



Manual



STRAIN GAUGE SIGNAL CONDITIONER Type SGM430

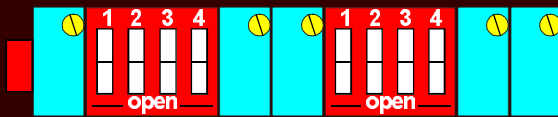
SPAN
ADJUST

ZERO
ADJUST

FILTER

CURRENT
ADJUST

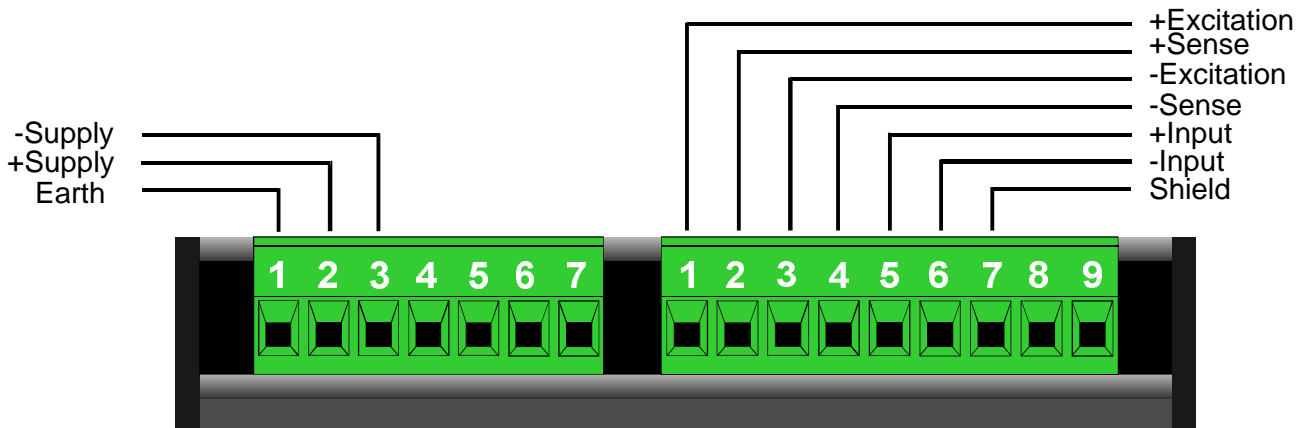
OUTPUT
LEVEL



Strain Gauge Converter type SGM430

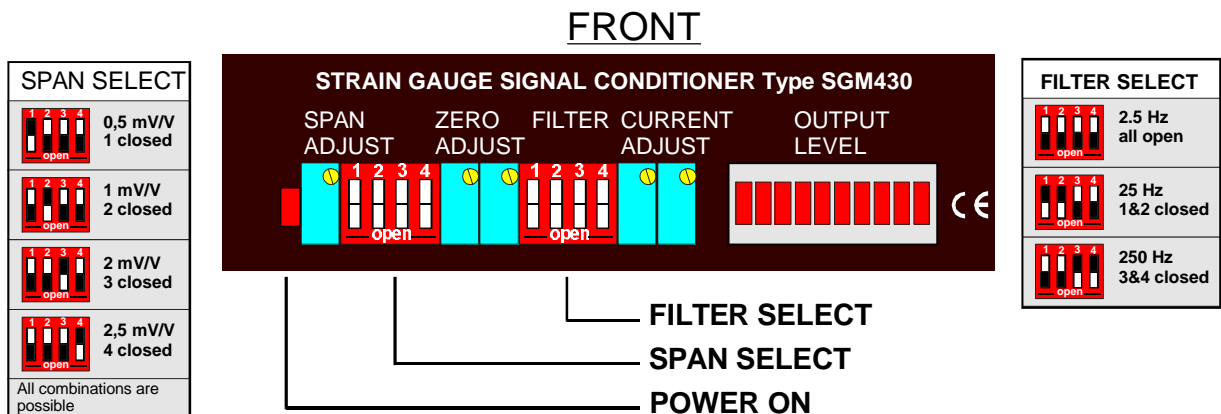
Strain Gauge Converter type SGM430

E-sm430

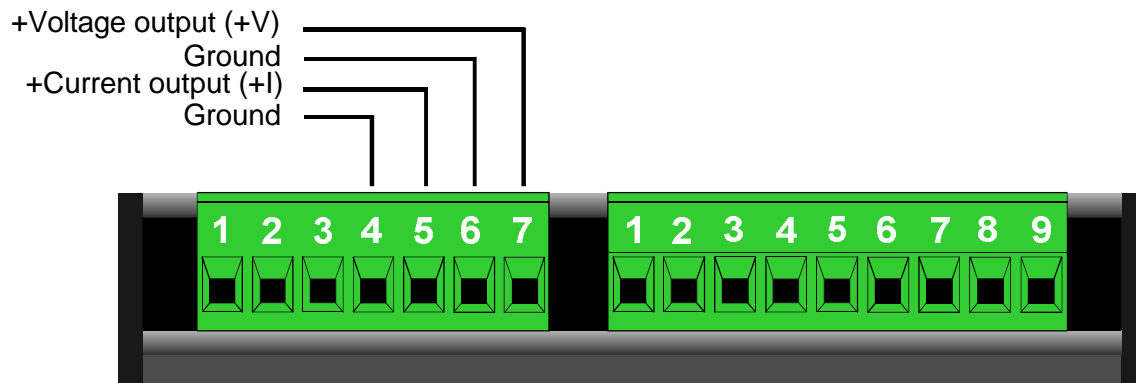


JUSTIFY THE STRAIN GAUGE AMPLIFIER TYPE SGM430.

- After mounting the loadcells, controlled and connected, it's time to justify . The loadcell cable must be connected to the 9 pins connector as follows:
 The +supply (excitation) on terminal 1.
 The -supply on terminal 3.
 The +sense on terminal 2.
 The -sense on terminal 4.
 The +signal (input) on terminal 5.
 The -signal on terminal 6.
 The shield on terminal 7.
- Select with the dipswitches for the "span select" the sensitivity of the amplifier. At a sensitivity of an 0,5 mV/V the system amplifies about 2.000 times. This is at 2,5mV/V about 400x.

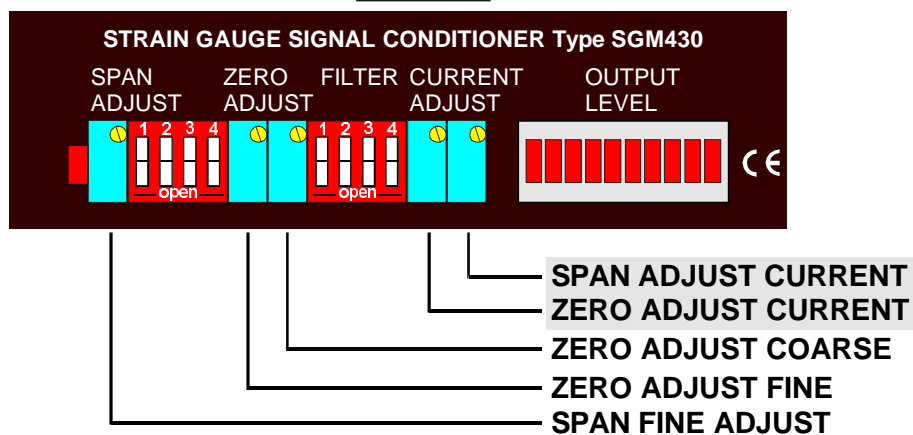


- Select with the dipswitches for "filter select" the cut-off frequency of the low pass filter. At 2,5 Hz you have less trouble of unrest but the system reacts slow. At 250 Hz the system is quicker but there more unrest. For weighing applications we advise the setting of 2,5 Hz.
- Connect a DC voltage power supply between 18 and 30Vdc (24Vdc recommended) to terminal 2 and 3. Terminal-1 is for the earth connection. It's also possible to connect an alternating voltage between 12 and 18Vac.



5. Measure with a voltage-meter at terminal 6 and 7 of the 7-pins connector the output voltage.

FRONT



6. At an unloaded weigher you have to justify the voltage with the "zero adjust" potentiometers to 0V. First with the "zero coarse" potentiometer to about 0 V and after that fine tuning with the "zero fine" potentiometer.

7. Place the maximum load on the weigher. Now adjust with the "span fine adjust" potentiometer the output voltage to 10 V. The ledbar "Output level" follows the voltage output.

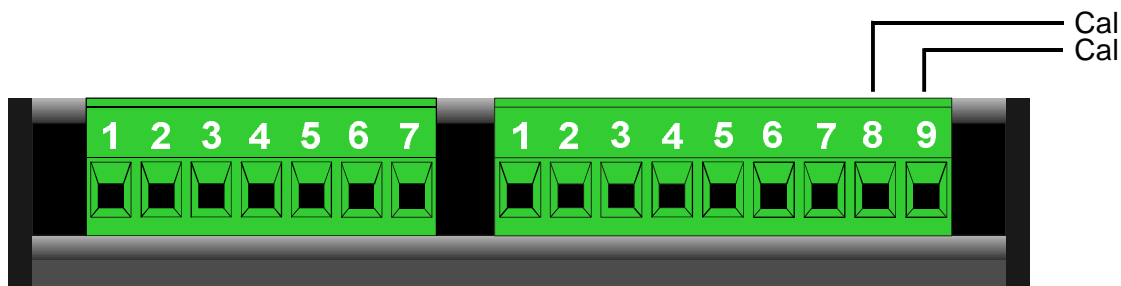
8. Repeat point 6 and 7 when necessary .

9. After all the current output can be justified. Connect to terminal 4 and 5 an ampere meter off the 7-pins connector.

10. Adjust with an unloaded weigher the current with "zero adjust current" potentiometer to 4 mA.

11. With a maximuml loaded weigher the current can be justified to 20mA. Do this with the "span adjust current" potentiometer.

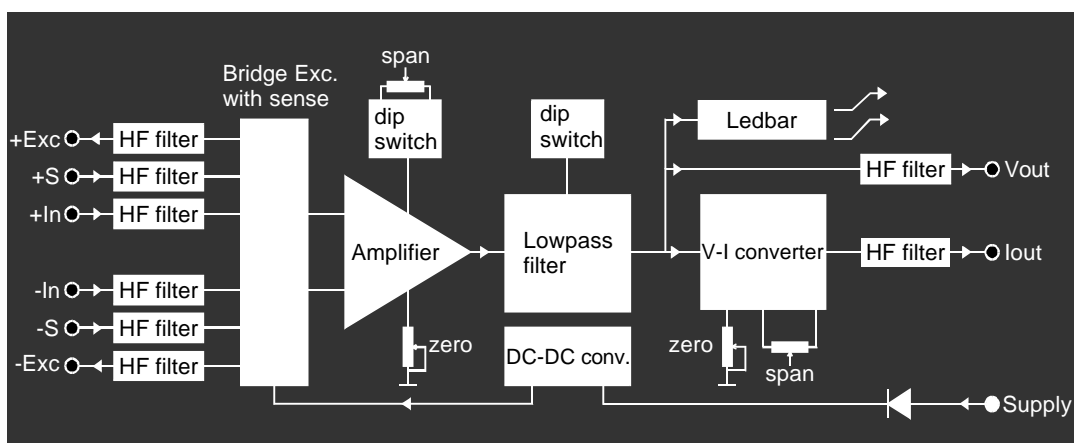
12. Repeat point 10 and 11 when necessary..



CAL function:

The function of CAL is to get a reference value out of the amplifier, to control after a while to check if the weigher still gives the same output. After the amplifier has been calibrated and the weigher is empty, please connect a potential free contact to terminal 8 and 9. Measure the output signal with a voltage- or current meter and notice this reference value for the gain. This function is meant to check automatic weigher systems. For example one the loadcells might be defect.

Block diagram:



Technical specifications:

Power supply	: 16-30 Vdc or 12-18 Vac.
Bridge excitation	: 10 Vdc suitable for 1-4 load cells (350 Ohm) with active sense for long cables or safety barriers.
Signal input range	: 0.5 mV/V - 2.5 mV/V.
Input impedance	: 10 GigaOhm.
Linearity	: 0.01 % FS.
Dead load compensation	: ca. 50%.
Temperature effects (FS)	: on zero $\leq 0.005\%/^{\circ}\text{C}$ on span $\leq 0.0025\%/^{\circ}\text{C}$ typical.
Temperature range	: operating -10 - + 40°C storage -25 - + 80°C
Analog filter	: 2.5, 25 or 250 Hz, 12 dB/octave c.q. 40dB/decade. (-3dB)
Output	: 0-10V and 4-20mA (4-24mA) / 500 Ohm max.
Consumption	: 7 Watt max.
Weight	: approx. 500g.
Dimensions	: 105 x 76 x 62 mm excl. mounting clip.