



# Sauter GmbH

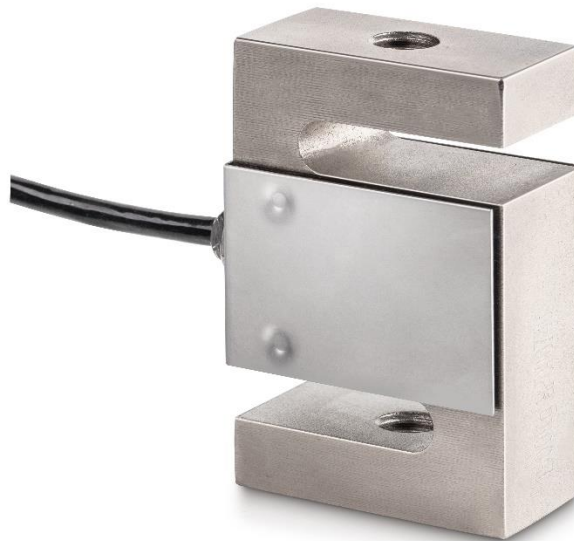
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## Instruction Manual / Data sheet

### CS P1

V. 1.0  
12/2018  
GB



PROFESSIONAL MEASURING

CS P1-BA-e-1810



# SAUTER CS P1

V. 1.0 12/2018

## Instruction Manual / Data sheet

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## 1 Short description

- Nickel plated alloy steel IP67 (acc. to EN 60529) "S" type load cell
- Force measuring compatible
- RoHS conform
- Suitable for hanging, hopper and other weighing devices
- Suitable for testing facilities and test stands
- Accuracy OIML R60 C3
- OIML certificated 100kg ... 2,5t
- Option on request: EX, Accuracy C4

## 2 Available models

Capacity	Model
25kg ( $\approx 250\text{N}$ )	CS 25-3P1
50kg ( $\approx 500\text{N}$ )	CS 50-3P1
100kg ( $\approx 1\text{kN}$ )	CS 100-3P1
150kg ( $\approx 1,5\text{kN}$ )	CS 150-3P1
250kg ( $\approx 2,5\text{kN}$ )	CS 250-3P1
500kg ( $\approx 5\text{kN}$ )	CS 500-3P1
600kg ( $\approx 6\text{kN}$ )	CS 600-3P1
750kg ( $\approx 7,5\text{kN}$ )	CS 750-3P1
1t ( $\approx 10\text{kN}$ )	CS 1000-3P1
1.5t ( $\approx 15\text{kN}$ )	CS 1500-3P1
2t ( $\approx 20\text{kN}$ )	CS 2000-3P1
2.5t ( $\approx 25\text{kN}$ )	CS 2500-3P1
5t ( $\approx 50\text{kN}$ )	CS 5000-3P1
7.5t ( $\approx 75\text{kN}$ )	CS 7500-3P1
10t ( $\approx 100\text{kN}$ )	CS 10000-3P1
15t ( $\approx 150\text{kN}$ )	CS 15000-3P1
20t ( $\approx 200\text{kN}$ )	CS 20000-3P1
30t ( $\approx 300\text{kN}$ )	CS 30000-3P1

## 3 Introduction

Please pay attention to the notes of the operating manual: read these operating manual carefully before commissioning, even if you already have experience with SAUTER measuring cells.

After receiving the measuring cell, it should be checked in advance whether no transport damage has occurred, whether the outer packaging or other parts or even the article itself has been damaged. If any damage is evident, please inform SAUTER GmbH immediately.

## 4 Warning notes

Observe the national accident prevention regulations.

Not correct executed use of the measuring cell can lead to serious injuries, death, material damage and personal injuries. Use only by trained and experienced people.

Never load more than the max. capacity to a measuring cell. Overloaded measuring cells no longer have the required accuracy. Overloaded or deformed measuring cells are no longer allowed to use and must be changed quickly.

Never step under suspended loads.

Always fasten overload- or break security to your construction.

Pay attention to the allowed static and dynamic loads of the used equipment.

Let the measuring cells calibrate at regular intervals.

Only load the measuring cell in its specified load direction. Avoid lateral forces.

Control the measuring cells to deformations and cracks.

Measuring cells with 4-Conductor cable will change their characteristic value when shortened or extended the cable length.

## 5 Warranty

The warranty expires at:

- Disregard of the specifications of the operating manual
- Modification or opening the measuring cell
- Overload
- Mechanical damages
- Damage caused by liquids or media
- Natural loss
- Not correct installation

## 6 Detailed specifications

Output sensitivity (FS)	mV/V	2.0 ± 0.004
Maximum capacity ( Emax )	kg	25, 50, 100, 150, 250, 500, 600, 750, 1000, 1500, 2000, 2500, 5000, 7500, 10000, 15000, 20000, 30000
Max.number of load cell intervals	nLC	3000
Ratio of min. LC verification interval	$Y = E_{max} / v_{min}$	10000
Combined Error	%FS	≤± 0.020
Minimum dead load	Of Emax	0%
Safe overload	of Emax	150 %
Ultimate overload	of Emax	300 %
Zero balance	of FS	< ± 1.5 %
Excitation, recommended voltage	V	5 ~ 12
Excitation maximum	V	18
Input resistance	Ω	350 ± 3.5
Output resistance	Ω	351 ± 2.0
Insulation resistance	MΩ	≥5000 ( at 50VDC )
Compensated temperature	°C	-10 ~+40
Operating temperature	°C	-35 ~ +65
Storage temperature	°C	-40 ~ +70
Recommended torque on fixation bolts	Nm	M8:25; M10: 50; M12:75; M20:450; 25kg M33:750; M42:1450

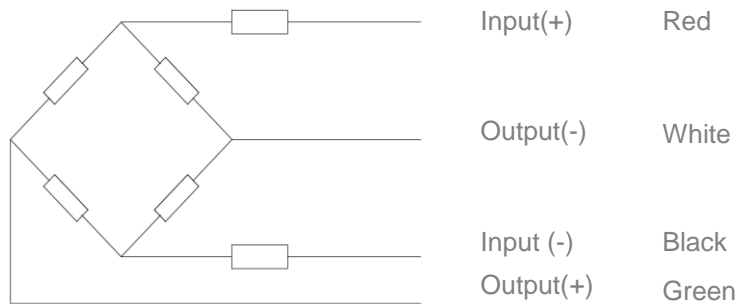
## 7 Wiring

Shielded, 4 conductor cable. Cable diameter: Ø5mm. Shield not connected to element.

Cable length 25kg ... 1,5t: 3m

Cable length 2t ... 30t: 6m

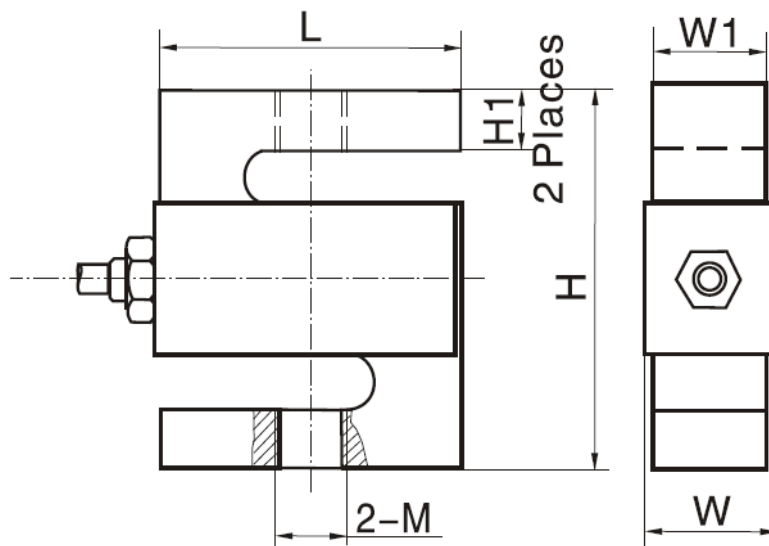
4-wire diagram



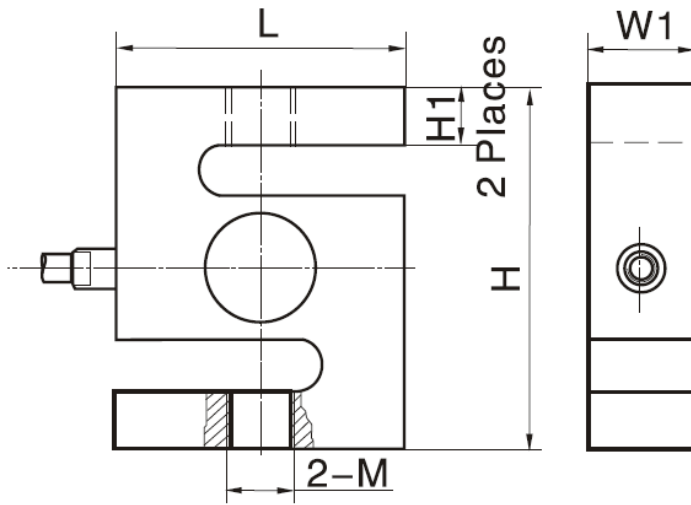
## 8 Dimensions in mm

Dimension / Capacity	L	H	W1	W	H1	M
25-50kg	50.8	76.2	12.7	14.5	15.7	M8
100-150kg	50.8	76.2	19.0	20.8	15.3	M10 x 1.5
250-750kg	50.8	76.2	19.0	20.8	13.6	M12 x 1.75
1-1.5t	50.8	76.2	25.4	27.2	12.1	M12 x 1.75
2-5t	76.2	101.6	25.4	27.2	20	M20 x 1.5
7.5-10t	125	175	50	n.a.	40.2	M33 x 3
15-20t	160	200	60	n.a.	51	M42x 3
30t	190	230	80	n.a.	57.5	M42 x 3

### 8.1 25kg ... 5t



8.2 7,5t ... 30t



## 9 Certificate of Compliance

The Certificate of Compliance can be downloaded from the website [www.sauter.eu](http://www.sauter.eu)