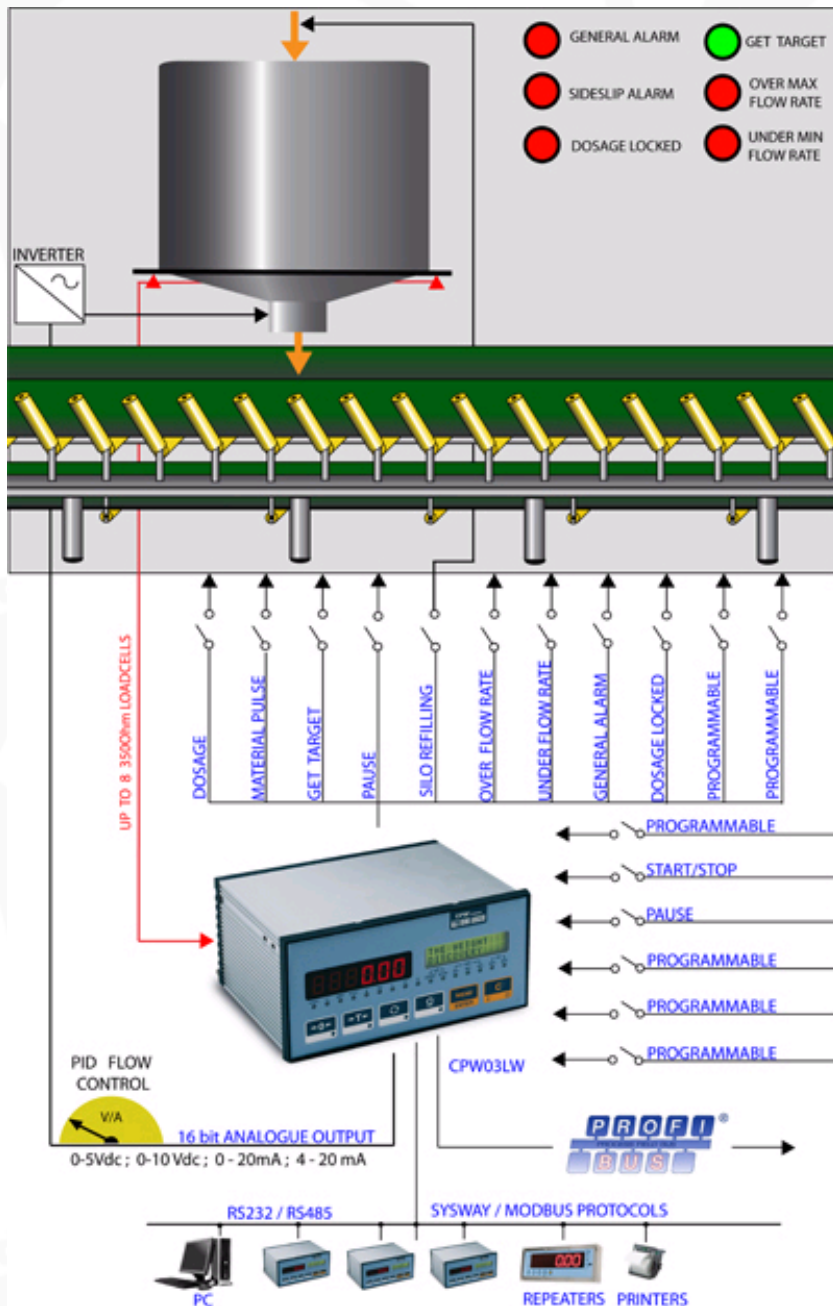


# "CPW03LW": CPW FOR MANAGEMENT OF CONTINUOUS DOSAGES IN UNLOADING



Software version for the measurement/integration of the flow of material exiting from silos, tanks, or hoppers, with memorisation of the quantity of dosed material; possibility of adjusting the flow through the 16 bit analogue output and the PID control. Possibility of remote management of the instrument through Sysway or Modbus RTU protocols, as well as Profibus through optional interface.

## FUNCTIONS

- **Instantaneous flow reader**, in g/h, kg/h, or t/h, visualisation of the system status and of the dosed total, with analogue output (optional) proportional to the flow.
- **Regulator of dosage hourly flow**, with regulation of the belt speed or the flow of material through a programmable analogue output. Completely adjustable PID (proportional, integral, derivative) algorithm.
- **4 selectable operation modes**, for completely manual or completely automatic dosages, managed by remote master through fitted Sysway and Modbus protocols or Profibus (optional).
- **Reading filter of the hourly flow with configurable incidence and speed** depending on the system.
- **Dedicated relay contacts for the complete management of the alarms** and the off weight or off flow blocks.
- **Management of the current dosage total** and general total of dosages, printable and clearable independently from each other.
- **Programmable dosage target** based on weight or time, with relative contact.
- **Management of the slow flow with programmable activation threshold**, for more precise dosages.
- **Calibration of the flow reader function**, for perfecting the dosage performances.
- **Impulse counter of the accumulated quantity through relay contact**, for direct communication with PLC or external devices.
- **Delay programmable at the start**, for synchronising various CPW03LW systems in the dosage of material mixtures.
- **Completely programmable printouts**, for compatibility with any ASCII printer manageable through the serial port; printing of the dosage data, of the system statuses and of the totals.
- **Fitted Sysway and Modbus communication protocols or the Profibus one (only with option).**

## FLOW READER FUNCTIONING

- The flow reader mode provides for the display of the hourly flow exiting from silos, tanks, or hopper and the display of the system status and the accumulated total.
- By closing the dosage start input, the system waits for the eventual set synchronisation time and enables the dosage output; if the analogue output has been configured, it transmits a signal, in voltage or in current, proportional to the hourly flow; furthermore it's possible to interrogate the instrument through the serial line and configure the set points through the fitted Modbus and Sysway protocols or through Profibus (only with option).
- If during the dosage, the weight of the material

CPW03LW: reading and adjustment of the flow and registration of the dosed weight.



## SYSWAY, MODBUS, AND PROFIBUS PROTOCOL' FUNCTIONS

### ● READING OF THE DATA:

- net weight
- instantaneous capacity
- instantaneous pid value
- partial total
- general total
- status of the optoisolated inputs
- status of the optoisolated outputs
- flow target (for the controller modes)
- minimum flow, maximum flow
- dosage time
- target to be dosed
- set point enabling/disabling value
- scale status.

### ● AVAILABLE COMMANDS:

- Dosage Start/Stop/Reset
- set flow target
- set target to be dosed
- set dosage time
- print format
- reset of the totals
- accumulated
- set setpoint.

descends below the filling start threshold, the reloading function is enabled: the analogue output is configured at fixed value and the reloading contact is enabled; upon reaching the reloading end threshold, the instrument returns into the dosage status.

- The dosage ends upon reaching the configured target, or by reopening the start input.
- If a printer is connected, the data of the finished dosage will be printed.

## FLOW REGULATOR FUNCTIONING

- The flow regulator mode provides for the display of the hourly flow exiting from silos, tanks, or hopper and the display of the system status and of the accumulated total.
- Furthermore, during the dosage, the instrument regulates the flow in order to keep it equally constant with the configured flow target: if the flow increases, the instrument decreases the analogue output value in order to diminish the flow of material exiting the silo; on the other hand, if the flow decreases, the instrument increases the value of the analogue output in order to increase the flow of the exiting material.
- The regulation of the flow is obtained through the completely adjustable PID (proportional, integral, derivative) control.
- By closing the dosage start input, the system waits for the eventual configured synchronisation time and enables the dosage output; furthermore, it's possible to interrogate the instrument through the serial line and configure the set points through the fitted Modbus and Sysway protocols or through the Profibus one (only with option).
- If during the dosage, the weight of the material decreases below the filling start threshold, the refilling function is enabled: the analogue output is set at a fixed value and the reloading contact is enabled; upon reaching the reloading end threshold, the instrument returns into the dosage status.
- The dosage ends upon reaching the set target, or by reopening the start input.
- Furthermore it's possible to set a dosage slowing threshold: when this threshold is missing from the weight to be dosed, the instrument slows the system in order to maintain the set "slow flow" until the target is reached.
- If a printer is connected, the data of the finished dosage will be printed.

**TO VIEW ALL THE TECHNICAL FEATURES, SEE THE CPW PRODUCT DATA SHEET**