

# ST-1400 Specifications

## Vibratory Feeder Controls Single, Dual, and Triple Units (15 Amp Capacity)

*The ST-1400 Series of Controls are used to operate vibratory bowls with part sensing, and storage hoppers fitted with electronic bowl level detectors. The demand cycling of the bowl or hopper is controlled by an external input signal processed through the **Remote Hold** and time delay settings of the unit if selected. The units are operational in both **Open Loop** and **Closed Loop (sensor option)** mode. An optional input connection for a **10 to 30 Vdc** power supply is available so that a **NPN** or **PNP** track level sensor can be operated.*

- **Soft-Start** is switch selectable which allows the feeder bowl to cycle on gently. A ramped 'on cycle' of approximately 0.8 seconds keeps piece parts from falling off the tooling when the bowl turns 'On' upon track level sensor demand. In addition, the tooling, drive mechanism, and drive springs are shocked less with each 'On' cycle.
- **Line regulation, Surge Protection** along with transformer isolation of the logic circuits allows the control's output to compensate for fluctuations in the supply voltage and sudden power surges.
- **(Optional) Track level sensor Interface.** A single input is provided for either a NPN current sinking or PNP current sourcing type sensor. An auxiliary power supply must be connected to the power supply input. The sensor input is also jumper selectable into the Remote Hold section with and without time delay option.
- A **Run Interlock Input (Remote Hold)** is provided so the control can also be turned On/Off, (Hold mode), by a PLC or other feeder control. This input is jumper selectable. Remote Hold can be controlled by an NPN or PNP track level sensor, dry contact closure or 5 volts RMS minimum to 120 volts RMS maximum (AC or DC) voltage input
- A **Power Output Range Select (Open Loop Mode)** adjustment allows the control to be preset for the maximum output of the main control potentiometer. By limiting the 'Full On' output, an operator cannot turn the main potentiometer up to high. This feature can prevent destructive hammering of the drive coils, tooling cracks, and spring breakage.
- **On and Off Delays** are independently adjustable to provided (0-15 sec) timing for the track level sensor. This allows a precise level of part flow to be maintained to the machine.
- **120 Vac and 220 Vac Models** are available, and will operate on either 50 Hz or 60 Hz line frequency.
- **Frequency Selectable** Outputs are available. 30Hz, 40Hz, 60Hz and 120Hz for 60 cycle line frequency. 25Hz, 33.3Hz, 50Hz and 100Hz for 50 cycle line frequency
- **Phase Select** feature enables which **phase** of the line voltage the controller triggers off of on the 30Hz and 60Hz frequency output selection only. This allows balancing of the source when multiple units are utilized
- **Operate / Hold Out (Interlocking)** This is a unit functional output of **+5 Vdc** indicating **Operate mode** and a **0 Vdc** output indicating the controller is in **Hold mode**. This function is used not only for indication but also for multiple controller interlocking control.
- **0 to +5Vdc Auxiliary Control Input** is jumper selectable replacing the main control potentiometer.