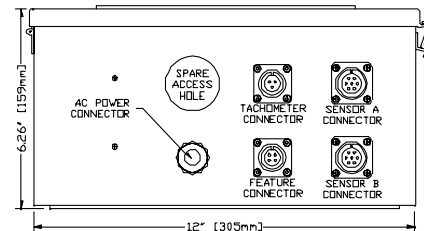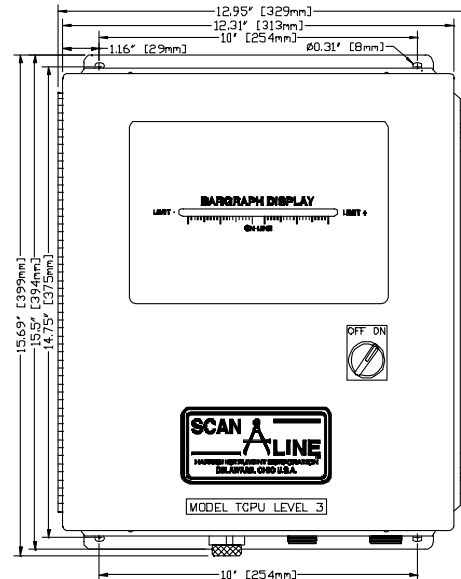# Model TCPU
TPC Control Processing Unit

Description

The **TPC Module** actuates existing position control solenoid valves in a fashion similar to the operator manual jog switches. The length of the closure of the position controlling relays is proportional to the magnitude of the error sensed and is fully adjustable by TIME GAIN control. A line speed or time adjustable RESET timer in the **TPC Module** circuit compensates for transport delay until correction can take effect. An input is utilized in the standard model to make the RESET time inversely proportional to the line speed. Also included is the **Control Offset** function for manual offset of the analog control signal (The **Control Offset** 10kOhm potentiometer and ten-turn precision multidial with manual lock optionally available from Harris Instrument Corporation).

Input signals from an analog output device (**Model TCPU Level 2 or Level 3**) or analog sensors (EG-Series sensors with **Model TCPU Level 1**) are processed and control signals sent to the line control relays. Two normally-open (*N.O.*) relay contact closures are available for the activation of the time proportional directional position control switches. The **TPC Module** provides contacts on the customer connections terminal strip for attachment to the control offset functions. All **Model TCPU** processing units are provided with contacts for connection of a 10Kohm potentiometer (OP Option). This potentiometer is usually attached to a ten-turn precision multi-dial, which is typically mounted on the front panel (door) of the processing unit.

The **Control Offset** function provides a positive or negative offset to the control analog signal from the **TPC Module**. Most SCAN-A-LINE™ control systems operate with one or two sensors. When edge guiding, the system determines the position of the strip from the edge positioned over the sensor. When centerline guiding, the centerline position of the strip is the physical center of the two sensors (or the single sensor with a narrow strip in a single-sensor system). The **Control Offset** function allows the operator to offset that centerline to one side or the other. The **Control Offset** potentiometer takes signals from the **TPC Controller** and adds or subtracts voltage for the offset of the strip. This allows minor tuning of the edge or centerline position control signal.

Model TCPU Level 3 Dimensions
(dimensions typical for all levels of Model TCPU)

Model TCPU Level 3 with Auto-Zero

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