OWECON OWA120/130 Loadcell Amplifier

The **OWECON OWA120/130 series amplifier** is a universal loadcell amplifier covering all types of standard loadcells in paper, foil and converting industry.

- ➔ Working Range: 1mV/V to 50mV/V loadcell signal
- ➔ Handles applications of: Constant Voltage or Constant Current – Bridge supply
- ➔ Cost / Performance effective
- ➔ Available in 24VDC and 110-240VAC models
- ➔ Extra flat, DIN Rail mount w./ metal foot catch

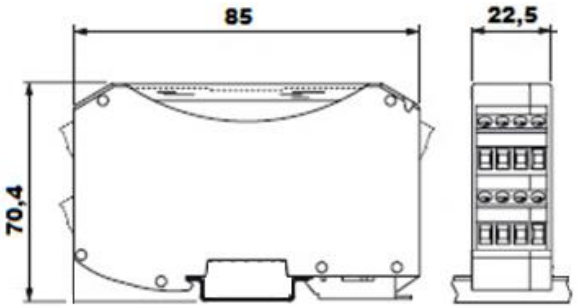
Applications:

The OWECON OWA amplifier and OWI Indicator are used with OWECON - or third party loadcells to indicate web tension on all types of web-process and converting machines. The output can be used to drive a tension meter. For processing, the output can be interfaced to a PLC, PC or motor-drive

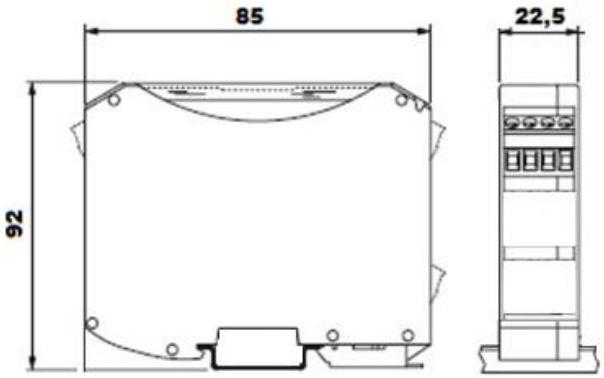
Mechanical specifications

Outline, mechanical dimensions:

Loadcell Amplifier OWA124/134
24 VDC supplied

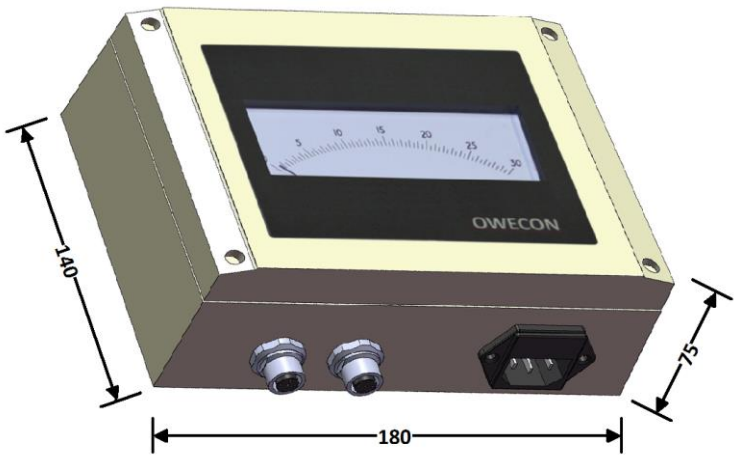


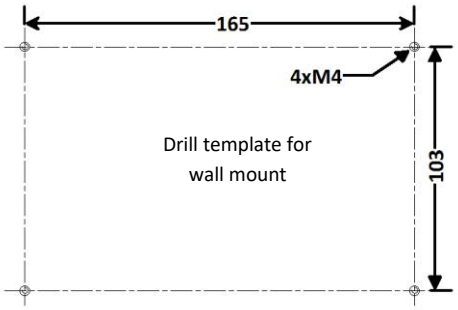
Loadcell Amplifier OWA120/130
110-240VAC supplied



Tension Indicator Module OWI120/130

The OWA120/130 Series Amplifier is available as an in-box Indicator Module: OWI120/130 – OWI124/134

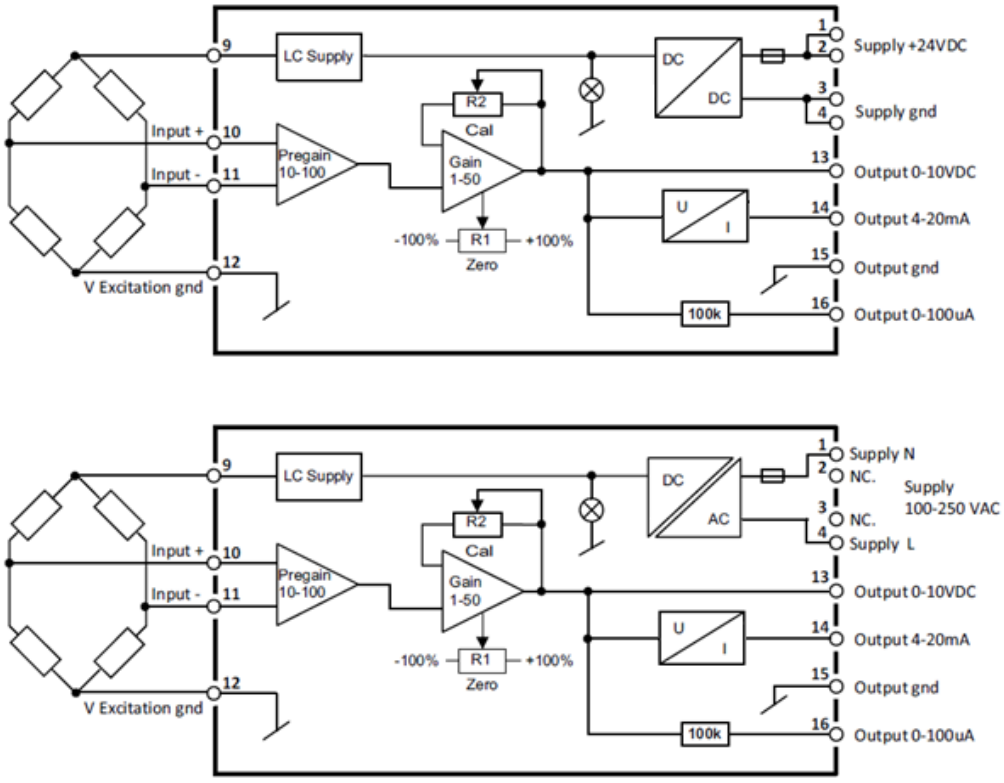




Electrical

Loadcell Installation

The OWA120/130 Series Amplifier is compatible to all types of loadcells in the market.



Electrical specifications:

Supply Voltage OWA/OWI124/134.....24VDC +/-15%
Supply Voltage OWA/OWI120/130.....90-264VAC
Overvoltage Category .....3kVAC (Class II)
Maximum Power Consumption .....4 W
Maximum Supply Fuse Size .....1 A
Load Cell Input .....± 1-50 mVDC
Input Impedance .....100 kΩ
Load Cell Supply .....±2.50 VDC ±1%
Zero Range Adjustment ..... 100% of Load Cell Rating (± 50mVDC)
Gain Adjustment .....10 to 5000 depending on type
Accuracy ..... Better Than 1%
Meter Output.....0 to 100 µA
Process Output .....4 to 20 mA and 0 to 10VDC
Process Output Maximum Load (Current) .....≤ 500 Ω
Process Output Maximum Load (Voltage) .....≥ 5000 Ω

Standard Scales OWI Indicator.....0-100, others on request
Connections .....Removable Terminal Blocks
Mounting Bracket .....DIN Rail
Mounting Orientation .....Not Critical
Ambient Temperature Range: Operating .....-10ºC to 50ºC
Ambient Temperature Range: Storage .....-10ºC to 80ºC
Humidity .....<95% Non-Condensing
Degree of Protection .....IP54 (IEC 529)
EMC-Immunity .....EN 50082-2 Industry
EMC-Emission .....EN 50081-1 Trade and Light Industry
Electrical Safety Standard Meets.....UL-60950-1
Material Degree of Inflammability Meets .....UL 94
Installation Environment (Pollution Degree) 2
Weight OWA .....0.10 /0.12 kg
Weight OWI .....1.5 kg
Size OWA 124/134(WxDxH).....22,5mm x 70,4mm x 85mm
Size OWA 120/130(WxDxH).....22,5mm x 92mm x 85mm

Calibration:

For the calibration procedure you need a small screwdriver, a multimeter, a rope, and a calibration weight. Choose what the maximum working web tension will be and find an appropriate calibration weight. For an optimum weight calibration, the weight should be at least 25% of the maximum tension. Before calibration make sure that the sensing roller is mounted correctly.

The calibration step are as follows:

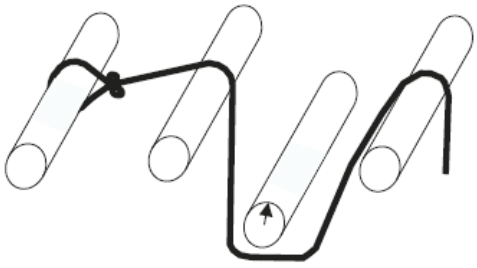
1. Use a multimeter, VDC range, connected between terminals 13 (+) and 15 (-).
   (For the OWI, read the present meter).
2. Make sure there is no weight on the sensing roller. Adjust the “ZERO” screw until 0 V is measured or read out on the meter.
3. Thread a rope around the center of the sensing roller, let it pass at least one roller before and one after the sensing roller.
4. Attach a weight of known value to the rope, at least 25% of the chosen maximum web tension.
5. Adjust on the “GAIN” screw until the multimeter shows a value calculated with the following formula:

V = (Cal. Weight/Cal. Max. tension) x 10Volts

Or for the OWI, the meter reads the calibration weight.

- A negative reading indicates that the loadcell signals are reversed. Switch the wires between terminals 10 and 11.
- Remove the weight and check that outputs return to 0. If not, repeat procedure steps from top.

Loosen the rope when Zero calibration:



Tighten the rope with the calibration weight when weight calibration: