

# SWIFT WEIGHING INDICATOR

## GENERAL SPECIFICATIONS



- **Weighing indicator and high speed transmitter:** 2400 measures per second.
- Selectable **Digital filters**.
- **Configuration and calibration by keyboard or computer.**
- **Display 6 digit 10mm LED** with 5-key keyboard.
- **Power supply** at 10-28 V DC (SWIFT consumption 4W max.).
- **DIN rail and Panel** mounting.
- **24 bits** A/D converter (16 million internal divisions).
- **100.000 external divisions.**
- **RS-232** (Dist. Max. up to 15m) and **RS-485** (both with **Modbus RTU and ASCII**) **serial port** (Dist. Max. up to 1200m with 32 devices) for PC, printer, remote display connection, etc. Transmission speed of 115200, 57600, 38400, 19200, 9600 and 4800 bauds.
- **Profibus and Profinet communications** (depends on version)
- **Analogue output configurable** at 0-5V, 0-10V, 0-20mA and 4-20mA, with galvanic isolation.
- **3 Digital opto-isolated inputs** with status LED.
- **3 Digital outputs** to relay with status LED.
- **Up to 8 load cells** 350Ω or **16 load cells** 700Ω.
- **Sense input to compensate losses** introduced by **wire resistance**.
- **Mass calibration and Pre-calibration mV:** Allows to start-up the scale by entering used load cell capacity and nominal sensitivity in mV/V.
- Possibility of **introducing zero and gain coefficient manually.**
- Two calibration **sealing** method: **Software** sealing by a calibration counter register or **mechanical** sealing. Use depends on local country regulation.



## APPLICATIONS

- Process Weighing and Level Measurement in Tank & Silos.
- Filling and Dosing Machines, by weight, in charge or discharge.
- Check-Weigher Scales.
- Animal Weighing Scales.
- Test Machinery.
- High Speed Dynamic Sorting Scales.
- Multihead Scales.
- PC/PLC Weight Transmission.
- Multiple Weight Indicators Connection in the same Bus.

## VERSIONS

SWIFT RAIL	SWIFT PANEL	OPTIONS	0/20 mA 4/20 mA	0/5 V 0/10 V	RELAY OUTPUTS	DIGITAL INPUTS	COMMUNICATIONS
							
Ref. 89450	Ref. 89460	SWIFT RS+ANALOG	■	■	3	3	RS232/RS485 MODBUS
89451	89461	SWIFT RS			3	3	RS232/RS485 MODBUS
89452	89462	SWIFT PROFIBUS			3	3	RS232/RS485 MODBUS PROFIBUS
89453	89463	SWIFT PROFINET			3	3	RS232/RS485 MODBUS PROFINET

## ADDITIONAL ACCESSORIES

- **Ref. 89458 Plastic Box:**
  - Protection class **IP 66**.
  - **Impact resistance IK07**.
  - **Wall mounting** ability.
  - Standard 35 mm **DIN** rail.
  - **Earth terminal** pre-assembled.
  - Cable entry through four **cable glands**.
  
- **Ref. 89459 Power supply:**
  - **100-240 V AC** at **24 V DC**.
  - Power up to **3 SWIFT** (15W).
  - **DIN** rail mounting.

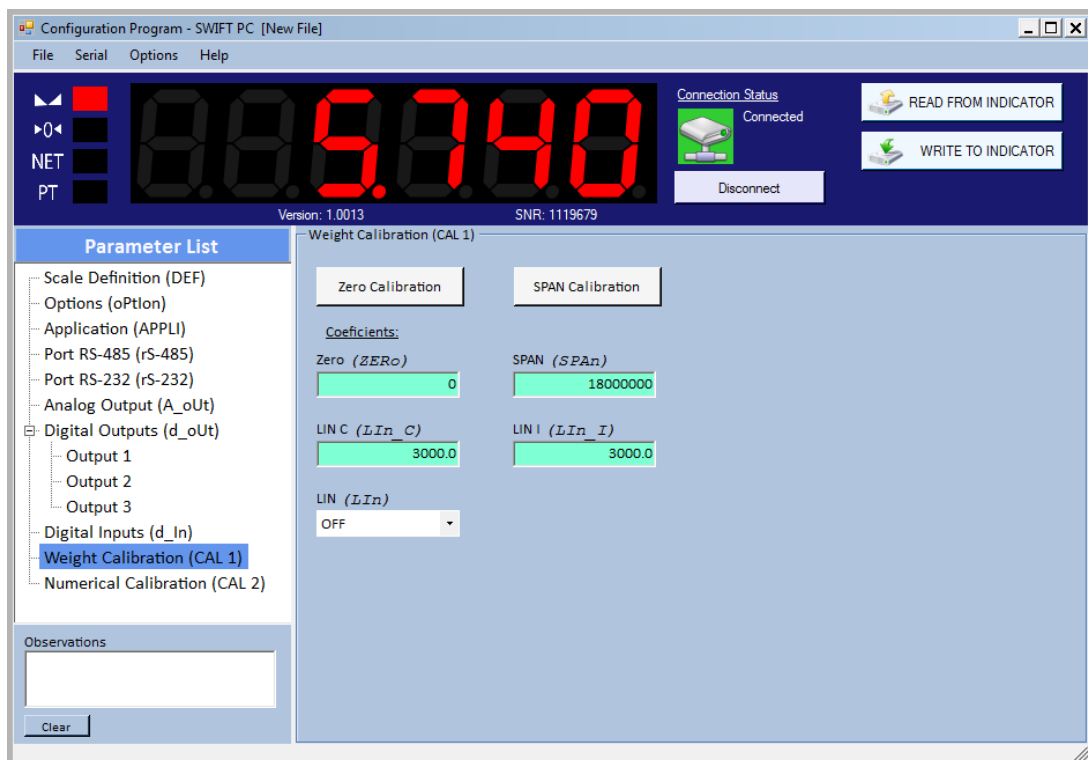


## PC COMMUNICATION PROGRAM

### SWIFT PC

This program needs to be installed in a PC and allows connecting a SWIFT with a PC through an RS232 serial port. There are two main functions:

- **Bootloader Function:** Allows SWIFT internal software to be update.
- **Configuration Function:**
  - **Display** the present state of the Weight on the scale.
  - **Configure SWIFT parameters** through a main menu in the PC screen.
  - **To make calibrations from a PC**, mass calibrations and numerical calibration using the mV/V parameters of load cells.
  - **To Save SWIFT parameter configuration** on a PC file.
  - **To Load SWIFT parameter configuration** from a PC file.
  - **To Print** parameters configuration.



Screenshot of SWIFT-PC in Configuration Mode ready to perform a mass calibration.

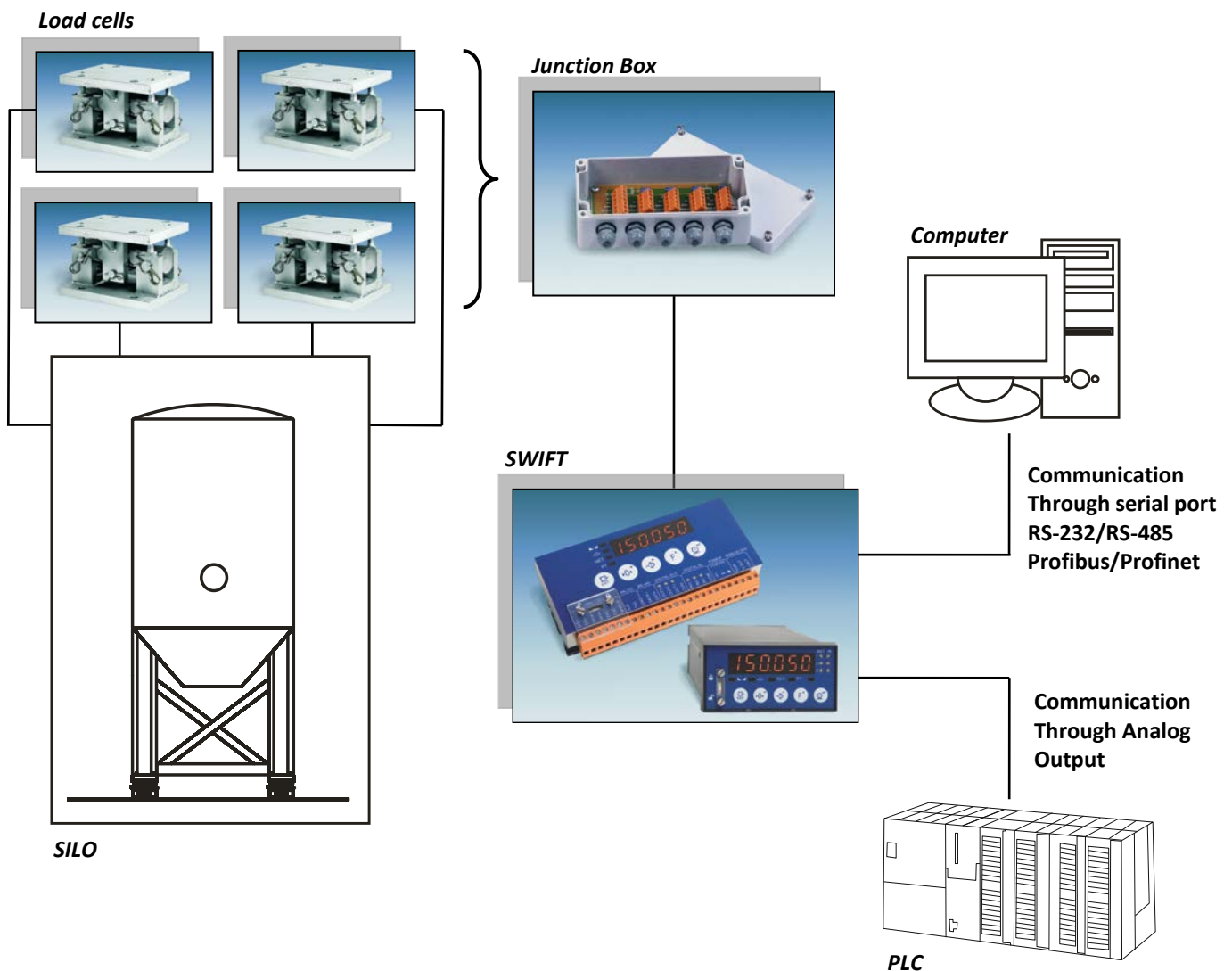
## PC/PLC WEIGHT TRANSMISSION

### GENERAL

SWIFT has 2 communication ports inbuilt: RS-232 and RS-485 (both with MODBUS RTU/ASCII). With these serial ports is possible to send and receive digital weight data from a PC or PLC.

Analog output allows to transmit the filtered weight signal in a variety of formats: 4-20 mA, 0-20 mA, 0-5 V or 0-10 V. This signal can be sent to external devices such as PC or a PLC with an analog input card. This feature allows to resolve the acquisition and filtering of the weight, avoiding implement this calculations on other control devices and reducing the time to market.

### SCHEME FOR PC/PLC WEIGHT TRANSMISSION

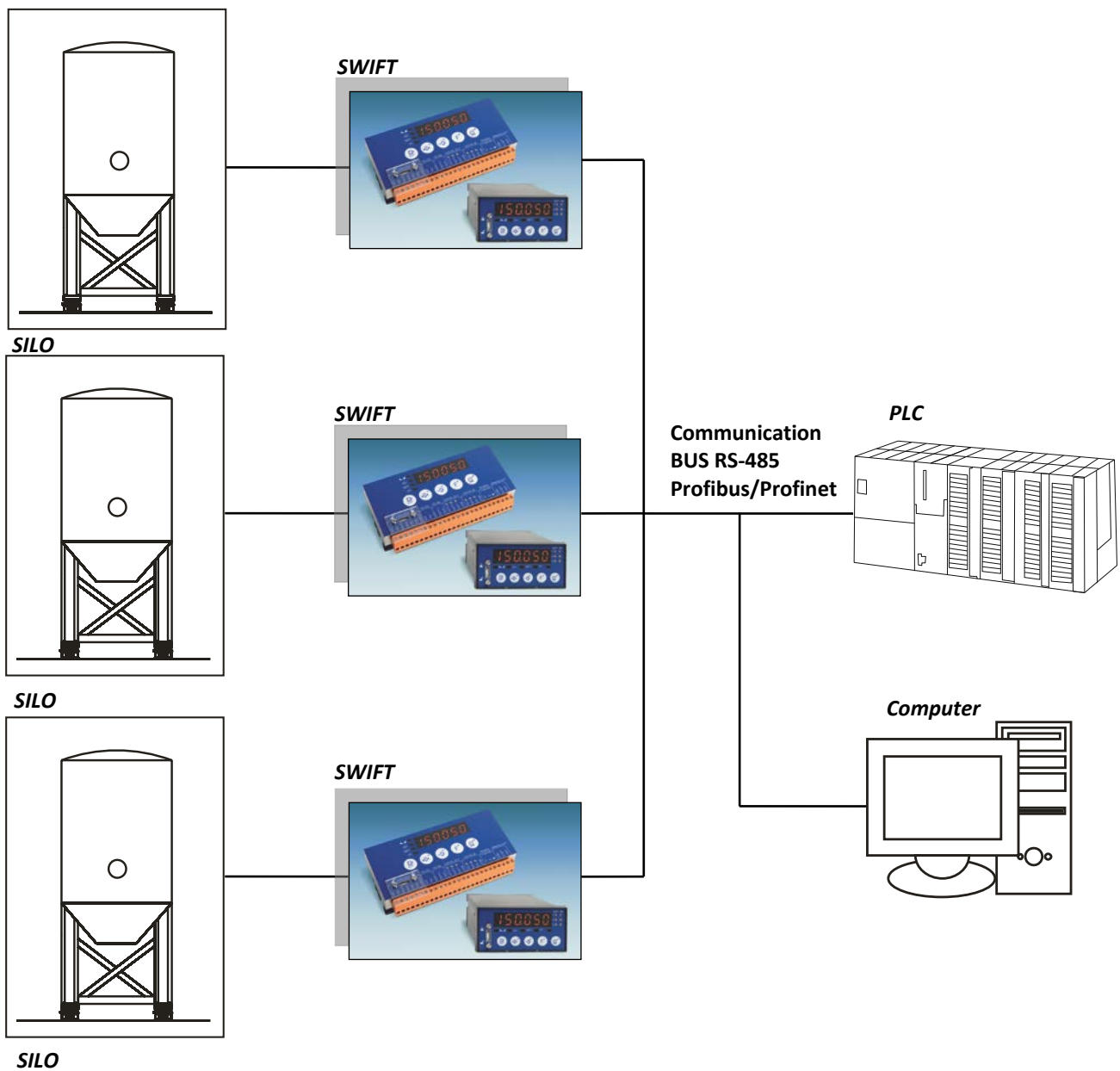


## MULTIPLE WEIGHT INDICATORS CONNECTION IN THE SAME BUS

### GENERAL

RS-485 (MODBUS RTU/ASCII) communication serial port allows to connect several SWIFT devices with a PC or PLC in the same data bus. The Data Bus communication allows to introduce several weighing devices in an existing Data Bus without making huge changes on the communication net.

### SCHEME FOR MULTIPLE WEIGHT INDICATORS CONNECTION IN THE SAME BUS



## CHECK-WEIGHER / ANIMAL-WEIGHING APPLICATION

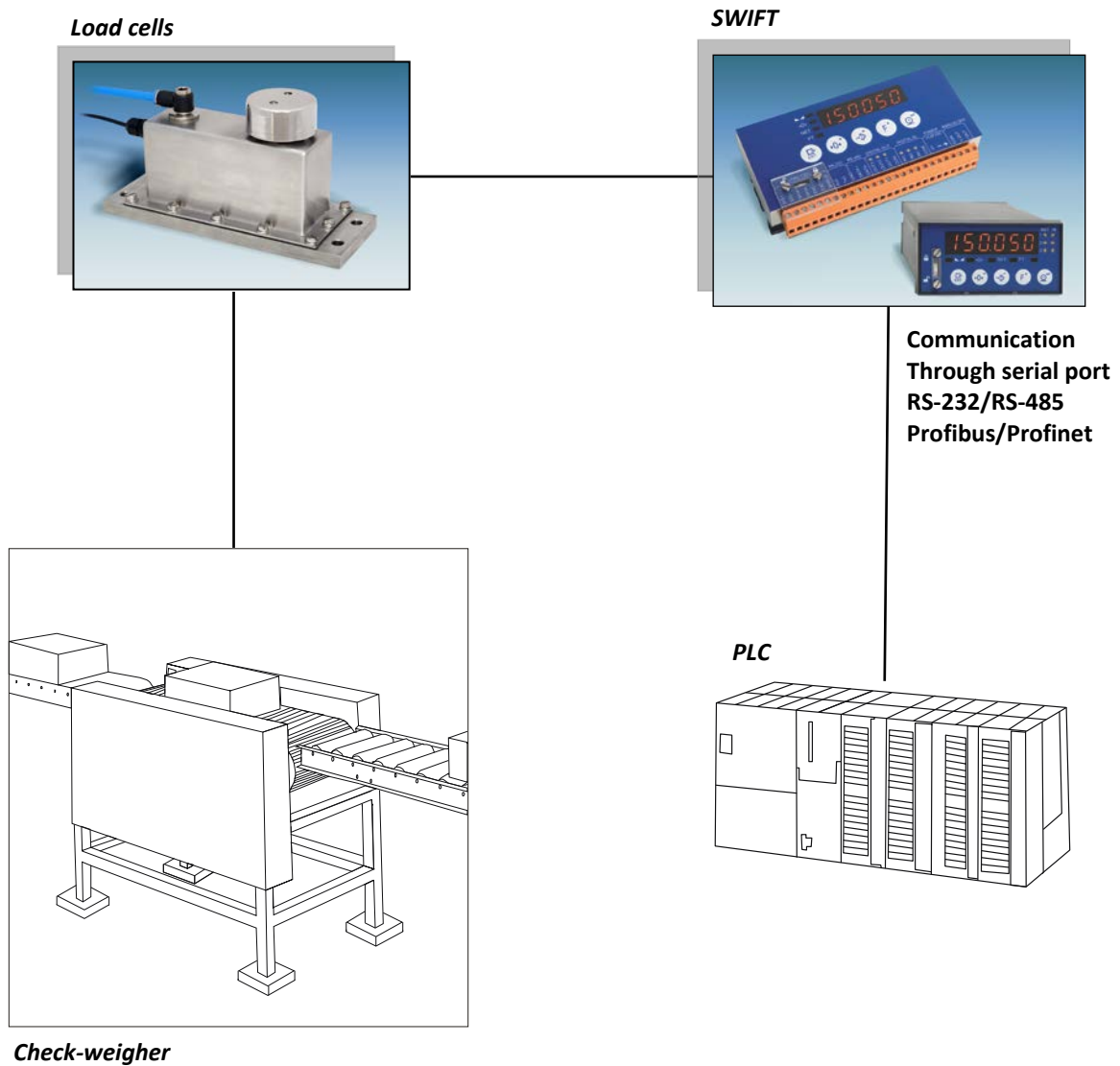
### GENERAL

The check-weigher / animal-weigher application allows catching the weight in dynamic application by selection of digital filter and controlling the three following steps of the weighing process:

- Trigger and Delay time step
- Weight readings step (weighing gathering)
- Display and printing result step

This application is very efficient and fast in a non-static system.

### SCHEME FOR CHECK-WEIGHER APPLICATION WITH SWIFT



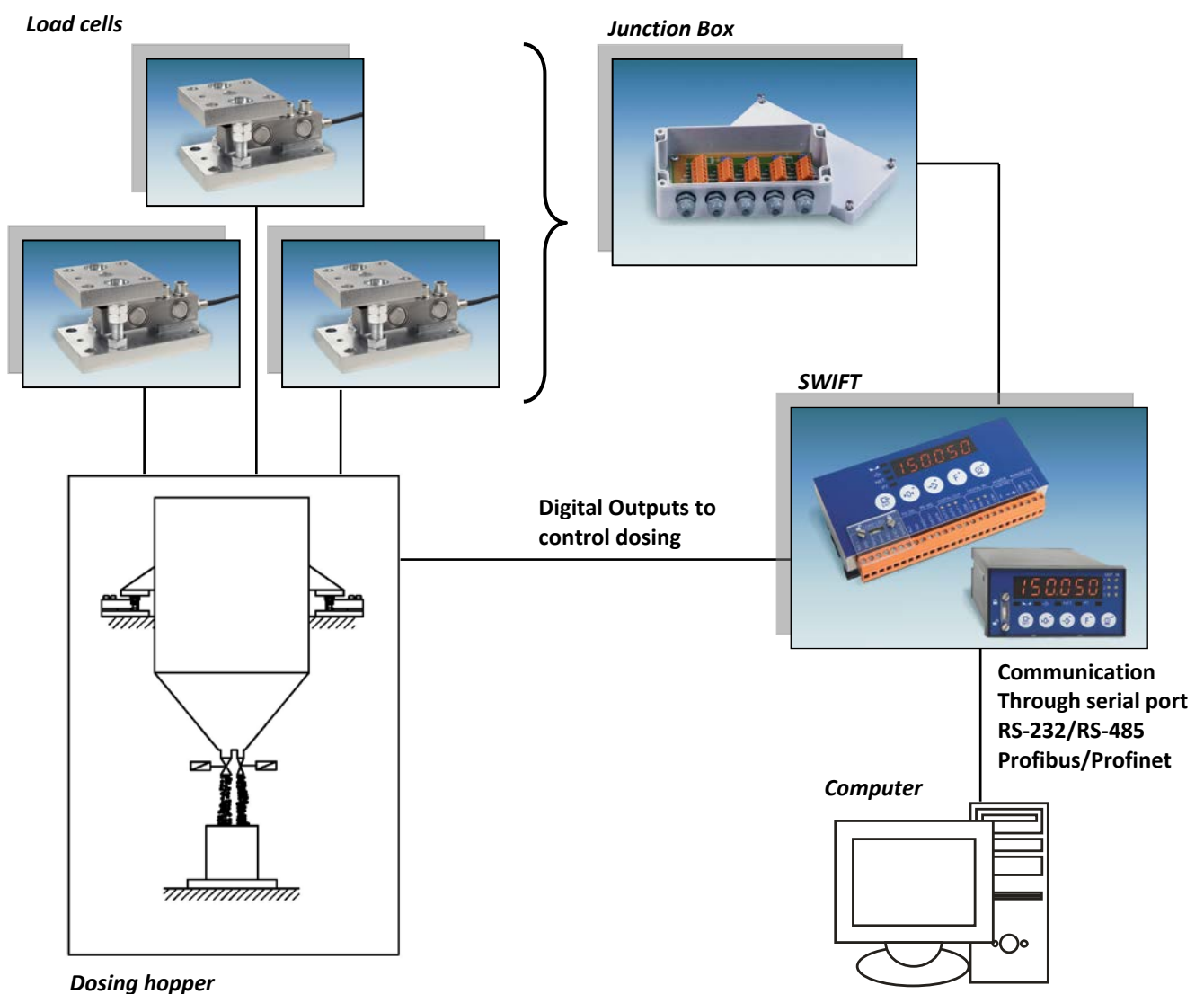
## FILLING AND DOSING MACHINES, BY WEIGHT, IN CHARGE OR DISCHARGE

### GENERAL

SWIFT has 3 Digital Inputs and 3 Digital outputs to relay that can be configured to perform a charge or discharge dosing by weight at one or two speeds for filling and dosing machines.

Digital Outputs can be programmed to trigger by gross or net weight level, relative to another Digital Output value, or in particular stats of the scale as: scale empty, stability, negative Weight value, tare disabled, and others. This feature allows to resolve dosing and filling applications with an autonomous SWIFT device.

### SCHEME FOR DISCHARGE DOSING AT TWO SPEEDS WITH SWIFT



## LEVEL MEASUREMENT IN TANK & SILOS

### GENERAL

Configuring the trigger values of the SWIFT's digital outputs it's possible to design a level Weight alarm system for a silo, to activate an alarm indicator if the weight level is too high or too low. This application allows implementation of Min and Max alarms and also detects failures for adding security measures to avoid the resultant costs in case of having an excess or need of product in the silo.

### SCHEME FOR WEIGHT LEVEL MEASUREMENT WITH SWIFT

