DITEL: PRODUCTS: DIGITAL STARS: **8000CC**

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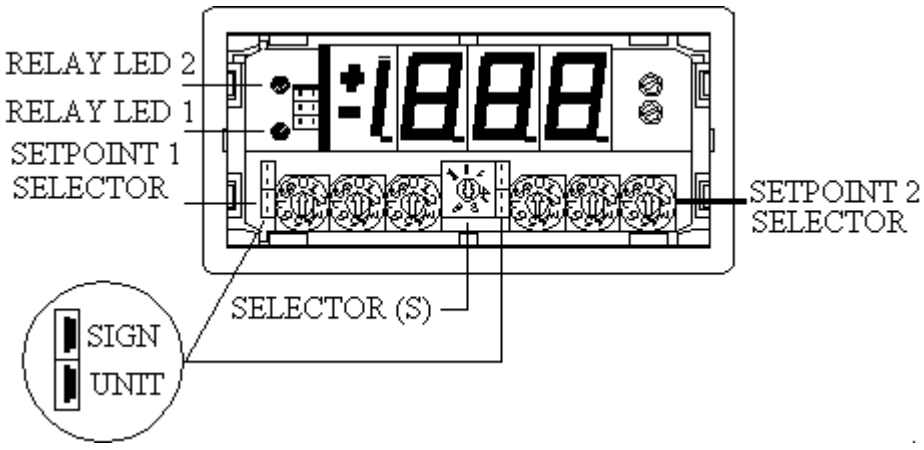
INPUT SENSIVITY

Strain meters for use with load-cell or bridge type pressure transducers are configured for an input sensivity of 2mV/v.
To modifie this value, replace the resistor R13 according to the results of:

$$N = 3630 / S * Vexc \quad R13(ohm) = 29400 / N - 7.2$$

where: S = Cell sensivity in mv/v. Vexc = Excitation voltage in volts. (When the excitation voltage is supplied by the meter, the value of Vexc is 10V).



Load-cell indicators are shipped to be 4-wire connected, whereby internal jumpers of SENSE terminals are soldered.
In case of long line lenghts between the cell and the instrument these jumpers must be unsoldered to allow 6-wire connection.

DISPLAY READING

After configuring the input sensivity, apply the following formula to determine the value of R24 in order to get the desired display readout (VD).

R24(ohm) = ((553*(2500 - VD)) / VD) - 100

With the resistance value obtained from the formula, the span adjustement margin is set to 20% of the display readout VD.

DEAD LOAD COMPENSATION (TARE)

To eliminate the dead load supported by one or multiple cells, connect a resistor R in the position [1] when operating under compression or in the position [2] when operating under tension.

Calculate the value of the resistor R by applying the following formula:

R(ohm) = (RCC * CCC) / (4 * SCC * PM)

where: RCC = single cell resistance in ohm

CCC = single cell capactity in kg

SCC = single cell sensivity in mV/V

PM = Total tare weight to eliminate in kg

Note: The maximum measurable weight will be the difference between the cell capacity (or the sum of all capacities in case of multiple cells) and the absorbed tare weight.

EXAMPLE OF CONFIGURATION

Suppose a load-cell supporting 1000kg, the tare weight in 250kg, cell sensivity 3mV/V and input resistance 350 ohm. Excitation = 10V.

Input sensivity:
N = 3630 / S * Vexc = 3630 / 3 * 10 = 121

R13 = 29400 / N - 7.2 = 29400 / 121 - 7.2 = 258ohm

Display reading:
R24 = 553 * (2500 - VD) / VD = 553 * (2500 - 100) / 1000 = 729ohm

Dead load compensation:
R = RCC * CCC / 4 * SCC * PM = 350 * 1000 / 4 * 3 * 250 = 175kohm

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