EWS-102 CONTROL UNIT SUPPLEMENTARY INFORMATION

Use of the Analogue Output Signal With Pre-Torque Anti-Rollback Systems

The EWS 102, when supplied with the optional analogue output, provides a 4-20mA signal that is proportional to the elevator load including any attached compensation chain. This signal allows a suitably equipped drive to pre-torque the traction machine, minimising any lift car rollback.

- 4mA = empty elevator (Zero)
- 20mA = elevator capacity (Full Load)

The EWS can be configured to "transmit" its output signal as either current or voltage. The output used will depend on the requirement of the equipment that will "receive" the signal.

The standard 4-20mA output can be converted to give voltage output signals as follows:

- 1-5V output signal - connect a 250 ohm resistor across the "receiver" input.
- 2-10V output signal - connect a 500 ohm across the "receiver" input.

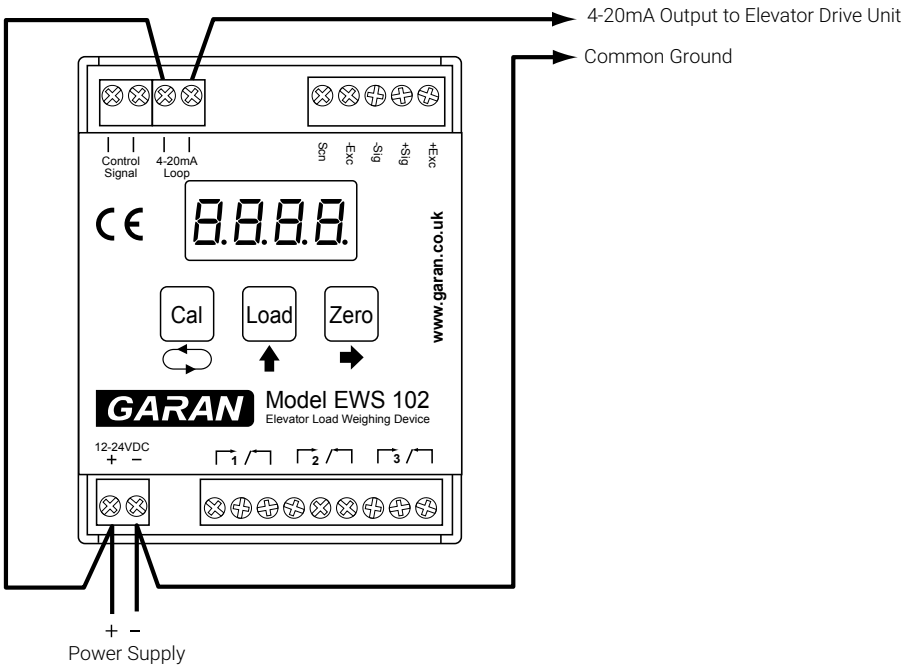
The loop power supply voltage needs to be high enough to include the voltage required by the "transmitter" (the EWS 102), and the voltage required by the Receiver.

The EWS 102 is a type 2 isolated 2-wire loop circuit with a compliance voltage of 10V. The required loop power supply voltages are:

Receiver Input	Supply Voltage	Note
4-20 mA	12-30V	12V assumes 100 ohm max across receiver input
1-5V	15-30V	With 250 ohm resistor across receiver input
2-10V	20-30V	With 500 ohm resistor across receiver input

Warning:
Care must be taken choosing the power supply for the recommended wiring scheme (see below). To avoid damage to the EWS 102, any power supply connected to its power supply input must not exceed 24 Volts DC.

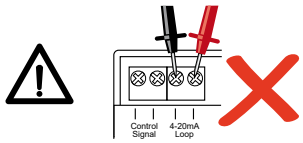
Wiring schematic



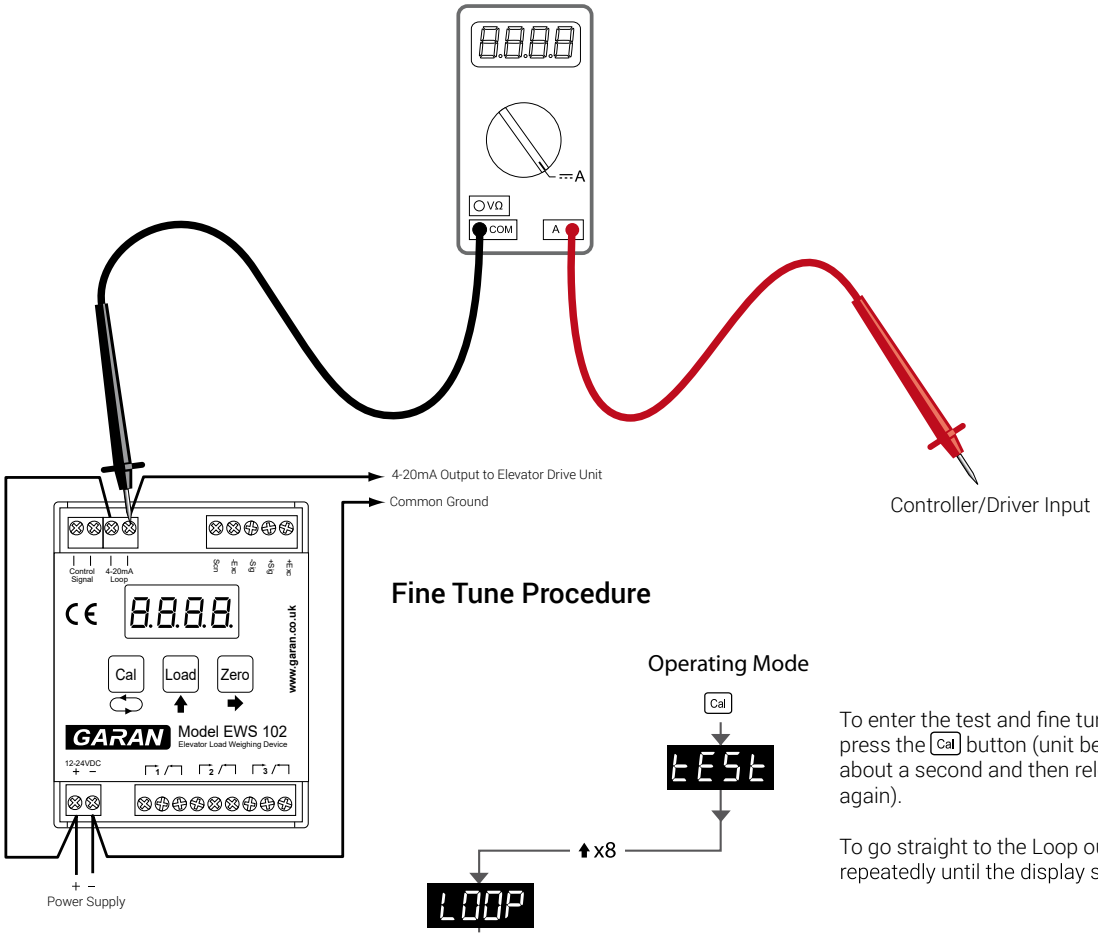
4-20mA Loop Fine Tune Adjustment

The current loop output is proportional to the elevator load including any attached chain (4mA when empty to 20mA when at capacity). Although the unit provides an accurate output without the need for any adjustment, this procedure offers a quick and simple means of measuring the output using a multi-meter connected in series with the 4-20mA Loop output terminals, and without having to monitor the sensor. The output can also be re-tuned during the process, if required.

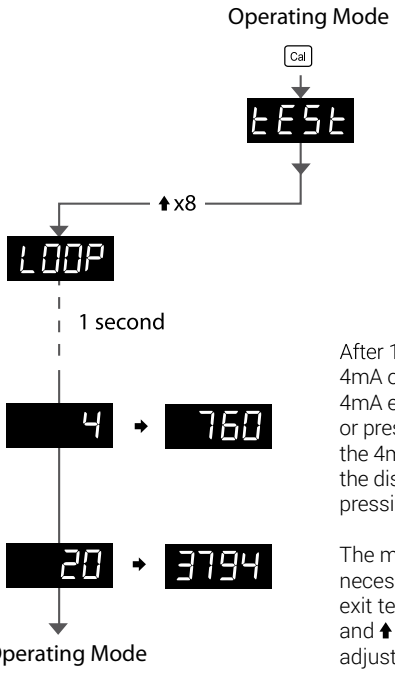
Connect the multi-meter as shown below:



Do not connect the meter across the 4-20mA output.
This may result in a blown fuse in your meter.



Fine Tune Procedure



To enter the test and fine tuning procedure, press the Cal button (unit beeps), hold it for about a second and then release it (unit beeps again).

To go straight to the Loop output test, press ⬆ repeatedly until the display shows 'LOOP'

After 1 second, the display will show '4' representing the 4mA output. At this point, the meter should measure 4mA exactly. If necessary, press ➡ to enable fine tuning or press ⬆ to move to the 20mA setting. To adjust the 4mA output, use the ➡ and ⬆ buttons to edit the displayed 3-digit value. Once adjusted, save it by pressing ⮌.

The meter should now measure 20mA exactly. If necessary, press ➡ to enable fine tuning or press ⬆ to exit test mode. To adjust the 20mA output, use the ➡ and ⬆ buttons to edit the displayed 4-digit value. Once adjusted, save it by pressing ⮌.