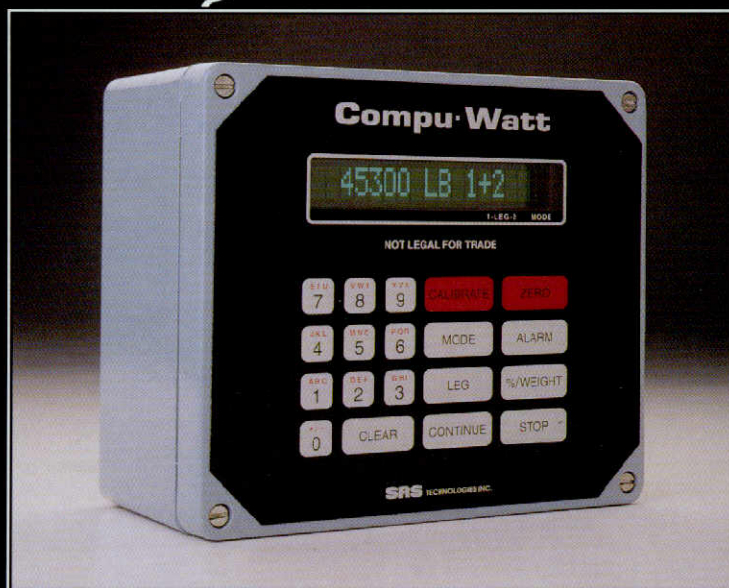


POWERFUL SOLUTIONS

VOLTS

AMPERES



Continuous Weighing

Solids Flowmonitor

for Bucket Elevators and Pneumatic, Belt
and Screw Conveyors

COMPU
W A T T
WEIGHING SYSTEMS INC.

A COST EFFECTIVE ALTERNATIVE

to impact, belt, hopper or volumetric weigh scales

Many applications do not require certifiable weights. **COMPU-WATT** can meet the needs of these applications without the expensive purchase, installation and maintenance costs of conventional weighing systems.

COMPU-WATT can provide **CONTINUOUS WEIGHING** or **SOLIDS FLOWMETERING** for your bucket elevator or pneumatic, belt or screw conveyor applications.

HOW IT WORKS

COMPU-WATT monitors the power consumption of the electric motor and computes the weight and flow rate of the dry bulk solid transported. This reliable technology has been proven in over 1600 systems worldwide.

APPLICATIONS

COMPU-WATT does not monitor the solids flow directly. Therefore it can be applied where other weighing systems cannot.

RAILCAR LOADING: Conventional weigh systems are not economical for many facilities. Destination weights are used for point of sale considerations.

TRUCK LOADING: Weigh the product as the trucks are loaded. Eliminate second passes to add or remove product after weighing on the platform truck scale.

INVENTORY: Monitor the transfer of products within your facility and keep track of inventory levels.

PROCESS MONITORING / FLOWMETER: Monitor the flow rate to dryers, crushers, mills, etc. An analog output (4 to 20 ma) is proportional to rate. A computer or PLC can control the Compu-Watt system and monitor detailed data transmitted.

COST SAVINGS and BENEFITS

ONE MAN DAY INSTALLATION: The system is easily installed by an electrician.

NO MAINTENANCE: There are no moving parts. There is no contact with the process flow because only electrical power is monitored at the electrical panel.

NO MODIFICATIONS: No expensive equipment modifications or access to product flow are required.

Costs of unused freight space and overload charges can pay for the system in no time. Distribute the load evenly in the railcar hoppers, maintaining equal axle weights.

Congestion and lineups at truck loadouts can be drastically reduced. Reduce loading time and increase throughput.

No expensive continuous level monitoring equipment or weigh scales required.

Control flow with relays (to actuate slide gate) or **4 to 20 ma** (to control variable speed drive).
Use the analog output to proportion additives.
Interface to batch or process controllers.

CONTINUOUS WEIGHING, FLOW MONITOR

for bucket elevators and pneumatic, belt and screw conveyors

FEATURES

- large backlit liquid crystal display is visible in all lighting conditions.
- displays totalized weight or % of full load capacity (or rate).
- select weight units (lb, kg, ton or tonne).
- 'ZERO' function to compensate for changes in the no load power consumption (due to temperature) of gearbox, belting, rollers, etc.
- programmable setpoints (up to 4) for totalized weight.
- alarm output for 5 seconds when each of the weight setpoints is reached.
- programmable setpoints (up to 2) for flow rate (overload).
- continuous alarm output when flow rate exceeds overload setpoints.
- up to 6 modes to calibrate for different product flow (front or rear side of the bucket elevator, etc.).

OPTIONS

- 'AUTO ZERO' function to automatically ZERO under no load condition.
- programmable auto shutoff at any or all of the weight setpoints.
- dual system can monitor 2 motors individually with separate or combined weight totalization.
- analog output (4 to 20 ma) proportional to rate of flow (lb/sec or kg/sec).
- two RS232 or RS485 serial ports

FLOW CONTROLLER:

analog output (4 to 20ma) or relays to control flow rate.

INTERFACE CAPABILITIES

OUTPUT ALARM RELAY: Activated when setpoints for totalized weight or flow rate are exceeded. The relay is usually connected to a 110Vac buzzer horn.

OUTPUT AUTO SHUTOFF RELAY(S): Activated at weight setpoints to shut off feed to the bucket elevator. The relay is normally connected to PLC or interlock circuitry to slide gate, conveyor motor, etc.

INPUT AUTO ZERO RELAY: Auto Zero can be initiated when the relay is energized by a flow switch or other device (feed conveyor off) indicating a no load condition.

CONTROL RELAYS: Relay outputs used to open or close a slide gate and control the process flow to a programmed flow rate.

ANALOG OUTPUT: The current source proportional to rate of flow is user programmable. With the controller option, the output current is the control signal for variable speed drive, etc. Optional read-back of the signal loop is available to verify the integrity of the current loop.

REMOTE OPERATOR STATION: Allows full operation from two locations.

SCOREBOARD DISPLAY: The display indicates totalized weight or flow rate. It is available in 6 digits with 1-1/2" or 4" character height.

RS232, RS485 INTERFACE: Interfaces to remote operator station, scoreboard display, printer, PLC or computer.

Multiple Compu-Watt systems can be networked to one serial port of a PLC computer.

SIMPLE INSTALLATION, NO MODIFICATIONS

INSTALLATION

Installation by a qualified electrician typically requires 1/2 to 1 day.

The Power Interface Unit is mounted near the magnetic starter for the motor.

Current transformers (included) to monitor the motor current are usually installed in the magnetic starter enclosure.

The 3 phase voltages are monitored at the magnetic starter. A 3 pole fuse block (included) is usually mounted in or near the magnetic starter enclosure.

The Operator Station (and additional Remote Operator Station or display) are mounted where required, usually on the work floor, loadout platform, etc.

Multi-pair shielded instrumentation wiring connects the Power Interface Unit and the Operator Station.

CALIBRATION

The system is easily calibrated. A known weight is transported and totalized by **COMPU-WATT**. The weights are compared. The correct weight is entered or the span is adjusted. If a known weight cannot be transported, an estimate of the total weight or the rate of flow can be used. The span can be adjusted later if required.

Multi-point calibration can be achieved by calibrating at various flow rates (40%, 60%, 80% and 100% of capacity). This will ensure highest accuracy throughout the range of flows calibrated.

There are 6 modes available to allow for calibration to product flow from a different source such as the front or rear side of the bucket elevator.

SPECIFICATIONS

OPERATING and STORAGE TEMPERATURE RANGE: -40 deg C. to +50 deg C.
-40 deg F. to +120 deg F.

ACCURACY: Power consumption is measured with 0.2% accuracy. Overall accuracy is dependent upon operating conditions and calibration. Typical accuracies of +/- 1% can be easily achieved for bucket elevators with repeatability of better than +/-1/2%.

SAFETY STANDARDS: The Operators Station and Remote Operators Station are FM and CSA approved for Class II, Division II, Group G Hazardous Locations.

WARRANTY

COMPU-WATT comes with a complete one year warranty on parts and labour.

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