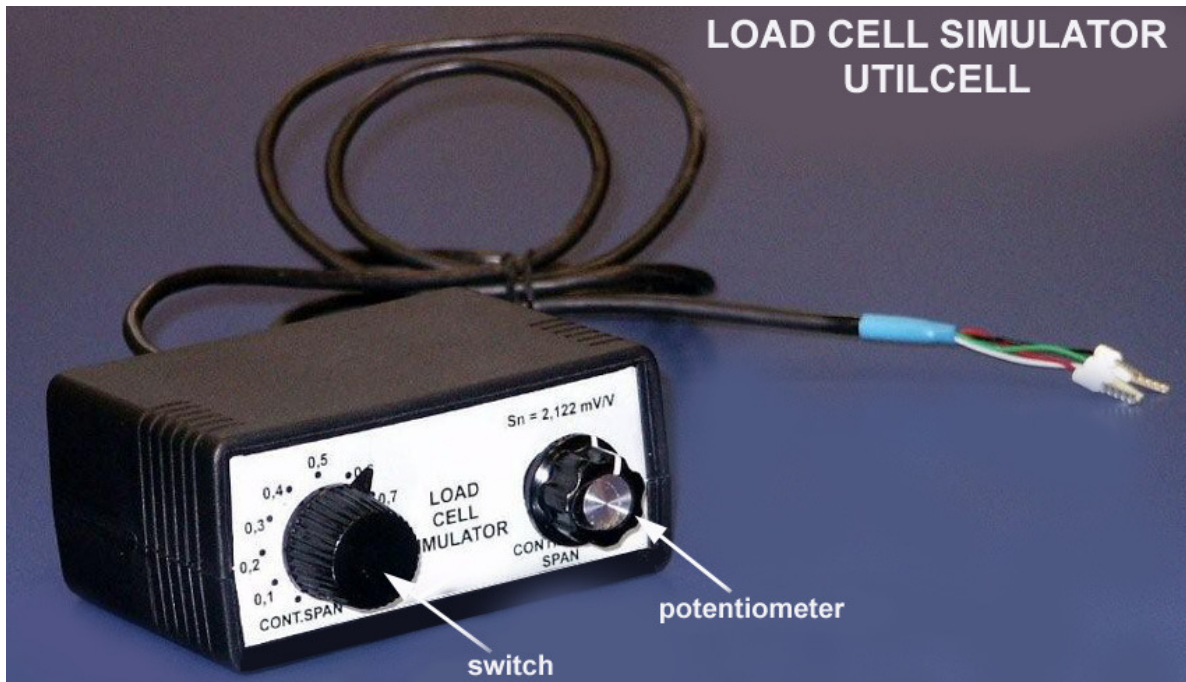# LOAD CELL SIMULATOR UTILCELL

Definition

The load cell simulator (pict.1) is a passive signal source for indicators, as the tensometric load cells use to generate. Thus, the load cell simulator allows to replace a real load cell so testing and checking of the indicator can be done without the real load cell connected.

The defined sensitivity of this simulator is Sn = 2,122 mV/V (with an margin error of ± 5%) and can be used with this information in mind to pre-calibrate the digital indicator.

Picture 1. Load cell simulator

Load cell simulator parameters

- nominal sensitivity   2,122 mV/V (±5%)
- dimensions (w x h x d)   90 x 40 x 60 mm
- weight   0,13 kg
- connection   4 wires :   +EXc   green
     –Exc   black
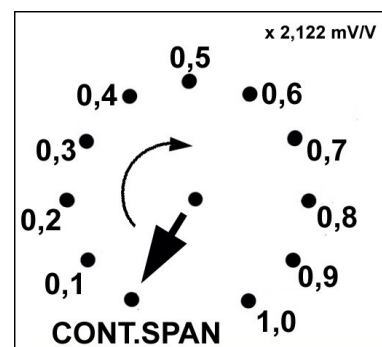   +Sig   red
     –Sig   white

Construction details

The simulator is cased in a plastic box – see pict. 1
On the front panel can be seen two regulation elements:

- **SWITCH** (Pict.2.) – 11 position switch that allow the selection of the signal in 1/10th of the nominal sensitivity or the continouts span through this range.

Pict.2. Switch

- **POTENTIOMETER** (Pict.3.) – For the continous span through all the range, there is a 10 turn potentiometer. This potentiometer is engaged only when the switch is in the position **CONT.SPAN** (see pict. 2)

Pict.3. Continuous span selection

CONTINUOUS SPAN
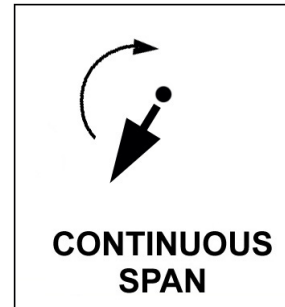
Connecting the load cell simulator.
The simulator is connected as a 4 wire load cell with the color code of the UTILCELL load cells. For connecting to indicators Matrix and SMART in standard connector casing, the Cannon 9 connecter have to be assembled as follows :

green	to pins 1, 2, 6
black	to pins 4, 5, 9
red	to pin 7
white	to pin 8

Use of the simulator
After the connection of the simulator to the indicator, select the different discrete 1/10th steps and check that this corresponds to what shall be expected for such a signal level. With the help of the continuous span in the left-most possition, set the zero , then, pass to the 1,0 possition in the switch and pre-calibrate the span of the indicator.

With the continuous span you can also check the set points and the hysteresis you set in the indicator as a batching system. Also, you can connect the simulator in the JBox in the side of the load cell to check the integrity of the JBox .

Note
Changes in the casing of the simulator that will not affect the functions here described are possible without prior advice. Thus, the information of dimmensions, weight and construction material of the simulator may vary.