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Instruction Manual Junction Box

SAUTER CJ P

V. 1.0
01/2019
GB





PROFESSIONAL MEASURING

GB

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V. 1.0 01/2019

Instruction Manual Junction Box

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1 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 products. After receiving the products, 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.

2 Warning notes

Observe the national accident prevention regulations. Not correct executed use of the juction boxes can lead to serious injuries, death, material damage and personal injuries. Use only by trained and experienced people. Never step under suspended loads. Measuring cells with 4-Conductor cable will change their characteristic value when shortened or extended the cable length.

3 Short description

Junction box allows to connect more then one load cell to one device. It is possible for the all Junctions to be used with fewer load cells than for which they are designed. All juctions are fit for 4-wire and 6-wire load cells. The load cells used should be of the same model, capacity and have the same rated output (mV/V).

4 Available models

Model	**Amount of connections**	**Cable inlet**	**Ingress protection**
CJ P2	2	bend relief	IP65
CJ P4	4	bend relief	IP65
CJ P4PG	4	PG screw connection	IP65
CJ P6	6	bend relief	IP65
CJ P8	8	bend relief	IP65

5 Mounting

The Junction Box can be mounted through the 2 mounting holes (dia. 4mm).

6 Electrical Connections

Remove the cover and connect the load cell cables to the circuit board and the circuit board output to the associated indicator (see **Table 1**). Be sure that all terminal strip connections are tight and that the cables are not damaged. Tinning the leads is not recommended for vibrant applications.

+ EXC	Excitation +
- EXC	Excitation -
+ SIG	Signal +
- SIG	Signal -
+ SEN *	Sense +
- SEN *	Sense -
SHIE	shield

Table 1: load cell and indicator connection (* only Models CJ P6 and CJ P8)

6.1 CJ P2, CJ P4 and CJ P4PG

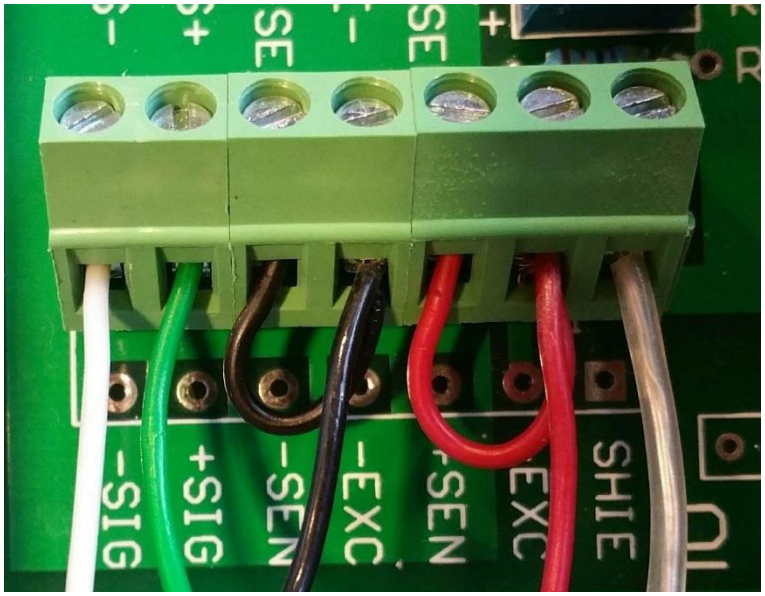
Each load cell terminal strip has the same sequence for connecting the respective wires as the indicator terminal strip (each Exc+ is marked with a square (instead of circular) soldering point).

6.2 CJ P6 and CJ P8

Each load cell terminal strip has the same sequence for connecting, as the lettering on terminal 1.

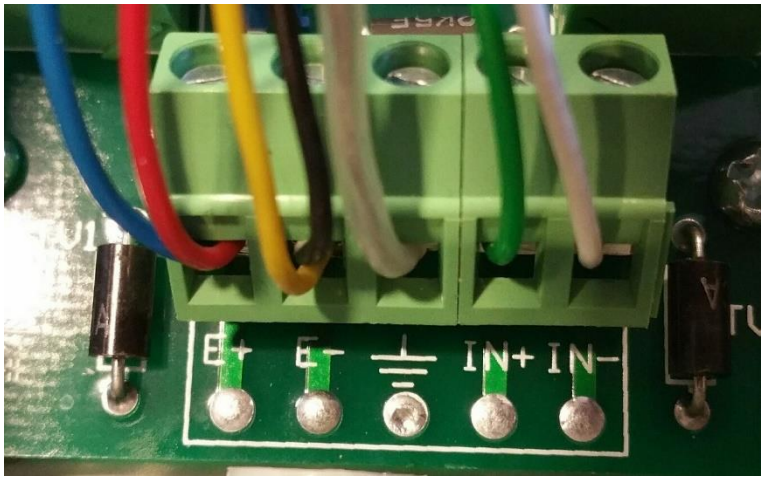
6.3 Connect a 4 wire load cell to a 6 wire connector

When connecting a 4-wire load cell to a 6-wire connector, two bridge wires are necessary to connect the wires properly. These bridge wires should be connected between the Excitation + and the Sense + and the other wire between the Excitation - and the Sense -. Please look at the picture below for this solution in practice.



6.4 Connect a 6 wire load cell to a 4 wire connector

When connecting a 6-wire load cell to a 4-wire connector, the sense wires should be connected in the same place as the excitation wires. The Sense + wire should be installed together with the Excitation + wire into the Excitation + connection. The Sense – wire should be installed together with the Excitation – wire into the Excitation – connection. Please look at the picture below for this solution in practice.



6.5 Grounding

6.5.1 CJ P2 / CJ P4 / CJ P4PG

When installing the junction box, be sure that the enclosure is connected to the scale framework with a low resistance earth strip.

6.5.2 CJ P6 / CJ P8

Use the external clamp for grounding.

7 Setup of the Scale

7.1 Adjustment

After all wiring is completed and the scale instrument is powered up, turn each of the potentiometers fully anti-clockwise (maximum 28 turns, click will be heard and/or felt), to obtain the highest possible output from each load cell. Before proceeding with following adjustments, check the scale for repeatability and correct any problems.

7.2 Corner adjustment

Model CJ P has one potentiometer for each load cell. The potentiometer nearest to a terminal strip adjusts the respective load cell connected to it.

1. Place a test weight over each of the load cells in turn and record their readings and location. The lowest reading will be used as your target weight.
2. Replace the test weight over each of the load cells in turn and if necessary, adjust the corresponding potentiometer so that the weight indicated matches the target weight.
3. Place the test weight over the load cell located in the step 1. Record this weight as the new target weight and repeat steps 2 & 3 until all cells are matched and all the scale corners read the same.

8 Troubleshooting

8.1 The scale seems to be reading incorrectly:

1. Unload the scale and check for a zero reading with no load on the scale.
2. Ensure that the object being weighed is fully on the scale and not supported otherwise.

8.2 The scale corner readings are not equal:

1. Repeat the setup and adjustment procedure.
2. Check the load cells for damage.

8.3 The scale readings drift rapidly:

1. Check for water and dirt in the junction box
2. Check the load cells and their cables for damage.
3. Disconnect one load cell at a time from the junction box. If the scale becomes stable, then the disconnected load cell is probably defective.

Use a load cell simulator to verify that the indicator is stable and operating correctly.

9 Certificate of Compliance

To have a look at the CE Declaration of Conformity, please click onto the following link: https://www.kern-sohn.com/shop/de/Downloads