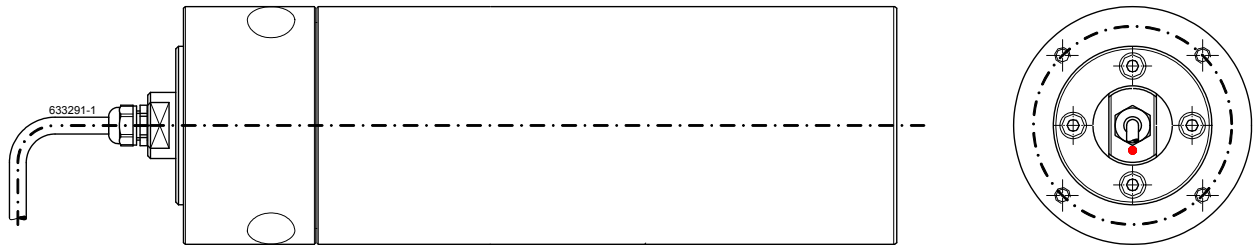


Cantilever Sensor Roll - CSW

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 - 50 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		0,2
Excitation voltage max.	V	12
Reference excitation voltage	V	10
Input resistance	Ω	175 \pm 3
Output resistance	Ω	175 \pm 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	< $\pm 0,1$
- 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 ¹	% 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 0,38mm ² , cable diameter 5,6mm, 5m long 8 x 0,14mm ² , cable diameter 5,5mm, 5m long, open ends with splices, sheath special PVC
System of protection		IP 50

81247088

F_N : nominal force

¹ radial incoming force without additional bending or tilting moment

Connections - standard

Standard: connection type „O“		Option: connection type „S“	
	yellow	+U _{Br}	Excitation
	brown	-U _{Br}	
	white	+U _{Sig}	Output
	green	-U _{Sig}	
	transp. or black	Shield (not connected to housing)	
		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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Connections - separate measurement on both sides

Sensor A				Sensor B			
yellow	+U _{Br}	Excitation A	81247065	red	+U _{Br}	Excitation B	81247066
brown	-U _{Br}						
white	+U _{Sig}	Output A		pink	+U _{Sig}	Output B	
green	-U _{Sig}			grey	-U _{Sig}		
<p style="text-align: center;">↓ Sensor A</p>							

Shield (transparent or black) is not connected to sensor housing.

Technical execution subject to change without prior notice.
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