

SWIFT indicator: Powering load cells with an external power supply

The following system may be used when the number of load cells needed to connect with the same weighing system exceeds the maximum capable by SWIFT indicator.

Will be needed an external 5VDC power supply capable of supplying the necessary current to connect the amount of load cells needed. UTILCELL can a 5VDC power supply (DIN rail mounting) with code 89145 that delivers up to 2.4A with short-circuit protection. The external power supply must be connected to SWIFT Indicator SENSES input signal or to the corresponding SENSES wires of load cells or junction box, so that SWIFT indicator can detect and compensate possible changes in external power supply voltage for an accurate weight reading.

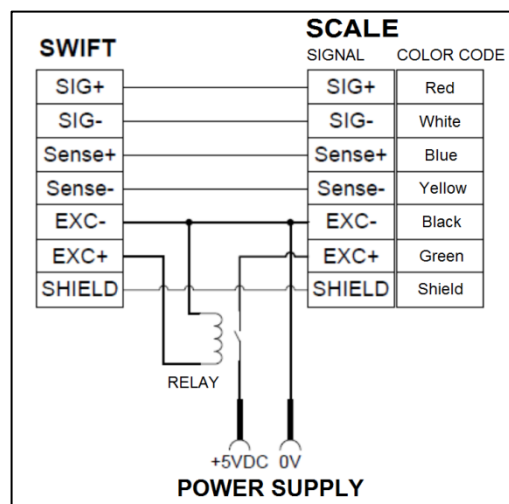
WARNING



Never supply voltage to the terminals of SWIFT indicator when the indicator is off, doing this can damage the electronic board of the indicator. The external power supply must not supply voltage to load cells until SWIFT indicator is switched ON.

To protect the system, will be needed to use a relay that disconnects the external power supply when SWIFT indicator is OFF. UTILCELL provides a relay for DIN rail mounting to perform this function (code 89146).

When the indicator is ON, the output signal generated by the SWIFT indicator through EXC+ and EXC- will feed the coil of the relay that connects the external power supply powering all load cells. This protection system ensures that if SWIFT is switched OFF, will no longer receive voltage response from load cells because the relay will be cut.



Additional features of the external power supply:

- Output voltage: 5VDC $\pm$ 5% **Warning: A higher voltage may damage SWIFT indicator.**
- Output current: Depends on the number of load cells and their impedance (20 mA for each 350 Ohms load cell or 10 mA for each 700 Ohm load cell, plus a safety factor of 30%).

When using a power supply without short-circuit protection, will be necessary installing a fuse in series with the external 5VDC power supply output dimensioned according to the total consumption of all load cells.

Characteristics of the relay are as follows:

- Excitation coil voltage: 5VDC.
- Maximum coil Consumption: 0.1 A.
- Relay contacts must withstand the current consumed by load cells.