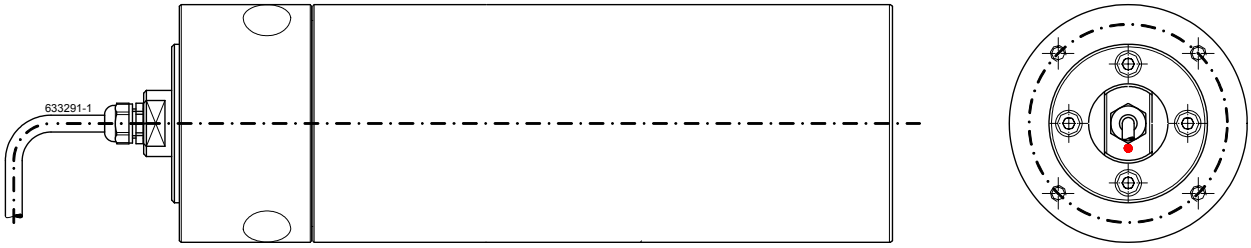
Cantilever Sensor Roll - CSW

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)	N	0 - 50 to 0 - 5000
- construction size BG1		Construction size is depending on the customers application
- construction size BG2		
- construction size BG3		
Rated output	mV/V	1,5
Rated output tolerance	%	< ±0,2
Accuracy class		0,2
Excitation voltage max.	V	12
Reference excitation voltage	V	10
Input resistance	Ω	175 ± 3
Output resistance	Ω	175 ± 1
Isolation resistance	GΩ	> 10
Rated temperature range	°C	+5 to +50, Option: -10 to +70
Operational temperature range		
- sensor	°C	-10 to +70
- connection cable	°C	-30 to +80
Storage temperature range	°C	-30 to +70
Reference temperature	°C	+23
Temperature influence per 10 °C		
- on the zero point	% F_N	< ±0,1
- on the calibration	% F_N	< ±0,15
Creep after 30 minutes	% F_N	< ±0,05
Linear output signal up to	% F_N	approx. 130
Mech. overload protection takes effect at	% F_N	approx. 150
Overload protected [1]	% F_N	300 to 500, depending on nominal force
Ultimate side load	% F_N	200
Typ. deflection at nominal force	mm	0,07 ± 20%
Weight	g	depending on construction design
Connection cable		robust, flexible, shielded 4 x 0,14mm², cable diameter 4,5mm, 5m long, open ends with splices, sheath special PVC
System of protection		IP 50

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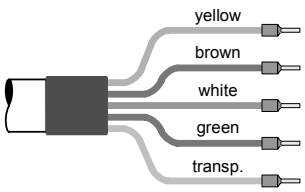
[1] radial incoming force without additional bending or tilting moment

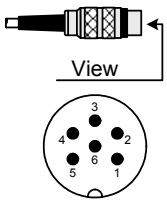
Connections

Standard: connection type „O“



$+U_{Br}$	Excitation
$-U_{Br}$	
$+U_{Sig}$	Output
$-U_{Sig}$	
Shield *(not connected to housing)*	

Option: connection type „S“



1	$+U_{Br}$	Excitation
2	$-U_{Br}$	
3	Shield *(not connected to housing)*	
4	$+U_{Sig}$	Output
5	$-U_{Sig}$	
6	Reserved	

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Technical execution subject to change without prior notice.
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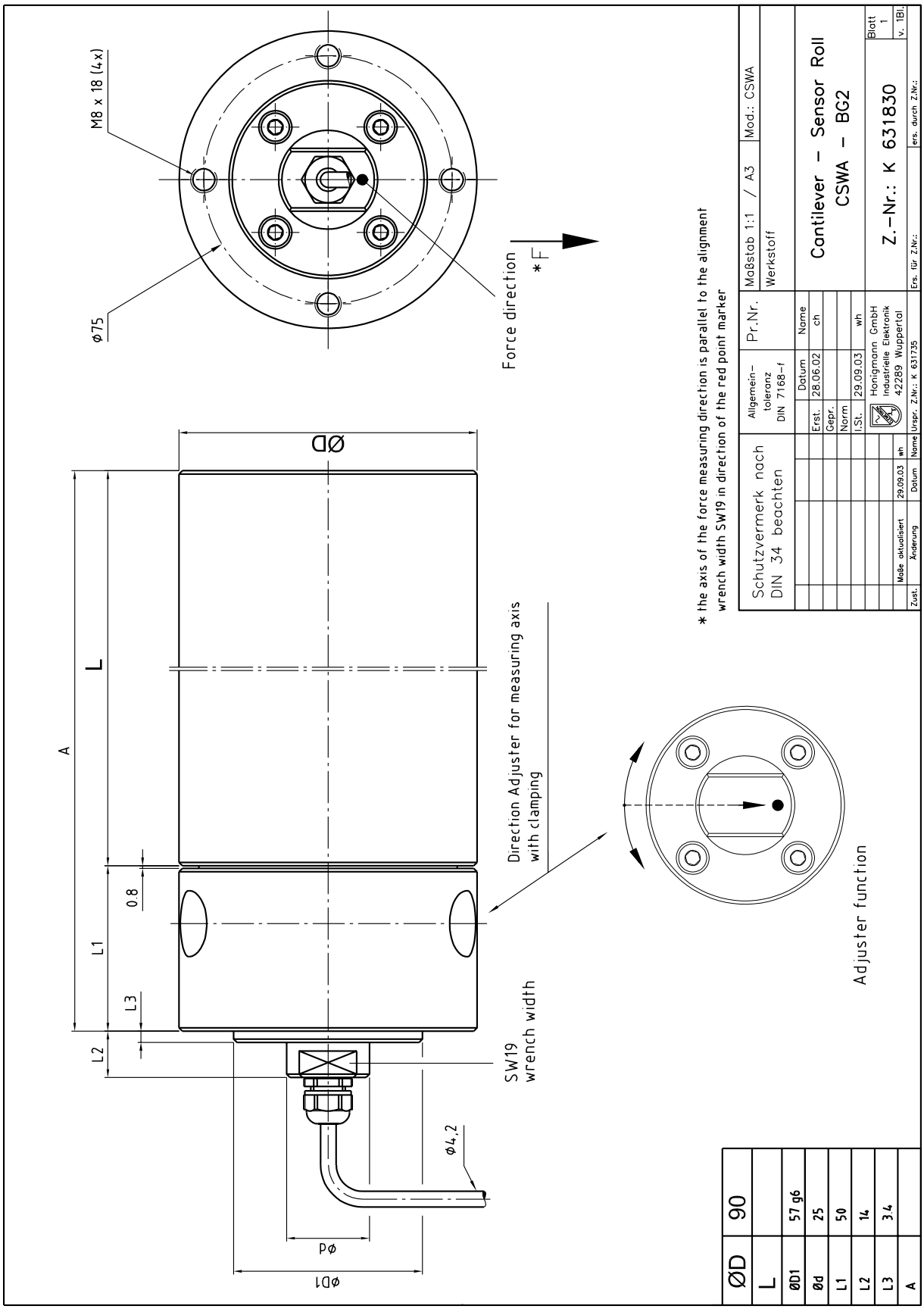
Dimensions


M8 x 18 (4x)
ø75
Force direction
*F
ØD
A
L
L1
L2
L3
0.8
Direction Adjuster for measuring axis
with clamping
SW19
wrench width
ø4,2
Pø
ØD1
Adjuster function
* the axis of the force measuring direction is parallel to the alignment
wrench width SW19 in direction of the red point marker
Schutzvermerk nach
DIN 34 beachten
Allgemein-
toleranz
DIN 7168-f
Pr.Nr.
Maßstab 1:1 / A3
Mod.: CSWA
Werkstoff
Cantilever - Sensor Roll
CSWA - BG2
Z.-Nr.: K 631830
Blatt 1
v. 1Bl.
Erst. 28.06.02 ch
Gepr.
Norm
I.St. 29.09.03 wh
Honigmann GmbH
Industrielle Elektronik
42289 Wuppertal
Maße aktualisiert 29.09.03 wh
Zust. Änderung Datum Name
Urspr. Z.Nr.: K 631735
Ersetzt durch Z.Nr.:
Ersetzt für Z.Nr.:
ØD 90
L
ØD1 57 g6
Ød 25
L1 50
L2 14
L3 3.4
A