



Single Channel Load Cell Amplifier



Reference Manual

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The SCA-10 module was developed for the connection of foil strain gauges in a bridge circuit (four-wire technology), but they also can be used as mV amplifier. 350Ω...20kΩ sensors with output voltages of between 1...20mV/V can be used in application as strain gauge amplifier. The bridge supply voltage is set to 5V or 10V using jumper "X6".

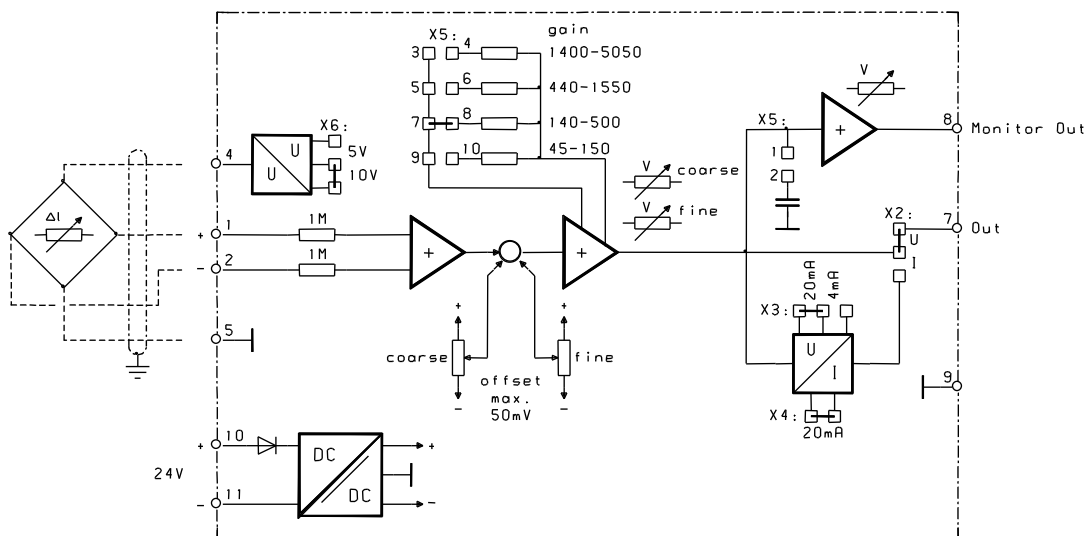
The output signals of 0...10V, 0...20mA* or 4...20mA* can also be pre-selected using a jumper. See table:

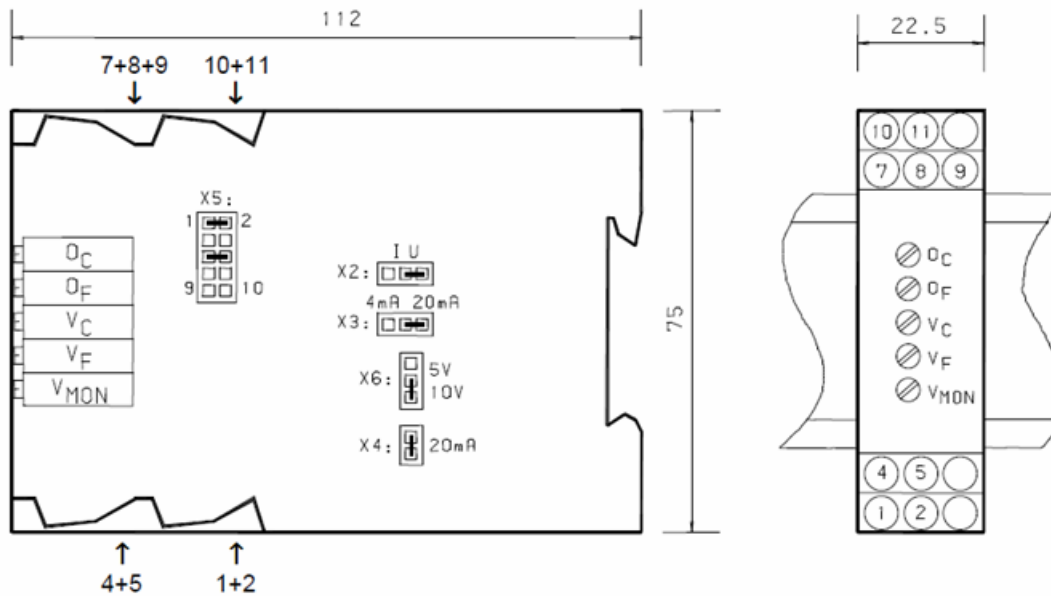
Output	Jumper X2	Jumper X3	Jumper X4
0...10V	U = on	20mA = on	20mA = on

The output can be monitored on a suitable display via an adjustable monitor output (0...10V). The cut-off frequency of the monitor output can be selected in two stages using jumper "X5".

The amplifier can be coarsely adjusted to the various measuring bridges using jumper "X5" (45...5050) on the printed circuit board. For the balancing of zero point and gain, there are two 20-turn helical trimmers. These are ideal for making optimum coarse and fine adjustments to the measuring range.

The units can be clipped onto DIN TS35 rails and are supplied with 24V DC. The supply voltage is electrically isolated from the signals.





Technical Data SCA10

Supply Voltage	24V DC $\pm 20\%$ / Max 1.5W
Ripple (Supply Voltage)	Max. 5%
Bridge Types	Only full Wheatstone Bridges
Bridge Resistances	350 Ω ... 20k Ω
Bridge Sensitivity	1...2mV/V
Signal Inputs / R in	0...200mV / 1M Ω
Overload Signal Input	Max. 30V
Bridge Supply Voltage	5 or 10V short circuit proof
Min. Gain	45
Max. Gain via x5	150, 500, 1550, 5050
f_{MAX} at gain 45... 5050	5kHz...2kHz
Zero Point Adjustment	Max ± 50 mV from input
Voltage Output	0... ± 10 V / max. 5mA
Current Output / Load	0 or 4-20mA / max. 500 Ω
Monitor Output	0...10V / max. 5mA
Monitor Cut Off Frequency	60Hz or 0.6Hz
Linearity Error	0.005%
Temperature Drift	0.002% / K
Ambient Temperature	0...50 $^{\circ}$ C
Connections	2.5mm ² Screw Terminals
Housing	Grey Insulated Polycarbonate
Housing Mounting	DIN Rail TS35 Mount
Weight	100g

Other Products from TTS

TTS supply a complete range of transducers designed to meet almost all web tension applications.

They are designed to meet exacting standards and all feature positive overload stops to prevent damage

Please visit our website where you can find a more comprehensive listing of our products plus all the technical support you should need

www.tts-systems.com