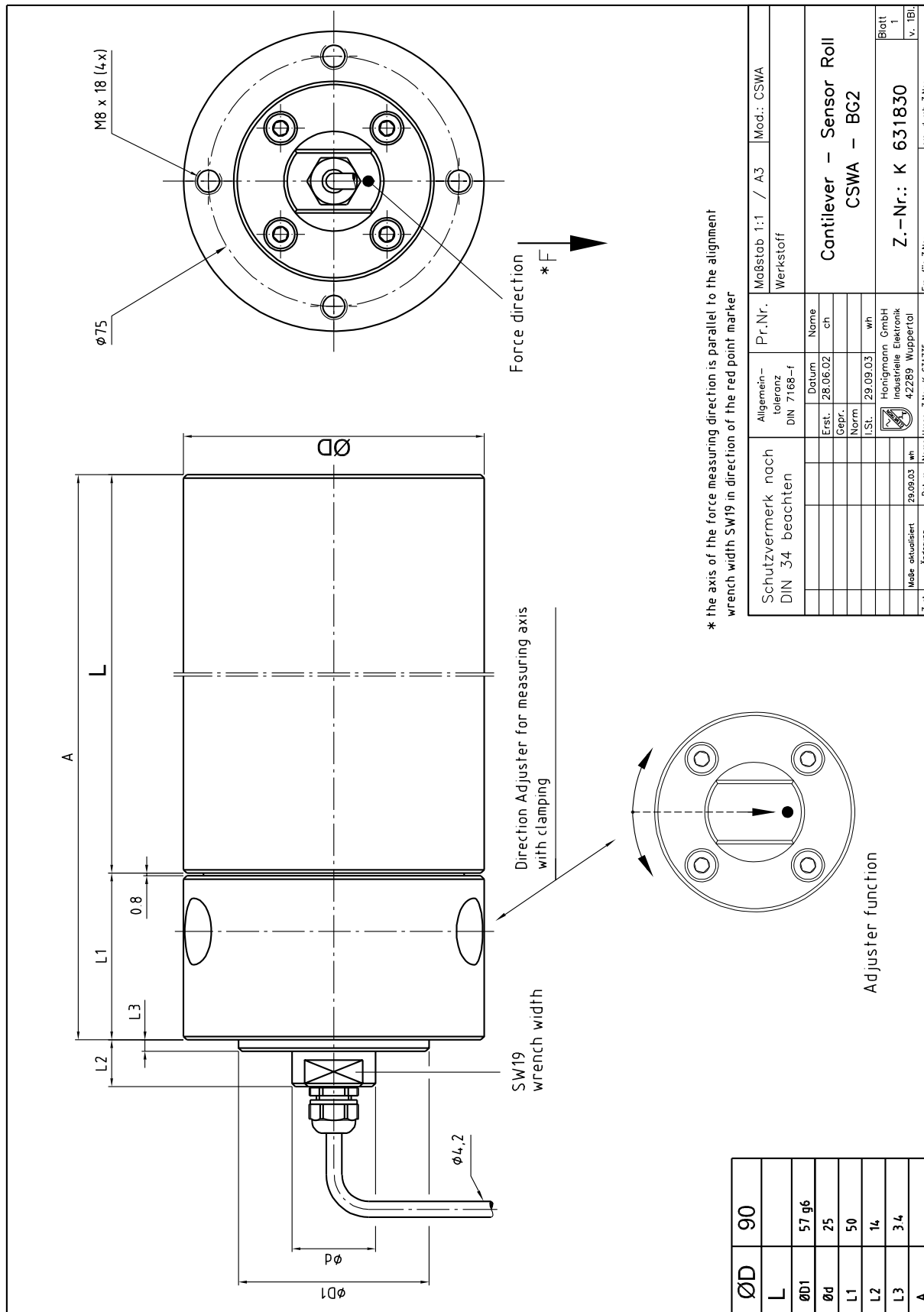
## Connections

Standard: connection type „O“	Option: connection type „S“
 <p>yellow brown white green transp.</p> <p>+ <math>U_{Br}</math> - <math>U_{Br}</math>      Excitation</p> <p>+ <math>U_{Sig}</math> - <math>U_{Sig}</math>      Output</p> <p>Shield (not connected to housing)</p>	 <p>View</p> <p>1 + <math>U_{Br}</math>      Excitation 2 - <math>U_{Br}</math>      Excitation 3 Shield (not connected to housing) 4 + <math>U_{Sig}</math>      Output 5 - <math>U_{Sig}</math>      Output 6 Reserved</p>

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Technical execution subject to change without prior notice.  
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# Dimensions



\* the axis of the force measuring direction is parallel to the alignment wrench width SW19 in direction of the red point marker

ØD	90
L	
ØD1	57 g6
Ød	25
L1	50
L2	14
L3	3.4
A	

Schutzvermerk nach DIN 34 beachten	Allgemein- toleranz DIN 7168-f	Pr.Nr. Name	Moßstab 1:1 / A3 Werkstoff
	Datum 28.06.02	ch	Cantilever – Sensor Roll CSWA – BG2
	Gepr. Norm		
	I-St. 29.09.03	wh	
			Z.–Nr.: K 631830
Made actualisiert 29.09.03 wh	Datum 29.09.03 wh	Name Horigmann GmbH Industrielle Elektronik 42289 Wuppertal	Ers. durch Z.Nr.: v. 1B1